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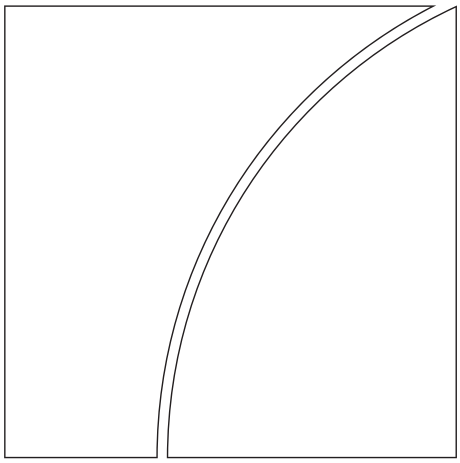

# 73rd Annual Report

1 April 2002–31 March 2003

Basel, 30 June 2003

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## Conventions used in this Report

| | |
|---|---|
| lhs, rhs | left-hand scale, right-hand scale |
| billion | thousand million |
| ... | not available |
| . | not applicable |
| $ | US dollar unless specified otherwise |

Differences in totals are due to rounding.

# 73rd Annual Report

*submitted to the Annual General Meeting*
*of the Bank for International Settlements*
*held in Basel on 30 June 2003*

Ladies and Gentlemen,

It is my pleasure to submit to you the 73rd Annual Report of the Bank for International Settlements for the financial year which ended on 31 March 2003.

The net profit for the year amounted to 362.0 million gold francs, compared with 268.5 million gold francs for the preceding year. The figure for the preceding year has been restated to reflect the amendments in accounting policies made in this year's accounts. Details of the results for the financial year 2002/03 may be found on pages 173–4 of this Report under "Net profits and their distribution". The amended accounting policies and their financial impact are disclosed in notes 2 and 3 to the accounts on pages 186–90.

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 68.7 million gold francs in payment of a dividend of 400 Swiss francs per share.

The Board further recommends that 29.3 million gold francs be transferred to the general reserve fund, 3.0 million gold francs to the special dividend reserve fund and the remainder – amounting to 261.0 million gold francs – to the free reserve fund.

If these proposals are approved, the Bank's dividend for the financial year 2002/03 will be payable to shareholders on 7 July 2003.

Basel, 11 June 2003

MALCOLM D KNIGHT
General Manager

# I. Introduction: an uncomfortable soft spot

The last year or so has been marked by economic disappointments. Interrelated developments in the geopolitical, economic and financial spheres held back growth and led to great uncertainty about the future. The recovery in the world economy seemed to stall. Indeed, the news got worse rather than better during most of the period under review. This was surprising to many given the high degree of policy stimulus being applied in large parts of the world. In fact, such a pattern of unrealised expectations has been the norm for at least the last couple of years, a phenomenon typically explained in terms of unexpected events like the Enron and other corporate scandals, the shock of 11 September 2001 and, albeit better anticipated, the Argentine crisis. The period under review, ending April 2003, was no exception. Uncertainties related to the Iraq war, and even the spread of the SARS virus, were cited as the principal reasons why business investment everywhere seems to have been put on hold.

War in Iraq provided an ominous background. The initial question was whether there would be war or not, and what the implications might be for oil prices. Then the question became one of timing. Subsequently, the issue was how the war might be conducted, and how it could be ended. These questions have been answered more speedily than many expected. Nevertheless, there remain lingering political uncertainties arising from the war that might prove harder to dispel. Even before these recent events, there were a number of international tensions which threatened progress in such crucial areas as the Doha round of trade negotiations and global financial reform. The recent weakening of the US dollar has also thrown into greater relief uncertainties pertaining to international saving imbalances, and how different countries might best contribute to their resolution.

Yet, as hopes regarding the global economy have repeatedly been disappointed, attention has also begun to focus on the possibility that more deep-seated forces might be at work. Developments in the United States drove global growth from the early 1990s onwards. In large part this was because Japan and Germany did not succeed in making the structural adjustments needed to deal with the legacy of the asset bubble and reunification, respectively. However, with hindsight, the US expansion of the late 1990s also fostered its own excesses of overly optimistic profit forecasts, rapid credit growth and asset price increases, and overextended balance sheets. Last year, headwinds arising from these imbalances, particularly in the corporate sector, blew strongly against the economic upturn in the United States. Moreover, given growing global linkages through trade and financial markets, to say nothing of shared confidence effects, other countries also seem to have been affected in important ways. As profits continued to be elusive, European multinationals that had previously invested heavily in the United States cut

back everywhere. More broadly, the necessity to adjust to unprecedented stock market declines, with the fall from the peak in March 2000 to current levels equal to about two fifths of today's global GDP, was another restraining factor. Emerging market countries were also hit, in Asia primarily through diminished trade in high-tech goods, and in Latin America through a temporary drying-up of capital inflows.

If it was unfortunate that the more optimistic expectations for growth failed to materialise, it was fortunate that the same could also be said for the more pessimistic outlooks. Contrary to what some had feared, weak economic growth did not interact with the strains arising from the recent "bubble" period to seriously threaten the health of the global financial system. In spite of a series of shocks that eroded both capital and confidence, there was no failure of any major financial institution. Equally welcome, there have been no recent instances of significant failures in the functioning of key financial markets. That said, there was clear evidence of tightening credit standards in some jurisdictions, with the US high-yield market being particularly affected. And there were growing fears that some weakened insurance companies and pension funds might prove less willing to take on risky investments in the future. While both these developments probably represent an overdue swing back towards greater prudence, their constraining effects on credit availability cannot be desirable at this particular juncture. In this area as in many others – including fiscal restraint, loan provisioning, changes in exchange rates, structural reforms and policy paradigms – the failure to make needed changes in a timely way always bears attendant costs.

Fiscal easing and the sometimes sharp reductions in policy interest rates in many industrial countries have doubtless contributed to the resilience of the financial system to date. This has also helped to limit the downturn in the flow of capital into a number of emerging market economies still dependent on such flows to finance current account deficits. However, another possible reason for this financial resilience may have been the significant efforts made over the years both to improve the infrastructure supporting the international financial system and to increase the diversity of funding sources.

## Moderating global growth and the influence of financial factors

Growth in the US economy in early 2002 recovered well from the previous recession, consistent with the strongly expansionary fiscal and monetary policies in place. Yet, more unusually, growth has since tended more to moderate than to accelerate. In addition, the nature of the recovery has been every bit as unusual as the sharp drop in profits and investment that preceded it. Consumption, whose atypical strength had helped make the downturn the shallowest recession in the postwar period, stayed strong through most of 2002 before showing signs of waning closer to the turn of the year. Corporate investment, in contrast, remained weak throughout, even though rigorous cost cutting succeeded in maintaining productivity growth at high rates, restoring the profit share of GDP to more normal levels and sharply reducing firms' external financing requirements.

The growing influence of financial factors on spending decisions in the United States became more apparent in the period under review, even if the corporate and household sectors differed markedly in their sensitivities. In the former, the principal concern was to restructure corporate balance sheets in the light of historically high debt levels. This led to both cuts in investment expenditures and reductions in outstanding debt, where possible. The process of retrenchment was also consistent with financial market conditions that remained very challenging. Continued sharp falls in equity prices and very high, if recently narrowing, bond spreads meant that only high-quality credits benefited fully from the earlier reduction in policy rates. The fact that the US dollar finally fell on an effective basis, reflecting both lower interest rates and growing concerns about the US trade deficit, provided some support to repatriated earnings. However, this was nowhere near enough to overcome the underlying corporate pessimism arising from concerns about balance sheets and uncertainties about the world political environment.

These difficult financial circumstances might also have been expected to restrain household spending. In fact, and paradoxically given surveys showing weaker consumer confidence, US households continued to spend vigorously. Consumer durables and housing services were particularly favoured as both benefited from lower policy rates as well as special financial factors. The willingness of producers of durable goods to provide zero interest financing, at a cost to their own profits, helped sustain automobile sales in particular. More significantly, a combination of lower mortgage rates, rising house prices and reduced transactions costs led consumers to refinance massively. While proceeds were used in part to pay down higher-cost consumer debt, a substantial portion was used to finance more consumption, or to trade up in the housing market. Since this latter trend reinforced upward pressure on house prices, the process may to some extent have developed a dynamic of its own. Moreover, a similar phenomenon reflecting the greater availability of credit has been seen in recent years in the United Kingdom and Australia as well as in a number of Asian and continental European countries. While US household debt continued to rise throughout the period under review, this elicited no obvious precautionary response from consumers. Debt service costs remained relatively low, even though the ratio of debts to assets rose significantly due primarily to declines in equity prices.

Growth in Japan, and particularly in continental Europe, also failed to measure up to earlier forecasts. But the disappointment was all the greater given that Europe was seen as exhibiting only a few of the expansion-related imbalances evident in the United States, and Japan had already suffered many years of effective stagnation. Cautious behaviour in the corporate sector was not much different from that seen in the United States, and for essentially similar reasons of weak profits and high debt levels. Rather, the major difference in performance compared to the United States was on the consumption side, with patterns of household spending in continental Europe and Japan not diverging much from previous cycles. While house prices in 2002 rose even faster in many continental European countries than in the United States, there seemed to be neither the desire nor the

practical means to transform this higher housing wealth into increased spending.

It is hard to attribute the persistent sluggishness of growth in Japan and the larger continental European countries, especially Germany, to macroeconomic policies. These were generally accommodative, albeit not excessively so, over the period under review. Instead, the evidence points more in the direction of structural weaknesses in labour, product and even financial markets. In Germany, for example, unemployment rose again last year as earlier reductions in the "tax wedge" affecting employment were partially reversed. Investment plummeted at the same time to postwar lows in the context of a further decline in the corporate profit share. Moreover, deregulation in Japan and many European countries did not proceed rapidly enough to allow an orderly reallocation of labour in the face of international competition. Last year, the long-standing pressure on prices and profits in goods-producing industries eased only slightly, and such pressures could well intensify given China's accession to the WTO. Finally, in Japan and Germany, financial institutions appear to have tightened credit conditions last year, affecting the investment decisions of small and medium-sized enterprises in particular. On the one hand, this could be interpreted as a welcome response to the secular problem of persistent underpricing of risky loans to businesses. On the other hand, to say that this change in behaviour came at an awkward time would be to put it mildly.

Given the difficulties faced by the major industrial countries, it is perhaps surprising that the emerging market and transition economies grew as fast as they did. Latin America suffered for much of the period from jitters in global financial markets, but also from domestic concerns that reduced capital inflows. Currency depreciation, recession and inflation threatened simultaneously. Fortunately, as time wore on, the commitment of the new Brazilian president to prudent macro policies, the ending of a major strike in Venezuela, and signs of an upturn in Argentina all contributed to a better regional atmosphere. Greater confidence in the efficacy of adjustment efforts, associated support from the IMF in many cases, and increased investor demand for emerging market debt tended to narrow sovereign spreads, which nevertheless often remained uncomfortably high.

In Asia and central and eastern Europe, growth generally stayed quite robust throughout the period under review, reflecting both external and internal factors. Asian countries benefited from a major expansion in intraregional trade, increasingly with China, whereas the European economies in transition succeeded in diversifying their export markets. In both regions, capital inflows continued to be sufficiently strong to pose policy dilemmas that were only partly allayed by official intervention and substantial increases in foreign exchange reserves. As a by-product of such actions, the official sector also ended up making a large contribution to the financing of the ever expanding US current account deficit. Fortunately, significant efforts were also made in both regions to stimulate domestic demand in order to begin redressing this external imbalance as well as to increase growth. Unlike in Latin America, a number of countries in these regions had sufficient credibility to allow the

authorities to ease fiscal and monetary policies. Moreover, in some cases, structural changes contributed to a marked expansion of household credit to finance purchases of both consumer durables and houses. However, Korea, which had advanced furthest in this regard, also experienced significant financial turmoil in the spring of this year. For outside observers at least, this was a useful reminder of the potential pitfalls inherent in all restructuring processes, particularly those involving the financial system.

Global inflation has remained essentially stable at low levels over the last year or so, although higher commodity prices, especially for oil, did for a time raise fears of an inflation rebound. In the industrial countries, the trend was more down than up, with Europe tending to have the biggest price rises, Japan in outright deflation and the United States somewhere in between. A general phenomenon, observed particularly in countries with appreciating currencies, was that goods prices either fell or rose much less than the prices of services. Increased international competition and productivity differentials presumably played a leading role in this change in relative prices, and probably had a broader disinflationary effect as well. One background factor supporting the maintenance of low inflation in the industrial countries was an increasingly firm set of expectations, after some years of low inflation, that similar conditions would prevail well into the future.

The price picture was decidedly more mixed in the emerging market and transition economies. Latin America was clearly the worst performer. Inflation rose sharply in many countries and explicit inflation targets were often missed. Yet it was also notable that, even after significant depreciations, there was no return to hyperinflation, as in the past. In part this reflected the broader global pattern, but it also depended upon supportive policies by the relevant authorities, who insisted that inflation should and would be reduced. Still more welcome was the fact that inflation did decelerate over the review period in most countries outside Latin America, even in India, where the fiscal deficit remained high.

At the same time, a new trend appeared in a few emerging markets in Asia that was unwelcome in some cases and puzzling in others. As to the former, deflation deepened in Hong Kong SAR and reappeared in Singapore. These developments were in part the fallout from their earlier property and high-tech booms respectively. However, deflation also re-emerged in China, where there had been no boom, and occurred in spite of substantial fiscal stimulus by the government and very rapid rates of credit growth. One possible reason might be massive increases in labour productivity and hence in supply capacity reflecting foreign direct investment. The failure to close state-owned enterprises for fear of the social and political implications also contributed to excess capacity in many sectors.

The appearance of deflation in these countries, along with Japan, triggered a discussion of whether deflation might be a possibility elsewhere and, if so, whether it is a cause for concern. The observed pause in economic growth further fuelled this debate, since existing levels of excess capacity were threatening to become larger, which would put downward pressure on an inflation level that is already quite low. Such developments might even

interact with vulnerabilities in the financial system to further disinflationary effect. All these forward-looking considerations are returned to in the following chapters and the Conclusion.

## Preserving financial stability and the influence of public policy

Given the macroeconomic difficulties in the industrial countries, it was perhaps not surprising that corporate defaults and rating downgrades rose sharply last year to levels well beyond those seen in the last recession. In association with diminished prospects for profits in surviving firms, this also led to a third consecutive year of heavy losses in stock markets. Yet, in contrast to both this corporate experience and earlier episodes of economic downturn, the financial system seemed, on the surface at least, to remain relatively robust. While clear signs of strain did begin to emerge, they were limited to certain sectors and countries and appeared essentially manageable.

The greatest source of satisfaction was the resilience of banking systems in most industrial countries. With Japan a notable exception, losses on the corporate side and reduced revenues from capital market activities were at least partially offset by solid gains on the household side. This was particularly the case in the United States, where mortgage refinancing and consumer credit generated high levels of both net interest and fee income. In Germany, the story was somewhat different as corporate defaults rose unusually sharply, and chronically low interest margins provided inadequate compensation. Nevertheless, capital ratios improved for German banks, as indeed they did in many other jurisdictions, and remained well above minimum regulatory requirements. In addition, in both North America and many European countries, significant steps continued to be taken to cut costs and diversify income sources. As subsidised competition from state-sponsored financial enterprises in Europe is gradually removed, the positive results of these restructuring efforts on profits should be seen more clearly.

At the same time, performance elsewhere in the global financial system was less satisfactory. Some old problems remained unresolved and some new problems emerged. Among the former, bank balance sheets in Japan and a number of other Asian countries – Malaysia being a marked exception – continued to suffer from high proportions of non-performing loans. Nor was any definitive progress made over the last year in devising, still less in implementing, a strategy to deal with unsustainable debt problems in both the corporate and banking sectors. Insurance companies and pension funds emerged as new problem cases. Caught up earlier in the rhetoric of the "new era", and confronted with new competitive pressures, European institutions in particular had invested heavily in volatile equities rather than the long-term bonds which are the natural counterpart to their contractual liabilities. Many European and Japanese insurance companies suffered as well from having issued liabilities with relatively high guaranteed rates of return. In response, a number of larger European companies have taken steps to recapitalise themselves, have raised insurance premiums and have begun to withdraw

from unprofitable lines of business. For their part, pension funds almost everywhere have turned to their corporate sponsors to deal with their underfunding problems. As an unpleasant side effect, however, this has hurt profit expectations and ratings, which has in turn depressed share prices still further and increased the degree of underfunding.

Another source of concern during the period under review was sharp swings in sentiment and volatility in financial markets. In addition to the soft outlook for profits, a negative factor affecting equity markets in 2002 was the unprecedented number of "fallen angels", highly rated corporations that suffered a series of downgrades in rapid succession and sometimes even defaulted. Together with earlier revelations of accounting and other irregularities, this left investors disorientated and increasingly unwilling to bear risk. These sentiments also manifested themselves in credit spreads, which rose sharply for much of the period, reaching record levels in late 2002. Fortunately, long-term government bond yields fell markedly, reaching in the spring of 2003 levels not seen in over 20 years. The net effect was that borrowing costs did not rise as much as might have been expected. A surprising but welcome development around the turn of the year was that credit spreads began to narrow, even though other indicators of market sentiment stayed quite negative. While this could have been due in part to the unwinding of an earlier overshoot, the market apparently saw grounds for believing that corporations were succeeding in their efforts to restructure balance sheets and to reduce their vulnerability to potential shocks.

The fact that the financial system, and in particular the banking system, has functioned as well as it has can be explained by both cyclical and structural factors. Perhaps the most important cyclical factor in many countries was something that did not happen. This recent downturn was not preceded by a sharp increase in lending on commercial real estate that subsequently went sour. Rather, the incomes of financial institutions were often sustained, in the face of corporate and financial market weakness, by the relative buoyancy of the residential housing market and the consumer sector. This in turn was partly a by-product of the aggressive easing of monetary policy in many jurisdictions, made possible by continuing good inflation performance.

Structural developments have also fostered financial stability. Financial institutions generally, and banks in particular, seem to have become more conscious of the risks they run and the need to manage risks more carefully. One aspect of this has been the trend to transfer risk out of the banking system into financial markets and then on to non-bank financial institutions. This trend has been supported by the rapid growth of the high-yield market, particularly in the United States, and the development of European bond markets since the advent of the euro. Banks have increasingly used such vehicles as syndicated loans, asset-backed securities, collateralised debt obligations and credit default swaps to transfer credit risk to other institutional investors. The presumption, borne out to date, is that a greater dispersion of credit risk is helpful to stability. As an adjunct, the fact that those needing to borrow could tap a more diversified set of creditors helped to avoid the kind of liquidity problems that, in the past, had often led to disruptive insolvencies.

In addition to its timely adjustment of macroeconomic policies, the public sector can take some credit for these relatively positive financial developments. National authorities, in association with international financial institutions and the Financial Stability Forum, have for many years focused intently on improving standards of prudent behaviour in the financial system. In the period under review, particular attention was paid to the weaknesses in market foundations revealed by recent corporate scandals. While many initiatives were undertaken very quickly in the wake of these events, most appear nonetheless to have been well thought out in close collaboration with market participants themselves. Moreover, while essentially national in their legislative origins and scope, many of the initiatives have been drawn up to reflect high-level principles agreed internationally after intensive consultations. Since these principles embody the lessons drawn from recent national experiences, this interactive process should eventually lead to a substantial degree of international convergence on best practices.

A particularly important development was the recent release by the International Organization of Securities Commissions of a set of principles for auditor independence (to avoid conflicts of interest) and public oversight of audit firms. These efforts attempt to address what is increasingly seen as a major weakness, namely the lack of both leadership and will in the audit industry to reform itself and its practice standards in the light of past shortcomings. Progress was also made towards international agreements on principles in the areas of accounting and disclosure. In the first area, the Memorandum of Understanding between the US authorities and the International Accounting Standards Board, agreeing to move towards a single set of accounting standards, was a major step forward. Another important development was the review begun last year of the OECD Principles of Corporate Governance, with a view to strengthening the principles themselves as well as providing more guidance on how they should be interpreted, applied and enforced worldwide. Finally, it was increasingly acknowledged that international standards are needed to help minimise inherent conflicts of interest in the financial services industry more generally. While attention has focused recently on the interaction between equity analysts and underwriters, a whole host of other conflicts can easily be identified.

To date, the global financial system has proved resilient to the economic strains that have become increasingly evident. This should be a source of comfort. So too should the progress being made in strengthening the underpinnings of the financial system. Being comforted, of course, should not distract policymakers from addressing the shortcomings which still remain. Nor should it blind them to further challenges. It may be that significant strains in the financial system exist, but are yet to be discovered. What the financial effects of an extended period of slow global growth might be, particularly if aggravated by shocks in the political or trade arenas, cannot be confidently predicted. These forward-looking issues, and possible policy responses, are the focus of attention in the Conclusion of this Annual Report.

# II. Developments in the advanced industrial economies

## Highlights

Despite significant policy stimulus in the advanced industrial countries, output recovered only modestly in 2002 (Table II.1). Household spending remained resilient, but firms continued to scale back investment. Demand in the first quarter of 2003 was unexpectedly sluggish, although how far this was due to geopolitical uncertainties and how far it reflected more underlying forces holding back growth is difficult to gauge. The consensus view of forecasters is that there will be a modest pickup in activity later this year. The recent increase in profits, the strengthening of corporate balance sheets and continued technical progress create favourable conditions for a revival in capital spending. But the household debt burden is higher and consumption growth may slow. Domestic demand remains weak in Japan and Europe – especially in Germany.

Downward pressures on the prices of goods worldwide have prompted some commentators to express worries about the possibility of global deflation and what dangers might be attached to it.

Other important policy challenges remain. Budget deficits have widened recently and, over the longer term, ageing populations in the advanced industrial countries will put upward pressure on public spending. The design of fiscal frameworks and the medium-term need for fiscal consolidation are thus key issues. The continued widening of current account imbalances in the industrial countries since the mid-1990s has been accompanied by shifts in global saving that may have future implications.

### Growth and inflation

Average annual percentage changes

| | Real GDP | | | | Consumer prices[1] | | | |
|---|---|---|---|---|---|---|---|---|
| | 1991–2000 | 2001 | 2002 | 2003[2] | 1991–2000 | 2001 | 2002 | 2003[2] |
| Advanced industrial countries | 2.5 | 0.9 | 1.7 | 1.7 | 2.4 | 2.1 | 1.5 | 1.9 |
| United States | 3.2 | 0.3 | 2.4 | 2.3 | 2.8 | 2.8 | 1.6 | 2.4 |
| Euro area | 2.1 | 1.4 | 0.8 | 1.0 | 2.4 | 2.4 | 2.2 | 2.0 |
| Japan | 1.4 | 0.4 | 0.3 | 0.8 | 0.8 | –0.7 | –0.9 | –0.6 |
| United Kingdom | 2.3 | 2.1 | 1.8 | 2.0 | 3.2 | 2.1 | 2.2 | 2.8 |
| Canada | 2.8 | 1.5 | 3.4 | 2.7 | 2.0 | 2.5 | 2.2 | 3.1 |
| Australia | 3.4 | 2.7 | 3.8 | 3.0 | 2.2 | 4.4 | 3.0 | 3.0 |
| Other countries[3] | 2.1 | 1.3 | 1.5 | 1.3 | 2.1 | 2.2 | 1.8 | 2.1 |

[1] For the euro area, harmonised index of consumer prices; for the United Kingdom, retail price index excluding mortgage interest payments. [2] Consensus forecast published in May. [3] Denmark, New Zealand, Norway, Sweden and Switzerland.

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

## The global recovery in 2002

### *Disappointing growth despite supportive policies*

The global economy lost steam in the course of 2002 ...

Following a relatively shallow downturn in 2001, the advanced industrial countries experienced a rebound in 2002. However, the global economy rapidly lost steam and ended the year on a weak note, with output gaps widening in most regions. Most notably, the growth of final demand softened in the United States. Some other industrial countries performed better, with particularly strong final domestic demand in Australia and, to a lesser extent, in Canada. The Japanese economy grew only modestly in 2002, despite a marked upswing in exports. Output growth turned out to be much weaker than expected in the euro area and almost stalled in Germany.

... despite significant policy stimulus

Given significant policy stimulus, these developments were particularly disappointing. In the United States, policy interest rates had been cut sharply and the budget moved into a large and widening deficit (Graph II.1). Policies were less expansionary in the rest of the industrial world. The fiscal stance was broadly neutral, with automatic stabilisers allowed to work, but with discretionary measures limited by high government deficits and public debt in the euro area and even more so in Japan. The room for easing monetary policy was also constrained by inflation stickiness in the euro area and by the zero lower bound on nominal interest rates in Japan (see Chapter IV). Monetary policy was tightened in a few countries (particularly in Australia and Canada) in the face of robust demand and some inflationary pressures.

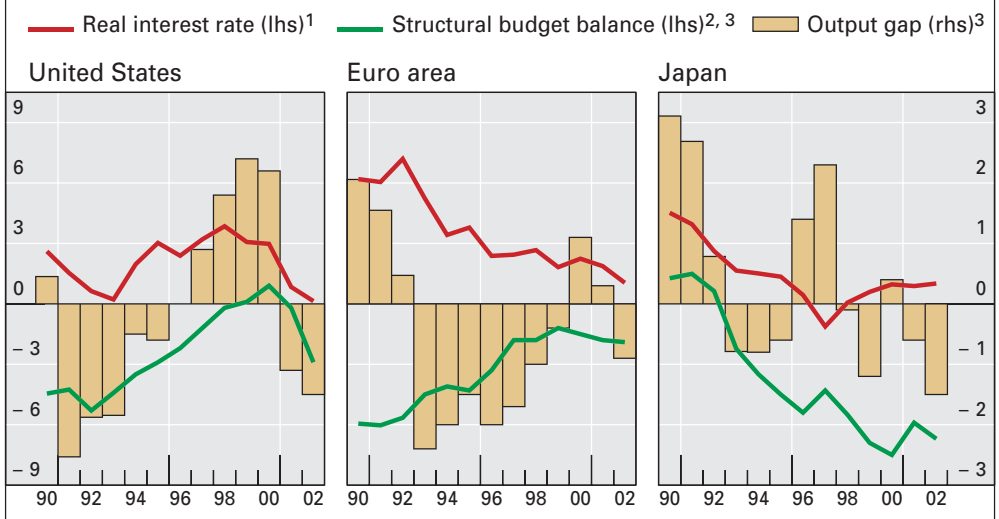
### *Business investment failed to recover*

Falling investment as firms rebuilt balance sheets

Business investment, which fell in the advanced industrial countries during 2002, has been unusually weak (Graph II.2). This was partly a reaction to the

**Real interest rate, structural budget balance and output gap**

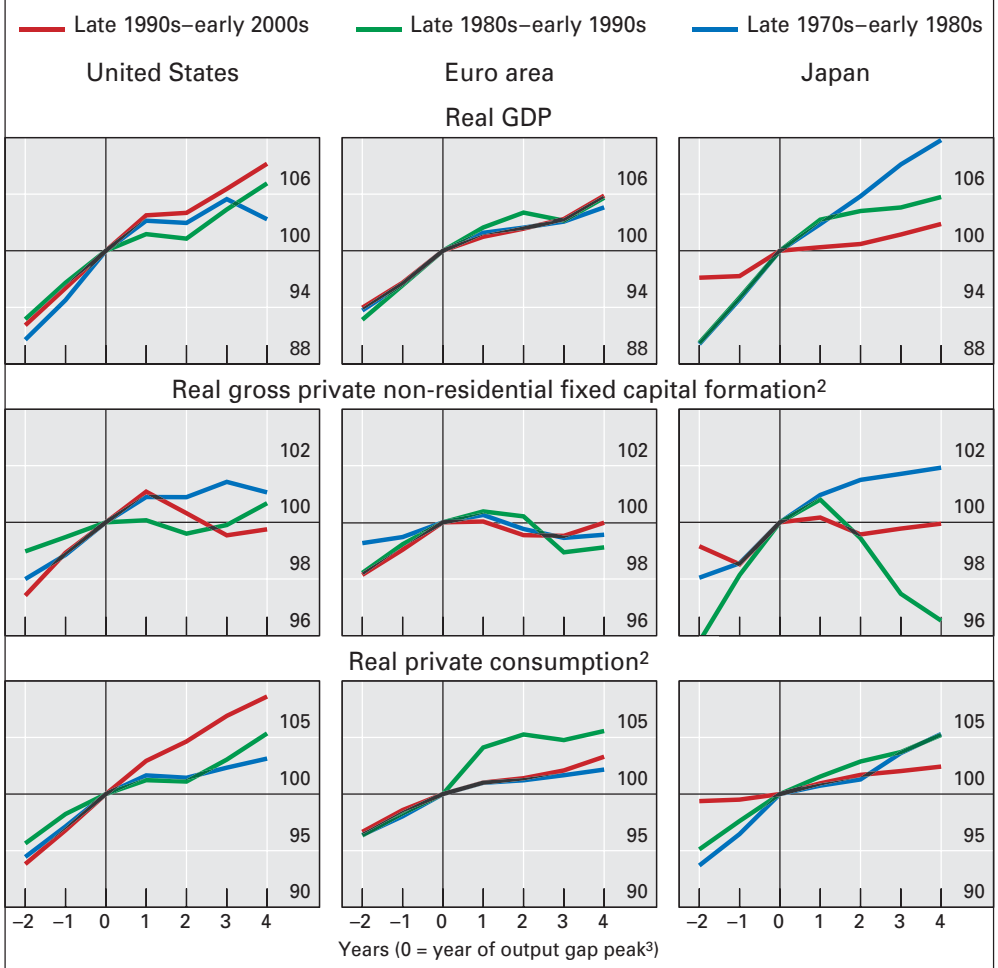
In percentages




[1] Short-term interest rate deflated by annual consumer price inflation. [2] General government cyclically adjusted financial balance. [3] As a percentage of potential GDP.

Sources: OECD; national data. Graph II.1

## Most recent and previous cycles compared[1]




[1] Year of output gap peak = 100; for 2003 and 2004, OECD forecasts. [2] Cumulated contribution to changes in real GDP. [3] For the United States: 1978, 1989 and 1999; for the euro area and Japan: 1979, 1990 and 2000.

Sources: OECD; national data. Graph II.2

previous investment boom, when overly optimistic profit expectations had led to unsustainable increases in credit and asset prices. The appearance of sizeable excess capacity in several sectors – particularly in the IT industry – and poor demand prospects reduced the demand for new equipment. In addition, firms had to rebuild their balance sheets and restore profits in the wake of falling asset prices. Investor confidence was further hit by heightened concerns about corporate governance following several high-profile financial disclosure scandals and large defaults. Lower equity prices, a tightening of credit standards and widening corporate spreads also made it harder for firms to raise finance. In some major European countries and Japan, the supply of credit was somewhat constrained, especially for small and medium-sized enterprises.

### *Resilient household spending*

Robust household spending ...

Yet aggregate household spending held up relatively well on average in the advanced industrial countries in 2002, despite substantial declines in

household financial wealth and adverse developments in the labour market. Private consumption and residential investment were quite strong in several economies – especially in the United States and the United Kingdom. The responsiveness of household demand to policy impulses in these countries was a major factor. The expansionary fiscal stance benefited households, for example through tax cuts, higher wages for public sector workers, or increased social benefits. Meanwhile, the widespread easing of policy interest rates and the decline in long-term interest rates led to a substantial fall in the cost of credit. For instance, average household borrowing rates fell by almost 1 percentage point in the course of 2002 in the United States and vehicle sales were stimulated by generous credit terms. Household spending was much less buoyant in the euro area, where saving rates rose noticeably. In Japan, consumption was relatively resilient but residential investment dropped further.

... supported by rising property prices and mortgage refinancing

Structural changes in financial markets in many countries have increased the availability of credit and enabled households to take on more debt. Another supporting factor was real estate values, which continued to rise strongly in 2002 and even accelerated in some countries, providing a source of liquidity for households (see Table VII.2 on page 129). The upswing in property prices seems to have partly offset equity market losses, in particular in North America, the United Kingdom and some countries in continental Europe. In those countries, heightened competition and innovations in mortgage markets have given homeowners a greater opportunity to borrow against unrealised capital gains on their homes. Moreover, the transaction costs of refinancing loans have fallen, allowing borrowers to benefit more easily from lower interest rates.

## The global outlook

### *An uneven but gradual expansion*

Recessionary forces could unwind in 2003 ...

Heightened concerns about developments in the Middle East are thought to have been a crucial factor in holding back expansion in the most recent past, driving oil prices up and confidence down. Although the present situation is still clouded by geopolitical uncertainties, the consensus view is for an abatement of previous recessionary forces. The inventory correction seems to have run its course, with inventory/sales ratios at historically low levels in the United States. Several factors also suggest a turning point in fixed investment. New equipment is likely to be needed after two years of declining investment, a requirement accentuated by the rapid obsolescence of high-tech investment goods. Further support for capital spending should come from profits, which strengthened in 2002 on a national income accounts basis, and healthier corporate balance sheets. Financial conditions have also improved recently.

... but few signs of a sustained recovery to date

Even so, output growth has remained weak in most regions so far in 2003, and there is little evidence that world trade has revived. Nor do current surveys suggest a widespread upturn in business confidence. But financial markets do indicate some improvement: yield curves point to a pickup in growth later in the year, bond spreads have narrowed and equity prices have recouped much of their war-related losses. In any event, markets did not

prove to be good predictors of economic developments in 2002, a year marked by rapid ebbs and flows in sentiment.

Question marks over the consensus view

There are several question marks over the consensus view that household spending will remain resilient and bridge the gap until investment picks up. On the one hand, a quick removal of geopolitical uncertainties could revive confidence and the willingness to spend in both the household and corporate sectors. This could lead to a stronger expansion than currently assumed. On the other hand, the impact of past policy stimulus could fade before final demand strengthens in a self-sustaining way. In particular, public spending and interest-sensitive household demand components are already at high levels, and there may be some falling-off in the near future. Indeed, a weaker phase in the consumer durable goods sector seems to have already begun in the United States. In those countries where a buoyant housing market has supported household spending, the stimulus from mortgage refinancing could diminish. The rise in house prices in some countries seems to have already peaked and long-term interest rates seem to have stopped falling.

Another downside risk is that policy impulses might actually start to reverse. On the fiscal side, deteriorating budget prospects have not only prevented the authorities from adopting further significant stimulus in many countries, but have also led to some restraint in Europe, as well as at the state and local level in the United States. On the monetary side, the scope for further stimulus has largely been exhausted in countries where both policy and government bond interest rates are now at historically low levels. Some commentators have indicated concerns about a possible upward correction in long-term rates should investors become worried about price or fiscal developments. Finally, new difficulties at the corporate level or hidden financial vulnerabilities in some countries might restrict lending for some time.

*Private balance sheets*

Corporate balance sheets have strengthened somewhat ...

How far the need to rebuild corporate balance sheets is still holding back growth remains unclear, but there are grounds for optimism. Weak business fixed investment has allowed the corporate sector's financial balance (ie the difference between corporate saving and investment) to improve significantly in Japan, the United States and Europe. In Japan, profitable companies have continued to pay back the large debts built up in the past; over the last decade, corporate debt/value added ratios have declined by more than 30 percentage points (Graph II.3). In the United States, the corporate financial balance was almost in equilibrium in 2002 and debt has started to decline. In the euro area, corporate debt, which rose sharply in the second half of the 1990s, has recently fallen and the deficit in the financial balance has been reduced since 2000.

Two additional considerations are also positive. First, debt/equity ratios remain moderate, as the decline in equity prices has been partly offset by some deleveraging. Second, low interest rates have allowed firms to reduce debt servicing costs. The interest costs of US non-financial corporations, for

instance, had fallen to around 14% of their cash flow by late 2002. This was a reduction of nearly 2 percentage points since the last peak in early 2001 and was more than 5 percentage points lower than at the beginning of the 1990s. However, if interest rates start to rise, corporations may try to reduce interest costs by further postponing debt-financed investment. Moreover, repairing balance sheets is a slow process. The fact that the US corporate debt/value added ratio now stands at 88%, compared with 80% in the early 1990s, may induce further deleveraging. This risk looks even higher in Europe. Finally, hidden corporate liabilities (eg from underfunded pension schemes) may mean that the underlying picture is less healthy than is suggested by published figures.

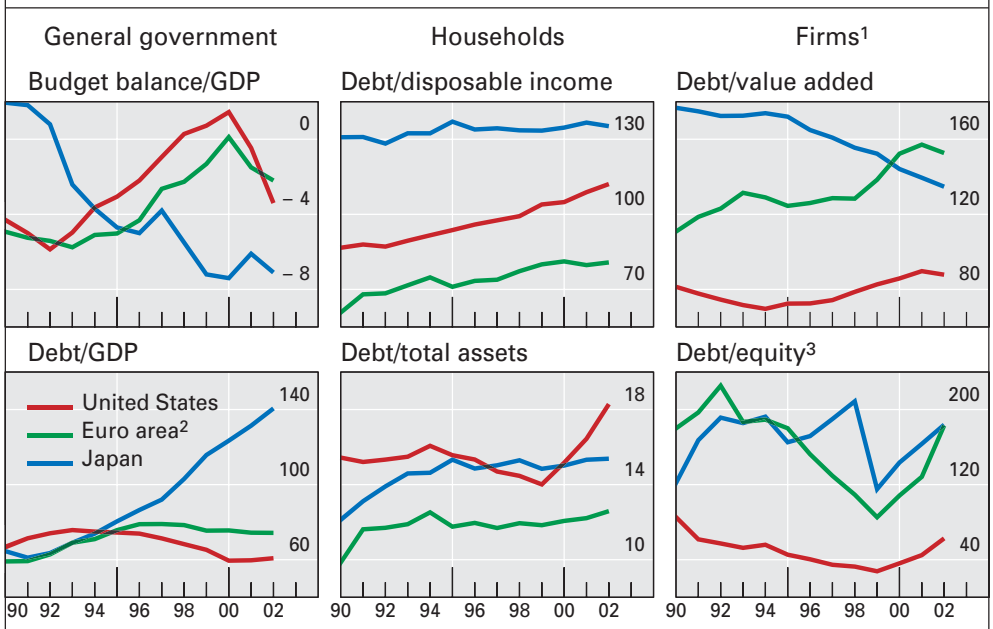
... but household debt has increased

Unlike corporations, households in the advanced industrial countries on average continued to borrow and spend during the recent phase of the cycle, despite a notable weakening in the euro area. As a result, household indebtedness continued to increase more rapidly than income in 2002. This trend was especially marked in those countries where lower nominal interest rates led to higher demand for housing and also induced households to refinance old mortgages. This process generated funds for increased household spending and was reinforced by substantial rises in house prices.

Once allowance is made for the value of household assets, debt does not seem particularly high. With the exception of Japan, the average ratio of household liabilities to wealth in the G7 countries has remained almost stable at around 15% for many years. Nonetheless, outstanding liabilities have risen to more than 105% of household disposable income in the G7 countries,

## Sectoral indebtedness

In percentages

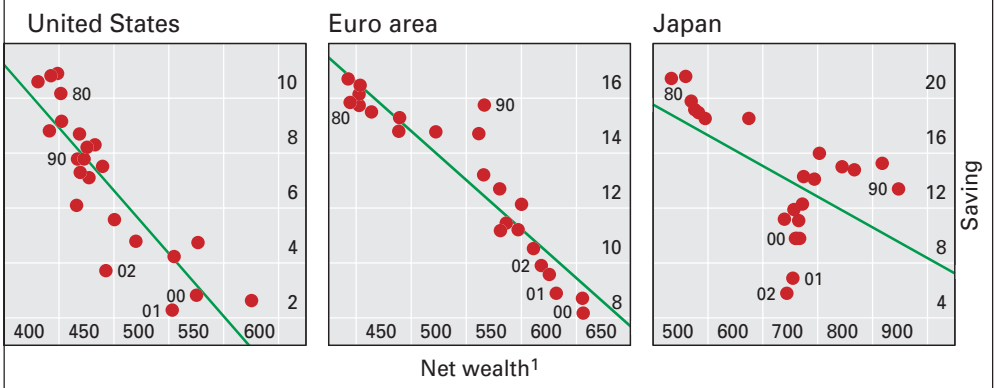



[1] Non-financial corporations. [2] For households and firms, weighted average of France, Germany and Italy. [3] Equity defined as the market value of outstanding equities.

Sources: OECD; national data; BIS calculations. Graph II.3

## Household saving and net wealth, 1980–2002

As a percentage of household disposable income




[1] Total assets (financial and tangible) minus liabilities.

Sources: OECD; national data; BIS calculations. Graph II.4

almost 15 percentage points higher than in the early 1990s. Debt service costs have also increased. For instance, such costs subtracted around 14% from US personal disposable income in 2002, appreciably more than a decade earlier despite substantially lower borrowing rates. Although the overall household sector is protected to a significant degree by locked-in long-term mortgage rates, it could therefore be vulnerable should interest rates rise or the labour market deteriorate. Low inflation might have led some households to underestimate the real burden of future debt repayments.

While household balance sheets do not suggest an immediate threat to spending, household saving rates could move higher. They have already risen significantly in the euro area in the past few years, and there might be more grounds for concern in Japan: sizeable wealth losses have been accumulated over the last 10 years yet the household saving rate has continued its downward path (Graph II.4). In the United States, the household saving ratio still looks low, although it had already begun to rise in 2002. Tax cuts have allowed US households to improve their saving position somewhat. However, the equilibrium level of household saving is likely to have declined over the past two decades because of rising net wealth.

### *Longer-term prospects*

Developments in the United States remain pivotal

A striking feature of the recent downturn in economic growth is that it was also felt in regions – especially continental Europe and Japan – which had not experienced the preceding spending boom. The apparently high degree of synchronisation in business cycles across industrial economies reflects financial and confidence channels as well as trade flows. According to some observers, such linkages have become stronger in recent years, with the leading role of the United States becoming more marked (see the 72nd *Annual Report*). First, supranational links at the corporate level have grown substantially following a surge in international mergers and acquisitions in the 1990s. Second, the widening of the US current account imbalance was accompanied by increasing capital inflows. Consequently, some foreign financial and non-

financial firms that had participated in the funding of the US upturn suffered heavy losses and were forced to cut costs to restore profits.

Japan and Europe weak ...

Yet the appearance of greater US influence on global growth may also reflect some specific weaknesses in other regions. Over the past 10 years, Japan has grown at an average rate of only 1% a year. This suggests that its potential growth rate may now stand well below the 4% estimated in the 1980s. Potential growth has also weakened in some major European economies, especially in Germany, which is discussed more fully below. These trends are important, and not only because of what they imply for secular developments in living standards. Low potential growth rates outside North America could complicate the process of current account adjustment needed to deal with present external imbalances. Moreover, low potential growth often reflects structural rigidities and little resilience to adverse shocks. Consider how well the United States, where potential growth remained robust, weathered the last downturn. The dynamic supply side of the US economy seemed to provide more scope for new sources of growth and a greater capacity to respond to demand stimulus.

... due to lower labour force growth ...

The first element behind long-term performance is the labour force. While still growing strongly in the United States, it has already started to decline in Japan and will soon do so in some rapidly ageing European economies. Furthermore, there have been striking differences in the functioning of the labour market. Structural unemployment has decreased steadily in the United States since the mid-1970s, but has increased in Japan. The picture is more mixed in the euro area. Structural unemployment rose to high levels until the mid-1990s but has since been reduced in some countries – with the notable exception of Germany – through successful efforts to promote employment growth. A second significant element has been the relative strength of labour productivity growth in the United States, particularly last year, when output per worker increased markedly. In the euro area and Japan, however, labour productivity growth has been weaker in recent years.

... and poorer productivity

The superior US performance seems to be mainly attributable to continued technological progress as measured by growth in total factor productivity (TFP), the growth in output beyond that which can be attributed to increases in labour or capital. Indeed, US TFP gains have accelerated significantly since the period of slow output growth during the 1970s, in striking contrast to developments observed in Europe and Japan. In Europe, there is some evidence that recent reforms in labour markets led to employment gains which held down measured productivity. In Japan, attention has mainly focused on the dysfunctional financial system, which is often seen as the greatest impediment to sustained growth.

Need for product and labour market reforms

Although the implementation of some structural reforms could lead to higher unemployment in the short run, it could also release latent demand (eg in the domestic service sector) and increase employment over time. In addition, the announcement of a reform programme could in itself improve confidence, particularly in the corporate sector. Moreover, there may be a more urgent need than usually thought to improve the way markets function. First, rigidities can remain undetected for a long time before the adverse

effects on supply become apparent. Second, long-term productivity gains could be threatened should heightened geopolitical risks lead to higher security and defence expenditures, which act as a hidden tax on the economy. Finally, stronger productivity gains will be required to compensate for the adverse impact of ageing on income per head in virtually all industrial countries.

*Subdued longer-term growth prospects in Germany*

Weak economic performance in Germany ...

In this longer-term context of structural weaknesses hampering growth, many observers have recently focused on continental Europe. The degree and nature of the impediments to growth vary from country to country. The case of Germany – the largest economy of the area – is of particular interest: GDP growth has been unusually weak in recent years. This underperformance seems mostly attributable to sluggish domestic demand. Over the last five years, the contribution of exports to total output growth has averaged more than 2 percentage points. This is above the average for the 1980s and higher than for France and Italy. By contrast, private consumption has been weaker and investment has been a significant drag, contributing to a decline in Germany's potential rate of growth to only 1½%. This compares with estimates of nearly 2½% in the rest of the euro area.

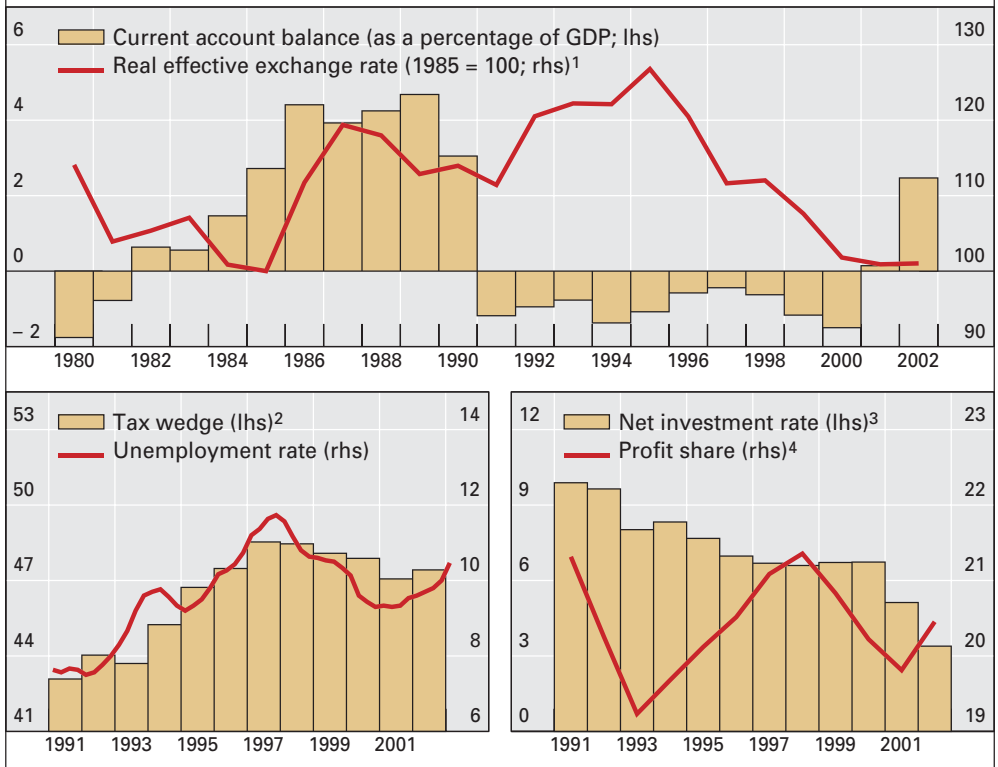
... despite recent improvement in competitiveness

Several reasons for Germany's deteriorating growth performance have been suggested, some of which might seem less well grounded than others. Some observers have argued that Germany entered EMU with an overvalued exchange rate. It is true that Germany did lose competitiveness and international market shares during the first half of the 1990s; but the real effective exchange rate has fallen significantly since the mid-1990s (Graph II.5, upper panel). As a result, Germany has gained market share in the last few years and the exports/GDP ratio is at a record high. Similarly, it has been argued that high real interest rates have reduced investment spending and growth overall. At first glance, this claim also seems unfounded. Since 1997, the real long-term bond rate (deflated by CPI inflation) has averaged 3½%, compared with an average of 4% since the 1960s. However, since the rate of potential growth has fallen, it could be argued that the "natural" rate of interest (ie the rate that equilibrates saving and investment) has also fallen.

Costs of reunification

A much more plausible argument is that Germany is still suffering the direct and indirect costs of reunification in 1989–90. Most firms in the former German Democratic Republic collapsed, causing a lasting deterioration in the labour market. The resulting fiscal transfers (almost 4% of GDP per year over the 1990s) appear to have caused a secular worsening of the German fiscal balance, which has significantly reduced the room for policy manoeuvre. The tax increases required to finance reunification also seem to have adversely influenced labour market developments through a significant increase in the "tax wedge" (Graph II.5, bottom left-hand panel). Finally, reunification led to an unsustainable rise in construction spending. Its subsequent contraction has reduced German real GDP growth by nearly ⅓ percentage point per year since 1995. Moreover, house prices declined in the second half of the 1990s and have been almost stable over the past few years. German households

## Economic indicators for Germany




[1] In terms of relative unit labour costs in manufacturing. [2] Defined as the difference between employers' costs and employees' net receipts (after tax) as a percentage of employers' costs. [3] Gross investment less depreciation as a percentage of GDP. [4] Property and entrepreneurial income as a percentage of GDP.

Sources: National data; BIS. Graph II.5

have thus been deprived of an offset to equity losses which households in most other industrial countries have enjoyed.

Decline in corporate investment ...

Perhaps the strongest sign (if not cause) of the underperformance of the German economy has been the decline in firms' ability or willingness to invest. Since the early 1990s, net investment as a proportion of GDP has fallen sharply (Graph II.5, bottom right-hand panel). Although reinvestment (ie the replacement of obsolete equipment) can also be used to introduce new growth-enhancing techniques, this decline is a matter of concern. If sustained, it would seem likely to reduce further Germany's potential growth rate.

... and difficulties for medium-sized companies

Although the low propensity to invest is partly cyclical, more fundamental or structural factors also appear to be at work. One of these might be that firms do not expect the rate of return on new investment to cover the risks incurred, suggesting that corporate profits are too low. There are also signs that small and medium-sized companies, which have historically been the main source of job creation but mostly serve the domestic market, have fared worse than large corporations which export a sizeable share of their output. The problem may have been exacerbated in recent years by banks imposing stricter lending standards. This could have hit smaller companies particularly hard.

Rigidities in product as well as labour markets

Product and labour market rigidities are also likely to have affected firms' propensity to invest, as well as overall growth performance. Several restrictions (eg on shop opening hours) could well have constrained the

service sector, affecting in particular its ability to absorb redundant workers from industry. The setting-up of new firms, with its potential for job creation, has been held back by strict regulatory requirements. Severe rigidities also remain in the labour market. In addition to the widening tax wedge referred to above, strict job protection measures could have deterred hiring. The tax structure, unemployment benefits and social security payments tend to discourage job searches, especially for those with low skills and incomes. The scope for wage settlements linked to the performance of individual firms or workers also remains very limited.

Some positive signs

While the short-term outlook for Germany does not seem very favourable at present, several positive signs should not be overlooked. The strength of exports shows that German firms are able to compete in difficult global conditions. The after-effects of reunification should dissipate over time. The required contraction of the construction sector seems well advanced and the consequences for banks and other financial institutions appear to have been contained (see Chapter VII). The government appears determined to introduce several important structural reforms. Hence, fears that Germany is facing prolonged economic weakness, similar to that in Japan, seem wide of the mark.

## Inflation

### *Recent developments*

Subdued price pressures

Global price pressures remained subdued in 2002. However, this overall picture obscures diverse developments across countries. Inflation increased in the fastest-growing economies, threatening inflation targets in Canada and the United Kingdom towards the beginning of 2003. Core CPI inflation rose above the 2% threshold in the euro area in 2002, while it eased substantially in the United States. Consumer prices were almost stable in Switzerland and fell in Japan for the fourth year in a row.

Notable divergences were also evident within regions, in particular in the euro area, where consumer prices increased by little more than 1% in Germany in 2002 but by nearly 5% in Ireland. Price developments also varied across the United States, with increases spanning a range from around 0% in the Cleveland area to close to 3% in the Los Angeles region. Finally, sizeable differences emerged across sectors, with rates of price increase of domestic-oriented services and manufactured goods often diverging sharply. For instance, prices for non-food commodities dropped by 2% in the United States in 2002 while those for services rose by 3%.

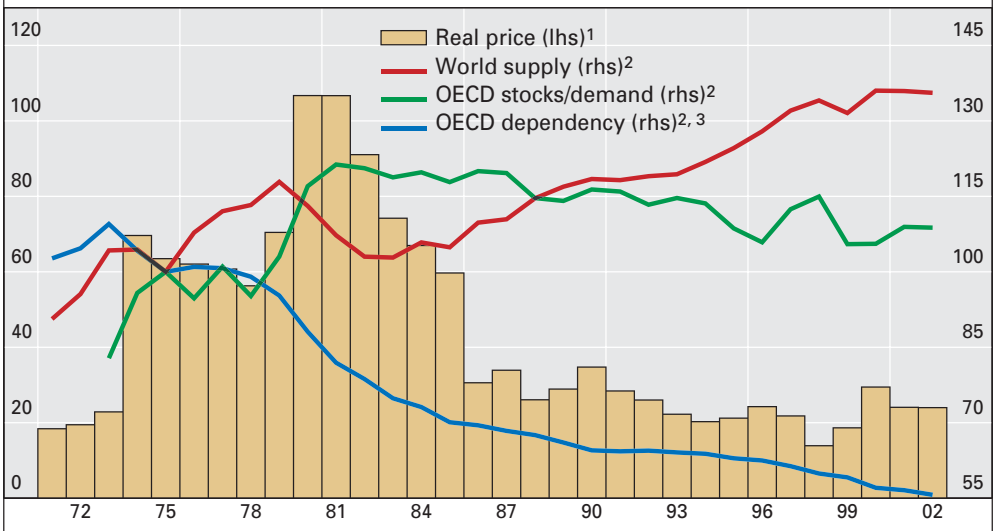
### *Prospects*

Outlook for oil prices uncertain

Inflation is expected to remain low in 2003. The spike in oil prices observed in the early part of the year, mainly attributable to the war in Iraq and output disruptions in Venezuela, has already begun to be reversed. However, prospects for oil prices remain subject to uncertainties. In the next year or so they could continue to be volatile, depending on global growth, supply from non-OPEC areas and the ability of OPEC to offset any sudden demand/supply

## Developments in the oil market

Annual averages




[1] OECD crude oil import price, in 2002 US dollars per barrel, deflated by the GDP deflator. [2] In volume terms; 1975 = 100. [3] Oil demand (consumption)/GDP.

Sources: US Energy Information Administration; International Energy Agency; OECD. Graph II.6

imbalances quickly. In addition, the ratio of oil inventories to demand in the industrial countries has declined since the early 1980s, so that any renewed market disruption could cause greater price fluctuations (Graph II.6). Finally, how quickly Iraqi oil returns to world markets, and on what scale, is a major issue.

Inflation is expected to remain low

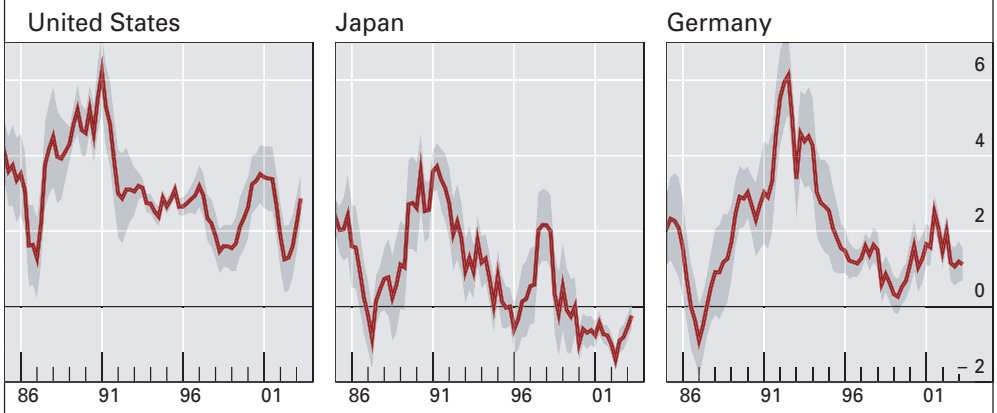
There are good grounds for thinking that global inflation will remain low and stable in the near term because of subdued core price pressures. One reason is that the sensitivity of inflation to cyclical variations in output seems generally to have declined. For example, inflation has remained moderate in the United States during the past decade, despite large variations in both unemployment and capacity utilisation. In Japan, deflation has been relatively stable and rather limited in the past few years. There is also some evidence that the exchange rate pass-through has declined in countries with such a low-inflation environment. Given the lengthening record of sustained low inflation in the industrial countries, price expectations appear to be rather firmly anchored, which should help to reduce the persistence of any one-time price shocks. Increased competition, both domestic and external, might also have affected the way prices and wages are set in various markets, suggesting greater resistance to price increases.

### *Risks of deflation?*

Given low inflation, ample spare capacity and the prospect of growth below potential in major advanced industrial countries, some commentators worry more about deflation – defined as a decline in the aggregate price level – than inflation. The fact that the GDP deflator in Japan has been falling by 1% per year since the mid-1990s, and that prices have recently been declining in a number of other Asian countries, has also attracted attention. Deflation can

## Inflation and uncertainty[1]

In percentages




[1] Uncertainty related to historical volatility (shaded area), which is measured by ±1 standard deviation around inflation (four-quarter changes in consumer prices), and estimated on a centred three-year moving window.

Sources: National data; BIS calculations. Graph II.7

generate economic problems because most debt contracts are defined in nominal terms, nominal wages tend to be downwardly rigid and nominal interest rates cannot be negative (see Chapter IV). From this perspective, what are the risks that the global economy could fall into a deflationary environment at the present juncture?

Inflation forecasts often inaccurate

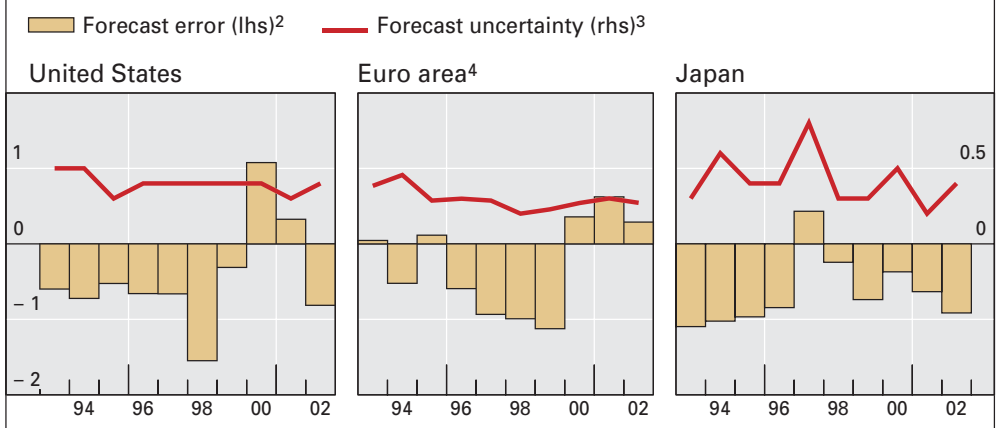
The first, obvious point is that when inflation is very low, deflation is arithmetically not far away. Moreover, the volatility of inflation remains substantial, particularly when compared to the current low level of inflation (Graph II.7), and has even increased in relative terms in some countries. The uncertainty in anticipating price developments – as measured by the standard deviation of forecasts – still represents nearly one third of a percentage point of inflation, depending on the country (Graph II.8). For long periods in the 1990s, actual inflation came in well below consensus forecasts.

Another key issue is that measured rates of inflation typically overstate the true rates of price increase, depending on the indices and the statistical methodologies used. For instance, taking account of shifts in spending in response to changes in relative prices would have reduced CPI inflation (using fixed weights) by almost half a percentage point in the United States in 2002. Similarly, Japanese deflation would appear more severe if measured by the private consumption deflator rather than the CPI. There is also evidence that measured inflation has been overstated due to difficulties in correcting for quality improvements, difficulties that can be reinforced by the launch of innovative products as well as by the emergence of new distribution channels. Given the current low level of inflation and the uncertainty of forecasts, the possibility of episodes of declining prices (as seen in Germany in the mid-1980s) cannot be ruled out. Taking into account the measurement bias ("effective deflation"; see Table IV.1 on page 70) raises this possibility further, although measured inflation has already been lowered substantially in some countries over the past few years as a result of significant changes in its

Many inflation measures biased upwards

## Consumer price inflation forecasts[1]

In percentage points




[1] Made in January of the preceding year. [2] Defined as actual minus forecast. [3] Defined as the standard deviation of forecasts. [4] Weighted average of France, Germany and Italy.

Source: © Consensus Economics. Graph II.8

calculation – particularly the increasing use of hedonic price indices. Since the Japanese experience clearly shows that deflation can become entrenched, despite very loose macroeconomic policies, an assessment of possible deflationary forces currently affecting other countries needs to be undertaken.

Potential deflationary forces include excess capacity ...

The dramatic bursting of the 1990s IT bubble created a perception of excess capacity more generally. This could in principle exert a significant deflationary force in the global economy – especially if falling prices were to interact with high levels of nominal debt. Indeed, anecdotal evidence of excess investment in developing Asia as well as very low capacity utilisation in many sectors, following the recent downturn, support such a view. Yet the evidence of generalised excess capacity in the global economy is limited. The capital/GDP ratio in the US business sector in volume terms actually declined during the 1990s, primarily due to accelerating equipment depreciation. As noted earlier, Japanese firms have tended to use profits to reduce debt rather than increase investment.

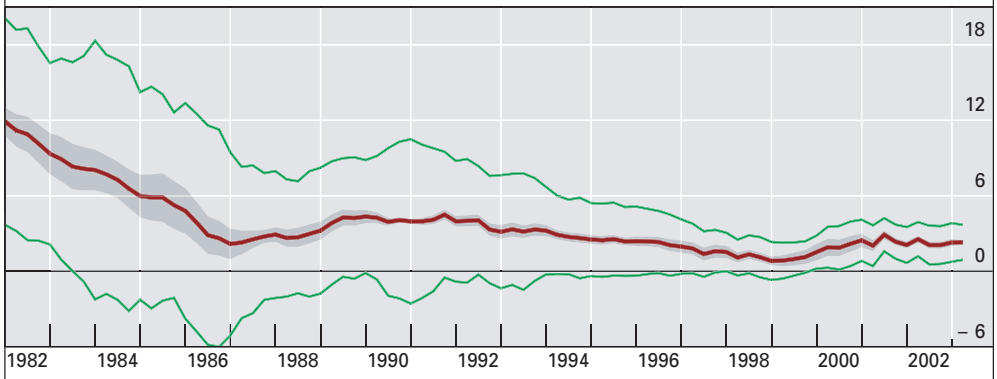
... relative price changes ...

Many have also pointed to relative price changes as a source of deflation, suggesting that in a low-inflation environment such developments are more likely to lead to actual declines in nominal prices in the sectors benefiting from technical progress, for instance IT products. This could increase the possibility of negative changes in the overall price level given the stickiness of prices in other sectors. Such supply shocks, however, must in general be viewed as positive, since they essentially reflect strong productivity gains that are passed on as real income gains to consumers. Even if their effect is to push measured price indices into negative territory, they do not threaten profits and growth in the manner of a more generalised deflation.

... globalisation ...

Relative price changes associated with international trade have also been raised as a possible source of deflation. Globalisation has allowed emerging market countries with lower unit labour costs to push down prices and thus "export deflation". Prices for manufactured goods in international markets

## Euro area inflation: historical and geographical volatilities[1]




[1] The historical volatility (shaded area) is measured by ±1 standard deviation around inflation (four-quarter changes in consumer prices), and estimated on a centred three-year moving window. The geographical volatility (green line) is measured by ±1 standard deviation (of contemporaneous inflation across euro area countries) around the shaded area.

Sources: National data; BIS calculations. Graph II.9

have indeed fallen significantly since the mid-1990s in SDR terms. Attention has focused on China (see Chapter III), given that its share of world trade has more than doubled in the past decade. However, China still accounts for only around 5% of world trade. Moreover, in a world of low inflation, declining prices for tradable goods should not necessarily be interpreted as a source of worrisome deflation. In fact, it is the most desirable way in which the benefits of divergent productivity developments can be transmitted over time between international trading partners as well as across sectors within individual countries. This is not to deny that the sectors affected might have great difficulty in coping with a sudden need for adjustment.

... and, in the euro area, inflation differentials

A final source of relative price changes with potential deflationary implications concerns the euro area. While inflation differentials across member countries are much lower than in past decades, they remain significant in relative terms (Graph II.9). It is thus alleged that a low inflation target for the euro area as a whole could force countries with low growth into recession and possibly deflation. This would then feed back on their real interest rates if nominal rates are fixed for the area as a whole. While these risks have to be carefully weighed in view of low labour mobility inside the euro area, they should not be overstated. As noted above, divergences in both the level and change of prices are relatively common within countries because prices are slow to adjust. In addition, countries with lower costs than their neighbours see an improvement in their competitiveness.

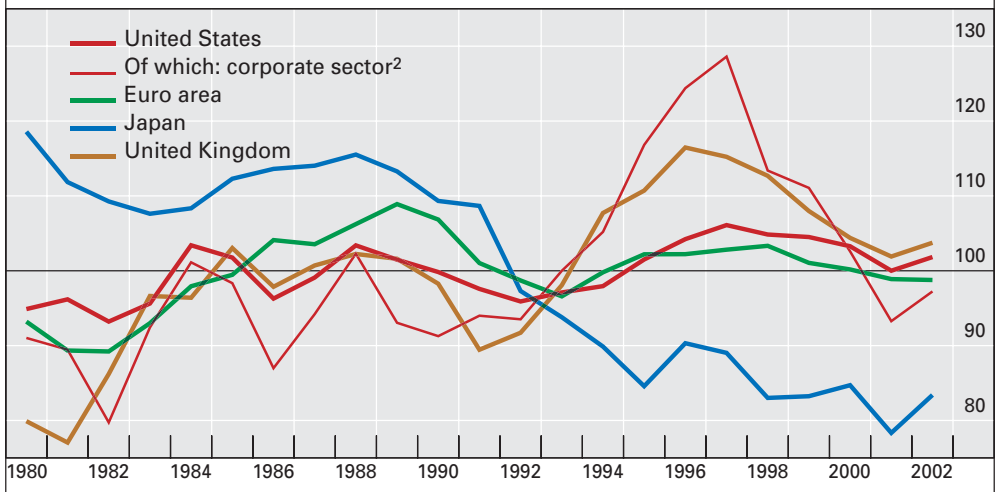
### *Profit margins and firms' pricing power*

Corporate profits improved in 2002 ...

Profits have followed strikingly different patterns across major industrial countries in recent years. In Japan, despite a sharp deceleration in unit labour costs, the profit share – defined as the ratio of property and entrepreneurial income to GDP – experienced a steady decline in the 1990s and recovered only modestly in 2002 (Graph II.10). This ratio held up better in the euro area in the past decade but has deteriorated somewhat recently. Cyclical

## Profit shares[1]

1980–2002 = 100




[1] Property and entrepreneurial income/GDP (whole economy). [2] Corporate profit/business GDP.

Sources: National data; BIS calculations. Graph II.10

developments weighed on productivity, and European wages were relatively sticky. Developments have been more volatile in the US corporate sector, whose share of national income improved dramatically in the early 1990s, peaking at a relatively high level in 1997. It rapidly decreased thereafter, disappointing prevailing market expectations. Intense cost cutting led to some improvement in 2002 and the US corporate profit share now stands only slightly below its average for the past two decades. Within this aggregate, profit shares in services and retail trades have been relatively stable in recent years. In contrast, corporate profit shares in manufacturing industries have generally fallen markedly, under the influence of international competition.

## Unit labour costs, productivity and profits

Average annual changes[1]

| | | Labour compensation[2] | Labour productivity[2] | Unit labour costs | Profit margin[3] | Labour share[4] | Real labour compensation[2, 5] |
|---|---|---|---|---|---|---|---|
| United States | 1981–1990 | 5.4 | 1.3 | 4.0 | 0.2 | –0.1 | 0.9 |
| | 1991–2000 | 3.7 | 1.5 | 2.2 | –0.1 | 0.1 | 1.4 |
| | 2001–2003 | 3.0 | 1.7 | 1.3 | 0.4 | –0.2 | 1.2 |
| Euro area | 1981–1990 | 7.3 | 1.7 | 5.5 | 0.7 | –0.4 | 1.1 |
| | 1991–2000 | 3.7 | 1.4 | 2.3 | 0.3 | –0.2 | 0.8 |
| | 2001–2003 | 3.1 | 0.7 | 2.4 | –0.2 | 0.2 | 1.0 |
| Japan | 1981–1990 | 4.4 | 2.8 | 1.5 | 0.4 | –0.2 | 2.3 |
| | 1991–2000 | 1.6 | 1.1 | 0.5 | –0.4 | 0.2 | 1.2 |
| | 2001–2003 | –1.1 | 0.8 | –1.8 | 0.0 | –0.3 | 0.5 |

[1] In percentages; for labour share, in percentage points; for 2003, forecasts. [2] Per employed person. [3] Defined as the ratio of the GDP deflator to unit labour costs. [4] Defined as the ratio of compensation of employees to GDP. [5] Deflated by the private consumption deflator.

Source: OECD. Table II.2

... despite lack of pricing power in manufacturing

These developments also suggest that firms worldwide have seen their pricing power constrained. This has been particularly evident in Japan, where companies have reduced nominal wages but have had to cut prices even more since the early 1990s (Table II.2). In the United States, high productivity gains helped to limit increases in unit labour costs in the 1990s, but the overall effect on profits was muted. Price adjustments have been constrained by increasingly competitive product markets, especially in newly deregulated sectors such as telecoms, and until recently by the strength of the dollar. Profit margins have nonetheless held up better in the past few years, as US unit labour costs have decelerated sharply and even decreased in 2002.

## The fiscal debate

Deteriorating fiscal positions partly reflect discretionary fiscal policy

Budget deficits have widened in recent years. This followed a decade of fiscal consolidation in all major countries but Japan. The average government deficit was 3% of GDP in 2002 across OECD countries, compared to a balanced budget in 2000. The gross public debt/GDP ratio reached 75% in 2002, up from about 60% 15 years earlier. This recent deterioration has in part reflected slow global growth and the impact of declining financial asset prices. Another important factor has been discretionary measures, especially tax cuts in the United States and some European countries. Geopolitical developments have also increased expenditure on military equipment and on security, partly reversing the "peace dividend" of the 1990s. More fundamentally perhaps, the use of the fiscal tool has been seen as a quick and predictable way of countering the economic slowdown.

Automatic stabilisers should be allowed to work

Views about the effectiveness of fiscal policy for countercyclical purposes differ widely. Most observers agree that government budgets have a natural tendency to smooth cyclical developments and that so-called "automatic stabilisers" should be allowed to work, particularly in countries without excessive government debt. Greater than average government borrowing during recessions would be offset by reduced borrowing or even debt repayments during periods of more rapid growth. Public spending seems indeed to have moved countercyclically in the main OECD countries (Table II.3). On the revenue side, however, the impact of automatic stabilisers has been less obvious: for instance, tax receipts have often shown a procyclical bias, such as a tendency in Europe to decrease rather than increase during economic upturns because of the adoption of tax cuts.

Discretionary fiscal policy has certain limitations ...

The use of discretionary fiscal stimulus measures remains more controversial. Such measures could put upward pressure on long-term rates and so weaken private investment, especially if they are not accompanied by a credible medium-term framework. A second obstacle to the effectiveness of discretionary fiscal policy has to do with the existence of various lags: the time taken to assess current developments, to decide on policy actions, to implement the measures agreed, and then for the policies to work. Hence, measures originally aimed at stabilising a swing in output could well have their full effect only after the economy had already begun to move in the opposite direction. The broad historical record in OECD countries

| Fiscal indicators and the cycle[1] | | | | |
|---|---|---|---|---|
| | Public spending | Public revenue | Budget balance | Fiscal stance[2] |
| United States | –0.31** | 0.12** | 0.46** | 0.26** |
| Japan | –0.06 | 0.11* | 0.16* | 0.06 |
| Germany | –0.13 | –0.01 | 0.14 | –0.18** |
| France | –0.17 | –0.11 | 0.17 | –0.05 |
| United Kingdom | –0.41** | –0.13* | 0.20* | –0.09 |
| Italy | –0.35* | –0.08 | 0.11 | –0.08 |

Note: The table shows the elasticity ($\beta_2$) estimated by the equation $X = \alpha + \beta_1 X_{-1} + \beta_2 GAP$, where $X$ is defined as public spending, public revenue, budget balance or fiscal stance, all expressed as a percentage of GDP, and *GAP* is the output gap, as a percentage of potential GDP; * and ** indicate significance levels of 90% and 99% respectively. Public spending moves countercyclically when the elasticity is negative (but positive for the other three indicators).

[1] 1972–2002. [2] Defined as cyclically adjusted general government primary balance.

Sources: OECD; BIS calculations. Table II.3

is that, on average, discretionary changes in the fiscal stance – as measured by the structural primary budget balance – do not seem to have moved countercyclically over the last few decades. This could underscore the rather poor inherent capacity of active fiscal policy to smooth output developments. Alternatively, it could be the case that fiscal measures were rarely undertaken for countercyclical purposes.

... but could be useful under special circumstances

Despite these important limitations, there might nonetheless be some scope for budgetary actions in specific circumstances. First, the impact of temporary fiscal expansion on interest rates should be relatively small, as long as such measures are expected to be reversed when conditions warrant. In this case, concerns about future inflationary pressures and government borrowing needs would remain limited. Second, fiscal policy might be useful in addressing marked balance sheet problems in the private sector. Government recapitalisation of weak banking systems is one example. A less extreme case is the tax cuts enacted by the present US administration that helped households to increase their saving rate in 2002. Tax cuts for business also helped the US corporate sector to reduce its large financing gap (ie the difference between capital spending and cash flow). Third, extreme circumstances could call for policy responses that would not be advisable in normal times. The use of fiscal policy could well prove helpful in restoring confidence after abnormal disruptions (eg acts of terrorism, geopolitical risk, etc), or in managing expectations to avoid worst case scenarios. From this perspective, some observers have argued that the recent swing towards larger deficits has helped avoid a slump in demand that would otherwise have been triggered by a correction of the imbalances built up during the expansion of the late 1990s. On this view, any overly rapid reversal of fiscal stimulus would also delay a recovery in investment.

Confidence in fiscal sustainability ...

Yet maintaining confidence in the longer-term sustainability of fiscal positions remains key. The quality of expenditure is important in this regard. Budget deficits that reflect high levels of investment in infrastructure or human capital often leave countries better prepared for tomorrow than deficits that encourage consumption. Tax cuts that reduce distortions also

raise the rate of potential growth. In assessing the present stance of policy it should also be remembered that budget projections have often shown a tendency towards "official optimism"; initial fiscal positions could well be less healthy than currently estimated. Moreover, past government commitments, as well as the impact of an ageing population, represent sizeable future liabilities that may be even higher than current measures of public debt in some countries.

... requires a medium-term framework

For all these reasons, fiscal policy requires a credible medium-term framework. During the 1990s a number of countries introduced rules designed to enhance fiscal discipline. Many countries adopted ceilings for public expenditure, budget balances or debt. In the United States, nominal caps were imposed on discretionary public spending. The adoption of clear fiscal criteria in the Maastricht Treaty reinforced the reduction of public deficits throughout the European Union. In Japan, where no formally binding rules were adopted, the definition of medium-term guidelines may have been helpful in containing long-term interest rates at very low levels despite sharply increasing public debt.

Fiscal rules have been relaxed ...

Many of these rules incorporated short-term rather than medium-term commitments. Moreover, the rules were often specified in absolute terms, irrespective of the business cycle or the possibility of exogenous shocks. These deficiencies made it tempting to relax the rules in adverse circumstances, or even to abandon them altogether. Such tendencies have been particularly evident in Japan recently, and in the United States, where constraints on spending have been eased in the last few years. In the euro area, the framework of the Stability and Growth Pact is more medium-term oriented. However, by focusing on current fiscal deficits, which were improving during good times, several countries failed to take the even tougher measures required to improve their underlying debt position. Efforts at fiscal consolidation in some countries were often paid for by cuts in investment rather than lower subsidies.

... but remain desirable

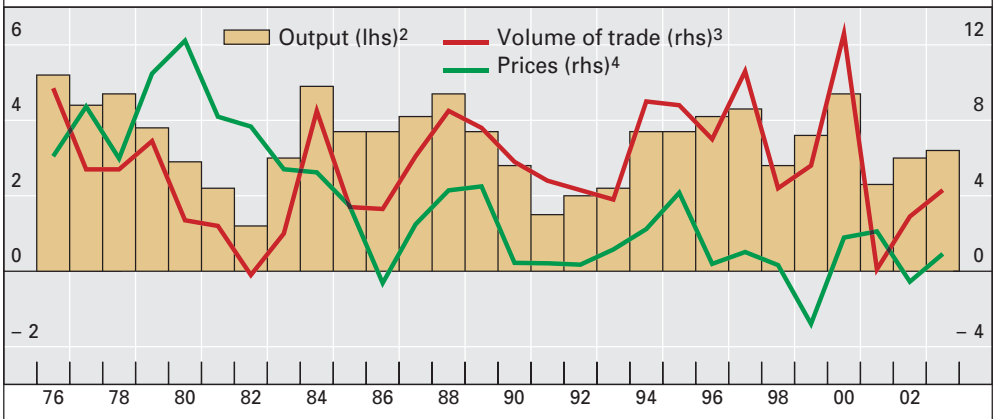
Rules that bind fiscal policy by a credible medium-term guideline would provide several advantages. First, the tendency for interest rates to rise will be reduced if it is clear that any short-term fiscal measure will subsequently be reversed. Second, guidelines can also counter pressure on governments to "give away" budget surpluses during periods of strong growth. Third, a medium-term framework helps to build room for manoeuvre – an issue of particular interest in currency areas in the face of asymmetric shocks. Finally, rules improve transparency and reduce uncertainty. This can foster better coordination amongst policymakers as well as within private markets.

## Trade and current account developments

Over the last three years, movements in world trade appear to have been dominated by changes in high-tech investment and inventories, both of which are highly trade intensive. The end of destocking in the United States early last year increased trade. However, the revival proved short-lived, as firms were reluctant to expand inventories and continued to reduce

## World output, trade and prices[1]

Annual percentage changes




[1] For 2003, forecasts. [2] Real GDP. [3] Goods and services. [4] Average of export and import unit values, manufactured goods, in OECD countries.

Sources: IMF; OECD. Graph II.11

investment. The slow global recovery was also reflected in the prices of internationally traded manufactured goods, which were basically flat last year (Graph II.11).

Widening current account imbalances

Current account imbalances in the industrial countries widened significantly in 2002. The US deficit increased to almost 5% of GDP while Europe and, even more so, Japan recorded significant surpluses, partly reflecting their disappointing growth performance. For the United States, a larger trade deficit was the main factor but, for the first time since World War I, the net annual investment income account also showed a deficit.

Sharp decline in FDI flows to the United States

More than half of the *external* counterparts to the US current account deterioration in 2002 were found in emerging Asia and Latin America. Emerging Asia increased its share of global trade as well as its current account surplus. In Latin America, the lower deficit was mainly the result of import compression (see Chapter III). In addition, there were significant changes in the size and composition of capital flows between the three major economic areas. As the investment boom faded, equity prices declined

## Balance of payments in the three major economic areas

In billions of US dollars

| | United States | | | Euro area | | | Japan | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 |
| Current account | –410 | –393 | –503 | –70 | –17 | 60 | 119 | 89 | 112 |
| Net long-term capital | 422 | 335 | 285 | –113 | –22 | 53 | –35 | –73 | –142 |
| Direct investment | 129 | 3 | –93 | –5 | –92 | –43 | –23 | –32 | –23 |
| Equities | 90 | 15 | 35 | –228 | 110 | 46 | –21 | 28 | –54 |
| Bonds | 203 | 317 | 343 | 120 | –40 | 50 | 9 | –69 | –65 |
| Basic balance[1] | 12 | –58 | –218 | –183 | –39 | 113 | 84 | 16 | –30 |

[1] Current account plus net long-term capital.

Sources: ECB; national data. Table II.4

and US firms reduced their financing gap, contributing to a sharp fall in direct investment flows to the United States (Table II.4). This impact was compounded in dollar terms by the depreciation of the US currency. Moreover, larger bond inflows increasingly reflected purchases of US Treasury and government agency paper rather than corporate securities. Last year also saw the euro area emerge as a net recipient of capital flows, as net FDI outflows declined and an earlier net outflow of bonds was reversed (see Chapter V).

*Recent trends in global saving*

Major shifts in the suppliers and users of saving

Since the mid-1990s major shifts in the position of countries or regions as suppliers or users of saving have accounted for the continued widening of current account imbalances (Table II.5). The proportion of global saving needed to finance the US external imbalance has more than tripled since 1997. In contrast, emerging market economies have become net suppliers of saving, with the change in emerging Asia being particularly impressive: following the 1997–98 crisis, the current account balance strengthened by more than 5% of GDP within just two years. Together with Europe, the Asian region (including Japan) covered two thirds of the US financing gap in 2002. However, because of the global current account discrepancy, not all sources of global saving can be accounted for. The discrepancy had almost disappeared by 1997 but it has since moved back towards the level of almost ½% of world GDP recorded 10 years ago.

Significant decline in the global saving ratio ...

Several factors have been at work in shaping changes in the supply and use of saving and the related dynamics of current account imbalances. Saving ratios have tended to fall in recent years, partly due to the general slowdown since 2000.

... with an especially sharp fall in Japan ...

The most dramatic changes can be observed in Japan. Over the last 10 years, Japan's national saving rate has fallen by more than 7 percentage points to 26½%, representing a major factor behind the reduction in the global saving ratio. Moreover, since Japan's saving propensity has remained above the world average, the shift in the distribution of global income away from Japan has reduced the global saving ratio further. As a major aspect of this trend, developments in the United States have had a negative impact on the

## Current account balances, saving and GDP

In percentages

| | Current account balance[1, 2] | | | Saving[1, 3] | | | GDP[4] | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1997 | 2002 | 1992 | 1997 | 2002 | 1992 | 1997 | 2002 |
| United States | –0.8 | –1.5 | –4.8 | 16.5 | 18.4 | 13.8 | 26.5 | 28.2 | 32.5 |
| Euro area | –1.2 | 1.6 | 1.1 | 20.5 | 21.9 | 21.2 | 26.5 | 22.1 | 20.7 |
| Japan | 2.9 | 2.2 | 2.8 | 33.7 | 30.8 | 26.5 | 15.9 | 14.6 | 12.4 |

[1] As a percentage of national or regional GDP. [2] For the euro area, sum of individual countries. [3] Defined here as the sum of investment and current account balance. [4] National or regional GDP in US dollar terms as a percentage of world GDP.

Sources: IMF, *World Economic Outlook*; national data. Table II.5

global saving ratio. A lower US propensity to save (particularly over the last two years) has coincided with a shift in the distribution of income in advanced industrial countries in favour of the United States. While developments in Europe have been more or less neutral, the shift in the distribution of world GDP in favour of high-saving emerging Asian countries has partly offset the impacts from Japan and the United States. Latin America has seen relatively small changes and remains a low-saving region.

... but a rising contribution from emerging Asia

As a result of the developments discussed above, the United States has increased its reliance on global saving in the past decade. Emerging Asia has increasingly become an exporter of capital and now contributes more to global saving than Japan.

*Near-term prospects*

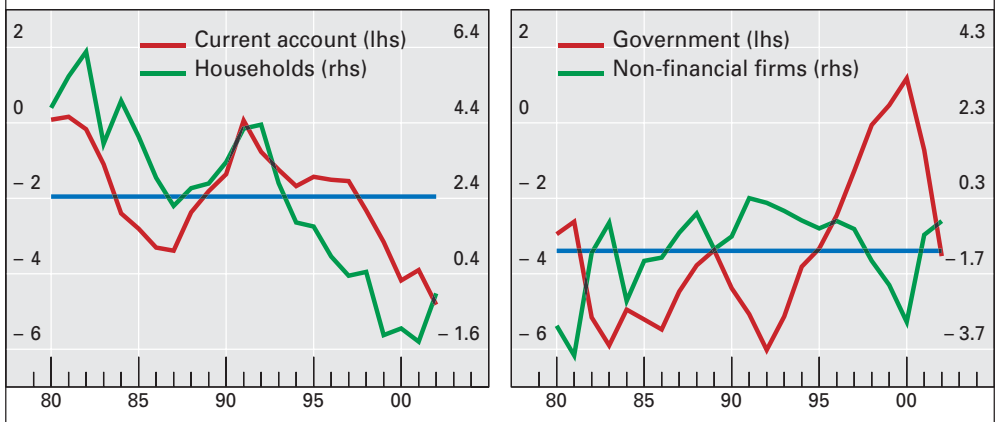
The widening US current account deficit since the mid-1990s ...

On the assumption that the United States will continue to grow faster than other industrial countries in the near future, most forecasters now predict a further widening of the US current account deficit and a concomitant rise in net foreign debt. This raises the question of sustainability as well as of the external adjustments and exchange rate movements which could take place in consequence (see Chapter V). Such developments would by definition be accompanied by changes in domestic counterparts to the current account deficit.

As mentioned earlier, both households and non-financial firms in the United States have managed to improve their financial balances during the last two years. In contrast, the government budget balance has worsened significantly so that the fiscal deficit accounted for nearly three quarters of the external deficit last year. Indeed, recalling developments during some years in the 1980s, when fiscal and external deficits increased in parallel, some observers have expressed concerns about an emerging "twin deficit" problem for the United States. The implication would be that a reduction in the external deficit requires an improvement in the fiscal balance.

US sectoral financial balances

As a percentage of GDP




Note: The blue lines represent the 1980–2002 means of the respective financial balances.

Source: National data.

Graph II.12

... has, in particular, reflected declining household saving

Developments in the household saving rate are also crucial as they affect both the current account and the government balance. This was evident during the second half of the 1980s: a significant increase in household saving led to a narrowing of the current account deficit in the United States, while the structural government deficit remained broadly unchanged at relatively high levels. The impression that household saving (or consumption) has been an important factor behind developments in the current account in the United States is even stronger for the 1990s (Graph II.12). Between 1991 and 2000, the financial balance of the US household sector worsened by nearly 5 percentage points of GDP. In response, the current account balance went from a small surplus to a deficit of 4% of GDP while the fiscal balance shifted from a large deficit (–5%) to a small surplus (1%). Since then, the household financial balance has improved somewhat but remains significantly below its long-run average, while the current account deficit has increased further.

Lower fiscal deficits would be helpful in reducing the current account imbalance – but a markedly smaller US fiscal deficit seems unlikely in the context of recent and proposed tax cuts and increased government expenditure on both defence and domestic security. In addition, the financial deficits of non-financial firms are not far from their averages for the last 20 years. Prima facie, this would seem to limit the possibilities for a major adjustment from this source. In any event, much lower business investment as a key to current account adjustment would seem counterproductive in terms of future growth prospects. This analysis implies that, over the longer run, a sustainable reduction in the US current account deficit may need to be associated with a higher household saving rate.

Stable current account positions in the euro area and Japan

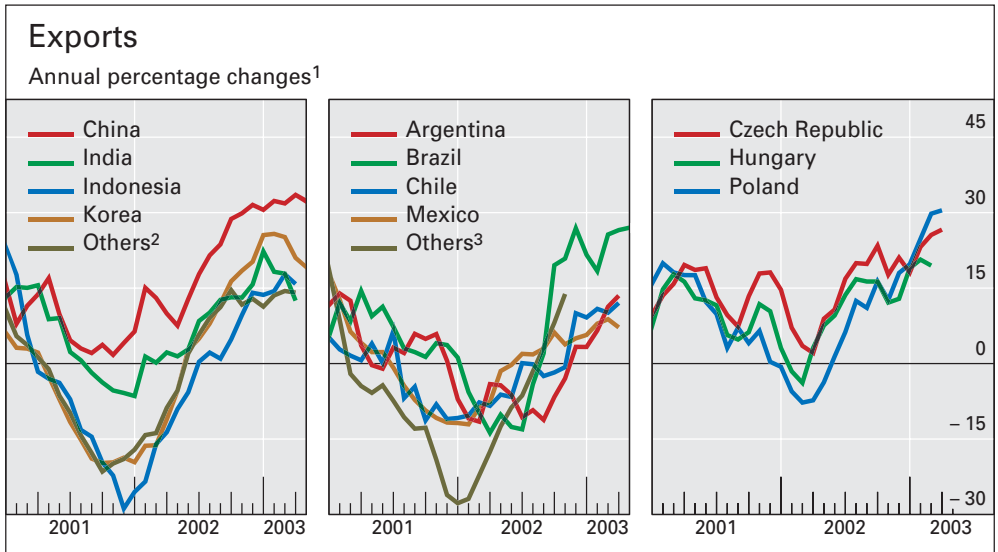
In the past five years, growing US current account deficits have been almost "matched" by the rise in the global current account discrepancy and the accumulation of current account surpluses in emerging market economies, especially in Asia. By contrast, current account positions in Japan and the euro area have not changed significantly over the last five years. The external position of the euro area has remained almost in balance, although recording a somewhat higher current account surplus in 2002 as net private sector saving more than offset increased dissaving by the public sector. In Japan, the current account surplus – appreciably larger than in the euro area – has also been rather stable since the mid-1990s. This stability has reflected a combination of significant adjustment in the corporate sector, in particular reduced investment, counterbalanced by a substantial decline in the household saving rate. The government deficit also widened considerably in the course of the 1990s but has essentially stabilised at very high levels in the past few years.

# III. Developments in the emerging market economies

## Highlights

The moderate but uneven recovery in developed economies in 2002 was associated with sharp divergence in the growth rates of emerging economies. This reflected differences in demand as well as external financing constraints. Relatively robust growth in Asia and central and eastern Europe (CEE) was underpinned by a broad recovery in exports in 2002 (Graph III.1, Table III.1), notwithstanding the modest pace of activity in developed economies. Export growth in Asia, while boosted throughout by demand from China, slowed in early 2003. In CEE, export growth was supported by sales to a wider range of countries. In contrast, financing constraints contributed to slower or negative growth, import compression and reductions in current account deficits in Latin America (Table III.1). However, exports began to raise growth in the region in the second half of 2002, in the wake of large real currency depreciations. External financing conditions also improved in the last quarter of 2002 and continued to do so in the first quarter of 2003.

The consensus forecast is that growth should recover modestly in Latin America, based on expectations that exports will continue to grow and that the recent easing in external financing conditions will be sustained. However, persistent geopolitical uncertainty and the spread of the SARS virus have led to a significant weakening in Asia. In contrast, growth is expected to rise in CEE and Africa (Tables III.1 and III.8).




[1] Three-month moving averages, in US dollar terms. [2] Malaysia, the Philippines, Singapore, Taiwan (China) and Thailand. [3] Colombia, Peru and Venezuela.

Sources: IMF, *International Financial Statistics*; national data. Graph III.1

## Output growth, inflation and current account balance

| | Real GDP[1] | | | Consumer prices[1] | | | Current account balance[2] | | |
|---|---|---|---|---|---|---|---|---|---|
| | Average 1998–2001 | 2002 | 2003 | Average 1998–2001 | 2002 | 2003 | Average 1998–2001 | 2002 | 2003 |
| Asia[3] | 5.4 | 6.2 | 5.8 | 2.8 | 1.1 | 2.1 | 3.7 | 2.9 | 1.9 |
| China | 7.5 | 8.0 | 7.2 | –0.3 | –0.7 | 0.4 | 2.1 | 2.1 | 1.1 |
| Hong Kong SAR | 2.0 | 2.2 | 1.7 | –1.7 | –3.0 | –2.2 | 4.1 | 9.7 | 10.5 |
| India | 5.5 | 4.4 | 5.8 | 5.2[4] | 2.3[4] | 4.9[4] | –0.8 | 0.7 | 0.3 |
| Indonesia | –1.7 | 3.7 | 3.5 | 21.9 | 11.9 | 8.2 | 4.6 | 4.1 | 3.0 |
| Korea | 3.9 | 6.3 | 4.2 | 3.6 | 2.8 | 3.5 | 5.3 | 1.3 | 0.2 |
| Malaysia | 1.7 | 4.1 | 3.8 | 2.7 | 1.8 | 1.6 | 11.5 | 7.7 | 6.8 |
| Philippines | 2.6 | 4.6 | 3.6 | 6.7 | 3.1 | 3.9 | 7.8 | 5.7 | 3.3 |
| Singapore | 3.2 | 2.2 | 2.1 | 0.7 | –0.4 | 0.8 | 21.0 | 21.5 | 20.9 |
| Taiwan, China | 3.4 | 3.5 | 2.9 | 0.8 | –0.1 | 0.1 | 3.4 | 9.1 | 6.6 |
| Thailand | –0.1 | 5.2 | 4.2 | 2.9 | 0.5 | 1.9 | 9.0 | 6.1 | 4.7 |
| Latin America[3] | 1.7 | –0.6 | 1.5 | 7.7 | 9.4 | 10.3 | –3.1 | 0.2 | 0.1 |
| Argentina | –1.0 | –10.9 | 4.6 | –0.6 | 25.9 | 12.7 | –3.6 | 8.8 | 7.1 |
| Brazil | 1.7 | 1.5 | 1.9 | 5.5 | 8.4 | 12.2 | –4.4 | –1.7 | –0.8 |
| Chile | 2.8 | 2.1 | 3.4 | 4.0 | 2.4 | 3.2 | –2.2 | –0.8 | –1.0 |
| Colombia | 0.2 | 1.5 | 2.2 | 12.3 | 7.2 | 6.4 | –1.4 | –1.8 | –2.5 |
| Mexico | 3.7 | 0.7 | 2.2 | 11.6 | 5.1 | 4.2 | –3.1 | –2.2 | –2.5 |
| Peru | 1.1 | 5.2 | 4.0 | 4.1 | 0.2 | 2.4 | –3.5 | –2.0 | –2.0 |
| Venezuela | –0.0 | –8.9 | –13.7 | 21.7 | 22.4 | 44.7 | 3.9 | 9.6 | 8.6 |
| CEE[5] | 2.8 | 3.5 | 3.7 | 12.3 | 6.1 | 5.4 | –4.8 | –4.1 | –4.2 |
| Czech Republic | 1.4 | 2.0 | 2.5 | 5.3 | 1.8 | 0.9 | –3.7 | –5.3 | –5.6 |
| Hungary | 4.5 | 3.3 | 3.5 | 10.8 | 5.3 | 4.8 | –3.5 | –4.0 | –4.7 |
| Poland | 3.5 | 1.3 | 2.8 | 8.6 | 1.9 | 1.2 | –5.5 | –3.6 | –3.6 |
| Russia | 3.9 | 4.3 | 4.8 | 36.6 | 16.3 | 13.3 | 10.2 | 9.5 | 7.4 |
| Turkey | –0.6 | 7.8 | 3.8 | 64.3 | 45.0 | 28.1 | –0.8 | –1.0 | –1.8 |
| *Memo: G7 countries* | *2.5* | *1.6* | *1.7* | *1.8* | *1.3* | *1.8* | *–1.0* | *–1.5* | *–1.6* |

Note: Figures for 2003 are based on May consensus forecasts and IMF, *World Economic Outlook*.

[1] Annual percentage changes. [2] As a percentage of GDP. [3] Weighted average of the countries shown, based on 2000 GDP and PPP exchange rates. [4] Wholesale prices. [5] Simple average of Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia.

Sources: IMF; OECD; © Consensus Economics; national data; BIS estimates. Table III.1

Large budget deficits in several CEE countries represent a major challenge, particularly in view of EU accession. A number of Latin American countries also face difficult policy issues. In some countries, high and rising debt burdens require fiscal adjustment. In others, the main task will be to contain rising inflation expectations, particularly where inflation targets have recently been breached. In both respects, the room available to stimulate domestic demand in the face of negative shocks will be very limited.

## Balance of payments developments

Surpluses and capital flows grew in Asia ...

The current account surpluses of emerging market economies as a group increased by $30 billion in 2002. Surpluses in Asia rose sharply, while in Latin America deficits fell. At the same time, private capital flows to emerging

economies more than doubled (Table III.2). Capital inflows rose in Asia and the transition economies (including the Commonwealth of Independent States and Mongolia), although they fell sharply in Latin America, leading to significant external financing constraints for a number of economies in the region.

... as did foreign reserves

The main counterpart of larger current account surpluses and increased capital inflows was a substantial rise in international reserves in emerging markets, of $90 billion. Reserves in Asia nearly doubled to $167 billion in 2002 (Table III.2). In contrast, there was almost no change in foreign reserves in Latin America. This is broadly in line with trends since the Asian crisis of 1997. Among the Asian countries listed in Table III.1, the median ratio of foreign reserves to GDP increased from 12% in 1996 to 26% in 2002. Reserves calculated on a similar basis for Latin America remained unchanged at 10%. Reserve accumulation is the outcome of diverse macroeconomic forces and policies; few central banks have an explicit target for reserves. Nevertheless, the large accumulation of foreign reserve holdings in Asia appears to reflect efforts by Asian monetary authorities to limit exchange rate fluctuations and reduce economic vulnerability.

## Balance of payments in emerging economies[1]

In billions of US dollars

| | Average 1995–96 | Average 1997–2000 | 2001 | 2002 |
|---|---|---|---|---|
| Current account balances | 92 | 9 | 84 | 114 |
| Asia | –34 | 77 | 78 | 102 |
| Latin America | –39 | –65 | –53 | –17 |
| Transition economies | –9 | –8 | 12 | 10 |
| Middle East and Turkey | 1 | 15 | 48 | 26 |
| Africa | –11 | –9 | –0 | –8 |
| Private capital flows | 218 | 69 | 39 | 86 |
| Asia | 111 | –11 | 16 | 70 |
| Latin America | 52 | 56 | 35 | 2 |
| Transition economies | 36 | 14 | 21 | 34 |
| Middle East and Turkey | 9 | 1 | –38 | –25 |
| Africa | 11 | 10 | 6 | 6 |
| Changes in reserves[2] | –114 | –79 | –119 | –209 |
| Asia | –45 | –53 | –85 | –167 |
| Latin America | –26 | 0 | 1 | –1 |
| Transition economies | –21 | –9 | –18 | –31 |
| Middle East and Turkey | –17 | –11 | –5 | –8 |
| Africa | –5 | –6 | –12 | –1 |
| *Memo: Private capital flows by type* | *218* | *69* | *39* | *86* |
| *Foreign direct investment* | *102* | *148* | *171* | *139* |
| *Portfolio investment* | *72* | *26* | *–39* | *–37* |
| *Other*[3] | *44* | *–105* | *–93* | *–17* |

Note: Official financing is not included.

[1] Includes developing countries, Israel, Korea, Singapore and Taiwan (China), but not Hong Kong SAR. [2] A negative value indicates an increase in reserves. [3] Includes banking flows.

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

Conditions in developed markets influenced flows ...

The direction of capital flows partly reflected conditions in developed financial markets, where ample liquidity, in the form of low policy interest rates, was countered for much of the period by declining investor risk appetite (see Chapter VI). This led, from mid-2002, to a widening in the spreads on high-yield and sovereign bonds, a trend that reversed towards the last quarter of 2002 as the cost of sovereign financing eased significantly.

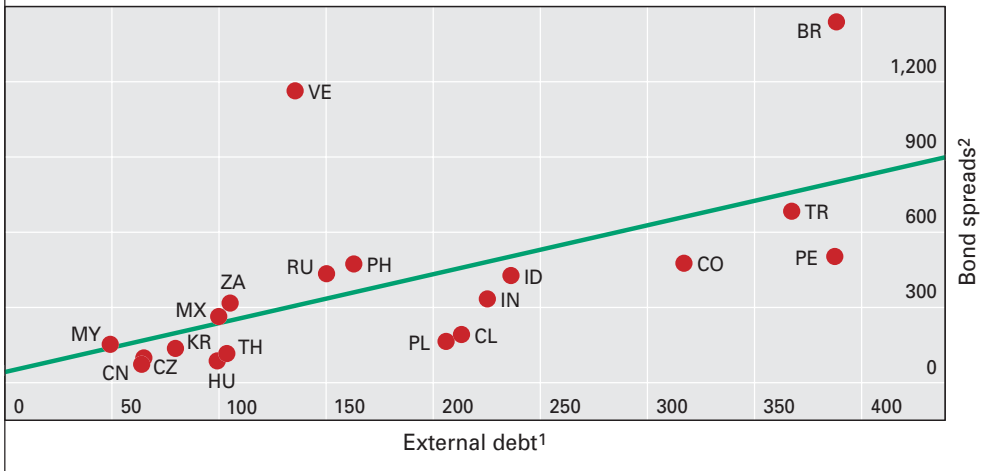
... as did domestic fundamentals

Although the changes in sentiment in international financial markets were a common driving factor, it was the fundamentals of the domestic economy that determined the magnitude of the spreads on a particular country's bonds. Concerns about external debt sustainability were particularly important: average spreads on international bonds in 2002 were positively related to the ratio of external debt to exports (Graph III.2). Brazil and Venezuela were outliers, with much higher spreads that primarily reflected growing political uncertainty. The sharp rise in Brazilian spreads began in May 2002, about a month before spreads widened in the US high-yield bond market. However, Brazilian spreads began showing a downward trend in the last quarter of 2002, as a newly elected administration took steps to reassure investors of its intention to pursue prudent policies. In Venezuela, spreads remained high because of continuing uncertainty about government policies and disruptions in oil production.

FDI also reflected fundamentals

The direction of foreign direct investment (FDI) and other flows also reflected country-specific fundamentals. Most of the FDI flows to East Asia (some from other East Asian economies) were concentrated in China, attracted by the opportunities offered by WTO accession and China's transformed role in the world economy. There were also sharp increases in other flows to Asian countries, partly reflecting a drawdown in their deposits with international banks. These funds may have found more profitable use within the rapidly growing Asian region. The opportunities offered by accession to the European Union also increased FDI in the economies concerned. Reduced growth and profit opportunities contributed to lower FDI in Latin America.

## Bond spreads and external debt




BR = Brazil; CL = Chile; CN = China; CO = Colombia; CZ = Czech Republic; HU = Hungary; ID = Indonesia; IN = India; KR = Korea; MX = Mexico; MY = Malaysia; PE = Peru; PH = Philippines; PL = Poland; RU = Russia; TH = Thailand; TR = Turkey; VE = Venezuela; ZA = South Africa.

[1] As a percentage of exports; 2001. [2] Over benchmark US Treasury bonds, in basis points; 2002 average.

Sources: Datastream; IMF. Graph III.2

## Asia

Growth exceeded expectations in Asia ...

Growth in most Asian economies in 2002 exceeded expectations. It increased in both China and Korea and resumed in Hong Kong SAR (hereafter, Hong Kong) and Malaysia, while large output declines were reversed in Singapore and Taiwan, China (hereafter, Taiwan). Growth was also strong in Thailand, the Philippines and Indonesia. In contrast, India's growth slowed somewhat, as a drought depressed agricultural production. The regional recovery was led by domestic demand supported by expansionary policies (Table III.3), as well as a strong recovery in exports during part of 2002.

... but uncertainty increased

Uncertainty about the outlook for Asia increased in the first quarter of 2003, following signs of weakness in external demand. It was greatly accentuated in April and May by the spread of severe acute respiratory syndrome (SARS) in China, Hong Kong and some other economies in Asia. Finally, growth prospects in South Korea were affected by tensions with North Korea and the failure of a major conglomerate with spillover effects on the financial sector.

In China private spending rose ...

Notwithstanding the uncertainty, China grew very rapidly in the first quarter of 2003, reflecting continued public spending on infrastructure, as well as strong increases in private consumption and investment spending. Private investment was stimulated by the increase in foreign investment flows following China's accession to the WTO in 2001. At the same time, rising urban incomes spurred household expenditures on high-value consumer durables and services. Such spending boosted industrial production in the first quarter of 2003, while a sharp increase in exports also contributed to the expansion.

... while high-tech exports grew in India

In India, a decline in agricultural output lowered growth to a little below 4½% last year, even as the industrial sector staged a recovery and domestic demand remained strong. Exports of goods and services were boosted by very fast growth in software output, and by the expanded outsourcing to India of information technology (IT) and business services. Together with rising non-resident remittances, services exports contributed to a current account surplus

### Asia: domestic demand (DD) and net exports (NEX)

Percentage contribution to GDP growth

| | China | | Hong Kong SAR | | India | | Indonesia | | Korea | |
|---|---|---|---|---|---|---|---|---|---|---|
| | DD | NEX | DD | NEX | DD | NEX | DD | NEX | DD | NEX |
| 1996–2000 | 7.5 | 0.8 | 1.5 | 1.9 | 7.0 | –1.2 | –0.6 | 1.4 | –0.4 | 4.9 |
| 2001 | 7.3 | 0.0 | 0.8 | –0.2 | 5.3 | 0.1 | 4.9 | –1.5 | 1.7 | 1.6 |
| 2002 | 7.3 | 0.7 | –1.3 | 3.6 | 4.5 | –0.2 | 1.9 | 1.8 | 4.5 | 2.0 |
| | Malaysia | | Philippines | | Singapore | | Taiwan, China | | Thailand | |
| | DD | NEX | DD | NEX | DD | NEX | DD | NEX | DD | NEX |
| 1996–2000 | –0.3 | 4.9 | 2.6 | 1.1 | 4.9 | 1.4 | 5.1 | 0.7 | –7.0 | 5.0 |
| 2001 | 0.1 | 0.3 | 5.2 | –2.0 | –6.3 | 3.9 | –4.9 | 2.7 | 1.8 | 0.1 |
| 2002 | 6.3 | –2.1 | 5.5 | –1.0 | –1.9 | 4.1 | 1.2 | 2.3 | 3.8 | 1.4 |

Sources: JPMorgan, *World Financial Markets*; national data. Table III.3

for the second year in a row. The government also introduced a number of important reform measures, which boosted investor confidence in the economy. These include the sale of some strategic companies to the private sector and laws to facilitate the recovery of bank loans.

Domestic demand led growth

Elsewhere in the region, domestic demand generally led growth in 2002 (Table III.3). In Korea, domestic demand was supported in the first half of the year by increased bank lending to the household and property sectors, but household spending has since slowed in the wake of policy tightening. Increased public and consumer spending also drove demand in Malaysia, the Philippines and Thailand. In Indonesia, consumer confidence rebounded following the resolution of some political uncertainties and the introduction of a number of important structural reforms. Stronger oil prices also boosted Indonesia's real income. In sharp contrast, the contribution of domestic demand to growth continued to be negative in Singapore and turned negative in Hong Kong. Both economies relied more on external demand to support recovery.

*Explaining disinflation and deflation*

Low inflation reflected the end of the regional boom ...

Average inflation in the region fell to 1.1% last year, well below the average in 1998–2001 (Table III.1). Deflation deepened in Hong Kong, and price declines reappeared in China and Singapore. India, the Philippines and Thailand also experienced among their lowest inflation rates in recent years. In some cases, downward pressures on prices seemed to be the result of such temporary factors as food prices. More generally, however, disinflation or deflation in a number of Asian economies could be seen as a by-product of the end of the regional economic boom of the 1990s, which was followed by persistent weakness in private demand. This may be partly the result of headwinds associated with financial strains in the wake of the Asian financial crisis, or capital overhangs from the rapid growth in capacity during the boom period.

... centred on property markets ...

In some economies property prices, which peaked in 1996–97, collapsed and depressed demand, leading to rising unemployment and disinflation. This effect was strongest in Hong Kong, which in addition faced other deflationary pressures. A slowdown in China's international trade affected activity in Hong Kong in 2001. Moreover, there was some tendency for prices to move towards the much lower prices in mainland China. Declines in property prices or rental values also occurred in some other Asian economies, such as Singapore and Thailand.

... and the high-tech sector

Capacity overhangs have also been a problem throughout the region, particularly in the high-tech sector. In many Asian economies, gross fixed investment fell sharply after 1997 and recovery in the years that followed was generally weak. In Singapore and Taiwan, currently experiencing mild deflation, the boom period was associated with surging exports in the high-tech sector which continued up to around 2000. The disinflationary impact of the collapse in demand in this sector in 2001 was significant, and the recovery since has been uneven. The hesitant recovery in the United States, persistent weakness in the Japanese economy and the continuing excess capacity in

the IT and telecommunications sectors have all played a restraining role. These economies have faced challenges in compensating for these factors by expanding their market shares in other sectors. In part this is because of the growing competitive challenge posed by China (see below).

Deflation in China is puzzling

Deflation in China is more puzzling. Massive increases in public expenditure and strong growth failed to trigger increases in the overall price level, particularly in manufacturing. One explanation is that deflation reflects excess capacity and a very elastic supply of low-cost labour. Excess capacity may also be the result of unprofitable state-owned enterprises that remain in production. The acquisition of technological and managerial know-how and improved skills associated with surging FDI has sharply increased productivity in China, and this also tends to lower prices. (Chapters II and IV provide additional perspectives on deflation.)

*Domestic demand growth in Asia*

Can policies support demand?

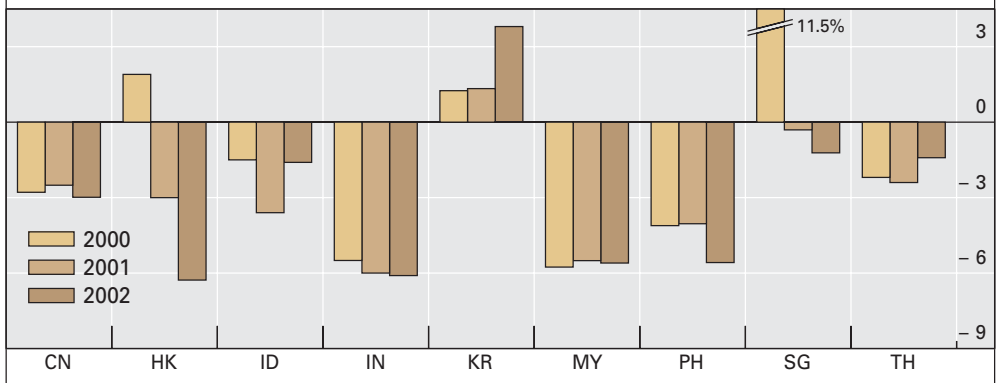
Asian economies have generally succeeded in increasing domestic demand, thanks not only to fiscal and monetary stimulus but also to a strong credit-financed expansion in household spending, including on housing, in a number of countries.

Fiscal stimulus has been important

Fiscal stimulus has been an important element of Asia's recovery from the crisis of the late 1990s. With the notable exception of Korea, economies in the region have run fiscal deficits since 2000 (Graph III.3). As a result of these developments, public debt ratios in some Asian economies have risen significantly since the mid-1990s (Table III.4). In India, Indonesia, the Philippines and to a lesser extent in Thailand debt ratios are relatively high. In contrast, some economies have low public debt ratios (Korea), or even no net public debt (Hong Kong). A low public debt ratio has this year given Korea the scope to offset sluggish growth with expansionary policies.

## Asia: central government budget balances[1]

As a percentage of GDP




CN = China; HK = Hong Kong SAR; ID = Indonesia; IN = India; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand.

[1] For China and Hong Kong SAR, general government.

Sources: IMF; Institute of International Finance; JPMorgan; national data. Graph III.3

## Debt indicators

| | Public debt[1] | | | External debt[2] | | |
|---|---|---|---|---|---|---|
| | 1996 | 2000 | 2002 | 1996 | 2000 | 2002 |
| China | 7 | 15 | 16[3] | 85 | 60 | 54 |
| India | 57 | 67 | 73 | 283 | 236 | 216 |
| Indonesia | 24 | 82 | 92[3] | 259 | 217 | 231 |
| Korea | 8 | 17 | 22 | 126 | 78 | 82 |
| Malaysia | 35 | 37 | 46 | 51 | 43 | 49 |
| Philippines | 53 | 66 | 74 | 197 | 134 | 158 |
| Thailand | 15[4] | 57[4] | 54[4] | 194 | 115 | 95 |
| Argentina | 36 | 45 | 146 | 468 | 554 | 530 |
| Brazil | 33 | 49 | 57 | 379 | 432 | 395 |
| Chile | 15 | 14 | 16 | 144 | 198 | 226 |
| Colombia | 14 | 37 | 51 | 273 | 261 | 313 |
| Mexico[5] | 37 | 37 | 40 | 164 | 90 | 100 |
| Peru | 49 | 45 | 47 | 492 | 406 | 364 |
| Venezuela | 49 | 27 | 40 | 150 | 120 | 162 |

[1] As a percentage of GDP. [2] As a percentage of exports. [3] 2001. [4] Includes Financial Institutions Development Fund liabilities. [5] Includes debt issued by Instituto para la Protección al Ahorro Bancario (IPAB).

Sources: IMF; World Bank; national data. Table III.4

Market perceptions do not stand in the way

Market perceptions also condition the feasibility of expansionary fiscal policies. In most Asian countries, markets seem inclined to accept even large deficits because these countries have an excellent track record in servicing their public debt, strong growth in output and exports, high private saving rates, relatively high foreign reserves and low ratios of external debt to exports. Nevertheless, perceptions can be fragile. For example, in Hong Kong the scope for additional expansionary policy has been limited by concerns about how this would be perceived by markets, notwithstanding substantial fiscal reserves.

Short-run fiscal stimulus possible

Fiscal stimulus has been possible in China in part because capital controls continue to keep high domestic savings invested at home. Nevertheless, there are medium-term reasons for limiting reliance on fiscal policy. Public spending is less efficient than private spending. In addition, problems of debt sustainability, while not apparent at present, could become more visible over time, and adversely affect confidence in banks that hold large quantities of government bonds. Indeed, the government has already expressed concerns about long-run debt sustainability influenced by implicit liabilities arising from financial sector losses or pension claims that are not reflected in reported public debt.

Interest rates fell, credit growth was robust ...

Domestic demand growth in Asia was also supported by easier monetary policies last year as policy interest rates were mostly stable or fell. Longer-term interest rates also tended to decline, and in some cases are now at their lowest levels in years. Falling or low interest rates were associated with robust credit growth in 2002 in China, India and Korea (17–25%) and a significant increase in credit in Thailand (8.5%, up from a decline of 7.5% in 2001). In

| Asia: interest rates and real exchange rates | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Short-term interest rates[1] | | | Long-term interest rates[1] | | | Real effective exchange rates[2] | | |
| | End-01 | End-02 | April 03 | End-01 | End-02 | April 03 | End-01 | End-02 | April 03 |
| China | 2.3 | 2.0 | 2.0 | … | … | … | 4.2 | –2.9 | –3.3 |
| Hong Kong SAR | 2.0 | 1.4 | 1.5 | 6.2 | 4.4 | 4.3 | –0.2 | –8.9 | –11.0 |
| India | 7.2 | 5.5 | 4.9 | 7.9 | 6.1 | 5.9 | 2.3 | 6.6 | –1.7 |
| Indonesia | 17.9 | 13.8 | 11.7 | … | … | … | 6.7 | 21.3 | 3.9 |
| Korea | 4.9 | 4.9 | 4.5 | 7.1 | 5.9 | 4.9 | 0.9 | 4.0 | 0.8 |
| Malaysia | 3.3 | 3.2 | 3.2 | 3.8 | 3.8 | 3.7 | 5.6 | –4.2 | –6.4 |
| Philippines | 8.9 | 5.2 | 7.4 | 15.8 | 12.0 | 12.6 | 3.3 | –6.4 | –8.4 |
| Singapore | 1.1 | 0.9 | 0.9 | 4.0 | 2.6 | 2.1 | –2.1 | –2.0 | –6.2 |
| Taiwan, China | 2.6 | 1.8 | 1.4 | 3.8 | 2.3 | 1.6 | –2.6 | –6.1 | –9.1 |
| Thailand | 2.9 | 1.9 | 1.8 | 3.4 | 3.5 | 3.4 | 4.0 | –3.6 | –6.3 |

[1] In percentages; end of period. [2] Annual percentage changes; in terms of relative consumer prices. An increase indicates an appreciation.

Sources: Bloomberg; Datastream; IMF; national data. Table III.5

some cases credit growth was associated with large increases in credit to the household sector. Easy money appears to have had more limited effects in some of the slower-growing economies, where interest rates were already very low or there was outright deflation. For example, while there was ample liquidity in Hong Kong last year, credit growth was negative. (See the discussion of a similar problem in Chapter IV.)

… and real exchange rates depreciated

The combination of monetary stimulus and only moderate inflation resulted in a depreciation of the real effective exchange rate in the Philippines, Thailand, Singapore and Taiwan. All these economies maintain floating exchange rate regimes. The first two economies maintain an inflation target, while Singapore targets a nominal effective exchange rate. A similar decline occurred in China, Hong Kong and Malaysia, whose currencies in effect are pegged to the US dollar. This decline reflected the depreciation of the dollar against other major currencies (Table III.5). These lower currency values contributed to the recovery in exports in the region.

*Limits to credit-financed household spending?*

Low inflation should allow more monetary stimulus

Low inflation in much of Asia increased the scope for additional monetary stimulus. Monetary ease in several countries has generated high levels of credit-financed household spending on housing and consumer durables. Faced with weak corporate demand for loans following the Asian crisis, banks were thus able to reduce risks through diversification by lending more to households. It is an open question how far this has created new risks for the banks themselves.

In Korea banks increased credit to households …

Potential problems are well illustrated by the recent experience of Korea, where banks have greatly increased the credit extended to households. The share of bank credit to households (personal loans, mortgages and credit card receivables) rose to over 40% of total assets by the end of June 2002, up sharply from 24% at the end of 1999. By June 2002, household

debt to banks had reached 109% of disposable income, with mortgages accounting for 49 percentage points and credit cards for 21 percentage points.

... but the pace was not sustainable

It could be argued that, over the medium term, there is still scope for further increases in mortgage credit to households in Korea. The home ownership ratio in Korea is still relatively low, and household credit normally becomes a more important component of lending as incomes grow. However, in response to the very rapid growth in mortgage financing accompanied by a real estate and construction boom, the government adopted a series of measures to limit housing price increases in "speculation zones". These included reductions in banks' loan-to-value ratio from 80% to 60%, increased risk weights in the calculation of regulatory capital for mortgages, the banning of additional purchases by previous buyers, the threat of tax evasion investigations for frequent buyers, tougher criteria for capital gains tax exemptions and higher property tax rates on costlier homes. In addition, the government put forward a plan to build additional housing around Seoul in order to slow the rise in housing prices. These measures were effective in containing the exposure of the banking sector, and consumer sentiment and spending declined in late 2002. They have also, however, dampened Korea's growth prospects for 2003.

Credit card companies were rescued

As would soon become apparent, the increased exposure of financial institutions to other types of household credit also implied significant costs. Credit card delinquency rates rose by half to over 11% between December 2001 and January 2003. Moreover, in April 2003, a flight to quality followed accounting irregularities at the country's fourth largest conglomerate. This caused a sudden interruption in financing to Korea's financially vulnerable credit card companies. The result was a government-arranged multibillion dollar rescue in which ailing credit card companies were recapitalised by their owners and bridge loans were supplied by financial institutions to help investment trust companies, which hold large amounts of securitised credit card debt.

Household credit supported growth in Thailand

An expansion in household credit and spending has also supported growth in Thailand. The value of land transactions increased by 71% in the year to January 2003, and housing credit outstanding was up 12% over the same period. However, household debt is a much smaller proportion of disposable income in Thailand than in Korea, and the exposure of the private financial sector is partly limited by the fact that government financial institutions account for almost half of housing credit. Nevertheless, the authorities remained concerned about the rapid growth in credit card debt and in November 2002 reimposed minimum income requirements for credit card holders.

Property markets are a concern in China

Property market financing has even become a source of concern in deflationary China, where there has been a boom in property prices in the areas around Shanghai and in Qingdao. However, the Chinese authorities are having to weigh any potential risks from this boom against the long-term goal of promoting private home ownership, which was only recently allowed. This objective is seen as very important for the economic and social transformation of China.

*The evolving role of China*

China's growing economic importance ...

China's influence in the Asian region has expanded significantly due to its rapid growth and integration into the world economy. Between 1991 and 2002, its share of Asian GDP and exports more than doubled, to over 17% and 20% respectively. Imports rose at least as much, so that China now has a current account deficit with its neighbours.

... is changing Asian trade and investment

The country's structural transformation is changing the patterns of Asian trade and investment. China's exports have recently grown much faster than those of the rest of emerging Asia (Graph III.4, left-hand panel), in part by focusing on the US market. Between 1998 and 2002, the share of exports to the United States in China's total exports increased by over 6 percentage points to 27%, while the corresponding shares in other Asian economies declined. The reductions were large in Hong Kong, the Philippines, Singapore and Thailand.

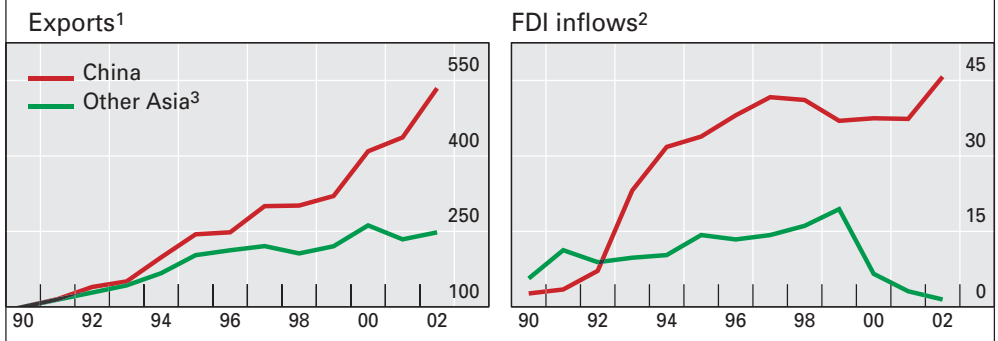
China attracted more foreign investment

At the same time, a larger portion of the foreign investment flow to the region has gone recently to China. One objective has been to exploit international trade opportunities but, increasingly, the aim is to tap China's growing domestic market. For example, major German, US and Japanese firms have made investments targeting China's automobile market, which is the fastest-growing in the world. In contrast, FDI flows to the rest of emerging Asia have fallen (Graph III.4, right-hand panel). Indeed, reinforcing a trend apparent since the 1997–98 crisis, net FDI flows to the rest of emerging Asia fell to zero last year even as net inflows to China rose to $46 billion.

Will China "hollow out" its neighbours?

Some observers are concerned that these developments imply that China will "hollow out" manufacturing production in other Asian emerging economies. China is already a major producer of labour-intensive manufactures. Moreover, as a result of its accession to the WTO, it is expected to capture a large share of the liberalised global market in textiles and apparel when the WTO Agreement on Textiles and Clothing expires in 2005. China thus poses major challenges for current producers of textiles and other labour-intensive manufactures in Southeast Asia. In addition, the country has moved steadily up the value added chain, and its exports of machinery and high-tech

## Asian exports and FDI inflows




[1] In US dollar terms; 1990 = 100. [2] In billions of US dollars. [3] Hong Kong SAR (except for FDI), India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan (China) and Thailand.

Sources: IMF, *Balance of Payments Statistics*; national data. Graph III.4

products have increased rapidly. China's share in Asia's total electronics exports has more than doubled during the past five years to 30% in 2002. In contrast, the shares of Malaysia and Singapore have fallen off sharply. Anecdotal accounts also suggest that production facilities in high-tech sectors are being relocated to China from emerging East Asia as well as Japan.

Past structural shifts have not reduced welfare

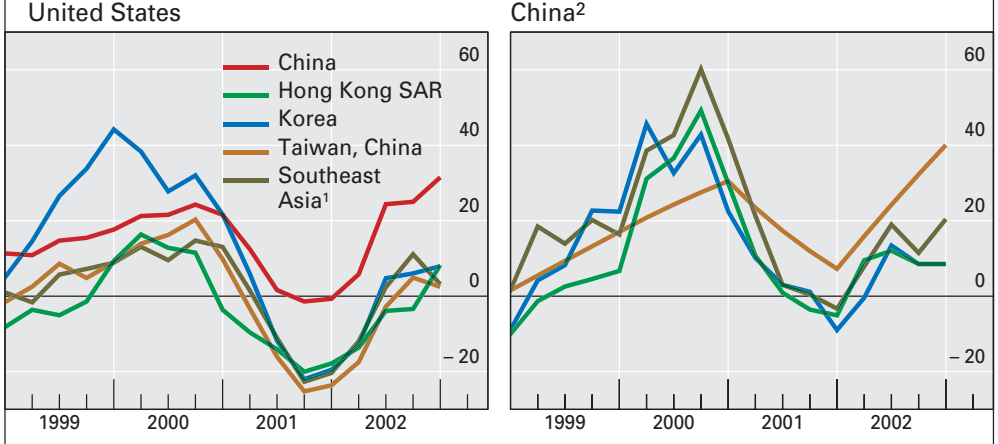
To put these developments in perspective, however, it is worth recalling that the region has seen major structural shifts in the past. These have not visibly reduced welfare in the countries whose production was "displaced". For example, China and Southeast Asia displaced much of the labour-intensive manufactures of the newly industrialised economies of the region (Hong Kong, Korea, Singapore and Taiwan). While this created difficulties for some, there were no adverse consequences for their prosperity overall. Starting in the early 1980s, most of Hong Kong's manufacturing production relocated to southern China. Nevertheless, Hong Kong prospered by providing much higher-value financial, trade and investment services, benefiting from its close proximity to the mainland.

China's neighbours may differentiate their products ...

In the present context, East Asia might be able to exploit its proximity to China in at least two ways. First, most international trade in final goods is between developed economies trading similar products that are differentiated in some way. This suggests that the more developed economies in East Asia and in the rest of the world can trade with China by differentiating their products on the basis of specific attributes. These could include quality or design, or specialisation in certain more advanced technologies. For example, Singapore has concentrated its recent efforts on diversifying into the biomedical and services sectors. Likewise, Hong Kong is seeking to go beyond its traditional financial sector niche to emerge as a knowledge-intensive economy. As these strategies require highly skilled workers, both Singapore and Hong Kong are seeking to improve their education systems and have

## US and Chinese imports from Asia

Annual percentage changes




¹ Indonesia, Malaysia, the Philippines, Singapore and Thailand. ² For 2002, provisional data.

Sources: IMF, *Direction of Trade*; national data. Graph III.5

maintained liberal residence policies for foreign professionals and skilled workers. For the less developed economies in Southeast Asia, adopting this strategy may take more time. However, it is apparent that there is already scope for this type of trade, for example in automobiles, which are already manufactured and exported in the region. It may also be possible for economies in Southeast Asia to concentrate on services such as tourism.

... and supply intermediate goods

Second, much international trade involves intermediate products, exploiting differences in costs, skills and resource endowments. Similarly, Asian economies could supply China with intermediate products that could then be used to produce goods for domestic or export markets. The potential for integration will grow as costs in China's coastal areas rise due to increasing real wages and congestion.

US import demand gets redistributed through China

Recent developments highlight the importance of such intermediate products in China's imports. A large part of China's exports are driven by import demand in the United States (Graph III. 5, left-hand panel), which is redistributed across the region through Chinese demand for imported inputs for its export industries. This is reflected in increasing Chinese imports from Asia (Graph III.5, right-hand panel). For example, while China's electronics exports grew by 33% last year, its (export-intensive) imports of electronic goods from the rest of Asia rose by over 49%. In contrast, the share of consumer goods as a proportion of China's imports has fallen steadily, from about 25% in the mid-1990s to 20% in 2002.

## Latin America

*Recent economic developments*

Last year was difficult ...

Last year was perhaps the most difficult in Latin America since the debt crises of the 1980s. Real GDP fell after being nearly stagnant in 2001. Among the larger economies, Argentina and Venezuela experienced outright crises, while Brazil found itself under severe external financing pressures for most of the period. Even Mexico and Chile – in recent years the region's better performers – did less well than in the past. In both economies, growth and export revenues were sluggish and capital inflows declined. One exception to this flagging growth performance was Peru, where growth at over 5% was the highest in five years as a result of very strong metal exports and increases in consumption.

... but growth recovered in late 2002

A generalised recovery became apparent starting in the second half of 2002. While private capital flows to Latin America declined for the year as a whole, external financing conditions eased considerably in the latter part of the year, and even more sharply in the first quarter of 2003. This was reflected in significant declines in the spreads on emerging market bonds (see Chapter VI). In addition, exports of goods and services also recovered in the second half of 2002, reflecting higher demand both inside and outside the region.

Improved external conditions support growth

Improved external conditions are expected to contribute to a modest recovery in Latin American growth in 2003, as are recoveries in investment and consumption spending. Investment and consumption spending will be boosted in 2003 if supportive policies and economic recovery succeed in encouraging the return of FDI.

*Debt sustainability and fiscal adjustment*

The sustainability of public debt ...

The key question in many Latin American economies is whether the fiscal adjustment that is currently under way will suffice to ensure a return of confidence. This depends in part on the extent to which an individual country is integrated with world capital markets, and on the size of its external debt.

... partly depends on external debt

An economy with an open capital account is, other things equal, more vulnerable the larger is the proportion of its debt denominated in foreign currency and the smaller its export revenues. The level of external debt matters for public debt sustainability, even if the external debt is largely private, because external debt servicing problems of the private sector may affect the exchange rate and the cost of financing of the government. Moreover, there have been cases in which the government has, for various reasons, assumed the external debt obligations of the private sector. The ratio of external debt to exports in Latin America is much higher than in Asian countries with comparable ratios of public debt to GDP (Table III.4). This is because national saving rates and the degree of trade openness in Latin America are much lower than in Asia (for a discussion of saving in different regions, see Chapter II).

Debt size influences perceptions

Perceptions of the sustainability of public debt seem to be influenced by its size, as measured by the public debt ratio, and by its trend. In Mexico and Chile, public debt ratios have broadly remained stable since the mid-1990s. In Brazil, Colombia and Peru, however, debt ratios have increased significantly since about 1996 and are now higher than in Mexico and Chile. Argentina's public debt ratio currently stands at 146%, but is not comparable to that of other countries because the country defaulted on this debt in December 2001.

Public debt ratios have risen ...

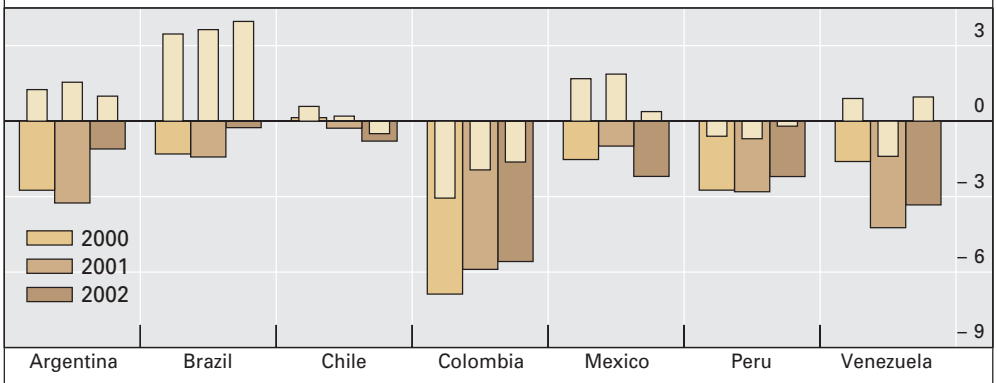
Public debt ratios have risen because primary balances have not been large enough to cover the interest payments on the public debt. High real interest rates combined with sluggish growth, which in part reflect financing constraints and the moderate pace of global economic activity, have also contributed to rising public debt ratios. Still another factor is currency depreciation, because much public debt is foreign currency denominated or linked and exports have not risen fast enough to offset this.

... reflecting fundamentals and perceptions

In the long run, the factors that influence public debt ratios reflect the underlying economic fundamentals. For example, the exchange rate depreciation that has contributed to rising public debt ratios in Brazil since the mid-1990s is due in part to the relatively low rate of saving in the economy and the country's high external debt. In the short run, however, these determinants of public debt ratios can also reflect perceptions of public debt sustainability that are partly self-fulfilling. Worries about a country's ability or will to service its debt can raise interest rates or depreciate the exchange rate so much that the debt becomes unsustainable. For this reason, policymakers in a number of Latin American economies have taken steps to reassure investors of their commitment to fiscal consolidation, which can be seen to some extent in the recent data on budget balances. As illustrated in Graph III.6, budget deficits have declined in some countries, and the primary surplus in Brazil has risen.

## Latin America: central government budget balances

As a percentage of GDP




Note: The wide bars show the overall balance and the narrow bars the corresponding primary balance.

Sources: IMF; national data. Graph III.6

Governments have sought to reassure markets

Some governments have also sought to reassure markets through forward-looking policy or legislative initiatives. For example, in Brazil, the new government has increased its primary surplus target from 3.75% in 2002 to 4.25% in 2003; in fact this surplus exceeded 6% in the first quarter of 2003. It is also seeking to reform the tax and social security systems, since the latter accounts for a large proportion of the fiscal deficit. In Colombia, fiscal deficits are expected to fall because of reforms adopted in 2002 affecting taxes, pensions, social security and the labour market. Also expected are a fiscal responsibility law limiting public debt ratios in Colombia and a referendum that would reform the public sector, yielding further substantial savings. Peru has also committed itself to fiscal deficit reductions in 2003 and 2004 under its programme with the IMF.

Inflation's impact on primary balances

The adequacy of these adjustment efforts must be assessed in the light of at least three factors. First, inflation has contributed to the recorded increase in the primary balances in some economies, but this effect will gradually erode if inflation persists. For example, central government tax revenues in Brazil rose by around 29% in the year to January 2003 (excluding an extraordinary item in January 2002), about as much as one widely followed measure of inflation. Because expenditures did not increase commensurately, the central government's primary fiscal surplus rose, more than offsetting the widening of the social security deficit. While an extended period of moderate inflation has significantly reduced inflation expectations and wage demands in a number of countries in the region, past experience suggests that the widespread use of indexation could increase if high inflation were to persist.

Certain taxes could impair growth

Second, revenues have been raised in part by relying on certain taxes, some distortionary, which could actually impair long-run growth prospects. For example, in Argentina, an export tax imposed in early 2002 generated 15% of government revenues. While this tax offsets the windfall gains to agricultural exporters arising from the sharp depreciation of the currency in 2002, taxes on international trade transactions are not a long-run solution. Brazil has relied heavily on a financial transactions tax, and a "cascading"

system of indirect taxes in which taxes on outputs are charged on top of (non-deductible) taxes on inputs. This last system is seen as reducing the competitiveness of Brazilian firms.

Non-discretionary expenditures limit cuts

Third, in many countries the high shares of non-discretionary expenditures make it hard to cut overall spending. Interest payments accounted for 18% of total expenditures in Brazil, and for 12–15% in Peru and Colombia. Changes to government budgets are also commonly restricted by contractual obligations or fixed rules for allocating such resources as social security and healthcare that many believe could be delivered more efficiently. In a number of countries, 35–50% of government spending is at the sub-national government level, and such spending has been particularly difficult to control. Spending cuts thus typically fall on a relatively small proportion of public spending. Moreover, because the immediate effects are less obvious, capital spending and maintenance by state-owned enterprises have sometimes been the first to be cut back. This could also reduce future growth.

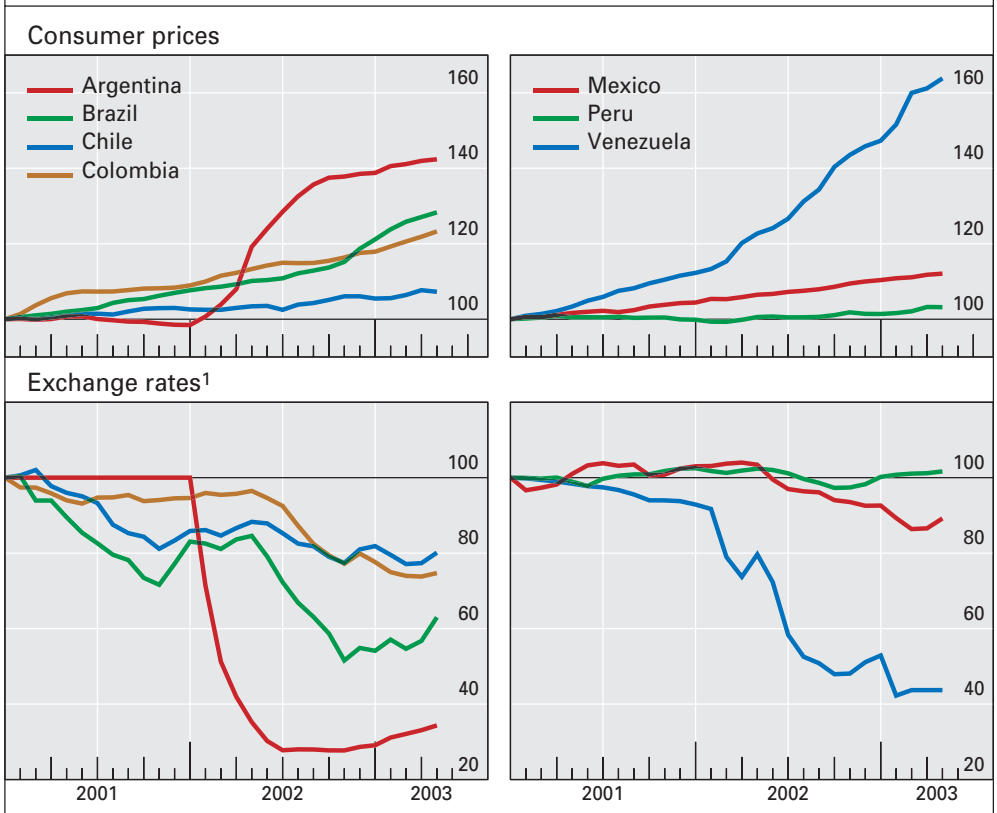
*The challenges of curbing inflation*

Notwithstanding external financing difficulties ...

In 2002, a number of countries faced external financing difficulties, which resulted in sharp currency depreciation followed by increases in inflation (Graph III.7). The assessment of monetary conditions in this environment is particularly difficult.

Latin America: consumer prices and exchange rates

End-2000 = 100




[1] US dollars per unit of local currency; an increase indicates an appreciation.

Sources: IMF, *International Financial Statistics*; national data. Graph III.7

On the one hand, while exchange rates have depreciated sharply in some countries, cycles of accelerating inflation and depreciation that were observed in the region in the past have been avoided. Indeed, exchange rates have generally stabilised or appreciated and spreads on sovereign debt have narrowed since late 2002. This suggests that markets have a degree of confidence in present policies in some countries.

... exchange rates stabilised ...

On the other hand, inflation rates have risen and some of the explicit inflation targets have been breached. With inflation at 12.5% in December 2002, Brazil missed the upper bound (5.5%) of its inflation target by a wide margin. While the central bank raised its 2003 inflation target to 8.5%, to reflect regulated price increases and inflation inertia, inflation rose further to almost twice the revised target by the end of the first quarter of 2003. The inflation target was also exceeded in Colombia, although the central bank continues to target a declining path for inflation. In Venezuela, price and exchange controls imposed starting in January 2003 allowed the authorities to peg the exchange rate. Inflation has nonetheless risen significantly. Mexico's 2002 inflation rate exceeded the target of 4.5%. The government nevertheless reaffirmed its commitment, made in July 2002, to meet an inflation target of 3% in 2003, with a 2–4% band around it. In Chile, inflation came in below target in 2002 due to moderate cost pressures, as a result of foreign price reductions and favourable labour cost conditions, but had risen above the upper bound of the 2–4% target range by the end of the first quarter of 2003. More recent data suggest that inflationary pressures were moderating in a number of countries. The decline has been particularly dramatic in Argentina, where the government cut its inflation forecast for end-2003 to 8%. This was down sharply from the 35% originally anticipated in Argentina's standby agreement with the IMF and the 41% actually recorded at the end of 2002.

... but inflation is a concern

Monetary authorities in countries with heavy debts faced several difficult trade-offs. Perhaps most important, it could be necessary to raise interest rates high enough to prevent destabilising spirals of depreciation and

High interest rates could impair sustainability ...

Latin America: interest rates and real exchange rates

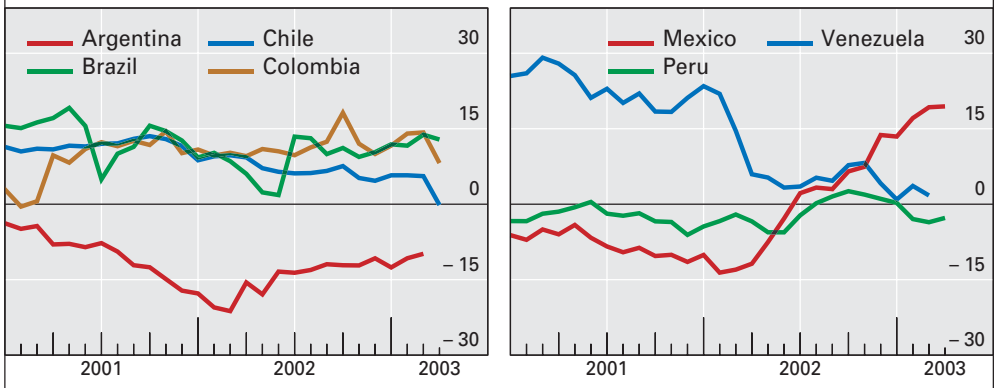
| | Short-term interest rates[1] | | | Real short-term interest rates[1, 2] | | | Real effective exchange rates[3] | | |
|---|---|---|---|---|---|---|---|---|---|
| | End-01 | End-02 | April 03 | End-01 | End-02 | April 03 | End-01 | End-02 | April 03 |
| Argentina | 6.1 | 34.1 | 22.2 | 7.8 | –4.9 | 2.3 | 1.6 | –58.6 | 11.1 |
| Brazil | 19.1 | 24.9 | 26.3 | 10.6 | 11.0 | 8.4 | –10.1 | –31.7 | –21.4 |
| Chile | 6.2[4] | 4.4[4] | 1.9[4] | 6.2 | 4.4 | 1.9 | –9.6 | –6.4 | –15.5 |
| Colombia | 10.7 | 7.5 | 7.6 | 1.6 | –0.6 | 1.0 | 5.5 | –16.1 | –21.8 |
| Mexico | 7.6 | 7.6 | 6.7 | 3.0 | 1.8 | 1.4 | 8.0 | –9.5 | –14.0 |
| Peru | 4.8 | 3.6 | 3.3 | 5.0 | 2.1 | 0.7 | 6.8 | –4.2 | –6.4 |
| Venezuela | 19.7 | 25.1 | 16.0 | 6.6 | –4.7 | –13.1 | 5.0 | –30.8 | –34.4 |

[1] In percentages; end of period. [2] Deflated by the annual rate of inflation. [3] Annual percentage changes; in terms of relative consumer prices. An increase indicates an appreciation. [4] Real rate linked to the Unidad de Fomento.

Sources: Bloomberg; Datastream; IMF; national data. Table III.6

## Latin America: domestic credit to the private sector

Annual percentage changes




Sources: IMF, *International Financial Statistics*; national data. Graph III.8

inflation. At the same time, raising rates too much could accentuate doubts about the sustainability of public debt and possibly increase financial fragility. This outcome could also exacerbate depreciation pressures, again with adverse effects on inflation.

... and depreciations could be contractionary

Another complication in Latin America is that nominal exchange rate depreciation can be contractionary in the short run since it increases the debt burden of domestic residents who borrow in foreign currencies, and also reduces domestic purchasing power. These forces act in opposite directions from traditional trade substitution effects. The depreciation would stimulate the economy in the medium run, but only if the real exchange rate also depreciated. This has recently been the case in a number of Latin American economies (Table III.6), a welcome change from earlier experience where inflation rose more sharply. The case of Argentina illustrates the mixed effects of depreciation in some emerging economies: the collapse of the Argentine peso in 2002 was initially followed by a steep contraction in output and only later by a recovery in exports of goods and services.

Low real interest rates did not boost credit

Partly to offset the contractionary influences cited above, central banks limited increases in nominal interest rates, so that real rates fell. In Brazil, the real interest rate declined but was still over 8% in April 2003, while in some cases (Argentina, Colombia, Venezuela) real rates became negative for an extended period. However, lower or negative real interest rates were not always associated with rapid growth in credit (Graph III.8). In spite of high inflation, nominal credit to the private sector fell in Argentina in 2002, owing to the problems of the banking sector, while credit growth decelerated to close to zero in Venezuela. Credit growth was in the neighbourhood of 10% in Brazil, but this was still less than the rate of inflation. In Chile and Mexico, where external credit constraints were less significant, policymakers responded to weak external demand by easing monetary policy. While real interest rates in both economies fell, credit growth remained moderate in Chile, although it increased significantly in Mexico.

## Central and eastern Europe

Growth remained resilient to the slowdown in western Europe

Growth in central and eastern Europe (CEE) was remarkably resilient to the slowdown in western Europe over the past year. The shift towards domestically driven growth, supported by the rapid increase in consumer credit and fiscal expansion in several countries, strengthened during 2002 (Graph III.9). On the external side, greater diversification of export markets and productivity improvements have led to better than expected export performance (Graph III.1). Output in southeast Europe and the Baltic countries thus expanded by 5–5½% on average, and in central Europe by around 3%. Growth in Russia remained solid, while the Turkish economy rebounded strongly after a sharp contraction in 2001. These trends were broadly maintained in the first quarter of 2003.

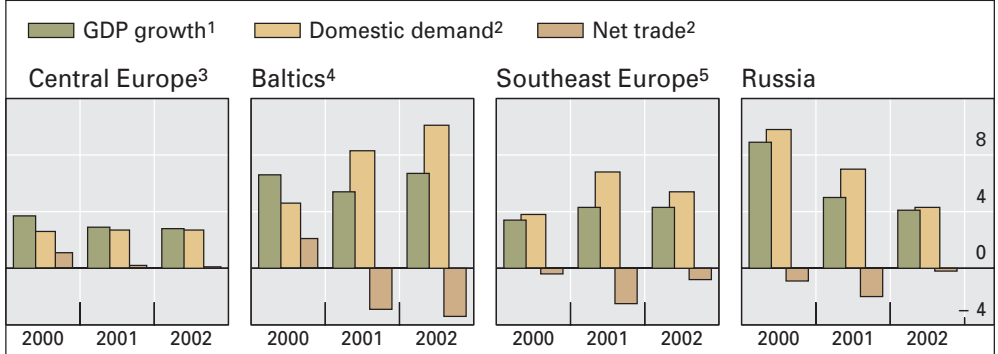
Inflation fell further ...

Continued disinflation has been another positive aspect of recent macroeconomic performance. Towards the end of 2002, average inflation in the region's eight EU accession countries and Croatia reached just over 2.5%, the lowest rate since the beginning of transition. Inflation remained in double digits in Romania, Russia, Serbia and Montenegro, and Turkey, but even there price increases slowed during the year. However, in most countries lower inflation did not result from more moderate domestic cost and demand pressures but rather from good harvests and the appreciation of exchange rates, which led to lower food and imported fuel prices. Indeed, disinflation was slower and more costly than in previous episodes. The cumulative change in the rate of unemployment required to lower inflation by 5 percentage points (the so-called sacrifice ratio) averaged 1.6 percentage points in 2000–02, up from 0.5 points in 1998–99.

... but the trend may not continue

Against this background, several factors suggest that recent low rates of inflation may not be maintained in the near term. First, the impact of declining food prices is likely to fade. Second, most countries have scheduled a series of one-off adjustments in administered prices. Third, rising oil prices started to affect inflation in early 2003. And fourth, public sector wage

### CEE: GDP growth and its contributing factors




[1] In percentages. [2] In percentage points. [3] The Czech Republic, Hungary, Poland, Slovakia and Slovenia. [4] Estonia, Latvia and Lithuania. [5] Bulgaria, Croatia and Romania.

Source: UN Economic Commission for Europe. Graph III.9

increases have begun to spill over to the private sector. Partly as a result, interest in incomes policies has revived in some countries.

FDI inflows financed large external deficits

Current account deficits remained large during 2002 (5.7% of GDP on average, excluding Russia) but were easily financed. In the Czech Republic, Slovakia and Slovenia, FDI inflows were two to five times higher than the deficits themselves, while in the remaining countries they covered on average 60% of the deficits. In addition, the approaching EU accession and investors' perceptions of relative risk in emerging markets led to a surge in short-term capital inflows. As a result, most central European currencies appreciated against the euro or in nominal effective terms during 2002. An important exception was the Polish zloty, which has been under pressure for some time as a result of weak domestic growth and a delayed response to large interest rate cuts. Russia maintained a current account surplus of close to 10% of GDP, thanks to rising oil exports. In Turkey, the strong recovery led to higher imports and, with export growth unchanged, a small current account deficit of 1% of GDP.

Faced with capital inflows and appreciating exchange rates ...

In this relatively favourable environment the monetary authorities in countries with inflation targeting regimes largely sought to balance the disinflationary effects of appreciating currencies against the expansionary effects of capital inflows on the domestic money supply. At the same time, central banks had to consider the expansionary stance of fiscal policy, the possibility that appreciating exchange rates would hurt the export industries, and the low interest rate environment in global capital markets. Faced with these challenges, most central banks used a combination of interest rate cuts and market intervention to slow capital inflows and alleviate the upward pressure on exchange rates.

... central banks cut interest rates and intervened

The Czech National Bank intervened on several occasions in 2002, lowering its main policy rate below the key ECB rate in July. The Polish National Bank has lowered its key policy rate by 5.75 percentage points since the beginning of 2002. In part, these moves have been aimed at weakening the zloty but also at lowering high real interest rates, which had been partly blamed for slow growth in 2001–02. Faced with FDI inflows equivalent to 20% of GDP in the first nine months of 2002, the Slovak government and central bank agreed to sterilise all capital inflows associated with privatisation and to use the proceeds only for public debt repayment and pension reform.

In Hungary, temporary controls were used to limit short-term inflows

Hungary's experience has been even more dramatic. Short-term capital inflows of approximately €4–5 billion, equivalent to several per cent of annual GDP, entered the country within a few hours on 15 and 16 January 2003. The inflows were fuelled by speculation that the 15% limit for appreciation of the forint above its central parity against the euro would be lifted. To quell the attack, the National Bank cut policy rates by 200 basis points, introduced a quantitative restriction on short-term deposits and intervened heavily in the foreign exchange market. These extraordinary measures calmed speculation. However, lower interest rates combined with the ensuing depreciation of the forint aggravated inflationary pressures, forcing the National Bank to raise its inflation forecast for end-2003.

*Sustainability of recent performance*

Can the good performance be maintained?

The contrast between the generally favourable developments in CEE and the uncertain outlook for western Europe raises a basic question: will CEE economies be able to sustain their recent growth performance and thus continue to catch up gradually with the living standards in the European Union? Strong growth is also needed to alleviate pressures stemming from stubbornly high unemployment, the least successful aspect of the overall macroeconomic picture in the region.

Several factors might seem to argue against the continuation of recent favourable trends. First, the outlook for western Europe has not improved, so export growth could slow. Second, high current account and fiscal deficits rule out an extended reliance on domestic demand as the main source of growth. Third, the recent expansion in domestic credit, a major factor contributing to the dynamism of domestic demand, may not be sustainable in the near term.

Exporters have diversified markets and remain competitive

However, upon closer examination, some of these arguments hold up less well than others. As to the first argument, some recent developments suggest that CEE may have actually become less reliant on exports to the European Union. Foreign companies now own a sizeable part of the enterprise sector in the region. These have often relocated production to CEE in order to establish a lower-cost export base, not only for the European Union, but also for non-EU markets (including CEE itself and Asia). This has been reflected in a rising share of non-EU markets in the total exports of the region, and a declining correlation since 1999 between exports of the accession countries and industrial production in the euro area. Admittedly, it is still not clear whether the decline is cyclical or more permanent, but it does stand in contrast to the rising correlation between these indicators during most of the 1990s. At the same time, labour costs in Slovenia, the highest in the region, were still only 25% of those in western Germany, the highest among EU countries. This cost advantage will probably lead to further, albeit smaller increases in the share of exports from CEE to markets outside as well as inside western Europe.

Current account deficits have been stable ...

To what extent could external imbalances pose a constraint on growth? With the exception of Russia and Slovenia, most CEE countries have been running large current account deficits since the beginning of transition. Such deficits are to be expected for countries in the process of catching up, as domestic investment is likely to exceed domestic saving. FDI inflows on average financed 90% of the current account deficits from 1994 to 2002. In general, the size of the current account deficits has been stable. Indeed, excluding Russia, the rise in the aggregate current account deficit since 2000 has been less than ½% of GDP. Moreover, save for a few exceptions, past episodes of large reversals of current account imbalances generally did not affect GDP growth for a prolonged period of time. Nevertheless, some concerns about external vulnerabilities remain. Annual FDI flows are often volatile because of large privatisation projects. Furthermore, countries in the region have recently become more exposed to short-term capital inflows, a development that may become even more pronounced after EU accession (see below).

... but further expansion of domestic credit poses risks

The third potential constraint on near-term growth could be the need to moderate the expansion of consumer lending. Most banks have been privatised and the high degree of openness to foreign ownership and control has done much to enhance both financial system efficiency and effective risk management. In the last two years, the strong growth of personal incomes, accompanied by lower interest rates and greater competitive pressures, has encouraged banks in Bulgaria, Croatia, the Czech Republic, Hungary and Romania to expand their lending to households at annual rates ranging from 20 to 60%. This high growth partly reflects the low share of household lending in bank credit. However, were it to persist, it might expose banks to significant credit risk, as most household lending is not properly secured due to deficiencies in legislation governing the use of collateral. Another potential concern is that greater competition among banks has resulted in a visible contraction of intermediation margins that may not be sustainable.

Sustainability of fiscal positions is a major concern

Of greatest concern, however, is the sustainability of fiscal positions. In Croatia, the Czech Republic, Hungary, Poland and Slovakia budget deficits have increased to 5% of GDP or higher since 2000. Most of this deterioration has been structural, that is, related to changes in legislation that have permanently raised social transfers and public sector wages. Accession to the European Union will also bring new claims on public spending to comply with EU regulations in areas such as environmental protection. A further difficulty is that up to two thirds of total spending in some countries is governed by legislation outside the budget. As a result, discretionary spending measures have often been implemented through quasi-fiscal activities (guarantees, extra-budgetary funds), which are not transparent and can create considerable uncertainty for monetary policy.

Turkey also needs to tackle debt problems

Turkey is grappling with a level of public sector debt that now exceeds 80% of GDP, above that of most other large emerging economies (Table III.4). To achieve the goal of reducing the debt ratio below 70% by the end of 2004, the authorities have committed to generate a primary budget surplus of 6½% of GDP (compared with 4½% in 2002) and to reduce inflation to 20% by the end of 2003 (from 30% in the first quarter). However, debt payments are heavy since real interest rates are around 20%. Moreover, most of the debt, even though domestically issued and held, is linked to short-term interest rates or to the exchange rate, and debt sustainability is very sensitive to movements in these variables. A further risk is that ambitious targets for revenue increases and expenditure cuts will not be achieved if privatisations and politically difficult reforms of the civil service and the banking system do not go forward as planned.

*Challenges of EU accession*

Next phases of integration are already having an impact

Following entry into the European Union in May 2004, the accession countries plan to join the exchange rate mechanism of the European Monetary System (ERM II). After a two-year period in ERM II, and subject to meeting the other Maastricht criteria, EMU membership would follow. Although the first of the new members are unlikely to join EMU before 2007 or 2008, the prospect of joining the euro area is already affecting market expectations, as long-term

bond rates are converging to euro area levels. Moreover, the policy environment has also been affected, as macroeconomic policies have to satisfy the Maastricht criteria and to manage large capital inflows at the same time.

Fiscal consolidation will be key to smooth convergence

It is by now clear that the major problem in the run-up to EMU will be large budget deficits and, in some countries, relatively high inflation (Table III.7). Although the medium-term goal is to reduce the budget deficits below the Maastricht norm of 3% in two years, entering ERM II with a budget deficit of 5–6% of GDP would put pressure on central banks to keep short-term interest rates higher than in the euro area. As illustrated by the Hungarian experience noted above, this differential would attract short-term capital inflows and could well increase exchange rate volatility. A particular concern is what might happen if the ambitious fiscal deficit reduction strategies were to go off track. Since non-residents are expected to become major buyers of newly issued public debt, given the promise of medium-term sustainability, such an event could lead to a sudden reversal of portfolio capital flows, causing the currency to depreciate sharply.

Capital inflows will challenge monetary policy

Capital inflows could challenge monetary policy even in countries that follow adequate fiscal policy and have achieved low inflation. One reason is that appreciation pressures are likely to remain strong in the presence of higher intersectoral productivity growth in CEE relative to the euro area and are likely to attract short-term inflows. Furthermore, the high marginal

## EMU convergence criteria

| | Price stability[1] | | Long-term interest rate[2] | | Exchange rate stability[3] | | Budget deficit[4] | | Public debt[5] | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2002 | 1999 | 2002 | 1999 | 2002 | 1999 | 2002 | 1999 | 2002 |
| Reference value[6] | 0.5 + 1.5 | 1.5 + 1.5 | 5.3 + 2 | 4.4 + 2 | ±15 | ±15 | –3.0 | –3.0 | 60 | 60 |
| Czech Republic | 2.1 | 1.8 | 7.0 | 4.3 | –1.0 | –2.6 | –6.3 | –5.8 | 15 | 23 |
| Hungary | 10.0 | 5.3 | 8.8 | 6.5 | 3.2 | –5.4 | –5.2 | –6.7 | 60 | 50 |
| Poland | 7.3 | 2.0 | 9.7 | 5.6 | 2.1 | 6.8 | –2.0 | –6.3 | 43 | 48 |
| Slovakia | 10.5 | 3.4 | … | 7.4 | 1.3 | –3.5 | –6.4 | –5.8 | 30 | 34 |
| Slovenia | 6.2 | 7.5 | … | 8.9 | 4.6 | 3.7 | –2.2 | –1.8 | 26 | 31 |
| Estonia | 3.3 | 3.6 | … | 3.9 | –0.1 | 0.0 | –4.6 | 0.7 | 7 | 5 |
| Latvia | 2.4 | 1.9 | … | 4.4 | –3.2 | 7.6 | –3.9 | –1.8 | 11 | 14 |
| Lithuania | 0.8 | 0.3 | … | 5.9 | –8.5 | –1.9 | –8.5 | –1.8 | 28 | 28 |
| Bulgaria | 2.6 | 5.9 | 9.3 | 5.7 | –0.6 | 0.0 | –1.0 | –0.6 | 94 | 57 |
| Croatia | 4.1 | 2.2 | 12.7 | 6.5 | 4.0 | 0.4 | –8.2 | –5.0 | 49 | 52 |
| Romania | 45.3 | 22.8 | … | … | 39.2 | 22.7 | –3.6 | –2.9 | 31 | 29 |
| *Average*[7] | *8.6* | *5.1* | *9.5* | *5.9* | *3.7* | *2.5* | *–4.7* | *–3.5* | *36* | *34* |

[1] Annual percentage changes of consumer prices. [2] On 10-year local currency government bonds, end-year; for Bulgaria and Latvia, a five-year maturity. [3] Deviation of end-year exchange rate (in units of local currency per euro) from the average exchange rate for 1998–99 and 2001–02, respectively. An increase indicates a depreciation. [4] General government deficit (accrual basis) as a percentage of GDP. Data are OECD estimates for OECD members, and IMF and national sources for other countries. [5] Domestic and external public sector debt (general government basis) as a percentage of GDP. [6] Inflation and interest rate data for the three EU and euro area countries, respectively, with the lowest inflation; other reference values based on the Maastricht Treaty. [7] Unweighted average.

Sources: ECB; European Commission; IMF; OECD; Bloomberg; national data; BIS estimates. Table III.7

productivity of capital will continue to attract FDI inflows. Consequently, the monetary authorities in these countries will have to conduct a very careful policy aimed at setting interest rates at an appropriate level: setting them too high would invite excessive short-term inflows, while setting them too low would lead to excessive investment and thus inflation.

Prudent policies are essential for convergence

To minimise the associated risks, the accession countries might find it advantageous to try to satisfy the Maastricht criteria as soon as they join ERM II. However, the experience of countries such as Italy and Spain in the early 1990s indicates that convergence can prove most difficult when it appears most within reach. Achieving nominal convergence in the next two to three years may thus prove more challenging for policymakers in CEE than is suggested by the current data. This highlights the need for continued prudent macroeconomic policies.

## Africa and the Middle East

African growth slowed in 2002

More prudent fiscal and monetary policies and a small exposure to foreign trade helped Africa weather the global slowdown in 2001. Nevertheless, growth slowed last year (Table III.8) because of continued weakness in the euro area (the main trading partner) and a variety of local problems. These included difficulties in controlling budget deficits and constraints on growth imposed by oil production quotas in Nigeria, large budget deficits and the seizure of commercial farms in Zimbabwe, lower tourist incomes as a result of terrorist attacks, severe droughts in northern and southern Africa and increased adverse effects stemming from the HIV/AIDS pandemic. At the same time, the median rate of inflation was only 4½% last year, close to that of Latin America and Asia, and was even lower in the three Maghreb countries (Algeria, Morocco and Tunisia), which target monetary aggregates. Among

### Output growth and inflation in Africa and the Middle East

Percentage changes, annual rates

| | Real GDP | | | | Consumer prices | | | |
|---|---|---|---|---|---|---|---|---|
| | 1995–2000 | 2001 | 2002 | 2003[1] | 1995–2000 | 2001 | 2002 | 2003[1] |
| Africa | 3.4 | 3.6 | 3.4 | 3.9 | 18.9 | 13.0 | 9.3 | 10.1 |
| Maghreb[2] | 3.1 | 4.1 | 3.3 | 4.4 | 6.4 | 2.6 | 2.2 | 3.3 |
| CFA countries | 4.1 | 3.9 | 3.7 | 3.4 | 4.4 | 4.2 | 3.4 | 3.0 |
| Nigeria | 3.1 | 2.8 | 0.5 | 6.7 | 20.4 | 18.9 | 12.9 | 15.3 |
| South Africa | 2.7 | 2.8 | 3.0 | 3.0 | 7.0 | 5.7 | 9.9 | 8.0 |
| Middle East | 4.0 | 2.8 | 2.7 | 4.2 | 9.9 | 3.8 | 6.3 | 7.0 |
| Egypt | 5.2 | 3.5 | 2.0 | 3.0 | 5.6 | 2.4 | 2.5 | 3.0 |
| Iran | 4.4 | 5.7 | 4.8 | 6.5 | 22.9 | 11.4 | 15.0 | 17.0 |
| Israel | 4.6 | –0.9 | –1.0 | 0.5 | 6.9 | 1.1 | 5.7 | 2.8 |
| Saudi Arabia | 1.9 | 1.2 | 0.7 | 3.5 | 0.6 | –0.5 | –0.6 | 1.0 |

[1] Forecasts. [2] Algeria, Morocco and Tunisia.

Sources: IMF, *World Economic Outlook*; national data. Table III.8

the Maghreb countries, Algeria's economic performance is expected to improve in 2003, supported by oil and gas exports.

In CFA countries, growth lower than anticipated

In CFA franc zone countries, growth was somewhat lower than anticipated in 2002 as a crisis in Côte d'Ivoire and unfavourable conditions in international commodities markets adversely affected a number of economies in the region.

In Nigeria, balances deteriorated

In Nigeria, the growth in fiscal spending had exceeded that of oil revenues in 2001, producing a deterioration of both the fiscal position and the current account balance. This was followed by exchange rate depreciation, rising prices and recession. In the second half of last year, Nigeria was forced to suspend debt service payments on bilateral official credits due to sharp reductions in foreign exchange reserves.

Fiscal policy supported growth in South Africa

In South Africa, the Reserve Bank helped reverse most of an earlier rand depreciation by pre-emptively raising its policy rate four times last year. Nevertheless, the rate of inflation significantly exceeded the target, and exports weakened in response to the decline in competitiveness. However, GDP still managed to advance by 3% in 2002 and is projected to grow at the same rate this year. In part, this is thanks to a growth-supporting fiscal policy made possible by several years of consolidation and debt reduction. In Tanzania and Uganda, exchange rate depreciation helped offset large terms-of-trade losses arising from steep falls in the prices of coffee and other traditional exports. Moreover, the depreciations, combined with stable prices, encouraged diversification into new export sectors that was supported by FDI inflows.

In Egypt, depreciation could raise inflation

In the Middle East, Egypt's low export competitiveness, as well as lower tourist incomes and capital inflows, contributed to deteriorating growth performance. The rapid growth of a parallel exchange market raised doubts about the sustainability of the pegged exchange rate, prompting the authorities to adopt a floating exchange rate regime in January 2003. Although the subsequent depreciation of the pound appears to have restored Egypt's external competitiveness, the outlook remains uncertain. The depreciation could raise inflation significantly in the absence of a new nominal anchor for monetary policy. Fiscal policy might also have to be tightened to halt the rise in public debt and prevent a further downgrading of Egypt's credit rating.

Prices rose in Iran but fell in Saudi Arabia

Iran's growth has increased in recent years and the current account balance has strengthened. However, high inflation (partly linked to a deteriorating fiscal position) remains a problem. By contrast, consumer prices in Saudi Arabia have fallen since 1998 despite a high fiscal deficit and a public debt/GDP ratio approaching 100%. While lower oil exports weakened GDP growth in 2002, the current account surplus remained close to 5% of GDP. This contributed to a further rise in foreign reserves and enabled the authorities to keep interest rates very low. An improvement in growth is anticipated in 2003, although the outlook remains highly dependent on developments in the oil market.

Israel in recession

In Israel, the recession which started with the bursting of the IT bubble deepened, and unemployment rose above 10%. The fiscal imbalance

remained high and the deficit on the current account increased to over 2% of GDP. To counter the breaching of the inflation target and a surge in inflation expectations caused by the depreciation of the shekel, the central bank raised its lending rate by more than 500 basis points. This eventually arrested the depreciation of the exchange rate and stabilised the rate of inflation. With the security situation continuing to weigh on tourism and export earnings, business and consumer surveys suggest, at best, a weak recovery of GDP this year.

# IV. Monetary policy in the advanced industrial economies

## Highlights

Monetary policy was stimulative in industrial economies during the period under review. This was due, in part, to the tepid recovery in 2002 and, in part, to risks of a sharp downturn in economic activity in an environment of heightened uncertainty. In particular, policymakers faced the challenges of lending support to consumption spending, countering the demand effects of financial headwinds in late 2002 and bolstering confidence in the midst of geopolitical risks in early 2003.

In the United States, lingering effects of past imbalances continued to weigh heavily on the prospects for a robust recovery. Against this background, the Federal Reserve held its policy target interest rate constant for most of the period, lowering the rate once in late 2002. The ECB initially held rates steady at a higher level, as inflation remained a concern, but eventually reduced them as growth weakened unexpectedly. The Japanese policy environment was unique. The economy showed signs of stabilising, but prospects remained highly uncertain. As a consequence, the Bank of Japan continued to pursue and intensify its policy of quantitative easing. Conditions were more mixed in other industrial countries, with some central banks tightening rates on concerns about rising inflationary pressures.

Despite the widespread assumption that growth will recover in a low-inflation environment, economies still appear to be vulnerable to various imbalances. These raise the possibility of a more protracted period of weakness, a scenario in which deflation could conceivably spread beyond Asian borders. A special section at the end of this chapter deals with the issue of deflation risk and its implications for central banks in advanced industrial economies.

## Review of developments

### *United States*

US monetary policy continued to be very accommodative

The Federal Reserve maintained its highly accommodative stance for monetary policy during the period under review, responding to an economy beset by sluggish activity, economic and geopolitical risks and some possible attenuation of the transmission mechanism of monetary policy. As economic conditions evolved, however, the Federal Reserve found the need to make several adjustments to its degree of accommodation.

In early 2002, the Federal Open Market Committee (FOMC) revised its assessment of the risks from one weighted mainly towards economic weakness to a balanced evaluation of the prospects for output growth and inflation. Consumer spending had proved to be more resilient than previously expected and the inventory cycle had become more favourable. With this brighter outlook and a policy rate of only 1.75%, markets expected a significant near-term increase in the federal funds rate target (Graph IV.1). By August, however, the FOMC had revised downwards its expectations of both the strength of the recovery and the degree of inflationary pressures, tipping the balance of risks back towards sub-par growth. By November, conditions had become sufficiently weak to justify a somewhat larger than expected 50 basis point cut in the policy rate; with headline inflation running near 2% on a year-over-year basis, the inflation-adjusted federal funds rate fell to roughly –1% for the first time since the mid-1970s.

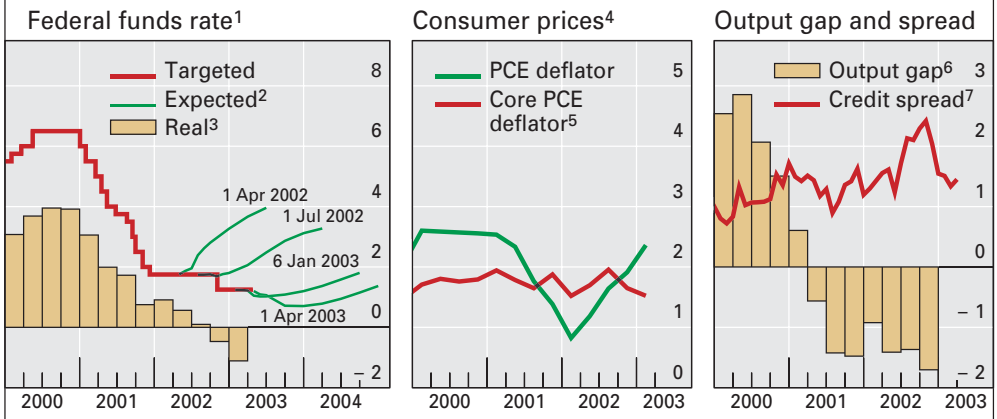
Federal funds rate cut to 40-year low

Widening uncertainties were noted as a major factor in the November decision because of their inhibiting effect on spending, production and employment. Market apprehension about corporate scandals and reporting irregularities also represented unusual headwinds, showing up as weaker equity markets and elevated credit spreads (see Chapter VI). In a somewhat surprising move, the FOMC paired the rate reduction with the adoption of a balanced assessment of the risks. This combination of decisions seemed to create some confusion in the market as to the Committee's true views about the near-term direction of the policy rate.

Uncertainties intensified, especially geopolitical ones

In early 2003, the policy rate was held steady even as uncertainties about the short-run economic outlook mounted. However, the FOMC temporarily suspended its practice of announcing its risk assessment at the conclusion of regularly scheduled meetings. A press statement indicated that useful

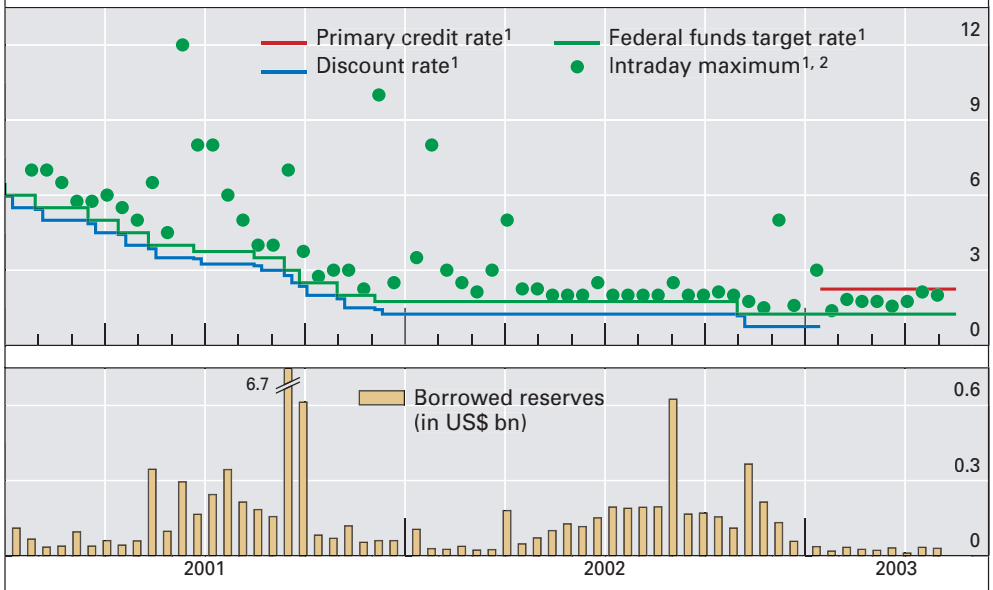
## Economic indicators for the United States




[1] In percentages. [2] One-month federal funds and three-month eurodollar futures adjusted for term premia; see B Sack, "Extracting the expected path of monetary policy from futures rates", *Finance and Economics Discussion Series* 2002-56, Board of Governors of the Federal Reserve System, December 2002. [3] Federal funds rate less four-quarter personal consumption expenditure (PCE) inflation. [4] Annual percentage changes. [5] Excluding food and energy. [6] As a percentage of potential output. [7] Corporate BBB minus swap rate, in percentage points.

Sources: OECD; Bloomberg; Chicago Board of Trade; Chicago Mercantile Exchange; national data; BIS estimates. Graph IV.1

## New US discount window programme and federal funds rate




[1] In percentages. [2] Maximum intraday federal funds rate during the two-week maintenance period.

Sources: Board of Governors of the Federal Reserve System; Bloomberg. Graph IV.2

information could not be conveyed because developments had become too fluid. By May, however, the FOMC had resumed this practice and assessed the risks to be predominately weighted towards weakness. While the risks to the attainment of sustainable growth in the short run were seen to be roughly balanced, the FOMC considered that the probability of an unwelcome substantial fall in inflation, though minor, exceeded that of a pickup in inflation.

Deflation concerns were addressed ...

Two other important policy issues attracted particular attention during the review period: deflation and the effectiveness of monetary policy. The prospect of deflation at some point in the future, while remote, could not be completely ruled out this past year against the background of a low-inflation environment, persistent economic slack, potentially serious financial imbalances and a recovery still vulnerable to downside developments. During the period, Federal Reserve officials stated that, even in the unlikely event that nominal interest rates were to fall to zero, other policy tools were judged sufficient to fight deflation (see below).

... as were questions about the effectiveness of monetary policy

The tepid recovery also raised questions about the effectiveness of monetary policy in the current environment. There is little doubt that activity in some sectors, such as capital spending and commercial real estate, was particularly disappointing. Business and consumer confidence also appeared somewhat insensitive to lower interest rates. One reason for this was the heightened uncertainties, but an additional drag came from lower equity prices and the need to strengthen corporate balance sheets. These developments, as well as a fall in the dollar, seemed to provoke some flight to quality, although this shift was orderly and manageable (see Chapter VI). Overall, these lingering headwinds called for lower policy rates than usual to establish the desired degree of stimulus. Even so, monetary policy had a positive effect on several other interest-sensitive sectors such as housing,

housing-related demand and consumer durables, especially motor vehicles (see Chapter II). Thus, the evidence so far suggests little risk of policy ineffectiveness in the aggregate.

The Federal Reserve adopted a lombard-type lending facility

In January 2003, the Federal Reserve adopted a new institutional structure for its discount window. It replaced the adjustment and extended credit programmes with a new lombard-type facility of the kind found at other major central banks. The primary credit programme – now its main programme – extends credit to sound depository institutions at an interest rate above the federal funds rate target on a "no questions asked" basis (Graph IV.2). This practice eliminates many of the administrative burdens associated with the previous programme. The lending rate should also serve as a cap on intraday volatility for the federal funds rate. The redesign of the discount window was not intended to reflect a change in the stance of monetary policy, which continues to be primarily determined by the federal funds rate target.

*Euro area*

Monetary policy was cautiously stimulative in the euro area

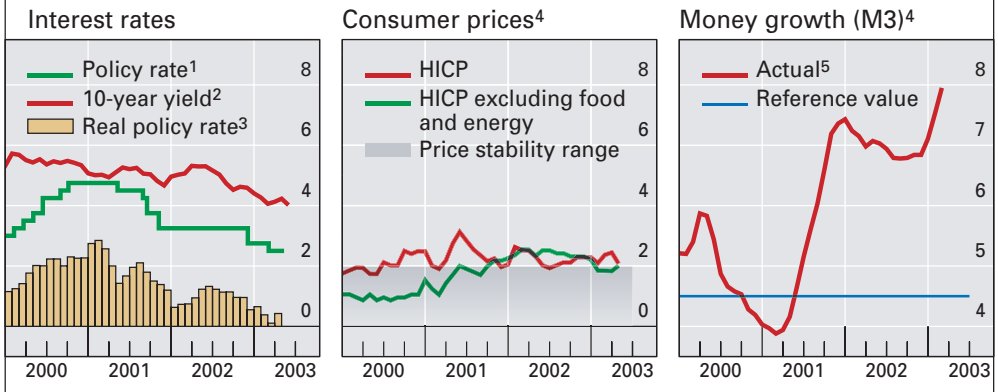
Policy rates were held steady in the euro area for most of 2002 (Graph IV.3). The policy environment was characterised by surprisingly weak growth and stubbornly high inflation, which remained above the upper bound of the ECB's price stability range. For a time, the ECB was particularly concerned that inflation expectations might become entrenched above this ceiling.

Inflationary pressures were a concern in the first half of 2002 ...

The ECB's view on the balance of risks to price stability did, however, evolve over the course of the year. The risks of inflation were taken to be on the upside in summer 2002 in the light of continued high money growth, wage developments and the public's perception of the inflationary effects of the cash changeover to euro notes and coins. The ECB took a more neutral view in early autumn, even though money and wage trends were still unfavourable and oil prices rose. By early November, the risks were seen as firmly on the downside, dominated by the high uncertainty over growth developments.

## Economic indicators for the euro area

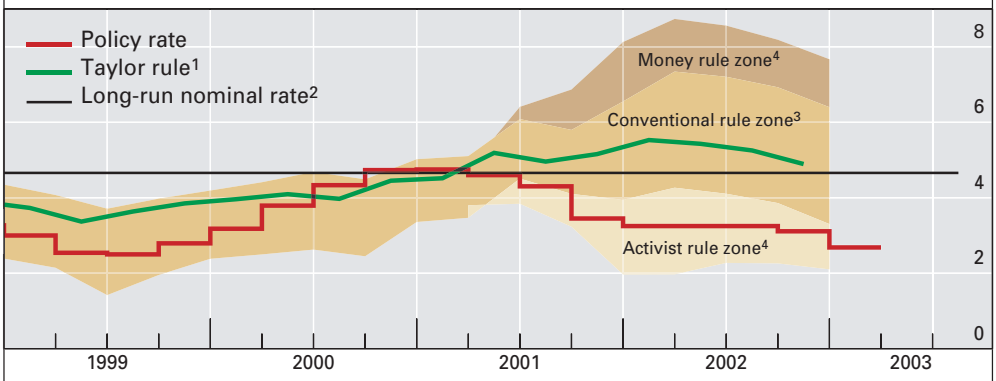
In percentages




[1] Tender rate (minimum). [2] Government bonds. [3] Policy rate less the 12-month percentage change in the harmonised index of consumer prices (HICP). [4] Annual percentage changes. [5] Three-month moving average.

Sources: ECB; European Commission; OECD; national data; BIS. Graph IV.3

## Policy rate and rules in the euro area




[1] (Baseline) Taylor rule = $r^* + \pi_t + \alpha(\pi_t - \pi^*) + \beta x_t$, where $\pi_t$ is HICP inflation, $x_t$ is the output gap, $r^* = 3.2\%$ (mean ex post real policy rate over the period 1982–2002), $\pi^* = 1.5\%$, $\alpha = 0.5$ and $\beta = 0.5$. [2] Equal to $r^* + \pi^*$ (baseline). [3] Range of Taylor rules with $r^*$ set to 2.5 or 3.5%, $\alpha$ set to 0.5 or 2 and $\beta$ set to 0.5 or 1. [4] Money rule zone: upper bound is baseline Taylor rule plus 0.5 ( $\Delta m_t - \Delta m^*$), where $\Delta m_t$ is M3 growth and $\Delta m^* = 4.5\%$ (ECB reference value). Activist rule zone: lower bound is baseline Taylor rule plus the difference between the federal funds rate target and a baseline Taylor rule for the United States. These rule zones are calculated from 2001 onwards.

Sources: ECB; OECD; BIS calculations. Graph IV.4

... but later downside risks loomed larger

In December, the ECB lowered the main refinancing rate by 50 basis points, as inflationary pressures were seen to be easing owing to sluggish growth and downside risks that seemed to loom ever larger. Meanwhile, M3 growth stayed well above the ECB's reference value of 4.5%. The ECB explained that the high money growth was largely driven by portfolio reallocations due to heightened uncertainty in the existing economic environment, financial market stress and lower interest rates. Nevertheless, the persistent deviation of M3 growth from the reference value raised the question of how long it would take for the demand for broad money to once again become stable enough to be used as a reliable indicator for monetary policy.

Rates were lowered in early 2003

A further policy interest rate cut was undertaken in early March, as inflationary pressures were expected to moderate still more in the face of continued sub-par growth and appreciation of the euro. In the light of significant uncertainty from geopolitical tensions, the ECB, like the Federal Reserve, noted that it was difficult to characterise the short-term balance of risks. Moreover, the direction and potential effectiveness of monetary policy over the medium term were deemed dependent on other policies in the euro area, notably further fiscal consolidation and progress on labour and product market reforms.

The ECB's policy stance was criticised for being too tight ...

During much of the period under review, the ECB's policy stance was criticised for having been too tight, particularly in comparison to that of the Federal Reserve. It is possible that differences in the monetary transmission mechanism and in policy frameworks, notably the ECB's more explicit focus on achieving price stability and the larger weight it places on monetary aggregates, played a role here. At the same time, differing economic conditions between the euro area and the United States may also have been consistent with the maintenance of relatively higher rates.

... but this was at odds with conventional benchmarks

Indeed, there are indications that, conditional on circumstances in their respective economies, the policies of the ECB and Federal Reserve have been broadly in line with each other. One assessment of the stance of policy in the euro area is provided in Graph IV.4. The graph plots the actual policy rate against ranges for the value of the policy rate implied by various Taylor-type rules. According to these measures, not only has the policy rate been below its long-run neutral level, but ECB policy has also been more stimulative than would have been consistent with the range of conventional Taylor rules. The case would be even stronger if it were thought appropriate that policy should respond directly to M3 growth, in addition to inflation and the output gap. However, just as in the United States, where the federal funds rate has similarly been kept below Taylor rule levels, the particularly stimulative stance in relation to such simple benchmark rules could be regarded as justified on the basis of a number of unusual circumstances. These include the previous collapse in stock prices, the geopolitical situation and even the possibility of hitting the zero lower bound, all of which are factors not easily incorporated into conventional policy rules.

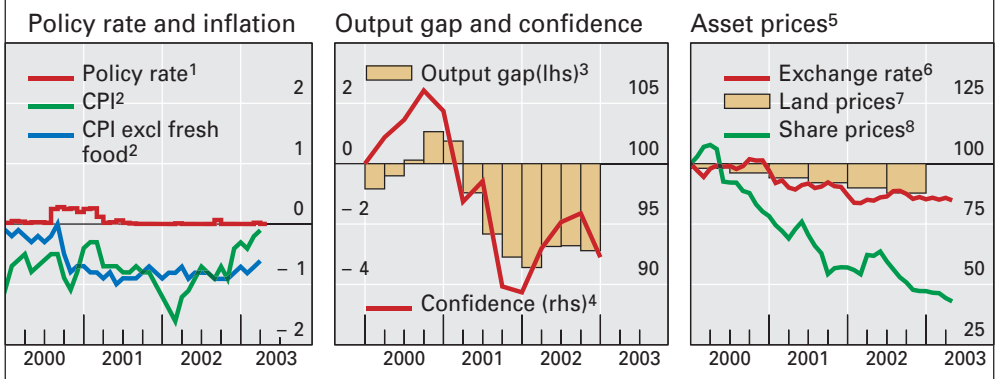
In May 2003, the ECB announced the results of its review of its monetary policy strategy. While maintaining its definition of price stability, the Governing Council clarified that it aims to keep inflation rates close to 2% over the medium term, underlying its commitment to guard against deflation. In addition, while confirming its two-pillar approach, the ECB underscored that the pillars pertain to two distinct policy horizons. Risks to price stability over the short to medium term will be assessed based on a broad economic analysis, emphasising shocks affecting the euro area and projections of key variables. Monetary analysis will serve as a means of cross-checking medium- to long-term inflation trends.

*Japan*

The Bank of Japan continued with quantitative easing

Japan continued to experience deflation during the period under review, albeit at a moderate rate, with the decline in core CPI at just below 1% (Graph IV.5). At the same time, the Japanese economy showed some signs of stabilising

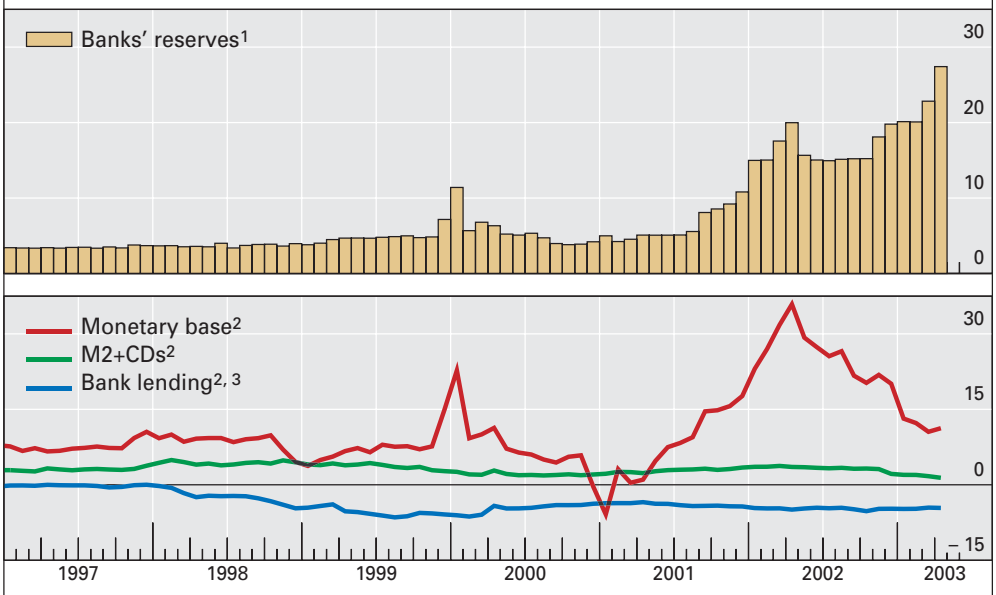
## Economic indicators for Japan




[1] Uncollateralised call money rate, in percentages. [2] Annual percentage changes. [3] As a percentage of potential ouput. [4] Consumer confidence; assessment balance, in percentage points. [5] Last value of 1999 = 100. [6] Nominal effective rate. [7] Residential. [8] Nikkei.

Sources: Bank of Japan, *Tankan*; Japan Real Estate Institute; national data. Graph IV.5

## Money and credit aggregates in Japan




[1] Current account balances with the Bank of Japan (in trillions of yen, monthly averages). [2] Annual percentage changes. [3] Lending by domestic commercial banks.

Source: Bank of Japan. Graph IV.6

during 2002, led by external demand. In the midst of these developments, the Bank of Japan maintained its policy of quantitative easing, which helped to keep short-term interest rates anchored virtually at zero. The target for the level of current account balances was initially maintained at ¥10–15 trillion, but was raised in October to ¥15–20 trillion (Graph IV.6). In addition, the Bank of Japan increased its outright purchases of long-term government bonds by about 20%. The monetary base grew at a lower rate during the latter half of 2002, although the growth rate of broad money (M2+CDs) remained steady at roughly 3%. Commercial credit declined further, reflecting the continued downward trend in business fixed investment, efforts by firms to shore up their balance sheets and more restrictive lending attitudes on the part of financial institutions.

Additional extraordinary measures were introduced

Policy was eased further in the early part of 2003 in response to greater risks to the economic recovery posed by the strengthening of the yen against the dollar and geopolitical tensions. In addition, equity prices and commercial and residential property prices continued to fall. At an extraordinary board meeting in March, the Bank of Japan reaffirmed its intention to provide ample liquidity to the economy, even in excess of its target for current account balances. It also announced an increase in the limit on its purchases of private banks' stockholdings, from ¥2 trillion to ¥3 trillion, and set up a committee to deal with potential negative market reactions to developments in the war in Iraq. The Bank raised its target for current account balances further in April, to ¥22–27 trillion, and again in May, to ¥27–30 trillion.

Doubts about quantitative easing were raised …

With deflation persisting and the Japanese economy showing no immediate signs of a strong revival, the effectiveness of quantitative easing was brought into question. In addition to other measures taken, such as a

reduction in collateral standards, the move to purchase equity holdings from banks was intended to supplement the programme of quantitative easing. One reason for resorting to this measure was to help insulate banks' balance sheets against further declines in stock prices. It was also hoped that this would help restore confidence in the equity market more generally. To date, these stock purchases have been on a relatively small scale. Arguably, a more important factor behind the Bank's decision to purchase equities was to underscore the severity of Japan's financial problems.

... as calls for more radical policies continued

The Bank of Japan also continued to face pressure to adopt other, still more radical policies to combat deflation. One alternative that received widespread support was an expansion of the Bank's purchases of risky assets to include asset-backed securities, real estate trusts and exchange-traded funds. In fact, in April 2003, the Bank of Japan announced its intention to purchase securities backed by loan claims and accounts receivable in an effort to channel funds directly to small and medium-sized companies. Alternative policy options included the adoption of inflation targeting, although the Bank of Japan has already pledged to maintain its policy of zero interest rates and quantitative easing until price declines cease. Also suggested was the pursuit of monetary actions that would lead to the depreciation of the yen as a means of complementing the exchange rate policies formulated by the Ministry of Finance. The authorities, in fact, intervened a number of times in foreign exchange markets, particularly in the early part of 2003, although this was directed towards stemming the appreciation of the yen against the dollar rather than encouraging a depreciation.

*Inflation targeting countries*

Stimulative monetary policies were the rule

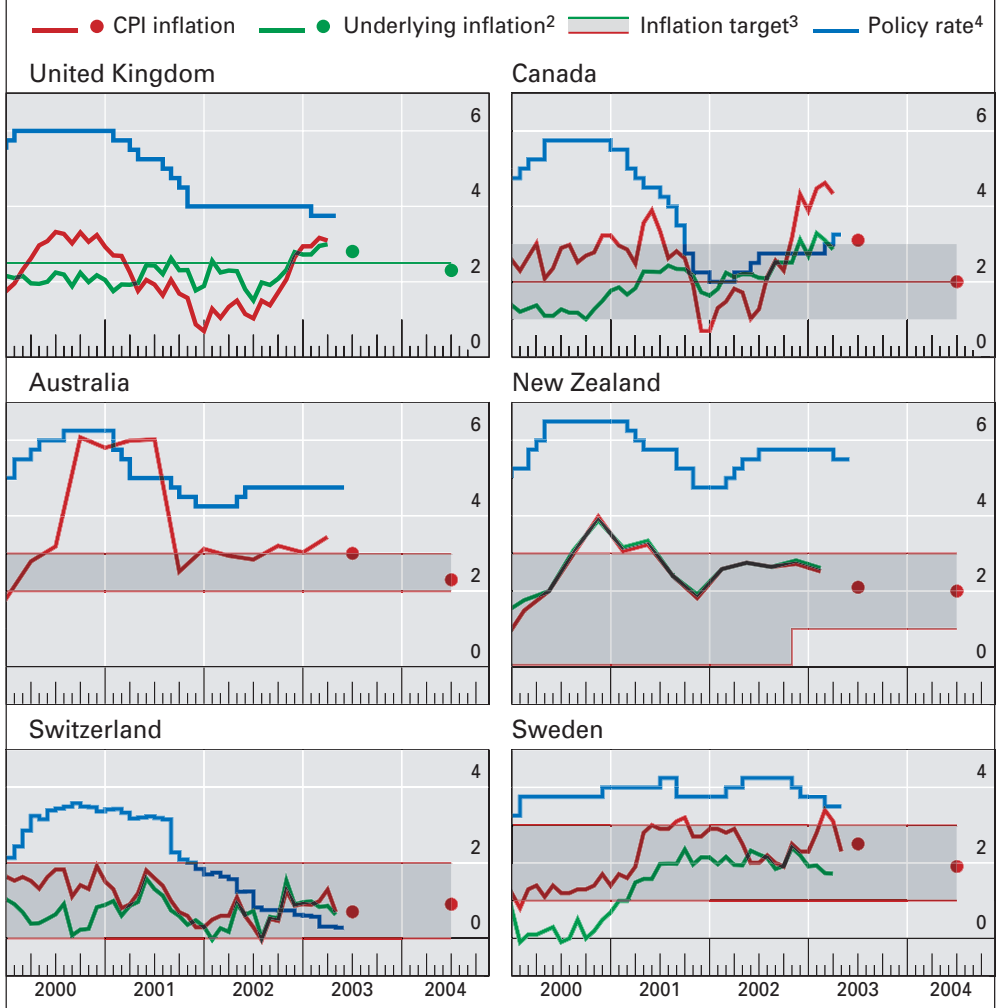
Central banks in countries with explicit inflation targets generally maintained an accommodative stance in the period under review. Several common factors lay behind this overall thrust of policy, including the global slowdown in demand, geopolitical uncertainties and the lingering effects of past falls in equity prices. Stimulative policies were pursued even though short-term inflationary pressures were generally elevated or rising during the period (Graph IV.7). To some extent, these were seen to reflect higher energy prices and other adverse supply developments. Assuming these pressures were of a temporary nature and that their impact would be likely to wear off over the forecast horizon, inflation rates would decline, especially if offsets were in place from exchange rate appreciation and economic slack.

Policy rates were generally steady in the latter half of 2002

Specific developments in each country highlight other key policy issues faced by policymakers over the past year, not least how to target inflation while balancing key uncertainties, such as risks posed in some cases by rapid increases in housing prices. The Bank of England kept its policy rate steady during most of the period, as output remained below potential and inflation fluctuated around its target rate of 2½%. The Bank expressed some reluctance to lower rates because of domestic demand pressures and potential growing imbalances in the household sector, especially those arising from the ebullient housing market. After having tightened policy in early 2002, the Bank of Canada, the Reserve Bank of Australia and the Reserve Bank of New Zealand

held rates unchanged for a time, despite robust domestic growth and diminished slack, as a precaution in the face of significant downside risks. Exchange rate appreciation and some moderation of prospects for global growth helped to maintain inflation close to the upper bound of the respective target ranges. The Reserve Bank of Australia and, to a lesser extent, the Reserve Bank of New Zealand also became increasingly mindful of potential problems arising from rapidly rising domestic housing prices. In Sweden, the Riksbank maintained its policy rate near 4% in 2002. A key concern during the year was whether inflation, which remained at the upper end of the target range, might become embedded in higher inflation expectations.

## Inflation and policy rates in countries with explicit inflation targets[1]




[1] Inflation rates measured as annual percentage changes. CPI inflation is targeted by Canada, Australia, New Zealand and Sweden; underlying inflation is targeted by the United Kingdom; Switzerland does not target inflation but instead uses a broad-based inflation forecasting strategy. The dots represent market forecasts from surveys conducted in May 2003. [2] For the United Kingdom, retail price index excluding mortgage interest payments; for Canada, CPI excluding eight volatile components and the effect of changes in indirect taxes on the remaining components; for Switzerland, CPI excluding food and energy prices; for New Zealand, CPI excluding credit services; for Sweden, CPI excluding indirect taxes, subsidies and house mortgage interest expenditure. [3] For the United Kingdom, set explicitly at 2.5%. [4] For the United Kingdom and Sweden, repo rate; for Canada, midpoint of the operating band for overnight financing; for Australia and New Zealand, cash rate; for Switzerland, the target band is set 50 basis points around three-month Libor.

Sources: © Consensus Economics; national data. Graph IV.7

Geopolitical uncertainties helped to prompt lower rates

Several central banks found cause to ease policy in 2003. This was in part due to worsening international economic prospects and lower confidence associated with the spike in uncertainty just prior to the war in Iraq. The Bank of England eased its policy rate by 25 basis points in February to 3.75%, the lowest level since 1955. The Riksbank cut its repo rate by 25 basis points in mid-March to guard against the downside risks. The Swiss National Bank responded to weakening international activity by reducing the lower and upper bands of its target range for three-month Libor to 0% and 0.75%, respectively, with the actual daily rate falling as low as 0.29%. With little short-term room to manoeuvre, Swiss policymakers also announced their intention to use foreign exchange market interventions, if necessary, to stimulate demand. The Reserve Bank of New Zealand lowered its policy rate by 25 basis points as it became more confident that inflationary pressures would ease. By contrast, continued upward momentum in inflation prompted the Bank of Canada to increase its policy rate by 50 basis points in early 2003.

Switzerland is now close to the zero lower bound

Further sectoral rebalancing may be needed

Even if the global recovery takes hold, policymakers in the inflation targeting countries will still face a number of challenges. One issue is whether temporary adverse supply developments over the past year, such as the spike in oil prices and service sector prices in some countries, could feed through into higher inflation. In practice, these developments, even if they lingered, would be less likely to cause as marked a deterioration in the inflation picture as they did in the 1970s. Since then, expectations have become better anchored at a low level of inflation, in part because of hard-earned inflation fighting credibility. Inflation targeting frameworks have increased public confidence that inflation rates will no longer be allowed to rise inexorably.

Concerns about housing prices

A second issue is whether elevated housing prices in some countries will be sustained. If increases in housing prices – such as in the United Kingdom, Australia and New Zealand – do prove sustainable, then central banks need not give them special attention. If, on the other hand, the run-up in housing prices were to prove unsustainable and the subsequent correction sizeable, policymakers might face a potentially destabilising period of adjustment. In the context of other financial imbalances, steep enough declines in spending could even lead to deflation if initial CPI inflation levels were low enough.

## Deflation risk and its implications

Deflation has become a widespread concern

Deflation – a decline in the general price level – is a term that had fallen into disuse during most of the postwar period of high inflation, but has cropped up more frequently in policy discussions of late. The successful taming of inflation has increased the possibility that most advanced industrial economies might be one deep recession away from experiencing deflation. In fact, accounting for measurement bias in standard aggregate price measures, the quarterly frequency of "effective deflation" has jumped significantly (Table IV.1; see also Chapter III). The recent Japanese experience, as well as the Great Depression era, clearly illustrates that a seemingly benign low-inflation environment can turn into one with disruptive deflation.

| Frequency of effective deflation, 1960 Q1–2002 Q4[1] | | | | | | |
|---|---|---|---|---|---|---|
| | 1960–69 | 1970–79 | 1980–89 | 1990–99 | 2000–01 | 2002 |
| Headline inflation | 13.7 | 3.0 | 7.5 | 11.8 | 22.1 | 28.9 |
| GDP deflator[2] | 8.7 | 2.0 | 5.3 | 15.4 | 32.2 | 34.7 |
| Core inflation[3] | 3.5 | 1.6 | 3.4 | 14.7 | 31.3 | 17.9 |
| Services less housing[4] | 4.0 | 1.3 | 2.2 | 12.2 | 28.6 | 16.1 |
| Wholesale inflation[5] | 27.6 | 7.6 | 23.1 | 35.2 | 25.0 | 57.3 |

[1] The frequency of effective deflation is defined as the percentage of quarters with yearly inflation less than 1% for each type of price index from Argentina, Belgium, Brazil, Canada, Chile, China, Colombia, France, Germany, Hong Kong SAR, Indonesia, Italy, Japan, Korea, Malaysia, Mexico, the Netherlands, Peru, Singapore, Sweden, Switzerland, Taiwan (China), Thailand, Venezuela, the United Kingdom and the United States. [2] Excluding Argentina, Chile, China, Colombia, Peru, Singapore and Venezuela. [3] Excluding the countries in footnote 2 and Brazil, Hong Kong SAR, Indonesia, Malaysia and Taiwan (China). [4] Excluding the countries in footnote 2 and Hong Kong SAR, Malaysia, Taiwan (China) and Thailand. [5] Excluding China and Hong Kong SAR. Table IV.1

One of the most daunting challenges faced by central banks in a deflationary environment is the zero lower bound (ZLB) constraint. The relevance of the ZLB as a binding constraint ultimately depends on the seriousness of the deflation as well as the level of the natural real interest rate. The latter varies positively with the potential growth rate of output and will differ from country to country. The main problem for central banks is that they would need to employ unconventional means to further ease monetary policy if short-term nominal interest rates were driven down to zero.

Following the adage "hope for the best but plan for the worst", this section explores some of the lessons to be learned about deflation from history, with particular reference to the role of monetary policy and the ZLB.

*Problems of deflation*

Deflation is inconsistent with central bank objectives

Central banks view deflation as undesirable because it is inconsistent with their goal of promoting welfare through price stability. In practice, most central banks consider price stability to be equivalent to some low but positive rate of inflation. The objective of price stability reflects the familiar economic costs arising from inflation on the upside and deflation on the downside, such as relative price distortions and arbitrary redistributions of wealth. In addition, deflation entails other costs that will depend greatly on the particular economic conditions associated with each episode.

Costs of deflation depend on circumstances

On the one hand, there may be situations where deflation is relatively benign. In an economy with flexible labour and product markets, a modest deflation may be no more costly or risky than a similarly sized deviation of inflation above the central bank's desired inflation rate. In consequence, such deflations might not be viewed as events that require exceptional policy responses. For instance, an economy with low average inflation is likely to experience occasional brief periods of deflation, as a matter of course, as economic activity experiences its normal cyclical fluctuations in response to demand and supply shocks. Unexpected weakness in demand may create economic slack that puts downward pressure on inflation, possibly enough to lead to deflation. Likewise, favourable supply developments, such as rapid

productivity growth or declines in imported intermediate goods prices, may generate deflationary pressures as product prices fall and unit labour costs remain subdued. Such supply-driven deflations may be the most benign of all because they would tend to be accompanied by rapid growth in output as well as in physical and financial asset prices.

Deflations can be disruptive ...

On the other hand, deflation can be more disruptive than inflation because of several types of economic asymmetries. First, if nominal wages were especially rigid downwards, their failure to fall could interfere with adjustments in labour markets during a deflation. Real wages would rise, thereby slowing a recovery or adding to contractionary forces by raising unemployment rates and reducing income growth. Second, debt deflation – the increased servicing costs in real terms on nominal credit contracts due to deflation – can have a restraining effect on demand during a deflation, although this effect would by itself not be dissimilar from that associated with an unexpected disinflation. The consequent deterioration in their financial position could induce borrowers to curb spending so as to bolster balance sheets, make external funding harder to come by and, at the extreme, increase bankruptcies and seriously undermine the asset quality of financial institutions. Third, deflation can impair the ability of monetary policy to stimulate economic activity once the ZLB is reached because real rates will rise if deflation is expected to increase. Without stimulative monetary policy, the downside risks to growth would be greater and the speed of recovery would be slower.

... particularly when associated with asset price declines

The consequences of deflation would be particularly disruptive if preceded by a build-up of large debts and accompanied by sharp declines in asset prices. The unwinding of financial imbalances could even lead to a deflationary spiral taking hold. In such an extreme scenario, subsequent rounds of debt deflation, large reductions in the value of collateral and equity ratios and entrenched deflation expectations could have serious repercussions on the financial system, including failures of financial institutions and dysfunctional financial markets. The outcome could be very damaging, including a contraction in output and a rise in unemployment. A prime example of such processes, abetted by poor policy choices, is the Great Depression in the United States.

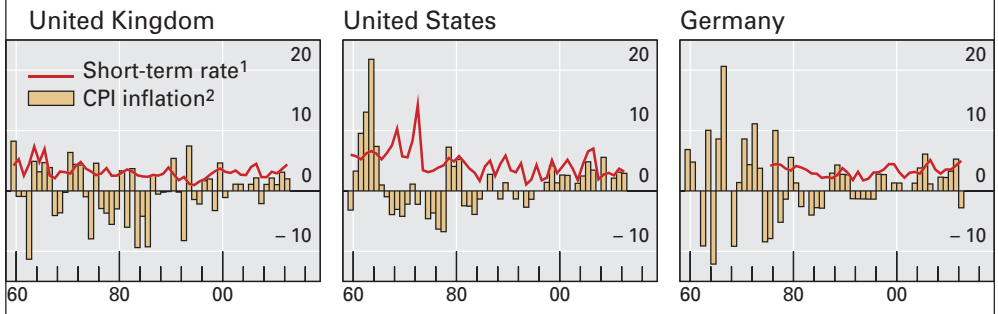
*The historical record*

Past experiences with deflation, particularly in the 19th and early 20th centuries, provide insights about the nature of deflation and its challenges for monetary policymakers. Several stylised facts emerge.

Deflation was commonplace

The most striking feature of that period is that deflation was a much more common occurrence than in recent history. For example, deflation was just as prevalent as inflation during the period 1860–1900 in the United Kingdom, the United States and Germany (Graph IV.8). This phenomenon partly reflects the rule-based nature of the monetary system during that time – the gold standard. Under the gold standard, the price of gold was maintained by national governments at a fixed parity, which effectively constrained the inflation process. As a result, price levels could not continually rise as they did

## Deflation and interest rates in historical perspective (1860–1913)




Note: The correlation between the two series for each of the three economies is 0.2, 0.1 and 0.0 respectively.

[1] In percentages. [2] Annual percentage changes.

Sources: Global Financial Data; national data; BIS calculations. Graph IV.8

in the latter part of the 20th century unless there was a sustained increase in gold reserves. This meant that, over time, periods of inflation alternated with periods of deflation and, over long horizons, prices tended to be comparatively stable.

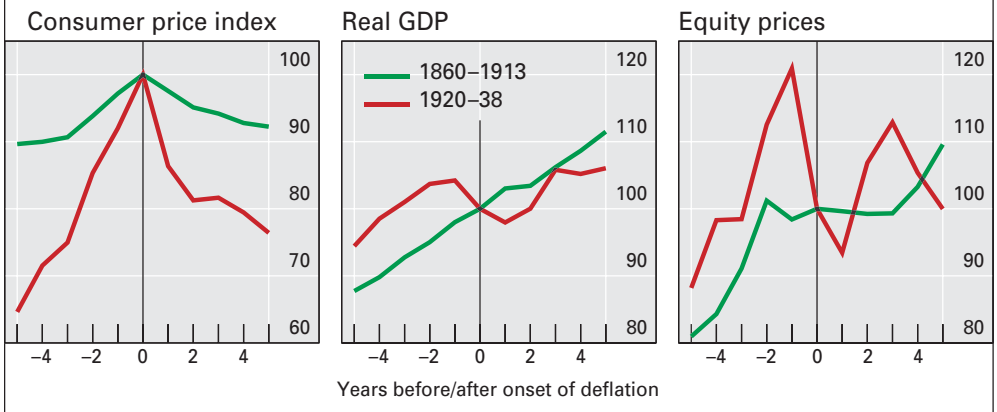
Mild deflations were consistent with good economic performance

Another interesting historical feature is that deflation in a variety of countries was rarely accompanied by an obvious deceleration in real GDP. In fact, to the extent that historical annual data are accurate, output typically kept growing even after peaks in the price level (Graph IV.9). Among the factors that might explain this are fairly flexible nominal wages, the nature of the monetary regime and the way in which price expectations were formed (see below), and historically modest debt levels. The Great Depression stands out as one notable exception, as there was a major collapse of output, an asset price crash and significant financial strains. In a broad historical context, the Great Depression may be best interpreted as a unique period when many particularly unfavourable economic and policy developments interacted to produce the most severe contraction in the past 100 years.

Deflations were largely unanticipated

Historical evidence also seems to indicate that, typically, the onset of deflations in the 19th century, even deep deflations, was largely unanticipated. More generally, it appears that price expectations adjusted only slowly to economic developments. While survey data are not available from this period, indirect evidence from the behaviour of nominal interest rates is consistent with this view. Short-term nominal rates were remarkably stable despite wide swings in the rate of price change (see Graph IV.8); indeed, such stable behaviour was particularly evident in long-term nominal rates. One possible explanation is that inflation expectations were not very sensitive to past inflation developments because price data were generally not available in a timely fashion, the theory behind aggregate price indices was still in its infancy and theories of nominal interest rate determination were either not developed or not well known. Another possible, complementary, explanation is that expectations simply reflected the nature of the monetary regime. Since inflation and deflation rates were less persistent under the gold standard, as noted earlier, expectational errors committed in the short run would have tended to be offset over time, thereby involving little cost on average.

## Dynamics of deflation, output and equity prices




Note: Average for the G10 countries, weighted by 1890 GDP. The series for each country is divided into subperiods of five years before and after the peak in the price level. Each subperiod is rebased to 100 at the peak and an arithmetic mean is computed for each country. Peak dates vary from country to country but cluster around the years 1871–74, 1880–84, 1890–91, 1920–26. Some series for some countries may start later than 1860.

Sources: M Bordo, B Eichengreen, D Klingebiel and M S Martinez-Peria: "Financial crises: lessons from the last 120 years", *Economic Policy*, April 2001; OECD; Global Financial Data; BIS calculations. Graph IV.9

The ZLB was not important

A fourth, somewhat more surprising, feature of deflations in the 19th and early 20th centuries is that the ZLB was hardly ever reached. Indeed, except during the interwar years, short-term interest rates were rarely close to zero. This was probably due, in part, to sluggish changes in expectations but also to the nature of the monetary regime. In particular, under the gold standard, policy (discount) rates were kept largely stable around historical norms and adjusted upwards only when the gold parity came under pressure.

### *Lessons from past experience*

Monetary regimes matter

When viewed through the proper lens, the historical record can provide lessons for policymakers today. A first point to note is that under the current fiat-based monetary system, policies aimed at delivering low and stable inflation act in a very similar way to the implicit rules imposed by the gold standard, despite obvious differences between the two systems. In both, deviations from price stability cause a feedback response that effectively constrains the behaviour of prices. Under the gold standard, international reserves and gold would naturally flow from countries with relatively high inflation; in the current system, central banks take action to adjust domestic monetary conditions. One important difference is that current monetary policy frameworks generally allow for sustained upward drift in the price level, whereas gold reserves provided a rough anchor for the price level over long horizons.

The historical record also provides more specific lessons concerning the likelihood of deflation and of hitting the ZLB, as well as whether economic problems associated with deflation today are likely to be more or less severe than in the past.

Unanticipated deflation still a relevant concern

First, despite more sophisticated economic analysis and forecasting abilities, recent experience suggests that the risk of failing to anticipate the onset of deflation should not be underestimated. Deflation in Asia, for

example, was in large part unexpected, as weaker than anticipated growth dashed expectations of positive price increases (Table IV.2).

The ZLB may be more important now

Second, it would be problematic to conclude from the historical experience that the ZLB constraint is unlikely to become a relevant consideration (Graph IV.8). Monetary policy is much more activist today than in the past. On the one hand, this tends to reduce the likelihood of generating deflation in the first place, as monetary authorities are now more apt to react pre-emptively to unfolding economic events. On the other hand, there is a greater chance that central banks will drive the policy rate towards zero during periods of sluggish economic activity if inflation threatens to go below the desired rate. For example, the Bank of Japan has already pushed short-term interest rates effectively to the ZLB, and, more recently, the Swiss National Bank has lowered its policy rate close to zero.

Expectations formation plays a key role

Third, expectations now seem to be more responsive to economic developments, reflected in the historical data by the higher correlation over time between inflation and nominal interest rates. To the extent that this depends upon the greater availability of information, there is a higher risk that, at the onset of deflation, expectations of further price decreases will become more easily entrenched. This puts a premium on current monetary frameworks being credible in the pursuit of low and stable inflation, thereby muting the responsiveness of expectations to undesirable short-term price dynamics. The gold standard, especially during its heyday from 1880 to 1913, played the role of a stable policy anchor. A key question today is whether the credibility of formal or informal inflation targeting frameworks would prove to be similarly stabilising.

Deflation may be more disruptive now due to more rigid nominal wages

Fourth, downward nominal wage rigidity is more prevalent today than in the past as labour market practices have changed significantly over the centuries. Such changes include higher rates of unionisation, more generous unemployment benefits and greater protection of workers' rights. Arguably, these factors would tend to increase rigidity in nominal wages. In addition, workers may be more likely to resist nominal wage cuts as a result of the

## Episodes of deflation in 2002

| | Inflation | | | Output growth | |
|---|---|---|---|---|---|
| | Actual[1] | Forecast[1, 2] | Forecast error[2, 3] | Actual[1] | Forecast error[2, 3] |
| Economies experiencing deflation[4] | –0.8 | 1.6 | –2.3 | 4.8 | –0.8 |
| China | –0.7 | 2.5 | –3.2 | 8.0 | –0.1 |
| Hong Kong SAR | –3.0 | 2.5 | –5.5 | 2.3 | –2.5 |
| Japan | –0.9 | 0.0 | –0.9 | 0.3 | –1.6[5] |
| Singapore | –0.4 | 2.0 | –2.4 | 2.2 | –4.3 |
| Taiwan, China | –0.1 | 1.8 | –1.9 | 4.0 | –1.7 |

[1] Average annual percentage changes. [2] January 2001 consensus forecast. [3] In percentage points. [4] Weighted by 2000 GDP at PPP exchange rates. [5] Part of the forecast error is probably due to the changes in the national accounts methodology.

Sources: © Consensus Economics; national data; BIS calculations. Table IV.2

legacy of high inflation from the 1970s and 1980s. The combination of expectations that are more sensitive to developments, and nominal wages that are less flexible, suggests that deflations associated with deficient demand could be more disruptive in certain respects than those a century ago. For example, the recent experience in Hong Kong has illustrated that, in an environment of persistent deflation and rising unemployment, nominal wages appear to have been less flexible than would otherwise have been expected.

Financial systems may be more resilient now

Finally, financial systems have clearly undergone major changes since the late 19th century. These may have increased their resilience in the face of deflationary pressures. For instance, risk management practices have grown considerably in sophistication and there have been significant improvements in prudential frameworks (see Chapter VII). On the other hand, higher leverage ratios today relative to the more distant past may have raised the exposure to debt deflation.

*Dealing with deflation*

Deflation raises specific challenges for monetary policy largely because of the presence of the ZLB. When the ZLB is reached, central banks must turn to alternative instruments in their efforts to stimulate demand. This raises three questions. First, what are the best monetary policy tactics when facing a risk of deflation? Second, how should central banks respond after falling into a deflationary environment? Third, and more broadly, does the recent brush with deflation, particularly the Japanese experience, suggest a need to adapt the current objectives or strategies of monetary policy? This subsection addresses these questions in turn.

*Tactics to avoid deflation*

The ZLB calls for aggressive easing

Since the ZLB imposes an asymmetry on interest rate movements, it has been suggested that monetary policy itself should be conducted asymmetrically as inflation falls towards zero. That is, interest rates would be lowered somewhat further and faster than would normally be the case in the face of a slowdown in economic activity that took place at already low inflation rates. This approach would aim to limit the risk of deflation taking hold in the first place. In addition, policy rates could be kept very low until clear signs emerged that demand had recovered and inflation had started to rise. To some extent, this may describe the behaviour of the Federal Reserve in rapidly lowering the federal funds rate target in 2001 and continuing to keep it low into 2003. Other countries also adopted and maintained very stimulative policies during this period.

At the same time, one possible risk associated with sharp reductions in policy rates is that they could, under some circumstances, have the potential to undermine confidence. This might be so if the public saw such moves as revealing negative information about the outlook, or if the public became concerned about the prospect of the central bank running out of ammunition. In either case, what policymakers said would play an important role in shaping public expectations about their policy intentions and assessment of economic

conditions. Communication of such views could have an economic influence above and beyond the direct effects of interest rate changes alone.

A second complication could arise depending on the circumstances in which deflationary forces developed. In particular, historical experience indicates that, given an initial low level of inflation, the unwinding of financial imbalances can be an insidious source of deflationary pressure. Such imbalances, however, might be primarily concentrated in certain sectors or asset classes and could respond with different speeds and degrees of sensitivity to monetary policy actions. If so, lowering the policy rate to counteract headwinds arising from one sector might contribute to the build-up of imbalances in another. This could present the central bank with a subtle trade-off over time when setting its policy rate.

*Tactics to combat deflation*

Ending deflation may require another set of monetary policy tactics than those used when simply trying to avoid it. As long as the ZLB has not been reached, the central bank can use conventional means to influence demand through the standard transmission channels. However, if the ZLB becomes a binding constraint, alternative approaches need to be adopted. In this case, potential measures include supplying massive liquidity, trying to influence more directly the relative price of specific assets, altering inflation expectations by other means, eliminating impediments in the monetary transmission mechanism and leveraging monetary policy responses through other macroeconomic policies.

Ending deflation may require unconventional measures ...

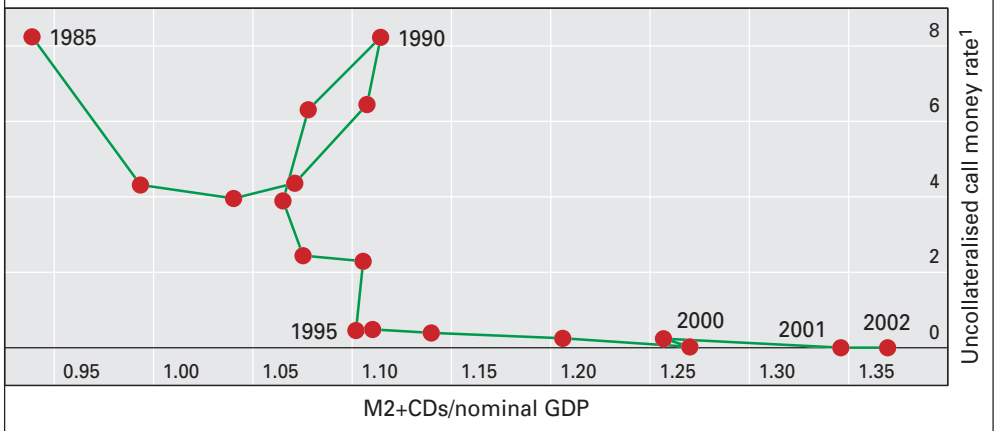
Supplying liquidity is a traditional monetarist response. Once the ZLB is reached, this means adding reserves to the banking system well in excess of normal amounts, such as under the Bank of Japan's policy of quantitative easing. But the willingness of banks and the public to hold idle cash balances can offset the stimulative effects of liquidity expansion, as appears to have been the case in Japan recently (Graph IV.10). The effectiveness of this tactic may also be compromised by the composition of the debt instruments the central bank chooses to purchase to add liquidity. If highly liquid debt were a good substitute for money, which is likely to be particularly true at the ZLB, central bank purchases of such debt would simply replace one form of money with another, with little net impact on the net provision of liquidity.

... such as massive injections of liquidity ...

A second approach is for the central bank to attempt to influence asset prices directly. Even when the short-term policy rate is zero, targeting the acquisition of specific assets, such as long-term risk-free bonds, corporate bonds, equities and real estate, may have direct demand effects on their relative price. In addition to wealth effects, higher asset prices raise the value of collateral, thus helping to counteract lending restrictions. It may be desirable, at the extreme, to attempt to peg certain prices, such as the exchange rate. In fact, many countries escaped deflation during the interwar period through currency devaluations. This helped alleviate economic dislocations associated with deflations caused by the restoration of the gold standard at pre-World War I parities. Of course, a change in the value of

... changing the relative prices of assets ...

## Money demand in Japan (1985–2002)




[1] December values, in percentages.

Sources: Bank of Japan; BIS calculations. Graph IV.10

the currency involves other countries, and thus its feasibility depends upon external economic conditions as well.

The purchase of risky assets, whether for the purpose of injecting liquidity through unconventional means or in an effort to raise prices, raises political economy issues for public institutions to wrestle with. To be effective, such purchases would probably have to be conducted on a large scale. This would mean that public institutions could end up owning a significant portion of the economy's productive resources, with potentially undesirable consequences for corporate governance and, ultimately, economic efficiency. In addition, there is the issue of whether these transactions should be undertaken by the central bank at all. In particular, the central bank's independence might be called into question if such purchases led to large losses on its balance sheet requiring recapitalisation by the government.

... altering inflation expectations ...

Central banks can also try to alter price expectations, which can help to alleviate deflationary pressures. They can achieve this in two ways. One is by making it clear that ample liquidity is being supplied. Another is for the central bank to reiterate its positive inflation goals and to introduce an explicit inflation target, if it does not already have one. For example, it has been suggested that the Bank of Japan adopt a formal inflation targeting framework. However, it is doubtful that this step alone would stop deflation. A key benefit of inflation targeting is how it affects the public's expectations, but without other strong measures to back up this type of change, the policy framework is unlikely to be credible.

... and other macroeconomic policies

For all the reasons discussed, other supporting policies, which require actions outside the central bank, might be necessary to combat deflation. One example is the removal of impediments to the monetary transmission mechanism. Overindebtedness in corporate balance sheets, credit crunches, heightened risk assessments and greater risk aversion have all played some role in severe deflations of the past. Combating these is an important step towards reflating an economy. An early example is the reversal of the credit crunch in the United States during the Great Depression, which was

accomplished primarily by stabilising the banking industry. Large-scale relief to corporate balance sheets was also provided by suspending legal clauses in bond contracts that were indexed to gold. More recently, the relatively quick recovery in Korea after the 1997 Asian crisis is evidence of how effective the cleaning-up of bad bank assets can be. Similarly, the ongoing poor condition of bank and corporate balance sheets in Japan serves as a warning of how sub-par growth and deflation can be prolonged when such problems are not solved. Countercyclical fiscal policies may also be effective measures to reinvigorate economic activity and thereby counteract deflationary forces (see Chapter II). These could include expansionary government spending and tax policies.

Coordinated actions by official bodies are likely to be thought more credible and to gain more notice from the public. This might allow a monetary authority to leverage its monetary resources by optimally sequencing monetary, fiscal and regulatory responses. The potential benefits of such an approach would be a more potent cocktail of stimulus and the chance to keep the less attractive monetary policy options in reserve.

*Possible refinements to the monetary policy framework*

The previous analysis suggests that the economic costs associated with deflation can be significant and that, under some circumstances, the effectiveness of monetary policy levers may be impaired. Whether this would warrant refinements to current monetary frameworks depends upon the specific characteristics of each regime and the economic structures under which they operate. Moreover, the evaluation of the relevant trade-offs for monetary policy will also depend on broader factors, not least the features of the mandates of each central bank. Even so, a number of possibilities might be considered.

Asymmetric inflation target bands

One possibility would be to institutionalise a policy of easing somewhat faster and further than normal as the risk of deflation increases. For instance, inflation targeting central banks could introduce asymmetric target bands: the lower end of the band would be closer to the otherwise unchanged target inflation rate than the upper end of the band. Accordingly, a fall in inflation below target would elicit a stronger response than a similar rise above target to counter the risk that the lower bound would be reached sooner.

Inflation objectives

A second possibility would be to increase the target rate of inflation. Of course, central banks would need to reassess the trade-off between the costs of somewhat higher average inflation rates and those associated with a higher incidence of deflation given a lower target. The former would, moreover, be of a permanent nature, while the latter would only be incurred from time to time.

Flexible price level targeting

A more fundamental change to existing monetary policy frameworks would be the adoption of a price level target, perhaps with an upward trend. In this framework, as the price level falls below its target level, a monetary authority would be expected to ease policy just as under inflation targeting. The chief merit of this alternative is that, as the gap between the actual and target price level widens, increasingly aggressive monetary policy actions would be expected. Relative to an inflation targeting framework, the central

bank would be prepared to accept a temporarily higher inflation rate as the price level rose back up to the target level. In such an environment, there would be a greater likelihood of deflation expectations turning into expectations of inflation, at least over a near-term horizon. Such a system would add a price level anchor similar in some respects to features of the gold standard. Even though price level targeting sounds like a radical change from current practices, it can be viewed as simply targeting an average inflation rate over a long policy horizon that takes into account past deviations of inflation from its target. In comparison, current practices largely ignore such past deviations. However, the differences between this system and existing frameworks may present a challenge in communicating with the public.

Greater emphasis on financial stability

Another possibility could be to modify existing frameworks by placing somewhat more emphasis on financial stability. The historical record, both recently and in the more distant past, indicates that deep deflations are normally accompanied by serious financial strains. Being mindful of financial imbalances as they build up in good times could help to reduce the likelihood and severity of their subsequent disruptive unwinding. In turn, this could help to limit the risk of financial crises and deflation. In practice, such a modification need not call for a redefinition of the objectives of monetary policy; rather, it would call for some refinements in the way those objectives are pursued. First, central banks could adopt longer policy horizons (ie beyond the conventional one to two years), recognising that the processes involved tend to be drawn out. Second, greater emphasis could be placed on avoiding the most undesirable outcomes, such as prolonged deflations, when assessing the balance of risks.

Limits of monetary policy

Finally, it should be recognised that there are limits to the effectiveness of monetary policy. The Japanese experience, in particular, has highlighted potentially important interactions between monetary, fiscal and prudential policies. Given such possibilities, central banks might wish to explore systematically, along with fiscal and prudential authorities, the set of policy options available to address deflationary forces well in advance of their actual emergence. To the extent that there is coordination of policies across separate institutions, questions might be raised about central bank independence. However, this risk could be worth bearing if the exploration of such options helped to inspire confidence in the ability of the central bank, and policymakers as a group, to fight deflation.

# V. Foreign exchange markets

## Highlights

The weakening of the US dollar was the salient feature in the major foreign exchange markets in 2002 and early 2003. The dollar depreciated particularly against the euro and, to a lesser extent, the yen, but also fell over time against a broadening range of currencies. Interest rate differentials seemed to re-emerge as an important factor behind exchange rate movements against the backdrop of disappointing growth prospects and the continuing decline in equity prices. The widening US current account deficit and changes in the composition of its financing also took centre stage, suggesting a rising risk premium on US assets.

An empirical review of major current account corrections in a large number of industrial countries since 1973 reveals that these adjustments were associated with slower domestic growth but only relatively minor currency depreciations. In contrast, an analysis of the particular episode affecting the United States in the second half of the 1980s indicates that the decline of the dollar played a much larger equilibrating role. Yet there are important differences between current conditions in the global economy and those prevailing in the 1980s. The implication appears to be that a significant correction of current account imbalances still seems likely, but that a similar pattern of dollar adjustment cannot be predicted with confidence.

Several non-EMU European currencies and the Australian, Canadian and New Zealand dollars derived support from their interest rate differential over US dollar- or euro-denominated assets. Their appreciation was also consistent with the relatively good performance of the respective economies. A notable exception to this association between currency strength and yield advantage was the Swiss franc, whose appreciation between January 2002 and March 2003 mainly reflected a safe haven role.

The search for yield by international investors also lent support to some emerging market currencies during the period under review, though global economic prospects and various domestic factors also exerted a considerable influence.

## The dollar, euro and yen

During the period under review, the dollar fell markedly against the euro and, to a lesser extent, the yen. It also declined significantly in effective terms. The dollar's weakness appeared to be driven mainly by a reorientation of capital flows towards safer fixed income assets and the consequent re-emergence of interest rate differentials as a determinant of international capital movements. In addition, concerns about the growing US current account deficit weighed

on the dollar. In contrast to earlier episodes of heightened uncertainty, but similarly to the period around the previous Gulf war, the dollar did not play a role as a safe haven currency.

*Key developments*

The dollar declined across the board

After a long period of broad-based strength, the dollar peaked at the end of January 2002. It then began to decline against many currencies starting in April, coinciding with a general deterioration of sentiment in US financial markets (see Chapter VI). In nominal effective terms, the dollar depreciated by about 16% between January 2002 and its lows in mid-May 2003 (Graph V.1).

The adjustment of the dollar was especially significant vis-à-vis the euro, which appreciated by 30%, from the $0.86–0.89 range in early 2002 to reach four-year highs of over $1.15 in mid-May 2003 (Graph V.2). The euro gained about 15% in nominal effective terms over the period, which marked a clear recovery from its depreciating trend in 1999 and 2000.

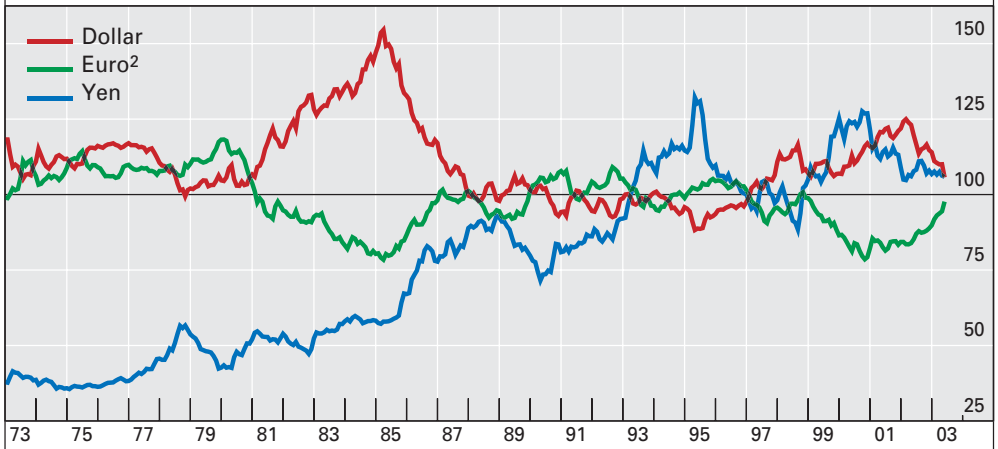
The dollar also weakened against the yen, albeit to a lesser extent, from over ¥134 in early 2002 to below ¥117 in May 2003. The advance of the yen prompted official intervention by the Japanese authorities on several occasions. In contrast, the yen continued to decline vis-à-vis the euro, from the ¥115–119 range to touch ¥135 in mid-May. Overall, the yen remained unchanged in nominal effective terms over the period under review. While still strong by historical standards, the yen nonetheless ended the period 19% below its recent peak in late 2000.

Significant shift in market sentiment

The depreciation of the dollar was accompanied by some significant changes in market sentiment (Graph V.3). Starting in early 2002, market participants' view of the balance of risks between a much stronger and a much weaker dollar, measured by the skewness of estimated risk neutral probability density functions, shifted towards dollar weakness. Econometric tests reveal that over the last two years a deterioration of sentiment about the

Nominal effective exchange rates of the dollar, euro and yen[1]

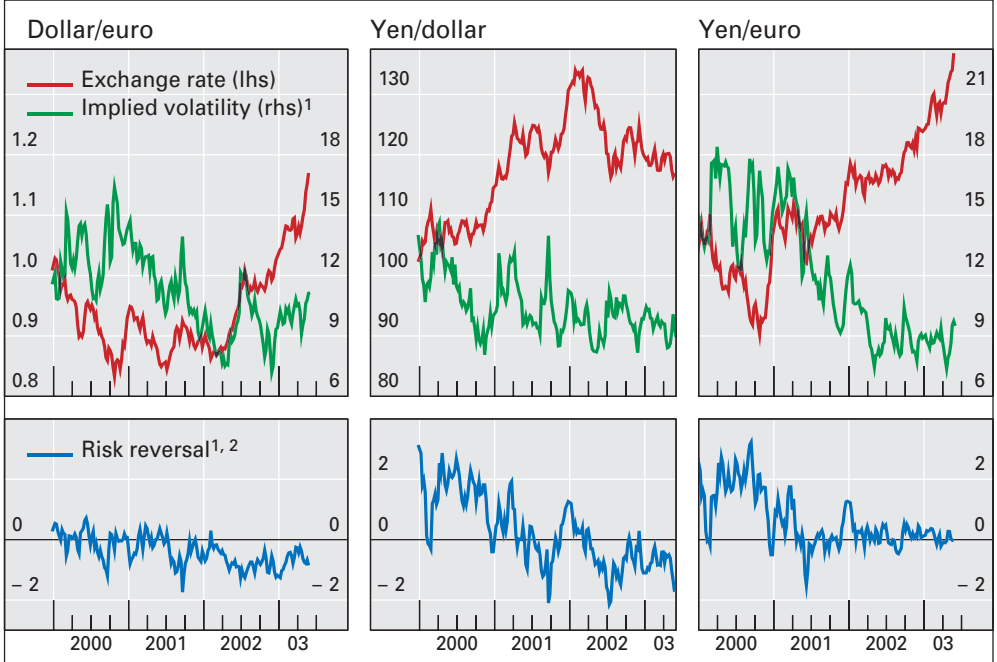
Monthly averages, 1990–99 = 100




[1] Trade-weighted averages. Prior to 1999, vis-à-vis 25 countries; thereafter the EMU participants are treated as a single unit. [2] Prior to 1999, trade-weighted average of effective exchange rates of EMU participants.

Source: BIS. Graph V.1

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



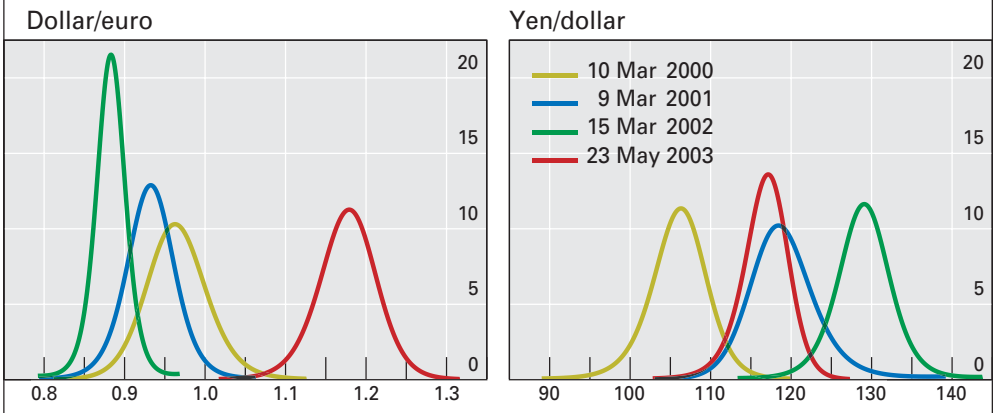

[1] One-month, in percentages. [2] A positive value indicates a bias towards dollar strength in the left-hand and centre panels, and towards euro strength in the right-hand panel.

Sources: Dresdner Kleinwort Wasserstein Research; Reuters; BIS calculations. Graph V.2

dollar tended to be followed by an actual decline in the exchange rate after four weeks, even after controlling for the effect of past exchange rate movements.

A notable feature of the major foreign exchange markets during the period under review is that, despite the pronounced movements of the G3 currencies, their short-term volatility was relatively low compared to previous years. This stood in contrast to the uncertainty in other financial markets (see Chapter VI).

## Probability distributions of the dollar against the euro and yen[1]




[1] The risk neutral probability density functions are estimated using the indicative quotes of a market-maker in London on three derivatives contracts: at-the-money implied volatility, the risk reversal and the strangle. The maturity of the options is constant and equal to one month. For details, see G Galati and W Melick, "Central bank intervention and market expectations", *BIS Papers*, no 10, April 2002. The calculation is based on weekly averages of daily estimated density functions for the weeks ending on the dates indicated.

Sources: JP Morgan; BIS calculations. Graph V.3

*Determinants*

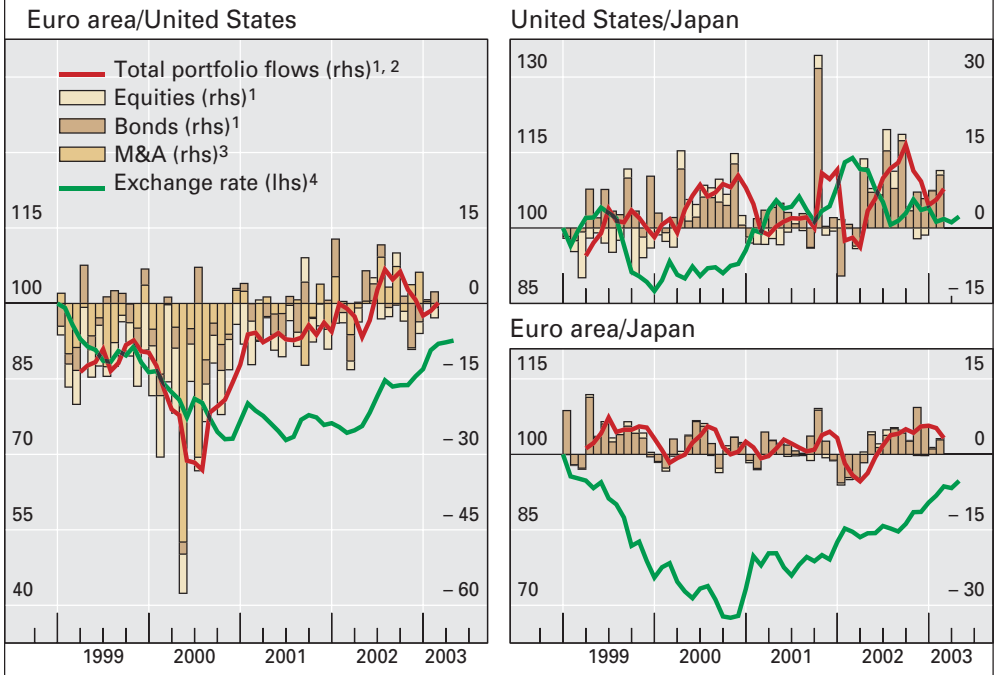
Substantial change in driving forces

The period under review was marked by a substantial change compared to earlier years in the forces driving the major exchange rates. To better understand the determinants of the dollar's decline in 2002, it is useful to recall the factors that had contributed to its strength between the mid-1990s and 2001.

High US productivity growth, large capital flows and dollar appreciation until 2001

During this earlier period, high actual and expected productivity growth in the United States had underpinned a rapid increase in investment and an exceptional rise in US equity prices. The prospects of higher returns in the United States had helped to draw in large portfolio flows, especially into equities and corporate bonds, as well as foreign direct investment (FDI) flows. These capital inflows had fuelled a sizeable appreciation of the dollar (Graph V.4), which in turn had weakened the current account balance. Admittedly, over the course of 2001, this investment boom had gradually come to a halt, alongside sharply falling profits and decelerating economic activity in the United States. The markets for US stocks and risky corporate bonds had also started to fall, with investors turning their focus away from equities back to safer portfolio choices such as higher-quality corporate bonds, agency debt and government debt (see Chapter VI). Gross capital flows to the United States had slowed down. Nonetheless, net private portfolio and FDI flows from the euro area had continued to be positive, as growth prospects in the United States were

## Portfolio flows between the three major economies




[1] In billions of US dollars. A positive value indicates, in the left-hand and bottom right-hand panels, a net flow into the euro area, and, in the other panel, into the United States. Data may include official transactions; for the bottom right-hand panel, Japanese investors only. [2] Three-month uncentred moving averages. [3] Mergers and acquisitions; net flows into the euro area, in billions of US dollars. Observations are assigned to the announcement date of the deal. [4] Dollar/euro, yen/dollar and yen/euro; December 1998 = 100.

Sources: Japanese Ministry of Finance; US Treasury; Bloomberg; national data. Graph V.4

still perceived to be better than those in the euro area. As a result, the dollar had continued to advance.

Capital shifted to safer assets in 2002 amid further deterioration in market sentiment

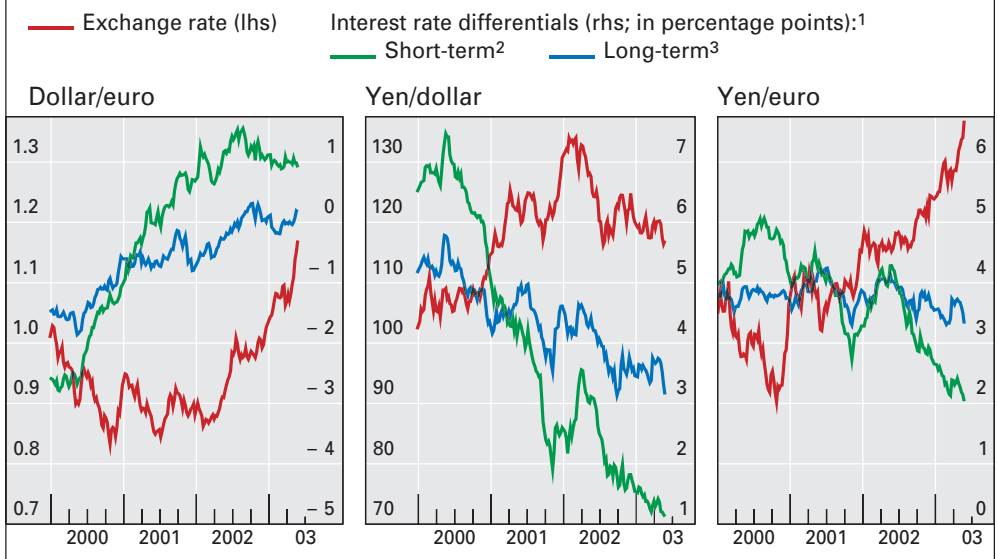
By contrast, in the first half of 2002, both the direction and the composition of capital flows changed significantly, as confidence in the US financial markets deteriorated further. This change in sentiment occurred primarily against the backdrop of the less robust than expected economic recovery and the revelation of a series of corporate accounting irregularities, which raised investors' concerns about the reliability of corporate financial statements and the extent of their risk exposure. In addition, restrictive changes in US trade policy were interpreted by the markets as suggesting increasing official concern about the US current account deficit. On a net basis, private portfolio and FDI flows from the euro area to the United States became negative. Moreover, international investors shifted still further away from portfolio equity investment and FDI into safer assets.

Interest rate differentials gained importance

With the potential returns on risky US stocks no longer a dominant consideration, expected growth differentials, which had for a long time underpinned capital flows into the United States as well as the dollar's strength, ceased to exert such an influence. Instead, interest rate differentials seemed to re-emerge as a major determinant of capital movements and hence exchange rate changes. A significantly positive correlation between short-term interest rate differentials and associated exchange rate movements could be observed across a considerable number of currency pairs. This marked a notable difference from the situation in earlier years.

Having the highest interest rates among the three major economies, the euro area was the prime destination of this yield-driven shift in capital flows, underpinning the euro's appreciation (Graph V.5). The positive correlation in

## Exchange rates and interest rate differentials

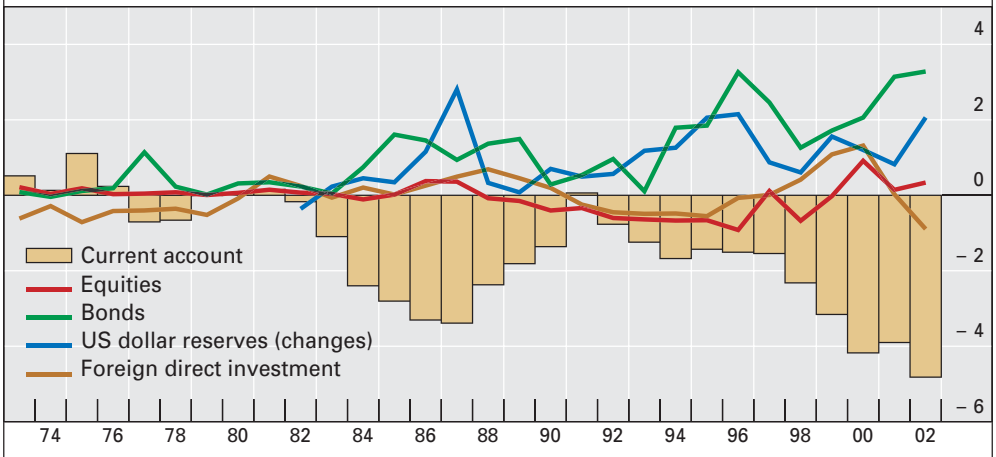



[1] In the left-hand panel, euro area minus US rates; in the centre and right-hand panels, US and euro area rates respectively minus Japanese rates. [2] Using forward interest rates derived from six- and 12-month Libid. [3] Using 10-year swap rates.

Sources: Bloomberg; national data; BIS calculations. Graph V.5

## The US current account deficit and its financing

As a percentage of GDP




Sources: IMF; national data; BIS. Graph V.6

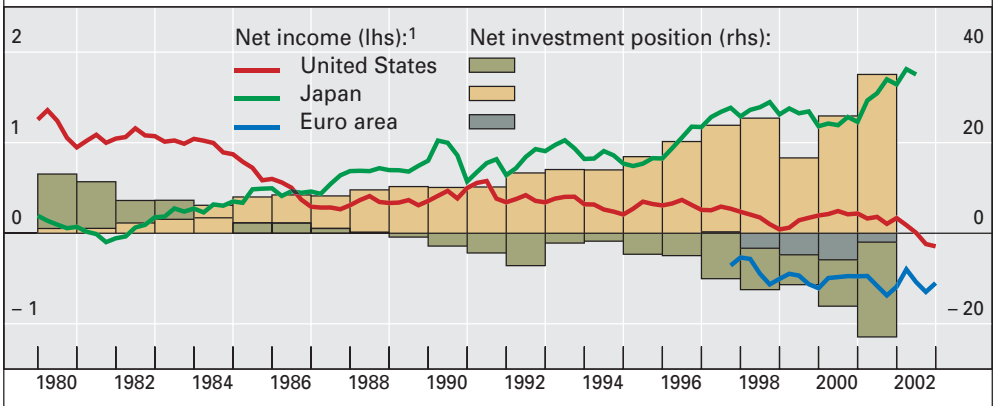
2002 between the dollar/euro exchange rate and the corresponding short-term interest rate differential was at its strongest since the introduction of the single currency. The yen's relative robustness against the dollar is also consistent with the narrowing of its negative interest rate differential vis-à-vis the United States.

The US current account deficit returned to the spotlight

The above-mentioned reduction in private capital flows to the United States and the change in their composition weighed more heavily on the dollar in the light of the still widening US current account deficit. In 2002, the deficit reached 5% of US GDP (Graph V.6), and net foreign liabilities for the first time exceeded 20% of US GDP (Graph V.7). These developments were given greater weight for several reasons. First, the share of the US deficit financed by FDI fell markedly, while the portion of official dollar reserves, mostly concentrated in Asian countries, rose considerably (Table V.1). This

## Net international investment position and income of the three major economies

As a percentage of GDP




[1] Three-quarter moving average.

Sources: ECB; IMF; national data. Graph V.7

pointed to the private sector's growing reluctance to finance the US current account deficit, thereby making the dollar more vulnerable to shifts in sentiment. Second, looking ahead, the deficit seemed likely to widen further given that in early 2003 the United States was still growing faster than most of its trading partners. Third, the change in the composition of US spending was not interpreted positively by market participants. While household spending remained high, investment declined; thus, to the extent that overall US domestic demand fell, a rising fiscal deficit filled the gap. This in turn led to concerns about a "twin deficit" problem (see Chapter II), bringing back memories of the 1980s.

## Annual changes in official foreign exchange reserves

In billions of US dollars

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | *Memo: Amounts outstanding at end-2002* |
|---|---|---|---|---|---|---|---|
| | At current exchange rates | | | | | | |
| Total | 49.8 | 27.0 | 138.6 | 154.7 | 111.7 | 351.4 | *2,392.3* |
| Industrial countries | –18.6 | –32.8 | 52.1 | 54.7 | 2.9 | 108.1 | *887.8* |
| United States | –7.5 | 5.2 | –3.8 | –0.9 | –2.3 | 4.8 | *33.8* |
| Euro area | 10.6 | –32.9 | –39.2 | –9.4 | –10.8 | 8.0 | *215.8* |
| Japan | 0.5 | –4.7 | 74.5 | 69.5 | 40.5 | 63.7 | *451.5* |
| Asia | 22.6 | 62.8 | 79.0 | 52.5 | 76.0 | 173.3 | *943.8* |
| China | 34.9 | 5.1 | 9.7 | 10.9 | 46.6 | 74.2 | *286.4* |
| Hong Kong SAR | 29.0 | –3.2 | 6.6 | 11.3 | 3.6 | 0.7 | *111.9* |
| India | 4.6 | 2.6 | 5.0 | 5.3 | 8.0 | 21.7 | *67.0* |
| Indonesia | –1.7 | 6.3 | 3.8 | 2.0 | –1.2 | 3.2 | *30.3* |
| Korea | –13.5 | 32.3 | 21.7 | 22.2 | 6.6 | 18.3 | *120.8* |
| Malaysia | –6.1 | 4.7 | 4.9 | –1.0 | 1.0 | 3.7 | *33.3* |
| Philippines | –2.8 | 2.0 | 4.0 | –0.2 | 0.4 | –0.3 | *13.0* |
| Singapore | –5.6 | 3.5 | 1.9 | 3.4 | –4.8 | 6.5 | *81.4* |
| Taiwan, China | –4.5 | 6.8 | 15.9 | 0.5 | 15.5 | 39.4 | *161.7* |
| Thailand | –11.5 | 2.7 | 5.4 | –1.9 | 0.4 | 5.7 | *38.0* |
| Latin America[1] | 11.4 | –9.8 | –8.8 | 2.1 | –0.3 | 4.2 | *140.1* |
| Argentina | 4.4 | 2.3 | 1.6 | –1.7 | –9.9 | –4.1 | *10.4* |
| Brazil | –7.5 | –8.2 | –7.8 | –2.3 | 3.2 | 1.7 | *37.4* |
| Chile | 2.3 | –2.0 | –1.1 | 0.5 | –0.6 | 0.8 | *14.8* |
| Mexico | 9.0 | 3.3 | –0.5 | 4.2 | 9.2 | 5.5 | *49.9* |
| CEE[2] | 5.5 | 6.6 | 1.7 | 19.1 | 12.7 | 36.4 | *146.1* |
| Other countries | 29.0 | 0.0 | 14.7 | 26.2 | 20.5 | 29.4 | *274.5* |
| | At constant exchange rates[3] | | | | | | |
| Total | 109.4 | 24.6 | 178.7 | 190.7 | 141.0 | 268.4 | *2,395.2* |
| Dollar reserves | 74.0 | 49.0 | 145.8 | 115.5 | 82.9 | 219.8 | *1,751.4* |
| Non-dollar reserves | 35.4 | –24.4 | 32.9 | 75.2 | 58.1 | 48.6 | *643.8* |

[1] Countries shown plus Colombia, Peru and Venezuela. [2] Central and eastern Europe: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovakia and Slovenia. [3] Partly estimated; valued at end-of-period exchange rates.

Sources: IMF; national data; BIS estimates. Table V.1

That heightened attention was being paid to the US current account deficit was evident from the timing of the turn in investor sentiment against the dollar in early 2002, which coincided with the introduction by the US administration of new barriers to steel and agricultural imports. This development was interpreted by market participants as being suggestive of official concern about strains in the US tradable sectors. The issue of the sustainability of the US current account deficit will be taken up in the last section, which draws some tentative conclusions based on a historical analysis of current account adjustments in a range of industrial countries.

## Developments in other foreign exchange markets

### *Industrial country currencies*

Yield differentials and economic performance also played a role in ...

International investors' pursuit of low-risk yield was also mirrored in the development of several other industrial country currencies. The correlations of their exchange rates with the corresponding interest rate differentials turned clearly positive in 2002, albeit to varying degrees. The interest rate advantage that these currencies enjoyed was underpinned by the performance of their respective economies. The relationship between interest rate differentials and exchange rate movements also became tighter because of the return of leveraged speculative players to the foreign exchange markets. Macro hedge funds in particular were drawn in as a result of the lacklustre performance of stock markets.

... the development of sterling ...

Among non-EMU European currencies, the development of the pound sterling and the Swedish krona provided two examples of the influence of yield differentials. Buoyed by comparatively high interest rates and strong UK economic growth, sterling gained 15% vis-à-vis the dollar, rising from $1.43 in January 2002 to over $1.65 in early February 2003 (Graph V.8). Against the euro, sterling registered some losses, given its smaller interest rate advantage and the single currency's upward momentum. The pound weakened across the board after the largely unexpected February 2003 interest rate cut by the Bank of England, which reduced the yield advantage and prompted market participants to reassess domestic economic conditions. In April and May, the pound rebounded to $1.62, but depreciated further against the euro. In

... the Swedish krona ...

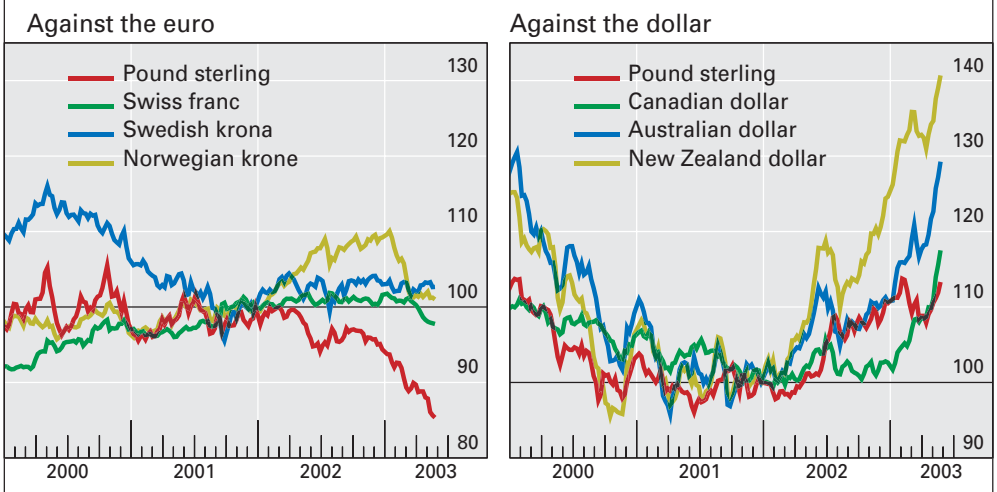
Sweden, robust economic performance and monetary tightening in the first half of 2002 took short-term interest rates higher than even their UK counterparts. Against this background, the krona recovered on average by 8% from its 2001 lows of around 10 to the euro and stabilised in the range of 9.0–9.4. The evolving prospects for EMU entry also played a role in shaping the development of the krona during the period under review.

... and the Australian, Canadian and New Zealand dollars

The striking revival of the Australian, Canadian and New Zealand dollars was similarly illustrative of the increased prominence of nominal yield differentials as a driver of exchange rate movements. With a buoyant economy and a sizeable and growing interest rate advantage over its US counterpart, the Australian dollar advanced by more than 25% between January 2002 and mid-May 2003 and broke above the $0.65 level last seen in early 2000. The New Zealand dollar, with yet higher yields, staged an even

## Exchange rates of other industrial countries

Weekly averages, end-2001 = 100




Note: An increase indicates an appreciation against the euro (dollar).

Source: National data. Graph V.8

stronger recovery during the same period, rising by 35% to over $0.57, a level last seen in early 1998. The upturn of the Canadian dollar appeared to start later and was more modest in absolute terms, reflecting the relatively small though also widening yield advantage. Even so, by March 2003 the currency had recouped all the losses incurred since late 2000. Rapidly rising commodity prices might have provided some extra support: for the first time in several years, the traditional positive correlation with commodity prices reasserted itself across all three currencies.

Interest rate environment was conducive to carry trades

A variation on this theme of yield advantage was the use of carry trade strategies, which became attractive given the low interest rate environments in the three major economies and Switzerland during the period under review. A particularly vivid example of the use of such strategies could be seen in the case of the Norwegian krone, whose short-term interest rates ranked high among industrial and even some emerging market countries. Market commentary suggested that hedge funds and other international investors were borrowing funds in euros and investing them in short-term Norwegian paper. Against this background, the krone strengthened significantly against the euro (11%) and even more against the dollar (29%) throughout 2002. It peaked in January 2003 but then gave up much of its gains by March, as carry trades were quickly unwound following the decision by the Norwegian central bank to cut interest rates. Carry trades were also said to have been a catalyst for the rapid recovery of the Australian, New Zealand and, more recently, Canadian dollars.

The Swiss franc was an exception, driven mainly by safe haven flows

Until March 2003, a notable exception to this association between currency strength and interest rate advantage was the Swiss franc. The franc continued to be robust against the euro and posted sizeable gains against the dollar, despite low and declining yields and relative economic weakness. The bouts of franc appreciation against the euro throughout 2002 coincided

with economic and geopolitical events that prompted a deterioration in sentiment towards the dollar and financial markets in general. The tightening of the franc's correlation with gold price movements in 2002 was also suggestive of the currency's role as a safe haven. In nominal effective terms, the franc was about 15% above its recent low in 2000, posing challenges to monetary policy in a sluggish economic environment (see Chapter IV). This situation stood in sharp contrast to the scenario three years ago, when the weak franc and its inflationary implications had been the main concern of policymakers. Nevertheless, the upward pressure on the franc was seen to be counterbalanced by the Swiss National Bank's policy stance. The franc declined by 3% against the euro in the two months following the policy rate cut by the Swiss monetary authorities in March 2003.

*Emerging market currencies*

Global economic prospects and various specific domestic factors exerted a considerable influence on emerging market currencies during the period under review. The search for yield by international investors also played a role in some cases.

Significant declines in Latin American currencies in 2002

Domestic factors dominated in Latin America, where several currencies experienced significant declines against the background of economic and/or political turmoil (Graph V.9). The depreciation of the Brazilian real accelerated in the months leading up to the October 2002 presidential election, reflecting doubts at the time over the future course of economic policies. In Venezuela, the bolívar, which was floated in early 2002, was further undermined later in the year by heightened political unrest and an oil strike, leading to the subsequent introduction of exchange controls. In the aftermath of the Argentine devaluation, financial distress prompted the Uruguayan authorities to allow the currency to devalue. Apart from regional factors, uncertainty over US and global economic prospects also had some impact. The Mexican peso, for instance, retreated from its highs in early 2002 to touch historical lows in March 2003, amid concerns about the implications of a delayed US recovery for Mexican exports and the economy. Doubts over global prospects also weighed on the Chilean peso.

Asian currencies generally strengthened or remained stable

In contrast, Asian currencies generally strengthened or remained broadly stable against the US dollar, reflecting in part the relatively strong economic performance of the region. The development of the yen/dollar exchange rate also played a role. Some currencies, in particular the renminbi and, to a somewhat lesser extent, the rupee, tracked the US dollar very closely (Table V.2). The sizeable accumulation of official reserves in China and India appeared consistent with a policy preference to resist large appreciations. Against this background, the effective weakening of the renminbi in tandem with the US dollar raised some concerns among economies competing with China's exports. Other currencies, in particular the won, followed the dollar less closely than in previous years. Overall, during the period under review Asian currencies appeared to be somewhat less volatile in nominal effective terms. The observation that some Asian currencies absorbed less of the dollar's decline than the yen could well have some implications for prospective US

current account dynamics (see below). Apart from economic factors, security concerns in the region also exerted some influence over currencies such as the won, the rupiah and the Philippine peso.

High yields and carry trades also played a role

At the same time, the yield differential and carry trade theme also found resonance among some emerging market currencies. For example, the rand, which had depreciated sharply in late 2001 and early 2002, recovered all its losses by March 2003, supported by its substantial interest rate advantage vis-à-vis most major currencies as well as the rising price of gold. Following previous declines, the Brazilian real also appeared to benefit from investors' preference for yield in 2003, as uncertainty over the new administration's economic policy began to dissipate. The real's appreciation accelerated markedly in March 2003.

Some emerging European currencies were also favoured, given their relatively high interest rates and the general optimism related to EU accession. However, the resultant rapid currency appreciation provoked policy reactions (see Chapter III). For instance, the Hungarian authorities intervened and cut

## Exchange rates in emerging markets[1]

Weekly averages, end-2001 = 100


[1] Against the US dollar (for the currencies in the top right-hand panel, against the euro); a decline indicates a dollar (euro) appreciation. For the bottom panels, compressed scales. [2] Twelve-month forward rate.

Sources: ECB; Bloomberg; Datastream. Graph V.9

| Exchange rate volatility[1] | | | | | | |
|---|---|---|---|---|---|---|
| | Bilateral[2] | | | Effective[3] | | |
| | 1995–96 | 1999–2001 | Jan 2002–May 2003 | 1995–96 | 1999–2001 | Jan 2002–May 2003 |
| China | 0.6 | 0.1 | 0.2 | 4.1 | 3.6 | 4.1 |
| Hong Kong SAR | 0.3 | 0.2 | 0.2 | 4.7 | 4.8 | 5.4 |
| India | 7.6 | 3.4 | 1.5 | 9.1 | 6.1 | 5.4 |
| Indonesia | 2.7 | 22.6 | 9.7 | 6.6 | 23.0 | 10.4 |
| Korea | 3.9 | 7.2 | 8.4 | 5.8 | 8.1 | 7.8 |
| Philippines | 3.9 | 10.4 | 4.6 | 6.1 | 10.6 | 5.0 |
| Singapore | 3.8 | 4.2 | 4.4 | 5.2 | 5.5 | 4.6 |
| Thailand | 3.6 | 7.6 | 5.0 | … | … | … |

[1] Calculated as the standard deviation of annualised daily percentage changes over the periods indicated. [2] Against the dollar. [3] Trade-weighted.

Sources: National data; BIS calculations. Table V.2

interest rates as the forint strengthened towards the upper limit of its trading band in January 2003. The Czech koruna's multi-year appreciating trend moderated in the second half of 2002 against the backdrop of an undershot inflation target and a series of policy rate cuts, which eventually closed the interest rate gap vis-à-vis the euro.

## Current account dynamics and exchange rate behaviour

During the period under review, the continued rise in the US current account deficit and net international indebtedness, together with the shift in the composition of the deficit's financing, raised several questions. Is the US current account deficit sustainable? If not, how might the necessary adjustments take place? And if the effective exchange rate of the dollar must decline, which currencies are likely to be most affected?

### *Adjustments of current account deficits in industrial countries since 1973*

Historical episodes of current account correction

A look at the historical experience of current account adjustments in industrial countries may serve as a preliminary guide to help answer these questions. For this analysis, only episodes in which the correction in the current account was substantial and lasting were considered (see Graph V.10 for details). Since 1973, there have been 28 such episodes.

Threshold for current account deficit and NIIP

An analysis of these episodes reveals three main common patterns. First, there is evidence of a threshold for the current account deficit as a fraction of domestic output. On average, the deficit tended to be reversed when it approached levels around 4–5% of domestic GDP. By contrast, it is difficult to find clear-cut evidence of a threshold for the ratio of the net international investment position (NIIP) to GDP. On average, deficit corrections occurred when this ratio was around 20%, but there was substantial variation across episodes.

Adjustment process based less on depreciation …

Second, the adjustment process by which a current account deficit was corrected was generally based on both a depreciation of the domestic currency and a slowdown of domestic growth. On average, the real effective

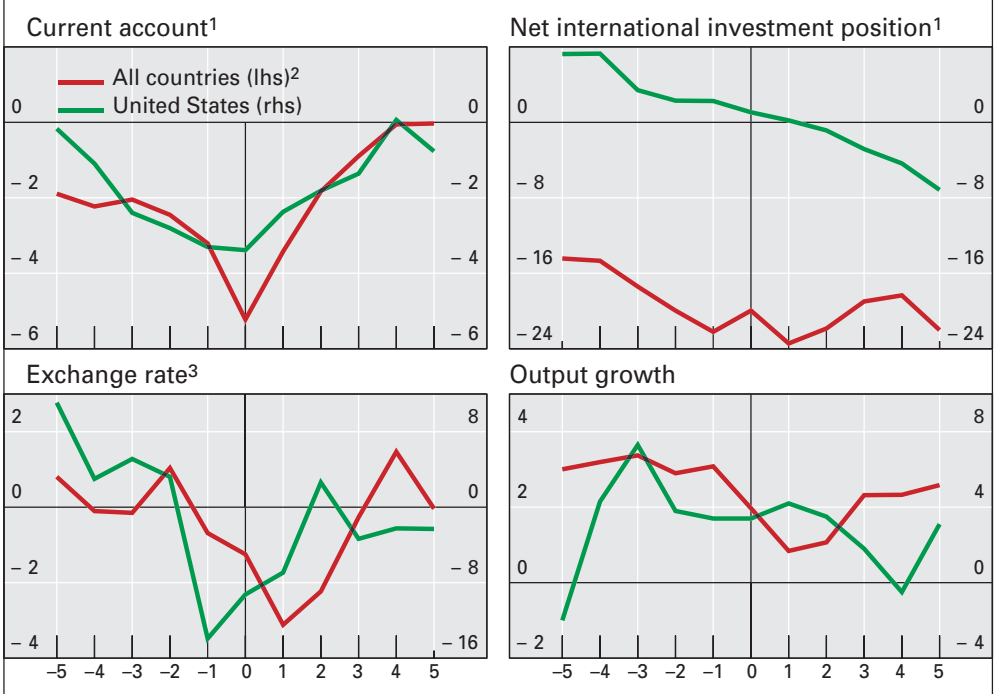
exchange rate declined by about 4% during these episodes, suggesting that the contribution of the real exchange rate to the current account adjustment tended to be small. However, the magnitude of the exchange rate correction varied considerably across episodes, and in some cases the domestic currency fell sharply. The depreciation typically started two years before the current account deficit reached its peak and continued for another year. This is consistent with a classical J-curve effect, whereby the trade balance initially worsened as the currency started to weaken, before improving after about three years.

... than on growth slowdown

Third, current account corrections were generally characterised by a marked slowdown of domestic growth in the two years around the peak of the deficit. On average, GDP growth dropped by 2 percentage points. The slowdown was typically accompanied by a reduction in investment, starting around the time of the peak of the current account deficit and continuing

## Current account adjustments and exchange rate dynamics

In percentages




Note: A current account adjustment is defined by three conditions: (i) the current account should exceed 2% of GDP prior to the adjustment; (ii) the average deficit should decline by at least 2% of GDP over three years and be reduced by at least a third; (iii) the largest deficit during the five years after the peak should not be wider than the smallest deficit during the three years before the peak. The graph covers 28 episodes of current account adjustment, comprising: Australia (1989, 1999); Austria (1977, 1980); Belgium (1981); Canada (1981, 1993); Denmark (1986); Finland (1991); France (1982); Greece (1985); Ireland (1981); Italy (1974, 1981, 1992); New Zealand (1974, 1984); Norway (1977, 1986); Portugal (1981); Spain (1976, 1981, 1991); Sweden (1980, 1992); United Kingdom (1974,1989); United States (1987). Twenty-one episodes are drawn from Caroline L Freund, "Current account adjustment in industrialized countries", *International Finance Discussion Papers*, no 692, Board of Governors of the Federal Reserve System, December 2000.

[1] As a percentage of GDP. [2] Simple average of all episodes. [3] Annual percentage change in real effective exchange rates (in terms of relative consumer prices).

Sources: IMF; OECD; national data; BIS calculations. Graph V.10

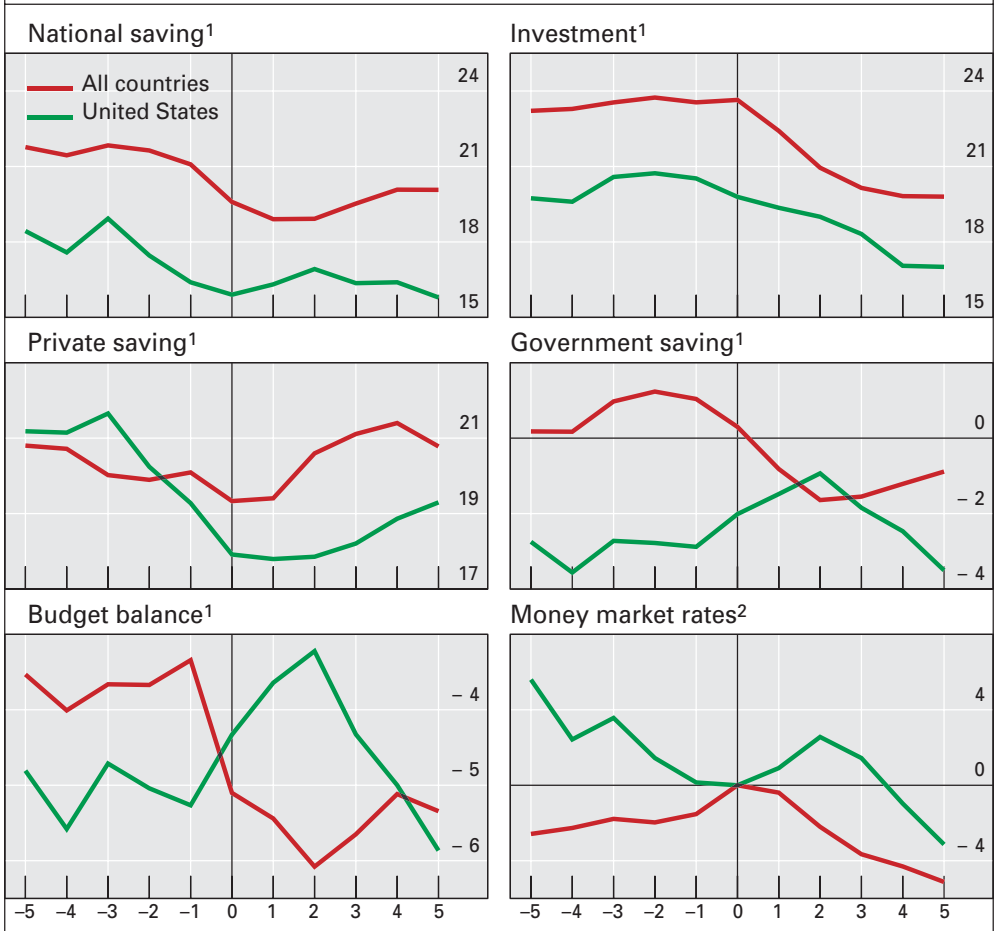
during the following three years. The behaviour of domestic saving was mostly driven by public saving, which on average declined as a fraction of GDP (Graph V.11). There is therefore no evidence that the improvement in the current account balance was associated with an improvement in the fiscal balance. Short-term interest rates generally appeared to follow a hump-shaped pattern, indicating that the slowdown in growth and investment was connected with a monetary tightening.

Two key differences between the United States and other countries

The analysis of these episodes of current account adjustment in industrial countries is interesting in itself but could have limitations as a guide to possible future developments in the United States. Two main considerations imply that the United States is different from other countries. First, it must be recalled that the dollar is the predominant international reserve currency and that, in consequence, residents of countries accumulating foreign exchange assets allocate a significant portion of their portfolio to dollar assets. Second, the United States has benefited from a persistent yield gap between international

## Current account adjustments and national income accounts

In percentages




Note: For an explanation, see Graph V.10.

[1] As a percentage of GDP. [2] Change from year of current account trough, in percentage points.

Sources: IMF; OECD; European Commission; national data; BIS calculations. Graph V.11

assets and liabilities. As a result, it has until very recently continued to receive a positive net income despite its rising international debt position (see Graph V.7). This might imply that a current account deficit could be more easily financed in the United States than elsewhere, and that the adjustment process could be different.

These two considerations therefore suggest that it may be useful to examine separately how the US current account deficit came about in the 1980s and how it subsequently came to be reversed. This analysis will be supplemented by a discussion of how circumstances today differ from those of 1987 and the effects this might have on the adjustment process.

*The US current account deficit reversal in 1987*

The US experience in the 1980s

The United States started in 1983 to run increasing current account deficits, which by 1987 had reached 3.5% of US GDP. The current account deficit was mainly driven by rapid growth in domestic demand boosted by, among other things, a widening fiscal deficit and the marked rise of the dollar, which between 1980 and 1985 appreciated by more than 50% in nominal effective terms (see Graph V.1). The dollar's remarkable strength was underpinned by current and prospective cyclical positions favouring the United States relative to Japan and Germany. This led to expectations of a monetary tightening in the United States and stable or easing monetary policy in the other two countries. In addition, growing foreign investment in the United States also contributed to pushing up the dollar and widening its external deficit.

Two similarities with other episodes ...

The mechanism through which the US deficit was eliminated between 1987 and 1991 was broadly consistent in two important respects with that of analogous episodes in other countries (Graph V.10). One similarity is that the US deficit started to decline when it approached the typical current account/GDP threshold. A second is that the reversal was accompanied by both a depreciation of the domestic currency and some slowdown of growth.

... but the adjustment mix differed

However, some significant differences between the US current account reversal in 1987 and other episodes also emerge. The main difference concerns the mix of adjustment mechanisms. In the case of the United States, the brunt of the correction was borne by the dollar, which depreciated much more markedly than the currencies of most of the countries experiencing a reversal. Between 1985 and 1987, the dollar fell sharply in both nominal (–35%) and real effective terms (–27%). The main counterparts to the adjustment were the yen, which appreciated by 65% against the dollar, and the Deutsche mark, which gained almost 60%. The yen's marked rise occurred against the background of very robust growth in Japan (Table V.3). The German economy grew less strongly but still outpaced the US economy during the period 1988–90.

Marked dollar correction determined by three factors

Three factors contributed to the magnitude of the dollar's depreciation. First, the unusual extent of the dollar's rise in the first half of the 1980s had led to an overvaluation of the currency, which provided ample scope for a subsequent correction. Second, the dollar's adjustment was intensified by coordinated central bank intervention in early 1985 and the Plaza Agreement of September 1985, which indicated that some further orderly appreciation of the other major currencies against the dollar was desirable. The G5

| Real growth, exchange rate depreciation and the US trade balance | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Growth rate | | | Exchange rate[1] | | | US trade balance by country[2] | |
| | 1985–87[3] | 1988–90[3] | 2002 | 1985–87 | 1988–90 | Mar 2003[4] | 1987 | 2002 |
| China | 12.2 | 6.4 | 8.0 | –38.3 | –22.1 | –0.0 | 1.8 | 23.7 |
| Euro area | 2.4 | 3.9 | 0.8 | 48.3 | 11.2 | 22.3 | 13.6 | 18.9 |
| Germany | 2.0 | 4.4 | 0.2 | 58.1 | 11.3 | 22.3 | 10.1 | 8.2 |
| Japan | 4.0 | 5.7 | 0.3 | 64.5 | 0.1 | 11.8 | 37.1 | 16.1 |
| Asia[5] | 4.8 | 8.0 | 4.1 | –4.2 | 2.0 | 2.6 | 15.1 | 11.6 |
| Canada | 3.8 | 2.6 | 3.4 | –2.4 | 13.6 | 8.5 | 7.4 | 11.4 |
| OPEC countries | … | … | … | … | … | … | 8.5 | 7.9 |
| Saudi Arabia | 0.0 | 6.3 | 0.7 | –5.9 | 0.0 | –0.1 | 0.7 | 1.9 |
| United Kingdom | 4.0 | 2.7 | 1.8 | 22.7 | 8.9 | 10.5 | 2.1 | 1.7 |
| United States | 3.5 | 3.2 | 2.4 | . | . | . | . | . |

[1] Cumulative percentage changes; an increase indicates an appreciation against the dollar. [2] In percentages. [3] Annual growth rates, averages for the periods indicated. [4] March 2003 over January 2002. [5] Simple average for Hong Kong SAR, India, Indonesia, Korea, Malaysia, the Philippines, Singapore and Thailand.

Sources: IMF; OECD; national data. Table V.3

authorities also stated that they would stand ready to cooperate more closely to encourage this. Third, the stock market crash in October 1987 and the subsequent easing of US monetary policy contributed to a further weakening of the US currency.

Output growth less relevant in the adjustment mechanism

In parallel, output growth played a less important role in the initial stages of the adjustment process in the United States in 1987 than in the other episodes. While US GDP growth fell sharply in the course of 1985, it remained fairly constant in the next few years. Growth did, however, drop from 3.5% in 1989 to –0.5% in 1991, as the current account deficit narrowed further. This pattern stands in contrast to adjustments during other episodes, when the timing of the reversal typically coincided with a fall in domestic output.

NIIP/GDP ratio also different

Another important difference between the US current account reversal in 1987 and other episodes concerns the NIIP/GDP ratio. It remained much smaller in the United States than in other countries, although the dollar fell sharply regardless.

*The current situation in the United States*

Three differences between the current situation and 1987

There are a number of differences between the present situation and the 1980s reversal. Broadly, they suggest that the implications of a current account correction for growth in the United States might be more significant, and those for the dollar less significant, than during the previous correction. However, virtually all of the points being made can be qualified in one way or another, suggesting that clear-cut conclusions are difficult to draw.

The role of private saving …

One fundamental difference from the early 1980s is that the current account deficit now seems to have been driven more by a private sector (and in particular household) rather than a public sector saving shortfall (see Chapter II). If deviations of this magnitude are judged "unsustainable", then their reversal could very easily restrain real growth while at the same

time improving the current account position. The process could differ, however, depending on whether the adjustment was initiated on the debtor or the creditor side. Should US households decide to increase their saving rate, spending would slow and interest rates would tend to fall. Conversely, were creditors to initiate the adjustment, by becoming increasingly unwilling to finance the current account deficit, the dollar would fall first and perhaps more significantly. In either case, the decline in the dollar would probably be less than in the 1980s, given the lower initial overvaluation.

Whether or not US saving patterns might be judged unsustainable by either debtors or creditors will depend on the overall level of wealth today associated in the first place with perceptions of future growth in potential. This in turn should be driven by expectations about productivity growth. The rate of growth of productivity and potential in the United States seems higher now than it was in the 1980s, which should help support growth and the dollar. With respect to domestic savers, higher wealth should make current low saving rates more sustainable, thereby underpinning domestic demand. At the same time, it remains an open question whether potential growth could have increased enough to be consistent with a private sector saving ratio remaining at the current low level for an extended period. Non-resident investors have already begun to express concerns both about future expected rates of return on dollar assets and about the risks associated with them.

The sustainability of domestic saving patterns will also depend on how the claims on future earnings growth are allocated between the domestic

US current account deficit and co-movement with the US dollar

| | US trade balance by country[1] | Exchange rate sensitivity[2] |
|---|---|---|
| China | 23.7 | 0.00 |
| Euro area | 18.9 | . |
| Japan | 16.1 | . |
| Asia | 11.6 | 0.17 |
| Hong Kong SAR | –0.8 | 0.00 |
| India | 1.8 | 0.01 |
| Indonesia | 1.6 | 0.14 |
| Korea | 3.0 | 0.34 |
| Malaysia | 3.1 | 0.00 |
| Philippines | 0.9 | 0.09 |
| Singapore | –0.3 | 0.31 |
| Thailand | 2.3 | 0.30 |
| Canada | 11.4 | 0.14 |
| Mexico | 8.5 | –0.24 |
| OPEC countries | 7.9 | . |
| Saudi Arabia | 1.9 | 0.00 |
| United Kingdom | 1.8 | 0.30 |

[1] 2002, in percentages. [2] Calculated as the coefficient in a regression of changes in the domestic currency/US dollar exchange rate against a constant and the yen/dollar exchange rate, from January 2002 to May 2003. A coefficient near zero (one) indicates that the currency of that country closely tracks the dollar (yen).

Sources: IMF; national data; BIS calculations. Table V.4

and foreign sectors. The US external debt servicing requirement has risen substantially since the mid-1980s, and seems set to rise much faster in the future. The fact that an increasing proportion of the US capital stock now belongs to non-residents suggests that domestic saving propensities may have to rise to reconstitute national wealth levels.

... economic conditions in other major economies ...

A second difference between the current situation and the 1980s concerns the economic conditions in other major economies. While both Europe and Japan were growing very strongly in the late 1980s and were able to absorb the shrinking of the US current account deficit with relative ease, this is not the case today. This implies that any correction would involve a bigger adjustment on the US side. A related complication is that about half of the US current account deficit today is concentrated in countries whose currencies have closely tracked the dollar (Table V.4). As a result, currencies that are currently floating more freely (in particular the yen and the euro) might come under substantial upward pressure. Furthermore, since European and Japanese investors have very large holdings of dollar-denominated assets in the United States, a marked depreciation of the dollar could expose them to negative wealth effects. This could also slow growth, complicating the absorption problem further.

Of course, these complications would be eased if more countries were prepared to let their currencies float up as the dollar fell. Moreover, policies to spur faster demand growth outside the United States would be particularly helpful since they would both increase absorption and temper the effects of a rising currency. In a more disinflationary world than that of the 1980s, creditors should in any event bear more of the burden of adjustment. Finally, should it prove the case that non-residents' gross exposures in US dollars were in fact hedged in various ways, this too would mitigate the problem posed for creditors by currency appreciation.

... and the euro as a reserve currency

A third difference from the 1980s is that the dollar is no longer the sole reserve currency. Given highly liquid financial markets, reserves can now equally well be held in euros. That said, it may take considerable time for the euro to gain a firm footing as a reserve currency in the face of established preferences and the continuing use of the dollar as the unit of account for international trade.

In sum, there are grounds for believing that there are more downside risks to US growth and the dollar than was the case in the 1980s. Nevertheless, there are also some more positive factors, not least the possibility of significantly faster productivity growth in the United States than elsewhere. The fact that there is considerable excess capacity in the US tradable goods sector also implies that a large resource transfer might be induced by a relatively small exchange rate change.

# VI. Financial markets

## Highlights

The most significant feature of global financial markets in 2002 was a further loss of investor confidence. In markets already weakened by disclosures of corporate accounting irregularities and a degree of pessimism about the economic recovery, the most prominent of a series of disturbing events was a financial restatement by WorldCom, a large US telecommunications firm. By heightening risk premia in equity markets, these blows to confidence not only contributed to extending the global market slump for a third year but also inflicted losses that were deeper than in the two previous years. However, investors recouped some of their losses as equity markets rallied in the spring of 2003.

The corporate bond market for a time joined the equity market in succumbing to the loss of confidence. In mid-2002, credit spreads soared to levels not seen for over a decade. The unfavourable borrowing conditions contributed to a marked drop in corporate fund-raising in the latter half of the year. Issuance was further depressed by corporations' efforts to strengthen their balance sheets and unwind excesses that had built up during the equity market boom. Such efforts helped to restore confidence in credit markets at a time when investors were seeking higher yields than those available in government bond markets. As a result, the corporate bond market saw a strong rally in late 2002, which continued well into the first half of 2003.

Volatility in the major financial markets spilled over into emerging markets during the period under review. While local political events also figured prominently, global investors' changing appetite for risk seemed at times to dominate developments. Highly indebted countries lost access to international debt markets in mid-2002, and even better-quality credits faced wider spreads. The shift by investors out of lower-quality assets abated appreciably in the early part of 2003 as investors sought higher-yielding assets. Even so, borrowing conditions remained susceptible to setbacks in the implementation of announced policies.

Housing markets seemed insulated from these global developments. Prices in many cases showed surprising strength three years after the peak in equity market prices. In the past, housing prices had tended to turn down around two years after an equity market peak. During those earlier episodes, however, monetary authorities had often raised interest rates in an effort to restrain inflation. By contrast, with inflation less of a concern recently, central banks have cut policy rates sharply, thus supporting housing prices.

## Yield curves and the macroeconomic picture

Swap curves reflect sentiment about the economy

Investors in fixed income markets tend to pay closer attention to macroeconomic data than do their counterparts in equity markets. With each major data announcement, investors re-evaluate their views, not only about the state of the global economy, but also about how central banks might react. Since investors will at some times be optimistic and at others pessimistic relative to imperfectly observable fundamentals, market moves could in this way exert a certain independent influence on the economy. In the fixed income markets, these changing perceptions are most discernible in yields and forward curves in the swap markets, which have increasingly become the markets for benchmark interest rates in the largest economies.

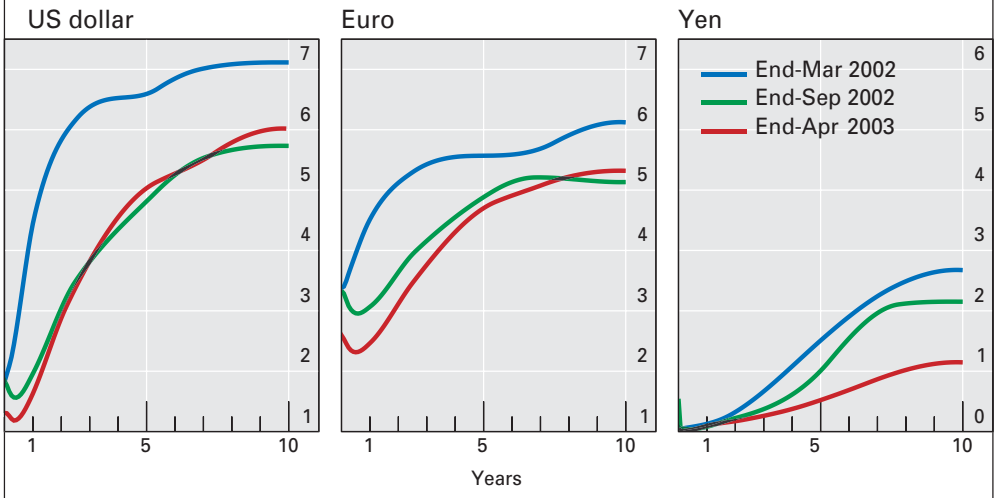
### *Shifts in sentiment*

The first half of the period saw an erosion of optimism

The period under review saw fixed income markets price in sharp downward revisions in expectations of economic growth. Throughout 2001 and in early 2002, the slopes of swap forward curves had continued to rise, indicating optimism that a global recovery was imminent. In April 2002, however, these curves started to flatten in the US dollar and euro markets, marking a turning point in investors' sentiment about the recovery. The slopes of these curves proceeded to fall for the next six months (Graph VI.1), reflecting a steady erosion of optimism about the prospects for the global economy. Coming at a time when the economy was showing more strength than before, the shift in sentiment was striking. The curves for the US and European markets then stayed within a narrow range between October 2002 and February 2003. In contrast, the swap forward curve for Japan shifted down significantly over the period, in part because delays in financial reforms seemed to reduce the likelihood of a near-term economic recovery. In March, the plunge of oil prices

**Swap forward curves[1]**

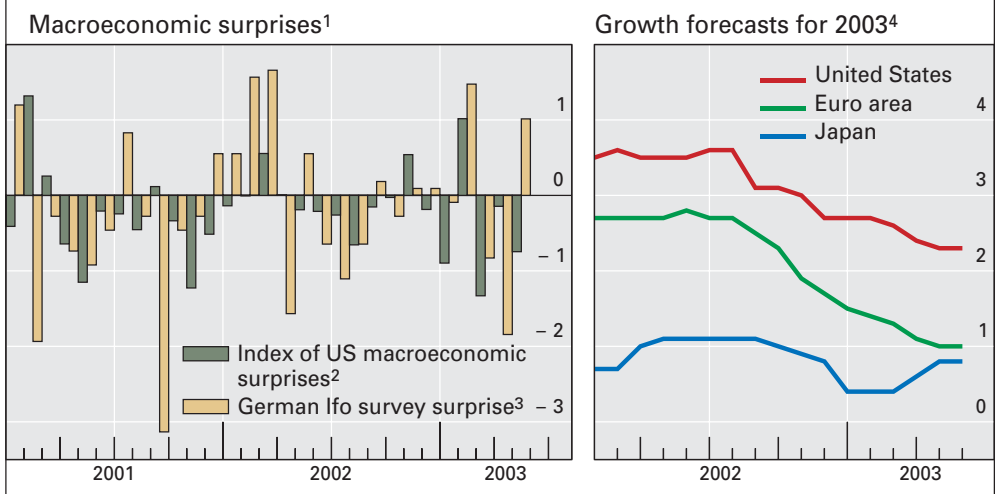
In percentages




[1] For three-, six- and 12-month maturities, Libor.

Sources: Bloomberg; BIS calculations. Graph VI.1

## Macroeconomic data and growth forecasts




[1] Normalised announcement surprises, based on the difference between actual numbers and consensus forecasts. The observations are positioned in the month in which the actual numbers were released. [2] Weighted average of normalised surprises of the ISM survey, non-farm payrolls, retail sales, producer price and consumer price announcements. [3] The German Ifo survey is a business climate index derived by the Institut für Wirtschaftsforschung from survey responses. [4] Percentage changes over previous year. Forecasts as published monthly by Consensus Economics. The observations are positioned at the end of the month in which the forecast was made.

Sources: Bloomberg; © Consensus Economics; BIS calculations. Graph VI.2

with the onset of war in Iraq seemed to restore some optimism in fixed income markets, leading to a steepening in forward curves.

The above episode illustrates how easily investor sentiment can change, even in a market that is as grounded in data as the fixed income market. In the US market, a disappointing durable goods figure released on 24 April 2002 seemed to trigger the initial turnaround in sentiment. While this statistic is ordinarily not such a major announcement in fixed income markets, investors at that time were looking for signs of a pickup in business investment spending as a factor critical for an economic recovery. In the responses to subsequent macroeconomic announcements, market participants seemed to give positive surprises less weight than negative ones. While investors in the euro markets tended to follow US announcements almost as closely as did their US counterparts, a strike in early May by Germany's IG Metall labour union was evidently an additional significant factor in European market sentiment. In June and July, the most closely watched macroeconomic data confirmed a weakening global economy. Only then did economists start to scale back their growth forecasts (Graph VI.2). While most of the shift in investor expectations had taken place by September 2002, growth forecasts for the US and European economies continued to be revised downwards until March 2003.

A single number seemed to turn sentiment around

A further important factor affecting investors' expectations was the reaction of monetary authorities. The major central banks had cut policy rates sharply in 2001 (see Chapter IV), and a perception that the monetary stance would be sufficiently stimulative had apparently been the main reason for the optimism among investors. As reflected in relatively steep forward curves near the short end, expectations as of early 2002 were for monetary authorities to start raising rates later in the year. As the optimism dissipated,

however, forward curves showed increasingly flat slopes near the short end, indicating a building-up of expectations of further monetary easing. However, it was not until November, December and January, respectively, that the Federal Reserve, ECB and Bank of England cut their policy rates by turns. The surprisingly aggressive move by the Federal Reserve in November was a particularly strong signal that the central bank was willing to take further action to achieve its goals even with a target rate already at 1.75%.

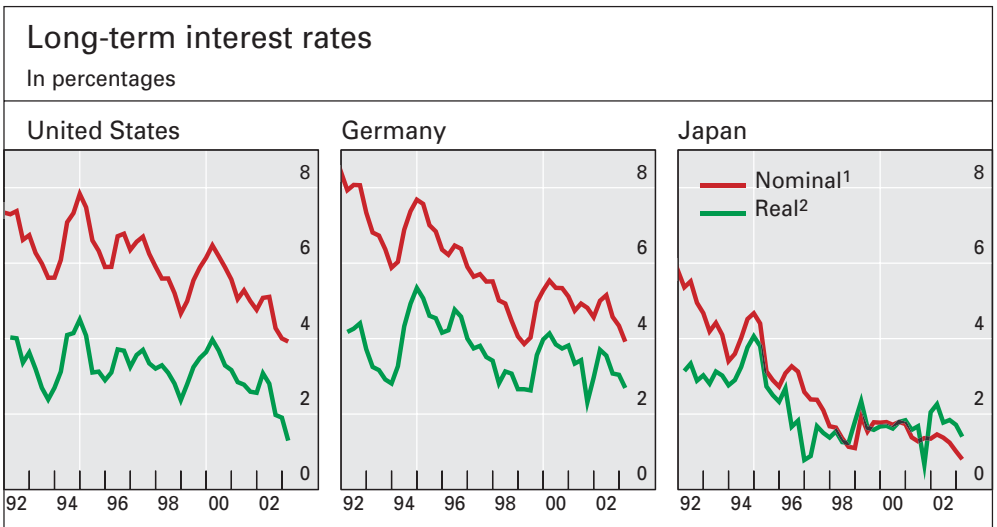
The Fed sent a strong signal in November

*Concerns about low yields*

The resulting decline in bond yields to historically low levels gave rise to an unusual sentiment among investors. When long-term yields reached a 40-year low in early October, some investors suddenly began to worry about a bond market bubble. At that time, the yield on the 10-year US Treasury note stood at 3.56% and yields on the corresponding Japanese government bonds were lower still (Graph VI.3). Yet relative to short rates, which were anchored to policy rates, long-term yields were not unreasonable in that they still seemed to price in likely increases in short rates. The forward curve implied by US yields, for example, was consistent with a rise in short rates of about 100 basis points over two years. Nonetheless, a brief period of selling by nervous bond investors contributed to an increase in yields in October that was unrelated to macroeconomic fundamentals.

Low interest rates led to a global hunt for yield

The low yields also induced unprecedented behaviour among ordinarily conservative investors. These investors increasingly developed an appetite for riskier bonds as a way to obtain higher yields. Positions in highly rated government and agency securities, at a time of declining interest rates, had provided these investors with exceptionally high returns. However, bond yields had fallen so far in both nominal and real terms that it seemed unlikely that they could decrease further. The inference drawn was that similarly high returns could no longer be achieved in highly rated instruments. Especially towards the end of the period under review, these conditions made riskier and




[1] Ten-year government bond yield. [2] Nominal yield deflated by the four-quarter-ahead consensus forecast of consumer price inflation.

Sources: Bloomberg; © Consensus Economics; national data; BIS calculations. Graph VI.3

higher-yielding debt attractive to investors. As discussed later in this chapter, the increased appetite for risk helped spreads in credit markets to narrow further, providing corporate and emerging market borrowers with more favourable terms for fund-raising.

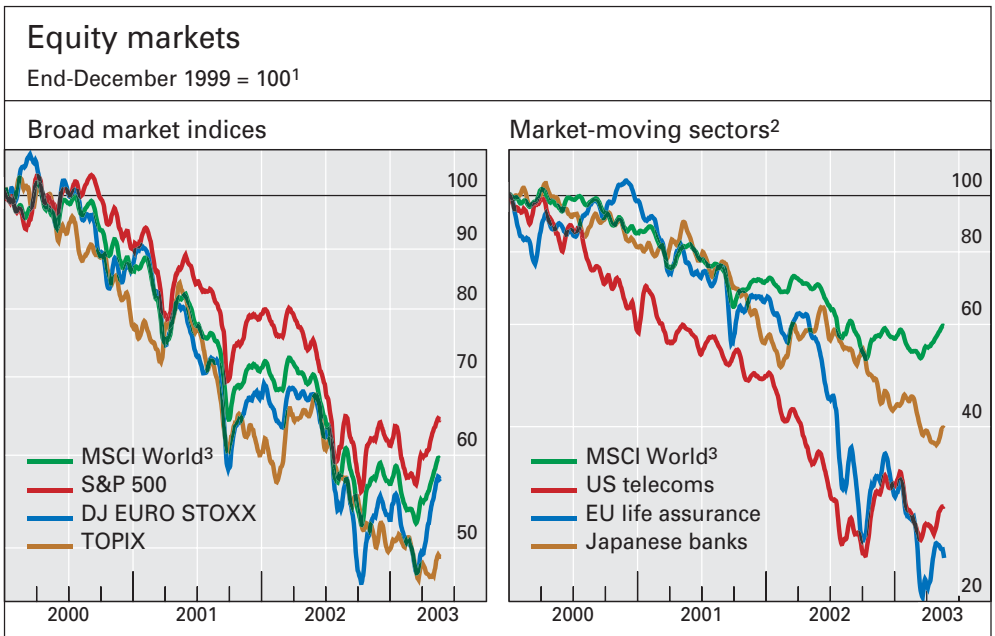
Through such channels, leading to lower long-term interest rates than otherwise, pessimism in fixed income markets may actually have contributed to economic growth in 2002. This effect worked in part through a hunt for yield that helped corporate and emerging market borrowers, and in part through the influence of interest rates on housing prices, as discussed later in this chapter.

## Equity markets

During the period under review, investors in equity markets found themselves still trying to come to grips with the after-effects of the excesses that had built up in the previous decade. Reassessments of valuations seemed to be driven not so much by news about the earnings of individual companies as by events that affected investors' confidence in the prospects of the corporate sector as a whole. Especially telling on the markets were events that called into question the corporate information that investors were receiving. At no other time in recent years had the integrity of accounting and reporting procedures been thrown into so much doubt. Other developments contributed to uncertainty about the underlying economy. The resulting global loss of confidence during the period was extraordinary, and this was reflected in a sharp rise in equity risk premia and a concomitant collapse in stock prices.

The global loss of confidence was extraordinary

The stock price declines inflicted heavy losses on investors for the third year in a row. Between April 2002 and March 2003, the MSCI World Index tumbled by 23%, having already slid by 31% over the preceding two years




[1] Ten-day moving average; log scale. [2] Sectors with the largest decline in the period January 2000 to December 2002. [3] Morgan Stanley Capital International (MSCI) World Index.

Source: Datastream. Graph VI.4

(Graph VI.4). The losses since March 2000 have wiped out about $13 trillion in market capitalisation worldwide. During the same three-year period, the S&P 500 Index declined by 45%, reducing shareholder wealth by an amount equivalent to half of US GNP in 2000. European and Japanese stock prices fell by even more, with the Dow Jones EURO STOXX index losing 52% and the TOPIX 50%. However, the anticipation of a short war in Iraq boosted global equity prices in March 2003 and favourable corporate earnings reports extended the rally into April and May, allowing investors to recover some of their losses.

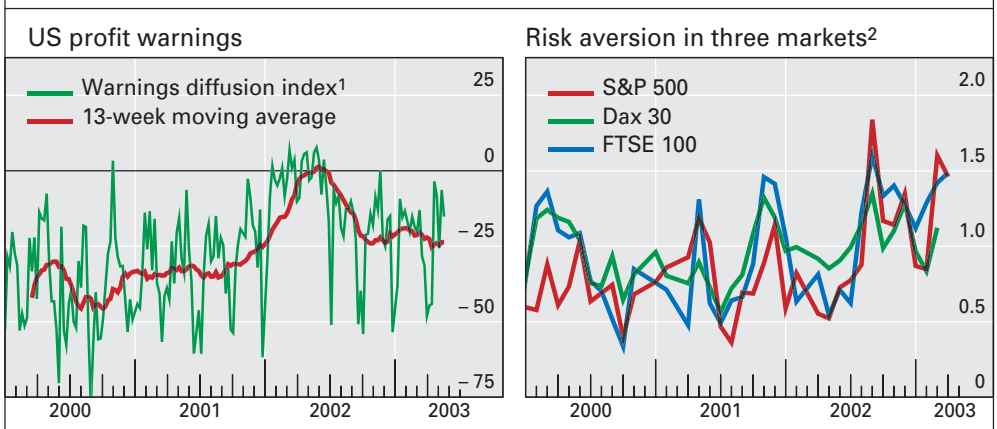
*Information and risk aversion*

Equity prices fell even as profit signals improved

Academic research in finance has established that stock prices tend to be driven by changes in investors' aversion to risk. This was especially true during the period under review, as investors reacted more to events that heightened risk aversion than to information about corporate earnings. Global equity prices resumed their slide in late May 2002 even as closely watched profit signals suggested an improving picture (Graph VI.5, left-hand panel). This configuration is explained by the fact that at this time investor risk aversion, as implied by prices of equity index options (Graph VI.5, right-hand panel), started to rise again. In general, as shown by comparing Graphs VI.4 and VI.5, the periods in which equity prices fell sharply tended to be matched by spikes in this measure of investor risk aversion.

The period under review was particularly eventful in terms of developments that affected investor risk aversion. Just when market participants seemed to be getting over the revelations surrounding the failure of Enron in December 2001, they suffered a series of further blows to their confidence. In late May and early June 2002, warnings about further terrorist attacks and rising political tensions between India and Pakistan led to a

## Profit warnings and risk aversion




[1] Number of positive minus negative warnings as a percentage of number of positive plus negative warnings. [2] Derived by comparing probabilities implied by option prices to probabilities estimated from a time series of realised returns, using the approach of N Tarashev, K Tsatsaronis and D Karampatos, "Investors' attitude towards risk: what can we learn from options?", *BIS Quarterly Review*, June 2003.

Sources: Bloomberg; Chicago Mercantile Exchange; Eurex; The London International Financial Futures and Options Exchange; BIS calculations. Graph VI.5

sell-off in the stock markets. The defining event for the period, however, was the $3.8 billion financial restatement on 25 June by WorldCom, a large US telecommunications firm. While the immediate market reaction was not particularly dramatic, it seemed to condition the reactions to subsequent events. Within days, the US copier maker Xerox also restated its financial reports, while a French newspaper alleged that the media company Vivendi Universal had inflated profits. These developments set global equity markets on their steepest two-month slide since September 2001. Between 21 May and 23 July 2002, the MSCI World Index fell by 26%, returning to a level last seen in 1997. In mid-January 2003, events related to Iraq also began to weigh heavily on the markets, with the US market losing 12% of its value and the European market 14% in the five ensuing weeks.

The defining event was the WorldCom restatement

*Insurers and banks*

In European stock markets, investors were most shaken by the losses suffered by insurance companies. These losses appear to be the main reason why broad equity market indices for Europe fell further than US indices. Unlike their US counterparts, European insurers had allocated large portions of their assets to equity investments, in effect taking leveraged bets on the stock market. Hence, general market declines during the period were magnified in the share prices of these insurance companies. Moreover, as losses on the equity positions mounted, regulatory rules often required the insurers to sell off their holdings. The uncertainty about the amounts to be sold and about the timing of the sales tended to precipitate price declines in the market as a whole. Trades fundamentally based on the simple need for liquidity – ie trades not based on information – led to disproportionate price reactions in the face of uncertain selling flows. This was similar to the phenomenon seen in the October 1987 stock market break and the 1998 episode in fixed income markets involving the hedge fund Long-Term Capital Management.

Uncertain selling flows caused disproportionate price drops

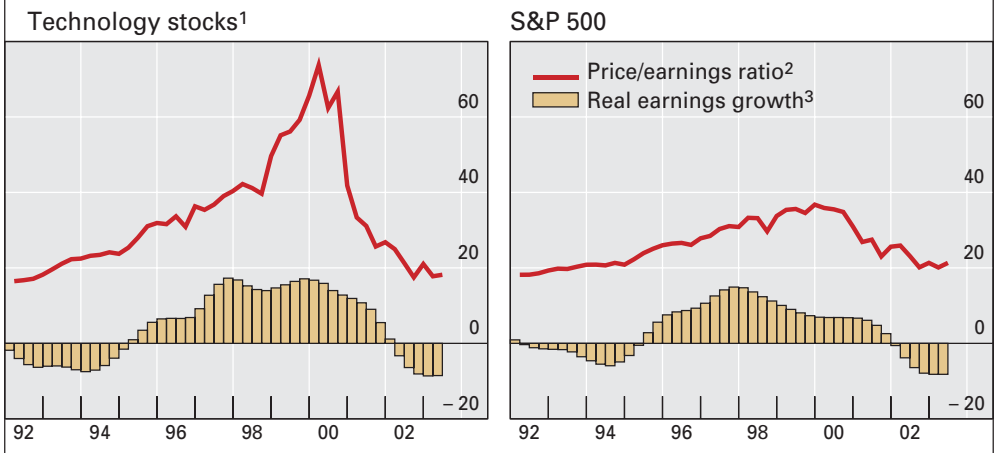
The Tokyo stock market saw confidence affected by shifting expectations about long-awaited financial reforms. Most notably, in September and October 2002, investors vacillated between two possible scenarios having quite different implications for share prices. In the scenario favoured by existing investors, the government would inject capital into ailing banks by buying shares held by these banks. In the alternative "hard landing" scenario, more stringent measures would force a capital injection that would ultimately lead to a government takeover of the management of the banks. The former scenario seemed more likely on 18 September, when the Bank of Japan announced its intention to purchase corporate equities held by the banks. The Nikkei 225 jumped by 2% that day. On 30 September, however, the other scenario became the dominant expectation when an advocate of bold reforms was appointed financial services minister. Accordingly, the Nikkei 225 sank by 11% over the next 10 days.

The Bank of Japan announced a plan to buy shares

*Valuations and the drawn-out collapse of a bubble*

The persistent decline in equity prices over the past three years may be characterised as the drawn-out collapse of an equity market bubble. The

## An equity market bubble




[1] US telecoms, media and IT sector. [2] Based on five-year moving average of trailing real earnings. [3] Five-year moving average of annual growth in real earnings.

Sources: Bloomberg; national data; BIS calculations. Graph VI.6

A lack of information led to drawn-out collapse

slowness of the collapse suggests that investors have had little information about fundamentals on which they might have acted more decisively. As already discussed, the role of investor confidence in such a market loomed large. Losses of confidence came at different times in different sectors, with the timing often dictated by unexpected events. At first, investors lost confidence in the ability of the technology sector to sustain high growth rates of earnings (Graph VI.6), causing share prices to fall. In mid-2002, the financial restatement by WorldCom had a similar effect on the telecommunications sector, which depressed prices in the broader market. Because investors tended to reassess their assumptions one sector at a time, the whole market did not slump at once.

Price/earnings ratios provide a clue as to how long the declines might continue. The global market rally in March 2003 lifted equity valuations further above historical norms. Based on a five-year moving average of earnings, the price/earnings ratio for the S&P 500 reached almost 22 in March, significantly above the 1961–95 average of 17. Since this calculation assumes that earnings will revert to the five-year average, it would overstate current valuations if earnings were to rise more strongly in an economy recovering from a recession. Indeed, analysts are forecasting robust earnings growth, and a calculation based on this forecast would bring the price/earnings ratio down to 16. However, such earnings forecasts have in the past consistently proved to be overly optimistic.

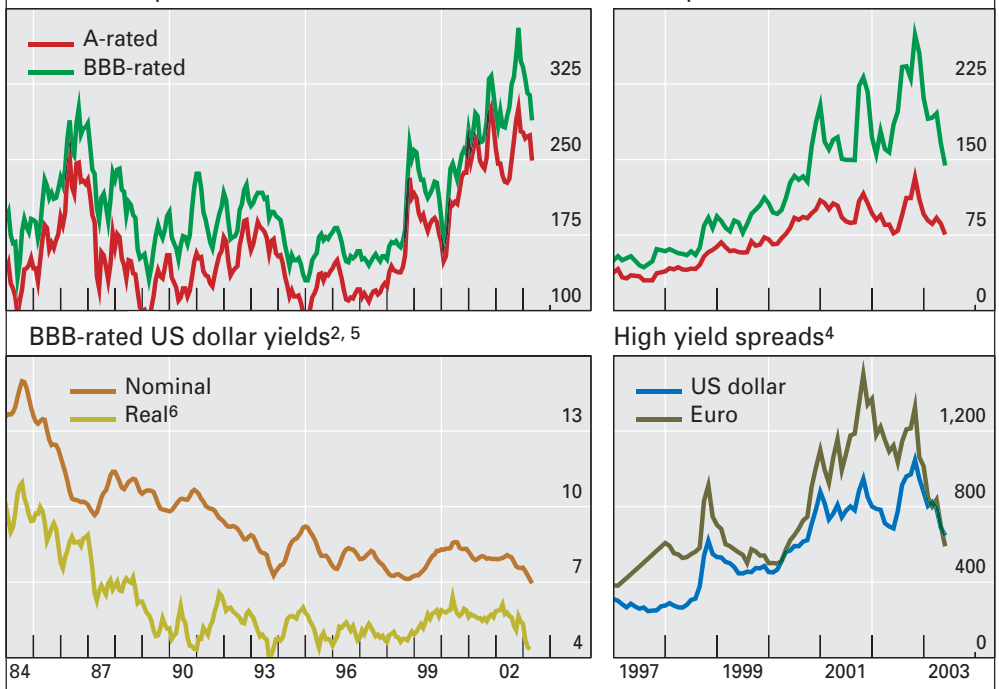
## Credit markets

The loss of confidence spread to the corporate bond market ...

The once resilient corporate bond market joined the equity market in succumbing to a loss of confidence in mid-2002. For most of 2001 and early 2002, the credit market had been the bright spot in the global financial system.

## Corporate bond spreads and yields

Monthly averages, in basis points[1]




[1] Except for bottom left-hand panel (in percentages). [2] Long-term corporate yields as calculated by Moody's. [3] Spread over 10-year US Treasury yields. [4] Option-adjusted spreads over government bonds as calculated by Merrill Lynch for corporate bond indices. [5] Three-month moving averages. [6] Nominal yield deflated by the four-quarter-ahead consensus forecast of US consumer price inflation.

Sources: Bloomberg; Merrill Lynch; Moody's; national data; BIS calculations. Graph VI.7

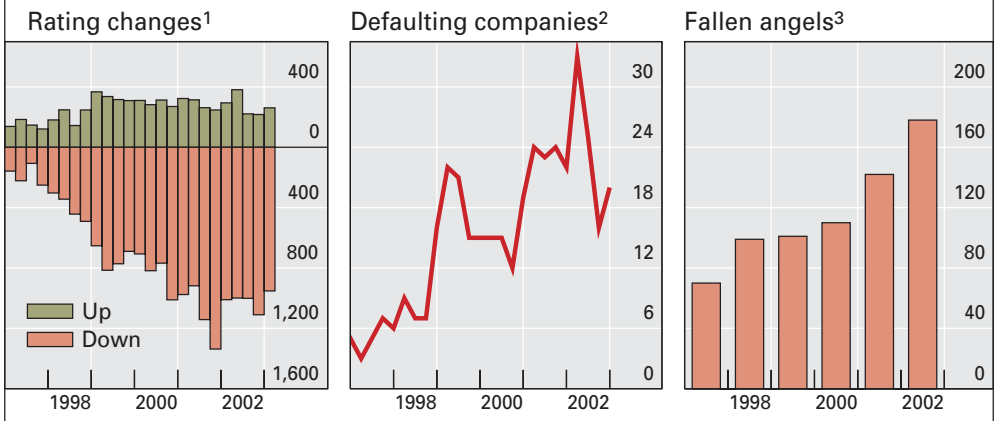
Spreads on investment grade corporate bonds, while wide, had remained within a narrow range even as equity markets tumbled. Between late June and mid-October 2002, however, corporate bond markets in the United States and Europe experienced a severe episode of dislocation. Lower-quality borrowers all but lost access to bond markets. The weighted average spread of seven- to 10-year triple-B US corporate bonds over corresponding Treasury securities widened by 130 basis points during this period, to a peak of about 400 basis points. In Europe, corporate bond spreads followed a similar pattern (Graph VI.7). Not since the global financial market crisis of 1998 had credit spreads widened by so much so quickly, and never over the past 50 years had triple-B spreads risen so high. The subsequent rally in credit markets was equally dramatic.

### *A summer of dislocation*

... despite signs of improvement in fundamentals

Ironically, the sell-off in the corporate bond market occurred at a time when the credit quality of non-financial corporations showed signs of stabilising, or even improving. The incidence of credit rating downgrades had peaked in late 2001 and started to decline in 2002 (Graph VI.8). So too did the incidence of defaults by rated issuers. Profit margins rose modestly in the United States and the United Kingdom, and to a lesser extent in the euro area and Japan

## Corporate credit quality




[1] Quarterly sum of credit rating upgrades and downgrades of non-financial corporations by Standard & Poor's. [2] Quarterly sum of corporate defaults as defined by Standard & Poor's. [3] Face value of bond debt owed by companies once rated investment grade but downgraded to below triple-B minus during the year, in billions of US dollars.

Sources: Bloomberg; Standard & Poor's; BIS calculations. Graph VI.8

(see Chapter II). Moreover, corporations started to rebuild their balance sheets (see below). Fundamentals alone, therefore, do not seem to explain the widening of credit spreads in mid-2002.

Indeed, the link between credit spreads and fundamentals – in particular, expected default losses – is always rather tenuous. In general, spreads are several times wider than what would be implied by expected default losses (Graph VI.9). At low frequencies, such as annual observations, credit spreads do tend to move in the same direction as the underlying probabilities of default. However, at higher frequencies, credit spreads are much more volatile than estimated default probabilities, regardless of whether the estimates are derived from credit ratings, which are not volatile, or from equity prices, which are volatile. Furthermore, across firms, these spreads move together to a greater extent than do default probabilities.

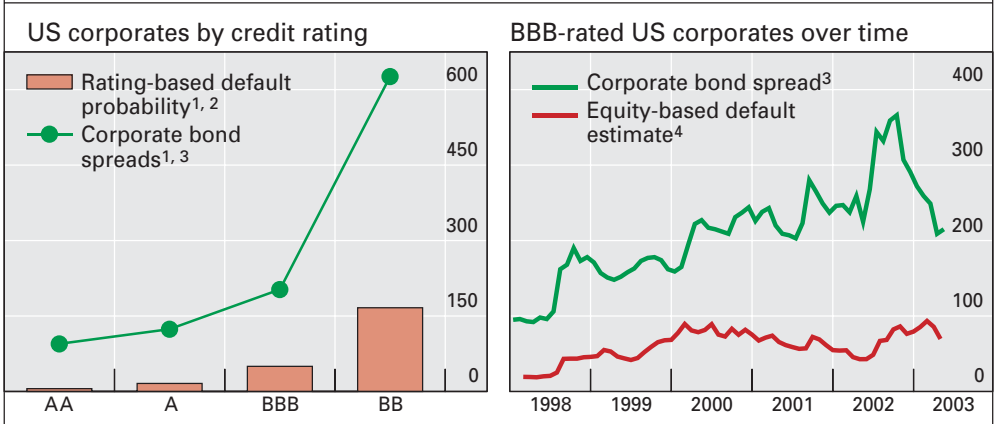
Weak link between credit spreads and default probabilities

An important factor in explaining the greater variability and correlation of credit spreads is shifts in investors' attitudes towards risk. Investors evidently demand a premium over and above expected default losses, perhaps as compensation for the difficulty of diversifying risk involving small probabilities of heavy losses, in practice resulting in uncertainty about the timing of default and about the severity of losses in the event of default. This premium can fluctuate independently of changes in fundamentals. For example, investors' underlying risk preferences might vary over time. Alternatively, changes in the composition of market participants might alter the effective risk aversion of investors. Finally, risk management systems might lead to trading behaviour that is effectively similar to that implied by heightened risk aversion.

As in equity markets, the risk premium demanded by investors in credit markets appeared to surge in mid-2002. The repricing of credit risk affected especially "fallen angels" such as WorldCom and French telecoms manufacturer Alcatel – firms whose debt had once been rated investment grade but was subsequently downgraded to below triple-B minus. Large

## The pricing of corporate default risk

In basis points




[1] Average for the period 1998–2002. [2] Probability of default within one year as calculated by Standard & Poor's. [3] Option-adjusted spread for US corporate bonds with five to seven years to maturity. For BB-rated bonds, all maturities. [4] Expected default frequency as calculated by KMV.

Sources: Bloomberg; KMV; Merrill Lynch; Standard & Poor's Creditpro; BIS calculations. Graph VI.9

borrowers at risk of becoming fallen angels, such as Ford and the Bermuda-based conglomerate Tyco, were also among those most adversely affected. These firms at times saw their spreads spiral upwards as investors shifted into securities perceived to be less susceptible to being downgraded.

Large losses on fallen angels led to a repricing of risk

This repricing of risk was driven by unexpectedly large losses on holdings of downgraded debt. In particular, investors' experience with WorldCom made them wary of holding large positions in actual or prospective fallen angels. High-yield investors who had purchased WorldCom debt following its downgrade to double-B in May, only to incur large losses when the company restated its accounts in June, became hesitant to step in and buy the debt of other fallen angels. At the same time, institutional investors, many of whom are restricted by mandate from holding debt securities rated below investment grade, scaled back their holdings of credits at risk of becoming fallen angels.

The sheer volume of debt downgraded in 2002 added to the imbalance of supply and demand for lower-quality credits. Several actual and prospective fallen angels were among the largest corporate issuers in US and European bond markets. WorldCom alone owed $30 billion. In total, nearly $180 billion of debt previously rated investment grade was downgraded to high-yield or default status in 2002, representing as much as one quarter of speculative grade debt outstanding at the end of 2002 (Graph VI.8).

Another source of dislocation in credit markets in mid-2002 was concern about underfunded pension liabilities. The decline of stock prices starting in 2000 inflicted heavy losses on defined benefit pension plans that had allocated large portions of their portfolios to equity investments (see Chapter VII). In October 2002, Standard & Poor's downgraded the credit ratings of a number of US companies, in part because of the size of the shortfall in their pension plans. In early 2003, the same rating agency downgraded a few European firms that faced similar shortfalls.

*Corporate borrowers began to repair their balance sheets*

Strong rally in credit markets starting in October 2002 ...

Starting in mid-October 2002, there was a general improvement in credit conditions. Even as equity prices tumbled in the first few months of 2003, investment grade and high-yield bond prices continued to rally. Spreads on triple-B US corporate bonds narrowed by 130 basis points between early October and end-2002 and by a further 70 basis points in the four months to end-April 2003.

Just as an increase in the risk premium demanded by investors in credit markets explained much of the widening of spreads, a decline in the risk premium drove much of the initial narrowing. The rally in credit markets was led by the same fallen angels whose spreads had previously soared. Attracted by low prices, investors bought the debt of companies with saleable assets or promising restructuring plans. HSBC's bid in November for Household International, a large US consumer finance company which had at the time faced a deterioration in access to capital markets, helped to bolster investors' confidence in the prospects for other firms facing difficult financing conditions.

Recognition of firms' progress in repairing their balance sheets extended the rally in credit markets into 2003. In 2001, corporations had already begun to strengthen their balance sheets. However, for the most part this had been characterised by a reprofiling rather than a reduction of liabilities. Companies had lengthened the maturity of their debt so as to reduce their exposure to liquidity risk. Furthermore, cutbacks in capital investment had helped to stabilise corporate debt levels in the United States and Europe following several years of large increases in borrowings (Graph VI.10). In the United States, firms had also reduced their repurchases of shares, which had surged in the late 1990s.

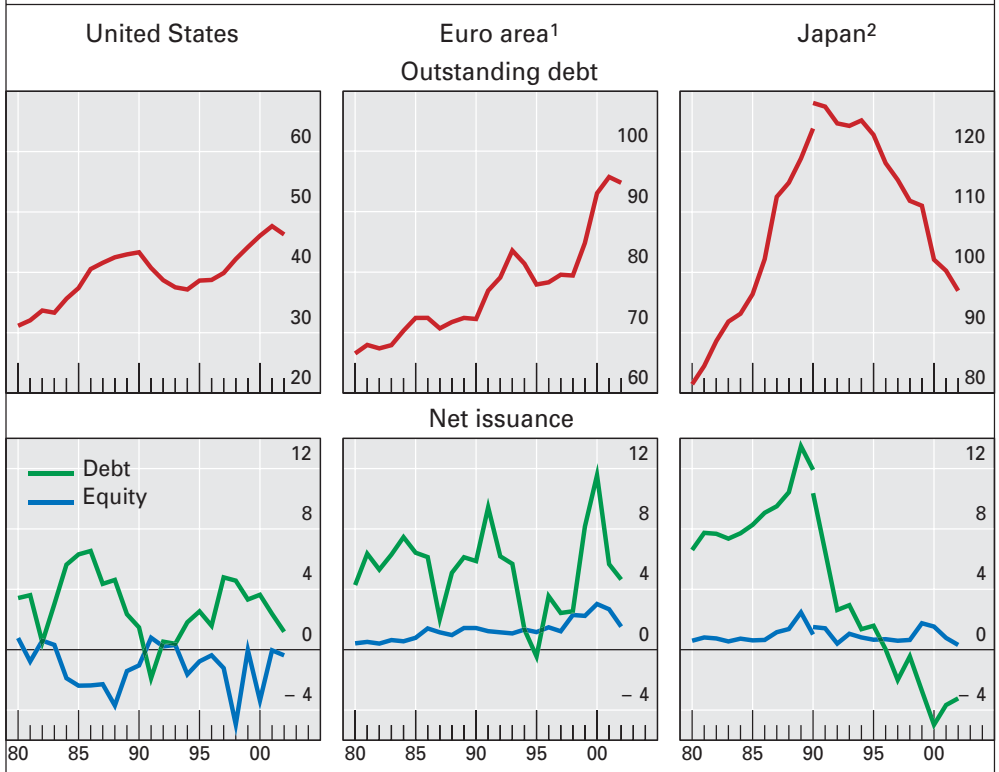
... as firms repaired their balance sheets

In 2002, corporate restructuring showed signs of accelerating. Firms that had stepped up their borrowing during the boom years, either to buy assets now worth considerably less or to repurchase shares at inflated prices, intensified their efforts to strengthen their balance sheets. The larger fallen angels advanced furthest in the restructuring process, owing to the difficulties they experienced in refinancing their maturing obligations in the face of a much reduced investor demand for their debt. As a result of weaker demand for funding and the virtual closure of the corporate bond market in mid-2002, net issuance of debt by US corporations in 2002 fell to its lowest level in nearly a decade, although it remained positive. Borrowing by European corporations also slowed. Japanese corporations again paid down their debt, continuing a process that had begun a decade earlier.

While companies needing to rebuild their balance sheets would normally raise equity capital, the long slide in stock prices made this avenue unattractive. Therefore, in contrast to the previous period of deleveraging in the early 1990s, net issuance of equity remained weak in 2002 (Graph VI.10). Even so, some companies did turn to equity markets. A number of European insurance companies issued warrants giving existing shareholders the right to buy new shares at a deeply discounted price. Japanese banks issued new common and preferred shares in early 2003, in part to related parties

## Borrowing by non-financial corporations

As a percentage of nominal GDP




[1] Sum of France, Germany and Italy; for net issuance of equity, sum of France and Germany; 2002 data estimated using ECB and Bloomberg data. [2] Fiscal year ending in March of the following calendar year (for 2002, based on partial data); break in series in 1990.

Sources: Bloomberg; ECB; national data; BIS calculations. Graph VI.10

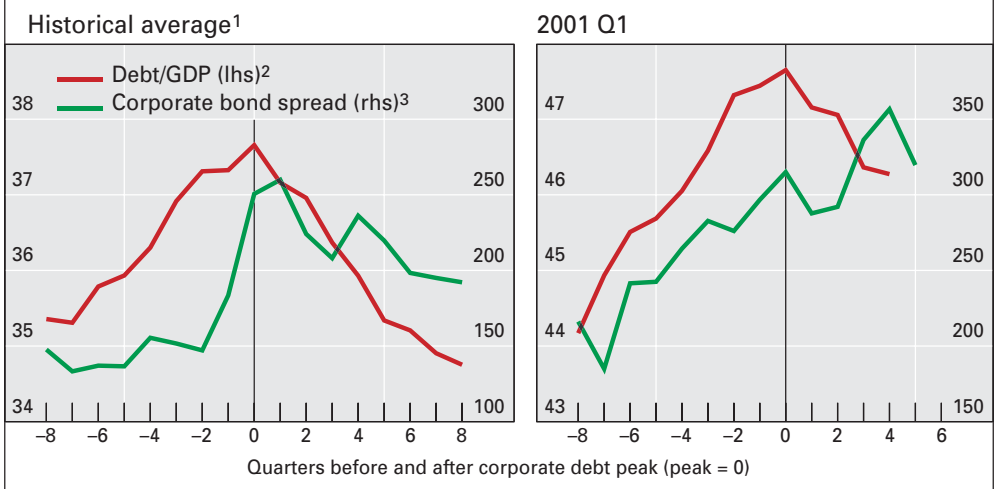
(see Chapter VII). These included the largest ever offering of common equity by a private firm in Japan and the first by a Japanese bank since the 1980s. Still other firms sold convertible bonds redeemable only in stock.

Investors were initially slow to reward corporations for their efforts to deleverage. In stark contrast to past episodes of corporate restructuring, credit spreads continued to widen in 2002 even after the upward trend in the debt ratio had been reversed (Graph VI.11). It was not until almost one year after the corporate debt/GDP ratio in the United States peaked that investors began to reprice default risk and lower their expectations of default losses.

As yields on government bonds and other highly rated securities fell to record lows in late 2002 and the early part of 2003, investors appeared willing to take on more credit risk in their search for higher returns. Expectations of further improvements in corporate credit quality underpinned this willingness. Should these expectations prove optimistic, the rally in credit markets could turn out to be temporary. Measures of default risk derived from equity prices remain high for non-financial corporations in the United States and Europe, suggesting that corporate balance sheets remain weak (Graphs VI.9 and VII.2). Also, debt levels for the US and especially European corporate sectors are still high relative to the size of the economy. Exceptionally low nominal yields help to keep debt servicing costs manageable. However, inflation-adjusted

Corporate debt levels are still high

## Credit spreads around corporate debt peaks




[1] Average of periods centred on 1970 Q4, 1974 Q4 and 1990 Q4. [2] Debt owed by US non-financial corporations as a percentage of nominal GDP. [3] Spread between the yield on long-term bonds issued by Baa-rated US corporations as calculated by Moody's and 10-year US Treasury yields, in basis points.

Sources: Moody's; national data; BIS calculations. Graph VI.11

yields are not far below their 1990–2000 average (Graph VI.7), and for those businesses facing declining output prices, such as manufacturing, real yields are even higher. Therefore, current debt levels could create difficulties for some firms in the longer term.

*Credit derivatives and market integration*

In addition to the cyclical factors discussed above, developments in credit markets during the period under review were shaped by structural changes. Credit and equity markets are integrated to a greater extent today than in the past, as are segments within credit markets. While integration improves the price discovery process by facilitating the adjustment of prices in different financial markets to new information, it can also create new vulnerabilities.

New models linked credit and equity markets ...

The growing use of credit risk models is helping to strengthen the link between credit and equity prices. Just as financial institutions use quantitative models to manage their interest rate risk, models are now being developed to do the same for credit risk. The most popular of these models follow the structural approach first proposed by Robert Merton in 1974, in which default occurs when the value of a firm's assets falls below the face value of its debt. In such models, the process leading to default depends explicitly on the level of the firm's liabilities and the market value and volatility of the firm's assets. Market participants typically use equity volatility as the key variable for estimating asset volatility, thereby introducing another channel for feedback from equity to credit markets.

Such feedback effects were especially pronounced in mid-2002 because of the increased presence of hedge funds in credit markets. As institutional investors retrenched to higher-quality credits, the investment strategies and risk management practices of hedge funds came to have a larger influence in the vacated market segments. In contrast to institutional investors, hedge

funds rely less on credit ratings as measures of creditworthiness and more on credit risk pricing models.

Linkages between markets were also strengthened by the development of markets for the transfer of credit risk, especially credit derivatives markets. Prior to the introduction of credit derivatives, credit markets were among the least liquid of financial markets. Corporate bond issues are often small in size; many have options or other unique features that make them complicated to price; they are difficult to borrow and so to sell short in expectation of a widening of spreads; and there tends to be very little trading once they have been placed in institutional investors' portfolios. As a result, in the past temporary or idiosyncratic factors frequently drove movements in corporate bond prices. This raised the costs of using corporate bonds for speculation or risk management.

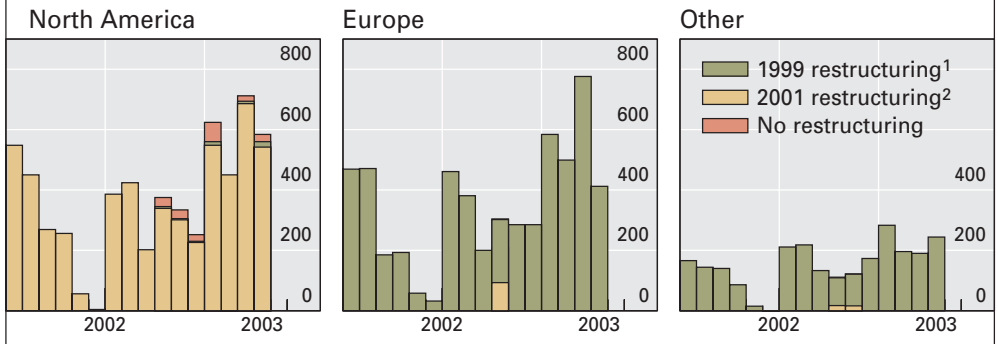
... while credit derivatives facilitated price discovery

The development of credit derivatives markets, and in particular of the credit default swap market, lowered such costs. Credit default swaps (CDSs) allow credit risk to be unbundled from other risks embedded in a financial instrument and to be traded separately. In a CDS contract, the buyer of credit protection pays to the seller of protection a periodic fee analogous to the spread between the yield on a defaultable security and the risk-free interest rate. In the event that the reference entity defaults, the buyer typically delivers to the seller debt owed by the reference entity in return for a lump sum equal to the face value of the debt. In essence, a CDS is an insurance contract protecting against losses arising from a default.

The CDS market has grown tremendously in recent years (Graph VI.12 and Chapter VII). Moreover, market participants have made a concerted effort to promote market liquidity by standardising contractual terms. As a result, many market participants now perceive liquidity in the CDS market to be greater than that in the corporate bond market. In particular, short positions can be taken more easily, by buying protection in the CDS market. This has made it less costly to hedge or speculate in credit markets, or between equity and credit markets.

## Credit default swaps by type of restructuring clause

Monthly sum of number of trades by residency of reference entity




[1] Contracts based on the 1999 ISDA Credit Definitions. [2] Contracts based on the 2001 supplement to the 1999 Credit Definitions.

Sources: CreditTrade; BIS calculations. Graph VI.12

Controversy about the treatment of restructurings in default swaps ...

Although to date the vast majority of swaps written against defaulting firms have been exercised smoothly, controversy about which events constitute defaults – specifically, about the treatment of debt restructurings – could yet undermine the liquidity of the CDS market. Already the market is fragmented along regional lines. Whereas contracts based on the original 1999 documentation published by the International Swaps and Derivatives Association (ISDA) dominate trading in the European market, contracts based on the more restrictive 2001 revisions to the 1999 ISDA Credit Definitions dominate trading in the United States (Graph VI.12). The market fragmented further in mid-2002, following the exercise of default swaps on Xerox. The experience with Xerox led some of the largest sellers of credit protection, in particular financial guarantors and other insurance companies, to refuse to enter into contracts that included any form of restructuring as a default event. They argued that the loan refinancing that triggered the swaps on Xerox did not stem from a deterioration in the company's financial condition and therefore should not have been considered a default event. Of particular concern to sellers of protection was the possibility that participants in a lending syndicate might deliberately negotiate a restructuring with the intention of triggering a default and exercising a CDS.

... could undermine liquidity

In May 2003, trading in contracts containing yet another modification to the restructuring clause began, but it remains unclear whether the revised definition will lead to convergence. In Europe, buyers of credit protection, especially banks, prefer contracts that include a broad definition of restructuring because in Europe payment difficulties are typically resolved through informal negotiations between creditors and debtors. A formal declaration of bankruptcy tends to be associated with insolvency and so is infrequently sought. By contrast, in the United States, buyers of credit protection are willing to accept more restrictive definitions of restructuring because firms filing for bankruptcy under Chapter 11 are given an opportunity to restructure before being declared insolvent. Furthermore, the proposed New Basel Capital Accord has also influenced the treatment of debt restructurings, because it requires that CDSs intended to lower banks' regulatory capital requirements include as a default event restructurings that result in credit losses, unless the bank has control over the decision whether to restructure.

## External debt financing for emerging markets

Borrowing conditions in the international debt market mirrored those in the credit markets. Highly indebted countries lost market access in mid-2002 and then enjoyed a steady improvement in spreads beginning in mid-October. Political developments were the focus of investor attention in many emerging markets: in Brazil, Turkey and Ecuador, changes of government; in Venezuela and Nigeria, civil unrest; in Colombia and Indonesia, terrorist attacks; in Korea, threats to national security; and in central and eastern Europe, the conclusion of accession negotiations with the European Union. Nevertheless, at times global investors' changing attitude towards risk seemed to outweigh the influence of local events.

*Sources of contagion*

Turmoil in Brazilian and Turkish markets

Brazil and Turkey experienced the most serious deterioration in access to international debt markets during the period under review. Investors started selling off Brazilian assets in May 2002 as a presidential candidate perceived by investors to be unsupportive of market-oriented policies gained ground in the run-up to national elections (Graph VI.13). Similarly, concern over the health of Turkey's prime minister and the abrupt resignation of several cabinet ministers led to a flight from Turkish assets beginning in June. By late July, the stripped spread on Brazil's sovereign bonds had more than tripled, to 2,400 basis points, and the spread on Turkey's bonds had almost doubled, to 1,000 basis points.

The intervention of the IMF in early August, in the form of a new $30 billion agreement with the Brazilian authorities and the disbursement of promised funds to Turkey, helped to stabilise debt and currency markets. Assurances from leading politicians about their commitment to fiscal discipline and structural reform eventually restored a degree of confidence, and Brazilian and Turkish markets rallied strongly in the last few months of 2002 and into 2003.

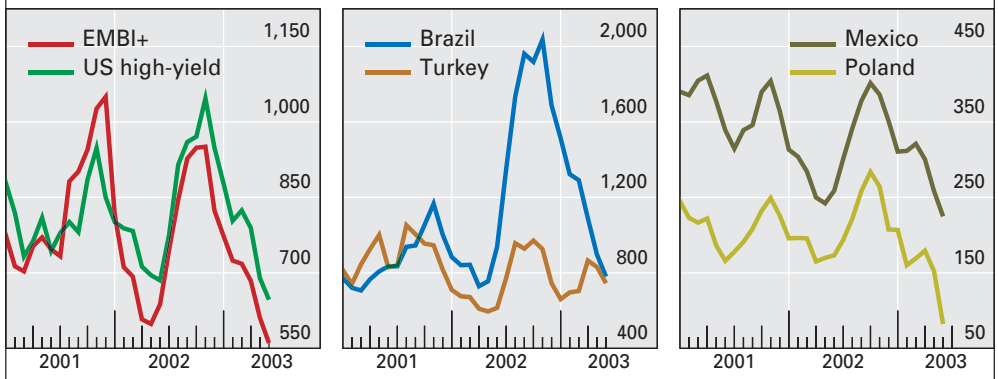
Despite the severity of the market turmoil experienced by Brazil and Turkey, events in those countries had little direct impact on other emerging markets. Discrimination by investors among credits did weaken somewhat during the sell-off in Brazil and Turkey. However, movements in emerging market bond spreads tended to be less correlated during 2002 than during previous financial crises.

Global risk aversion overwhelmed local developments

The most important channel for contagion during the period under review was changes in the risk aversion of global investors. The repricing of credit risk following the earnings restatement by WorldCom in June 2002 caused credit spreads for many emerging market borrowers to increase. Indeed, in recent years risk premia throughout emerging markets have moved surprisingly closely with spreads on US high-yield debt despite different underlying fundamentals (Graph VI.13).

## Bond spreads for selected emerging markets[1]

Monthly averages, in basis points




[1] Stripped spread of emerging market bond indices as calculated by JPMorgan Chase. For US high-yield, option-adjusted spread as calculated by Merrill Lynch.

Sources: Bloomberg; JPMorgan Chase; Merrill Lynch. Graph VI.13

While heavily indebted countries effectively lost access to international debt markets in mid-2002, even investment grade borrowers such as Mexico and Poland saw their sovereign spreads widen. Nevertheless, borrowing conditions remained relatively favourable for these borrowers because wider spreads were offset by lower US dollar and euro yields. Borrowers from emerging markets rated investment grade accounted for 59% of gross borrowing in international bond and loan markets in 2002, compared to 47% in 2001.

Fragile improvement in market access in early 2003

The general improvement in credit conditions in late 2002 and early 2003 enabled lower-rated borrowers to return to the international debt market. Indeed, the low level of yields on safe, liquid US dollar instruments made emerging market debt especially attractive to investors. Mutual funds investing in emerging market debt saw record inflows in the early part of 2003, and several heavily indebted countries saw an influx of investors searching for a pickup in yield. These countries had taken difficult measures to strengthen their external position. Nevertheless, their access to international markets remained fragile. In particular, it was conditional on continued improvements in policies, the maintenance of macroeconomic stability and disbursements of promised funds.

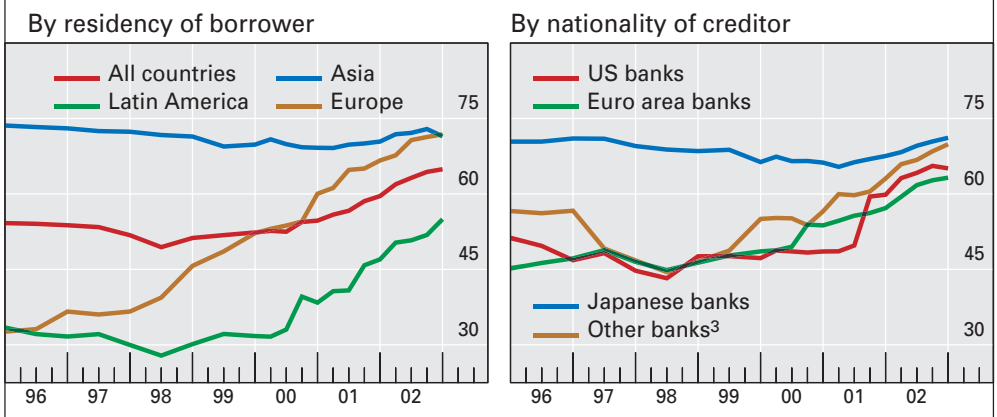
*Banks shifted towards better-rated credits*

Banks cut back cross-border credit to lower-rated borrowers ...

Shifts in banks' emerging market portfolio illustrate the extent to which lower-quality credits lost access to international markets in 2002. Claims on countries rated investment grade rose from 60% of banks' total foreign claims on emerging markets at the end of 2001 to 65% at the end of 2002 (Graph VI.14). Cutbacks in credit to Brazil and other countries in South America explain much of the increase. In other regions too there was a shift towards better-rated borrowers. Furthermore, the shift was visible across

## Credit quality of banks' emerging market portfolio[1]

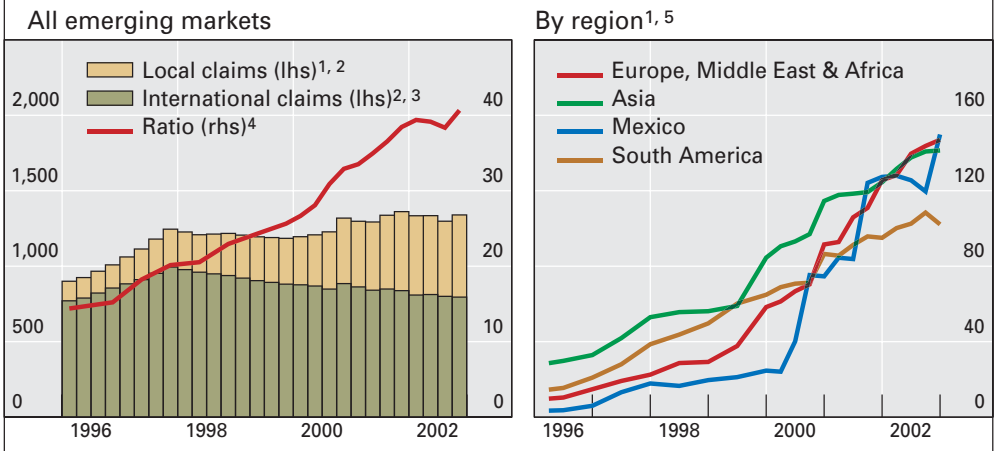
Claims on investment grade countries as a percentage of total claims[2]




[1] Total foreign claims of banks in the BIS reporting area, ie cross-border plus local claims. [2] Claims on countries rated BBB– or better by Standard & Poor's at end-2002 as a percentage of claims on all rated emerging markets. [3] Excluding banks headquartered outside the BIS reporting area.

Sources: Standard & Poor's; national data; BIS calculations. Graph VI.14

## Foreign banks' local business in emerging markets




[1] Claims booked by the foreign offices of banks in the BIS reporting area vis-à-vis residents of the country in which the foreign office is located and denominated in the local currency of the borrower. [2] In billions of US dollars. [3] BIS reporting banks' cross-border claims in all currencies plus their foreign offices' local claims in foreign currencies. [4] Local claims as a percentage of local plus international claims. [5] In billions of constant US dollars, converted from local currency at end-2002 exchange rates.

Source: BIS. Graph VI.15

different banking systems, with Asian, European and North American banks all reducing their exposure to non-investment grade credits.

While cutting back cross-border credit to lower-quality borrowers, banks did not compensate by increasing lending to higher-quality borrowers. Overall, banks' cross-border claims on emerging markets contracted for the fifth consecutive year. However, some regions did benefit from new cross-border credit, with banks stepping up their claims on EU accession countries in particular. In other regions, most notably Asia, demand for external credit remained weak.

... but continued to expand their local lending activities

At the same time, banks continued to expand their local presence in emerging markets. The experience in Argentina had raised questions about the future activities of foreign banks in emerging markets, including their willingness to engage in locally funded business. Beginning in the mid-1990s, foreign banks had greatly expanded their local activity, and by the end of 2001 local claims in local currencies accounted for 38% of banks' claims on emerging markets (Graph VI.15). Following the crisis in Argentina, some banks did scale back their operations in South America. However, this was more than offset by the growth of local activity in Mexico, central and eastern Europe and East Asia. As a result, local claims continued to rise, equalling 41% of total claims on emerging markets at the end of 2002.

## The puzzle of housing prices

Developments in the equity market hold significant clues about the future behaviour of housing prices. Equity holdings and housing are the largest components of household wealth in developed countries, and their values tend to move together over long periods. Indeed, one of the most striking

patterns in many developed countries over the last 30 years is that a price peak in equity markets tends to be followed by a peak in housing markets. However, the lack of inflationary pressures in the current business cycle and the corresponding fall in interest rates following the recent equity price peaks has apparently altered this relationship.

Housing prices continued to rise despite equity market collapse ...

Three years after the equity market started to collapse, housing prices continued to rise in many countries. In the five years to end-2002, housing prices appreciated by at least 50% in the United Kingdom, Australia, Spain, the Netherlands and Ireland, and by more than 20% in the United States, Belgium and the Nordic countries. By the end of 2002, the year-over-year increase in inflation-adjusted housing prices was 23% in the United Kingdom, 16% in Australia and 5% in the United States. Housing prices in Canada, Denmark, Italy, Sweden and Spain continued to rise as well. In general, this growth was accompanied by a rapid rise in household debt (see Chapter II).

In late 2002 and early 2003, tentative signs began to emerge suggesting that housing markets were losing steam, and might even have peaked in some countries. In Australia, the growth rate in the number of residential units auctioned and sold in Sydney has declined since June 2002. In addition, the quarterly rate of growth in housing prices stabilised at around 3–4% in the last three quarters of 2002, having reached a maximum of 5% in the third quarter of 2001. Housing price growth also slowed in late 2002 in Spain, and actually turned negative in the Netherlands. In the United Kingdom, housing turnover peaked in the third quarter of 2002, and the quarterly growth rate in housing prices dropped from 8.2% in that quarter to just under 2% in the fourth. Moreover, prices at the high end of the UK real estate market came down significantly over the last year. The situation was less clear in the United States. The fourth quarter of 2002 saw the smallest quarterly rise in housing prices since 1997, and new construction permits for privately owned residential units fell by 7% from February to March 2003. However, new home sales picked up in March 2003 after dipping in January and February, and mortgage rates remained near 40-year lows.

... implying a longer than average lag between peaks

Even if housing prices were to peak in the near future, this would nonetheless imply a longer than average lag between equity and housing market peaks by historical standards. As shown in Graph VI.16, peaks in housing prices have historically followed equity market peaks with a lag of approximately two and a half years. In a sample of 11 developed countries (Australia, Canada, Denmark, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom and the United States), 35 equity market peaks and 28 housing price peaks occurred between 1970 and end-2002. Between 1972 and 1976, all countries in the sample experienced at least one equity price peak, and nine countries also experienced a housing price peak. Again, between 1986 and 1990, equity markets peaked in nine countries, followed shortly by housing price peaks in eight of these. Statistical analysis indicates that there was roughly an 8% probability of experiencing a peak in housing prices in any one year during the sample period. However, this probability increased to 30% in the year following an equity price peak, and to 70% in the following three years.

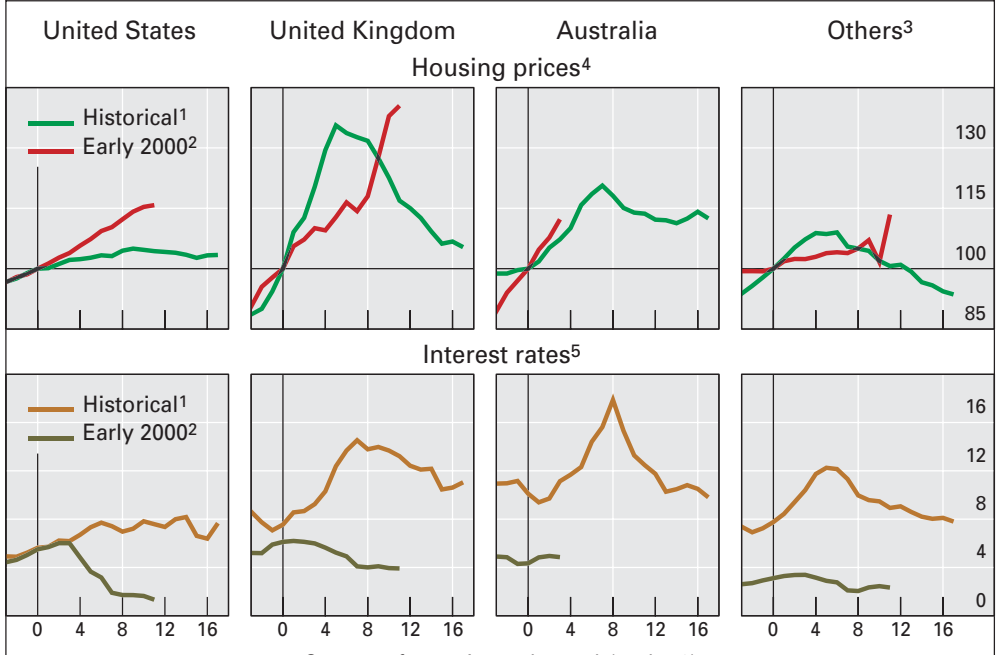
The longer lag between peaks in the current cycle ...

The continuing strength of housing prices seems to be related to the decline in interest rates. In general, inflationary pressures have been less prominent in the most recent cycle than in previous ones. As a result, monetary authorities have been able to use the additional room for manoeuvre to cut policy rates (see Chapter IV). As shown in Graph VI.16, short-term interest rates had generally risen in the two years following equity price peaks in the earlier periods, as monetary authorities responded to inflationary pressures. In the current cycle, however, interest rates in many countries fell considerably following the equity market collapse of 2000. In the United States, for example, nominal short-term rates fell from 5.6% in mid-2000 to 1.7% in mid-2002, while those in the United Kingdom fell from 6.1% to 4.1%, and those in Canada from 5.9% to 2.6% over the same period. Since housing is a long-lived asset, these lower interest rates helped to underpin housing prices, even in the face of a collapse in equity prices.

... has mostly reflected the drop in nominal interest rates

Evidence from previous periods lends support to the above argument. An econometric analysis of historical experience suggests that changes in interest rates had a significant effect on the lag between equity price and housing price peaks. In a sample of 22 pairs of equity and housing price peaks between 1970 and 1999, the average lag between peaks was roughly nine quarters. However, an average quarterly drop of 25 basis points in the short-term interest rate following an equity price peak would have delayed the housing price peak by approximately one quarter (Graph VI.17). Taken at face value, these results imply that the 475 basis point cut in policy rates in

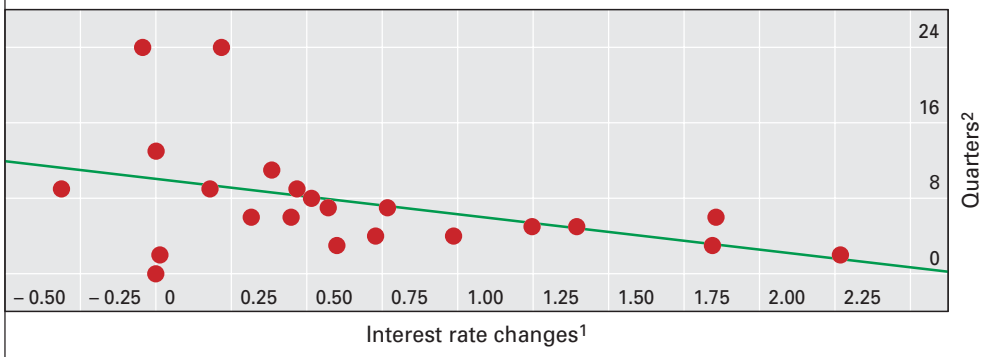
## Housing prices and interest rates around equity market peaks




[1] Historical averages of periods around peaks in the early 1970s, late 1970s–early 1980s and late 1980s. [2] 2002 Q1 for Australia, 2000 Q1 for all other countries. [3] Simple average of Canada, Japan and Sweden. [4] Housing price = 100 at each equity market peak. [5] Short-term nominal interest rate, in percentages.

Sources: Office of Federal Housing Enterprise Oversight; national data; BIS calculations. Graph VI.16

## Interest rate changes and the lag between equity and housing price peaks




Note: When outliers are excluded, the slope of the regression line increases to about –3 from –4.

¹ Average quarterly change in short-term nominal interest rates between the equity price peak and the subsequent housing price peak. ² Number of quarters by which a housing price peak lags an equity price peak.

Sources: National data; BIS calculations. Graph VI.17

the United States between mid-2000 and mid-2002 would have lengthened the average lag between equity and housing price peaks by just over two quarters.

Institutional factors are likely to have affected the degree to which interest rates have influenced housing prices in different countries. For example, the duration of the interest rate that anchors mortgage rates differs across countries. In particular, mortgages in the United Kingdom and Australia are predominantly based on three-month rates, while those in Canada are based on rates with maturities of one year or less, making housing prices generally more responsive to short-term interest rates in these countries. The majority of mortgage financing is tied to long-term interest rates in Germany, Japan, Sweden, the United States and, in particular, the Netherlands. In addition, mortgages in the United States are notable for the fact that they can be refinanced with little penalty, in effect giving mortgage borrowers a valuable option and making housing prices sensitive to the volatility as well as the level of long-term interest rates; innovations in mortgage processing technology recently introduced by Fannie Mae and Freddie Mac have made refinancing easier and less costly. Other things being equal, the sharp fall in short-term interest rates in 2001 would have had relatively more impact on housing prices in countries with mortgages tied to short rates, while the flattening of the yield curve in 2002 would have had more influence in countries with mortgages tied to long rates.

# VII. The financial sector

## Highlights

Over the period under review, financial systems in most industrialised countries came under additional pressure; expectations of an early economic recovery proved premature and equity prices fell further. However, financial institutions generally appeared to be weathering the economic downturn successfully, and financial sector pressures did not impede the supply of credit in most countries. Admittedly, the Japanese financial system continued to face serious difficulties. In addition, the profitability of financial institutions in Germany came under increased pressure, owing to chronic structural weaknesses as well as cyclical influences. Elsewhere, bank profitability typically held up better, reflecting in part the benefits of banks' earlier efforts to restructure their cost bases. In comparison to the previous cyclical slowdown, losses due to credit deterioration had only a limited effect on profitability and capital positions remained healthy. Insurance companies generally fared less well, owing to substantial losses on equity and bond holdings.

The noteworthy resilience of the banking sector, which contrasted favourably with the substantial deterioration in the non-financial sector, reflected both cyclical and structural factors. Atypical aspects of the economic slowdown, including a very accommodative stance of monetary policy, continued growth in household expenditure and the absence of a property price bust, contained the rise in loan losses relative to past cycles and boosted income from lending to households. Chief among the structural developments that cushioned the effects of the downturn was the increased use of traditional tradable debt instruments and loan syndications to improve the dispersion of credit risk throughout the financial system. Moreover, the development of new credit risk transfer mechanisms has enhanced institutions' ability to manage risk exposures. In addition, banking sector capital bases were stronger at the outset of the current slowdown than in the past, as a result of the long duration of the preceding expansion and tighter regulatory standards.

Looking ahead, the very reasons for the resilience so far point to the key sources of potential vulnerability. A prolonged period of economic weakness, although unlikely, would further test the loss absorption capacity of financial institutions and markets were it to materialise. Further falls in equity prices could undermine the solvency of insurance companies and pension funds, while a decline in property prices would hurt both the household and commercial real estate sectors, putting further stress on lenders.

The recent resilience can be viewed as an indication that financial systems with established alternative channels of funding, through both market-traded

instruments and balance sheet intermediation, may offer a more flexible response to adverse economic developments. Multichannel systems, however, pose new challenges for prudential supervisors in the form of greater complexity of individual institutions and intensified interrelationships between institutions and markets.

## The economy and the performance of financial institutions

The weak economy put pressure on non-financial businesses ...

The sharp slowdown and hesitant pace of recovery in global economic activity put substantial pressure on the balance sheets of non-financial businesses (see also Chapters II and VI). Defaults on corporate bonds, as well as losses given default, surged in recent years, with defaults reaching or surpassing their peaks in the early 1990s (Graph VII.1). Looking forward, market-based measures of non-financial sector risk in several countries, which rose steeply over the past few years, remain elevated, suggesting that market participants expect a continuation of the poor credit environment in the near future (Graph VII.2).

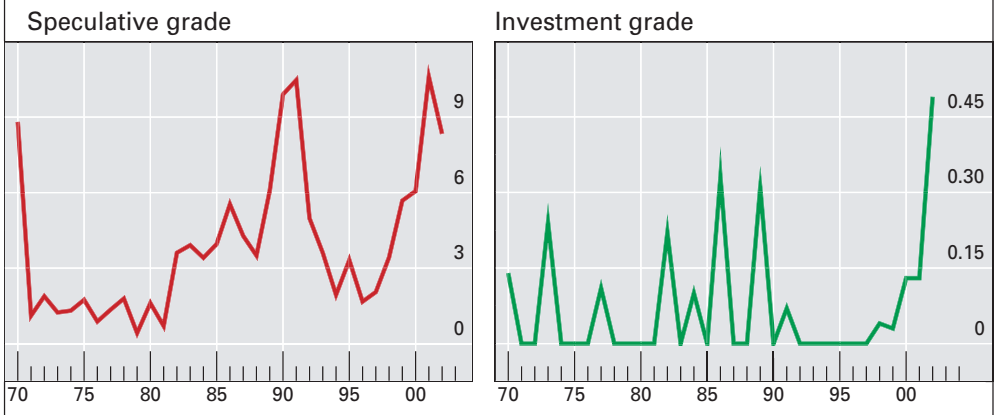
... but financial institutions fared better ...

In contrast to the substantial difficulties faced by non-financial firms, in most countries the financial sector remained relatively healthy. Bank profitability declined somewhat, but generally remained adequate given the poor economic backdrop. By contrast, insurance companies showed more signs of stress, with portfolio losses imposing severe strains in some cases. Nonetheless, market-based measures of risk for both banks and insurance companies remained at low levels relative to those for non-financial firms, although default risk in the insurance sector rose last year. The low level of the measures for Japanese financial institutions may reflect expectations of government action, given the well known difficulties facing these institutions.

... also relative to past cycles

The recent resilience of banks contrasts favourably with their performance in past downturns, during which deteriorating asset quality had

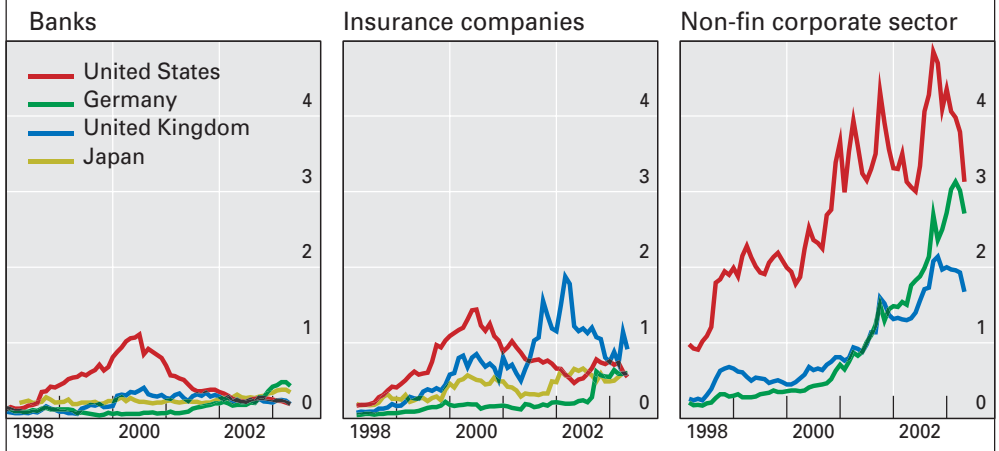
Global one-year default rates[1]




[1] Number of bond issuers that defaulted as a percentage of the number of issuers that could have defaulted in one year.

Source: Moody's Investors Service. Graph VII.1

## Market-based measures of default risk[1]




[1] Expected probability, in percentages, that a company will default within one year; median for companies in each sector/country.

Source: KMV. Graph VII.2

sometimes caused widespread difficulties. In some cases, prominent financial institutions had failed; and, even when there had been no significant bank failures, the resulting adjustments to lending and investment behaviour had at times weighed on the economic outlook. For example, financial sector headwinds had dampened economic activity in the United States, the United Kingdom and Australia in the early 1990s.

*Commercial banks*

Bank performance varied ...

While banks held up well overall during the period under review, there were significant differences in performance across countries and lines of business (Table VII.1). The serious difficulties at Japanese banks continued, despite

## Profitability of major banks[1]

As a percentage of total average assets

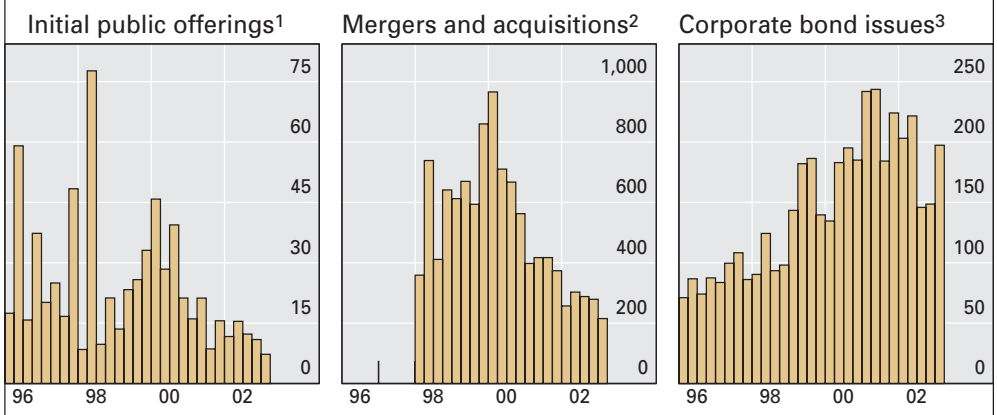
| | Pre-tax profits | | | Provisioning expenses | | | Net interest margin | | | Operating costs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 |
| United States (10) | 1.86 | 1.49 | 1.66 | 0.56 | 0.71 | 0.72 | 3.07 | 3.10 | 3.11 | 4.45 | 4.06 | 3.46 |
| Japan[2] (12) | 0.13 | –0.93 | 0.04 | 0.81 | 1.36 | 0.28 | 1.08 | 1.14 | 0.81 | 1.14 | 1.20 | 0.82 |
| Germany (4) | 0.53 | 0.14 | 0.05 | 0.17 | 0.24 | 0.39 | 0.83 | 0.90 | 0.80 | 1.62 | 1.62 | 1.50 |
| United Kingdom (4) | 1.65 | 1.27 | 1.11 | 0.29 | 0.31 | 0.36 | 2.36 | 2.07 | 2.02 | 2.68 | 2.48 | 2.40 |
| France (4) | 0.85 | 0.74 | 0.58 | 0.17 | 0.22 | 0.20 | 0.93 | 0.94 | 1.03 | 1.94 | 1.87 | 1.81 |
| Italy (6) | 1.15 | 0.81 | 0.48 | 0.44 | 0.55 | 0.67 | 2.06 | 2.04 | 2.16 | 2.37 | 2.39 | 2.61 |
| Canada (6) | 1.26 | 0.92 | 0.61 | 0.29 | 0.41 | 0.59 | 1.89 | 1.95 | 2.06 | 2.76 | 2.84 | 2.76 |
| Spain (4) | 1.33 | 1.20 | 0.93 | 0.35 | 0.44 | 0.49 | 2.65 | 2.86 | 2.66 | 2.63 | 2.60 | 2.37 |
| Australia (4) | 1.85 | 1.47 | 1.49 | 0.20 | 0.27 | 0.26 | 2.42 | 2.22 | 2.16 | 2.39 | 2.15 | 2.29 |
| Switzerland (2) | 0.96 | 0.42 | 0.08 | 0.04 | 0.14 | 0.21 | 0.73 | 0.68 | 0.84 | 2.87 | 2.91 | 2.47 |
| Sweden (4) | 1.16 | 0.82 | 0.70 | 0.06 | 0.10 | 0.09 | 1.60 | 1.49 | 1.48 | 1.72 | 1.51 | 1.44 |

[1] The figures in parentheses indicate the number of banks included. For Japan, the number changed from 13 in 2002 after a merger. [2] Fiscal years; for 2002, September interim data.

Source: Fitch Ratings. Table VII.1

## Indicators of investment banking activity

In billions of US dollars




[1] Germany, Japan, the United Kingdom and the United States. [2] Global value, announced excluding terminated transactions. [3] Global value, announced or completed international issues of bonds and euronotes.

Sources: Bloomberg; BIS. Graph VII.3

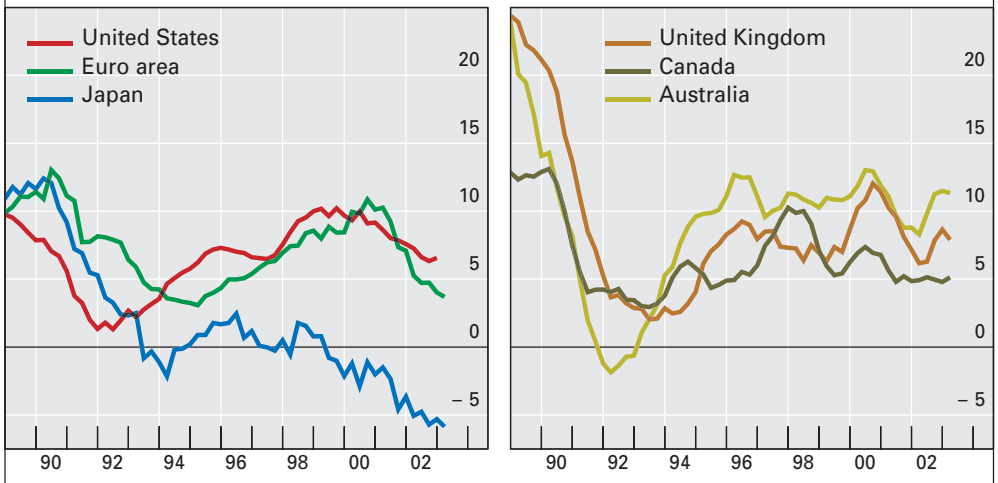
... across countries ...

considerable efforts to write off bad loans and issue new capital. In Germany, a relatively weak economy put greater pressure on commercial banks. Moreover, structural pressures on the profitability of retail banking meant that such operations did not provide an offset as was the case in some other countries. Larger wholesale institutions everywhere faced reduced income from capital market activity. Low stock prices, weak investment spending and efforts by some non-financial firms to strengthen their balance sheets slowed the pace of mergers, acquisitions and initial public offerings (Graph VII.3).

... and across lines of business

On the upside, household borrowing remained relatively strong in many countries, bolstering overall growth in credit and the profits of household lenders (Graph VII.4). In addition, ongoing efforts by banks to increase efficiency and reduce costs helped to support income.

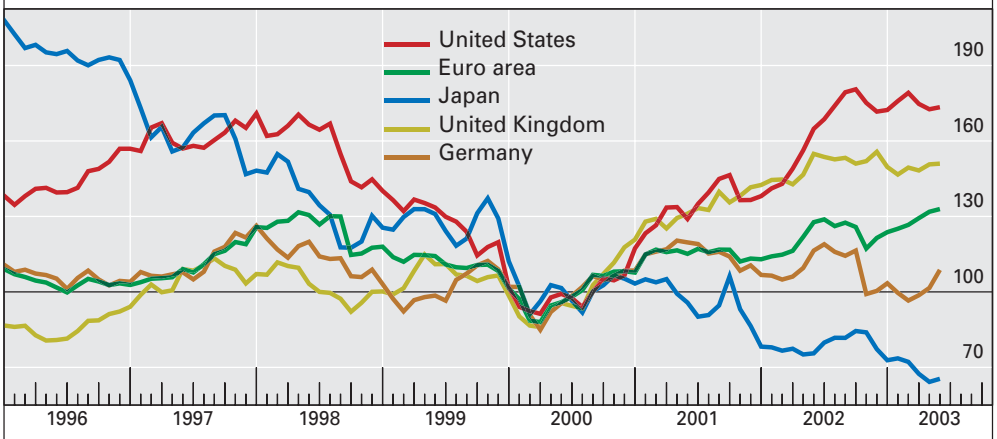
## Credit growth[1]




[1] Annual percentage change in private domestic credit.

Sources: IMF; national data. Graph VII.4

Relative bank equity prices[1]




[1] Ratio to broad equity index; 2000 = 100.

Sources: Datastream; national data. Graph VII.5

US banks performed well ...

In the United States, commercial banks posted very strong results despite the difficult environment, boosting their stock prices relative to the broader market (Graph VII.5). With the US economy expanding at a somewhat faster pace than those of Europe or Japan, loan losses changed little from 2001, and broad measures of loan quality actually improved slightly (Graph VII.6). Robust household spending on consumer goods, notably automobiles, sustained consumer lending, and the continued strength in residential housing supported mortgage growth. The profitability of mortgage lending was also strengthened by fee income from a boom in mortgage refinancing activity. A low-yield environment combined with heightened concerns about risk reinforced bank deposit inflows, keeping funding costs low and supporting net interest margins. Finally, non-interest expenses as a share of assets fell substantially last year. This probably reflected efforts to trim costs, although the reduction was also due in part to a change in the accounting for goodwill.

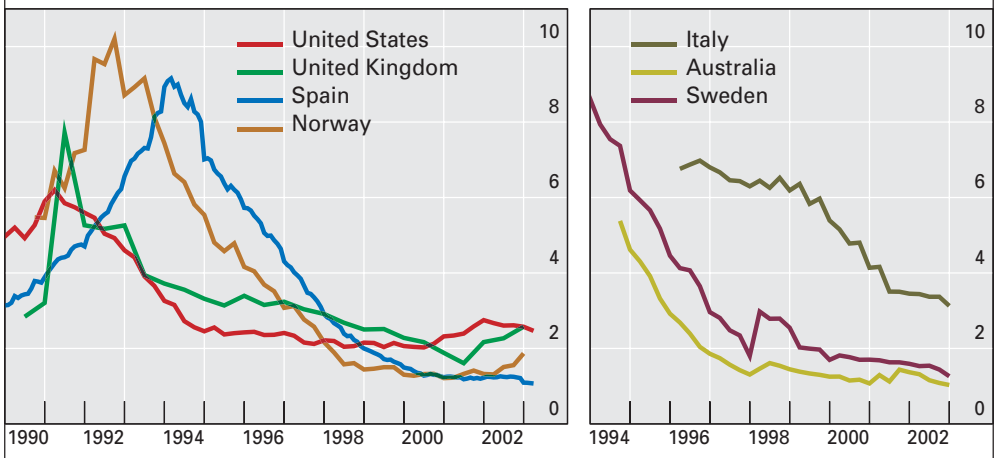
... as did banks in much of Europe

European banks generally performed less well than their US counterparts, but interest and non-interest income remained fairly strong and provisions for loan losses increased only modestly. Well established domestic retail and corporate clienteles provided low-cost funding and supported banks' non-interest fee income. Bank profits were boosted in some cases by progress made in reducing costs through investments in technology, restructuring and rationalisation of operations in the wake of consolidation during the latter part of the 1990s. Repricing and restructuring of product portfolios allowed many banks to sustain growth in revenues relative to costs, an effort aided by the revenue gains from offering a range of new products to households.

German banks faced larger challenges

The main exception to this picture was the German banking sector, where a confluence of cyclical and institutional factors brought to the fore long identified structural problems. German banks were hit by cyclical factors because of the greater severity of the slowdown in their home market. In addition, chronically low margins, a result of a fragmented banking system and heavy competition from a number of state-sponsored regional institutions, provided an insufficient offset to loan losses, putting at risk the capital

## Non-performing loan ratios[1]




[1] As a percentage of total loans; definitions and coverage differ across countries.

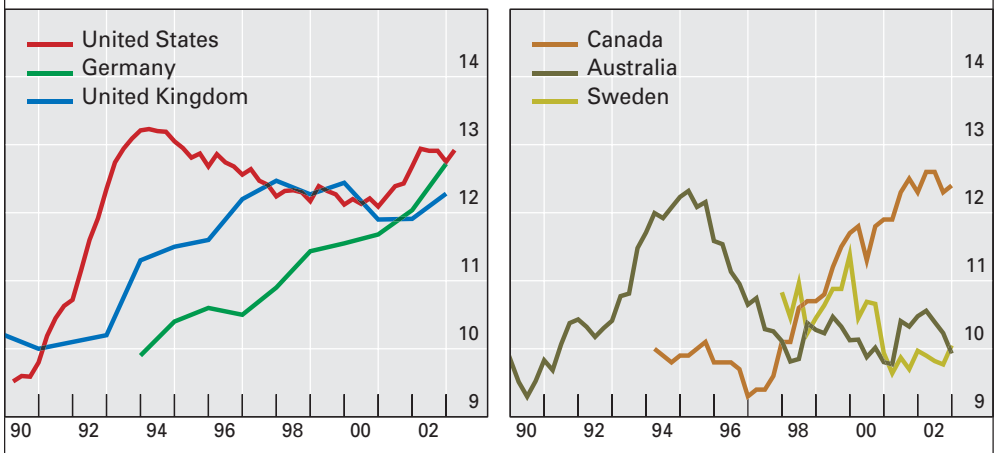
Source: National data. Graph VII.6

cushions accumulated in the 1990s. In the current environment some banks may find it difficult to generate the revenues that would be needed to cope with a significant further decline in asset quality. However, the German banking sector generally remains adequately capitalised (Graph VII.7). Owing in part to pressures on bank profits and also to efforts to price such loans appropriately for risk, German banks have reportedly increased margins on loans to small and medium-sized businesses – with potentially adverse effects on such firms. Looking forward, the expected ending of explicit government guarantees to regional and savings banks in 2005 should help ease the pressures on German banks' margins over the longer term.

Japanese banks continued to struggle

Banking conditions in Japan remained difficult, as weak economic activity and further declines in prices put additional strains on banks. Pressured by new regulatory rules on the valuation of loans to troubled firms, Japanese banks moved to deal more aggressively with their serious non-performing loan problems. In fiscal 2002 the largest Japanese banks suffered over ¥3 trillion

## Bank capital ratios[1]




[1] Total capital as a percentage of risk-weighted assets.

Source: National data. Graph VII.7

of losses in their equity portfolios and made more than ¥5 trillion of provisions for loan losses. As a result, reported losses for the year exceeded ¥4 trillion. To bolster their capital ratios, these banks issued about ¥2 trillion of capital instruments, including common, preferred and mandatory convertible preferred stock (see Chapter VI). In some cases, however, these instruments were sold to related parties or to the issuing bank's customers, and so it cannot be concluded that the new capital clearly reflected confidence on the part of outside investors. Despite these new issues, capital ratios for a number of the largest Japanese banks fell considerably, ending the fiscal year well below 10% in some cases despite earlier injections of public funds. Moreover, their actual capital positions may be significantly weaker than they appear, as a sizeable fraction of capital reflects deferred tax assets that can only be realised if banks generate substantial earnings in the near future. Indeed, in response to auditors' doubts about estimates of future earnings, one large bank reduced the reported value of its deferred tax assets enough to trigger official intervention.

*Insurance companies*

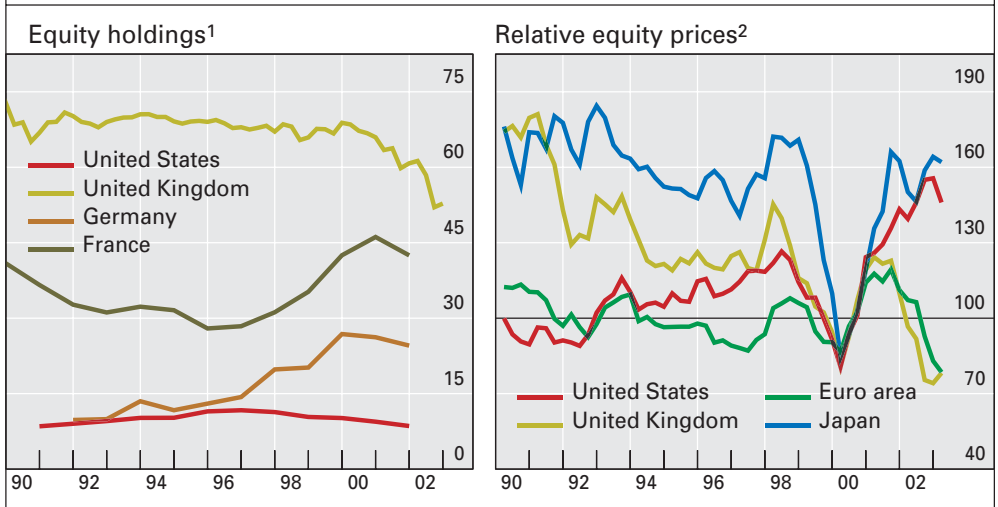
Insurance results were weaker than those of banks ...

Results in the insurance sector were substantially weaker than those for banks last year. The weakness was due in large part to poor returns on investment portfolios in 2002, which reduced profits or even led to losses. In the life insurance sector, profits were further squeezed by high guaranteed returns on insurance contracts. In the non-life sector, including reinsurance, low investment returns were partly offset by gains in operating income. Premium income strengthened, and claims, which had surged in 2001 as a result of the terrorist attacks in the United States and a number of natural disasters, returned to more normal levels.

... due to investment losses

The low returns on insurance companies' investments reflected two factors. First, yields on new fixed income instruments fell considerably, owing

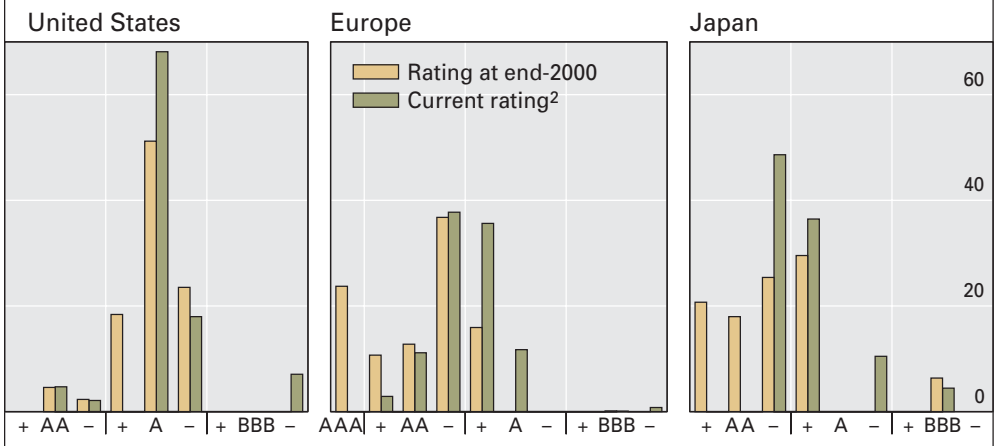
Insurance companies: equity holdings and performance




[1] As a percentage of total financial assets. [2] Ratio to broad equity index; 2000 = 100.

Sources: Datastream; National Association of Insurance Commissioners; national data. Graph VII.8

## Insurance companies' ratings[1]




[1] Each bar represents the assets of insurance companies with the corresponding rating as a percentage of the total assets of the selected companies from each region. Companies as included in industry groups of the S&P 500, Dow Jones STOXX 600 and TOPIX indices. [2] As of April 2003.

Source: Bloomberg. Graph VII.9

to the sharp easing of monetary policy. But, more importantly, the slide in corporate stock and bond prices reduced the value of insurance company holdings. Moreover, under existing insurance accounting rules in many countries, all of these losses may not yet have been reflected in company accounts. Looking across regions, higher equity market exposures appear to be related to the underperformance of insurance sector stock prices (Graph VII.8). The relative performance of the insurance sector in the United Kingdom and the United States is a case in point. UK insurance companies have traditionally held large equity portfolios and have suffered the most from current market conditions, while most of their US counterparts have been constrained by regulation in their exposure to the equity market.

Insurance ratings suffered

Losses on investments, as well as weak operating income, put pressure on the credit standing of a number of insurance firms in 2002. In some cases the firms responded by cutting dividends or issuing new capital to strengthen their balance sheets. In other cases companies were downgraded (Graph VII.9), and a few smaller ones failed. Downgrades were more common in Europe and Japan than in the United States. Despite the changes, however, the average credit rating of insurance firms in Europe remained higher than in the United States.

## Sources of resilience

Financial sector resilience reflects both cyclical and structural factors

Both cyclical and structural factors contributed to the recent resilience of banks in most industrialised economies. On the cyclical side, the latest slowdown has been atypical in ways that limited increases in loan losses by past standards, despite the considerable problems facing many non-financial companies. On the structural side, banks' risk management has no doubt improved substantially in recent years, and financial market developments have facilitated the dispersion of credit risk across the financial sector.

*Cyclical factors*

The recent cycle has been atypical

Two atypical features of the recent slowdown in economic activity helped to attenuate its effects on intermediaries, and especially on banks. First, as discussed in Chapter II, the slowdown was due primarily to a spontaneous unwinding of an investment-driven boom that had been accompanied by excessive equity valuations, rather than to the effects of monetary policy tightening in response to increased inflation pressures. As a result, monetary policy was eased significantly as the economy slowed. Lower interest rates contributed to a second atypical feature of the slowdown: the relative strength of property prices. House prices continued to rise, and even surged in some countries (see Chapter VI). While commercial property prices softened, they generally did not decline to the extent seen in many previous slowdowns.

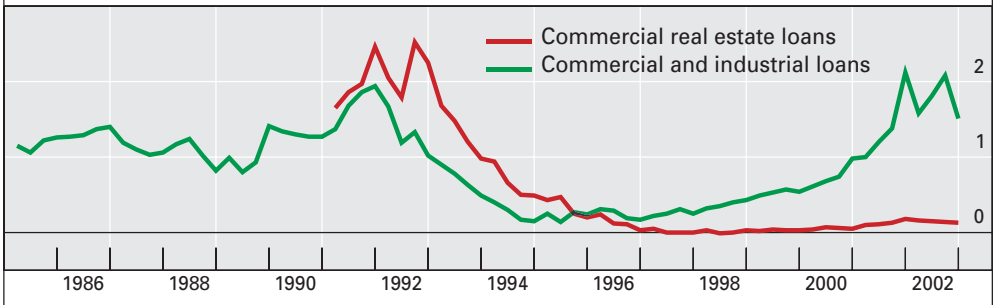
Loan quality deteriorated less than in past cycles ...

With lower interest rates trimming debt service burdens, and high property prices supporting balance sheets, loan quality deteriorated considerably less than in past slowdowns. Admittedly, the weak economy and unwinding of excesses in a number of sectors, including telecommunications and information technology, did cause a substantial rise in losses on commercial and industrial loans (Graph VII.10). However, losses on real estate related lending, especially commercial mortgages, remained low. By contrast, those investors, notably insurance companies, with greater exposure to equities and inflexible liability costs faced more substantial losses in the recent cycle, reflecting the outsized fall in equity prices and the sharp decline in long-term interest rates.

... especially for real estate related credits

The relatively mild deterioration in the commercial real estate sector in many countries reflected in large part the absence of a boom in the sector during the previous expansion. In contrast to residential real estate prices, those for commercial properties stayed well below their previous peaks (Table VII.2). Moreover, construction activity in most countries remained modest. As a result, as the economy softened, increases in vacancy rates and declines in rents and prices were generally muted, putting less pressure on borrowers. True, reported increases in vacancy rates may understate underused capacity to the extent that current lessees may be seeking to sublet space they no longer need. In such cases, however, owners continue to receive rent income, allowing them to service their debts.

US commercial bank charge-off rates[1]




[1] Annualised, as a percentage of average loans.

Source: National data.

Graph VII.10

Commercial real estate performance depended on demand

With overbuilding less prevalent than in the past, the performance of commercial real estate assets depended on the strength of demand for space. Continued growth in consumer spending in many countries buoyed demand for retail space. By contrast, office or industrial properties were particularly hard hit in markets where the economy was soft, either because of weak overall performance, as in Germany, or because of sector-specific problems, as in Silicon Valley in the United States. Commercial real estate in some financial centres was adversely affected by declines in investment banking activity. Properties located in cities with more diverse business mixes reportedly performed better.

Lack of overshooting reflects past losses ...

The relative lack of overshooting in the commercial real estate market in the latest cycle reflected a number of factors. Memories of losses suffered in the commercial real estate collapse of the early 1990s presumably inspired investor and lender caution and greater scrutiny of projects. Moreover, the gradual absorption of overcapacity created by that earlier construction wave is likely to have dampened further investment. The increased role of market sources of finance, including real estate investment trusts, listed property companies and commercial mortgage-backed securities, may also have contributed to the relative stability of the sector (Graph VII.11). The development of these public funding sources arguably increased market transparency and discipline. It also allowed for a wider dispersion of risks,

... and closer market suveillance

## Property prices

| | Commercial property[1] | | | Residential property | | | *Memo: Household debt*[2] | |
|---|---|---|---|---|---|---|---|---|
| | 1995–2002 | 2002 | 2002 | 1995–2002 | 2002 | 2002 | *1995–2002* | *2002* |
| | Nominal change[3] | | Level[4] | Nominal change[3] | | Level[4] | *Nominal change*[3] | |
| United States | 3.2 | –5.6 | 37 | 5.8 | 6.9 | 100 | *8.1* | *8.9* |
| Japan[5] | –8.7 | –10.0 | 38 | –3.0 | –4.6 | 69 | *0.3* | *–2.4* |
| Germany | 4.1 | –14.2 | 63 | 0.0 | 1.0 | 84 | *4.4* | *2.5* |
| United Kingdom | 2.8 | –3.7 | 35 | 11.8 | 23.9 | 100 | *8.6* | *13.0* |
| France | 5.9 | –4.3 | 64 | 4.8 | 6.7 | 100 | *6.2* | *6.2* |
| Italy | 11.6 | 5.5 | 84 | 3.7 | 10.0 | 94 | *8.1* | *6.3* |
| Canada | 4.6 | –0.5 | 52 | 3.6 | 10.3 | 94 | *6.0* | *7.8* |
| Spain | 12.5 | –20.5 | 49 | 9.8 | 17.4 | 100 | *13.2* | *6.2* |
| Netherlands | 7.5 | –11.8 | 86 | 11.2 | 4.5 | 99 | *12.7* | *7.0* |
| Australia | 2.5 | –7.8 | 44 | 9.0 | 18.5 | 100 | *11.9* | *12.4* |
| Switzerland | 0.2 | –1.6 | 61 | 0.1 | 4.9 | 66 | *3.3* | *3.3* |
| Belgium | 4.0 | 0.4 | 78 | 5.2 | 6.5 | 100 | *5.1* | *1.5* |
| Sweden | 4.9 | –7.4 | 52 | 8.0 | 9.2 | 100 | *7.1* | *8.2* |
| Norway | 5.6 | –2.9 | 43 | 8.9 | 5.6 | 97 | *7.6* | *6.1* |
| Denmark | 7.2 | 8.0 | 85 | 7.0 | 3.4 | 100 | *7.9* | *5.9* |
| Finland | 3.3 | –2.3 | 59 | 8.2 | 8.7 | 79 | *4.3* | *4.7* |
| Ireland | 14.3 | –3.0 | 91 | 14.5 | 14.2 | 100 | ... | ... |

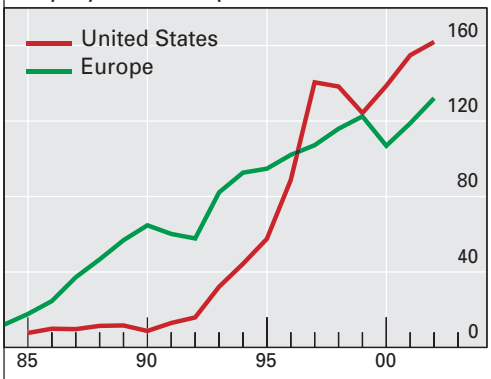
[1] For Australia, Belgium, Italy and Spain, prime property in major cities. [2] Broad financial accounts concept where available, otherwise credit from banks; partly estimated. [3] Annual percentage changes. [4] Relative to the peak period of real commercial/residential property prices. [5] Land prices.

Sources: Catella Property Consultants; Frank Russell Canada Ltd; Investment Property Databank Ltd; Jones Lang LaSalle; National Council of Real Estate Investment Fiduciaries; Nomisma; Office of Federal Housing Enterprise Oversight; Sadolin & Albæk; Wüest & Partner; national data; BIS estimates. Table VII.2

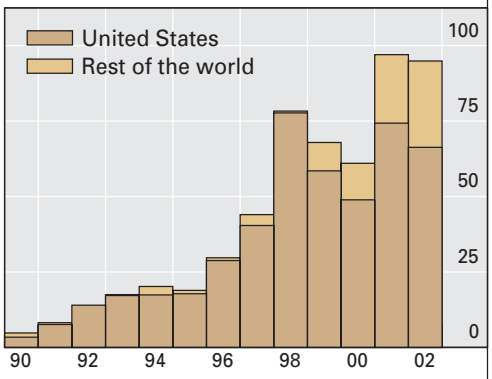
## Public commercial real estate markets

In billions of US dollars

Equity market capitalisation[1]




CMBS[2] issuance




[1] Refers to real estate investment trusts in the United States and listed property companies in Europe. [2] Commercial mortgage-backed securities.

Sources: Commercial Mortgage Alert; Global Property Research; National Association of Real Estate Investment Trusts; national data. Graph VII.11

reducing lenders' exposures to individual projects. Finally, these instruments eased the access of new investors to the commercial real estate market, potentially augmenting the flow of funds to projects in the event of difficulties at traditional funding sources.

*Structural factors*

Improved dispersion of credit risk underpinned by ...

Although the characteristics of the latest cycle helped limit the resulting fallout for financial institutions, especially banks, two other developments also contributed to this outcome. First, there has been a general shift of business credit from bank loans to capital market financing in many economies in recent years (Graph VII.12). As a result, losses that might have been absorbed by banks in earlier downturns were shared with portfolio investors. Second, risks were better dispersed within the banking sector, with risk concentrations generally better contained than in the past.

... better credit risk management ...

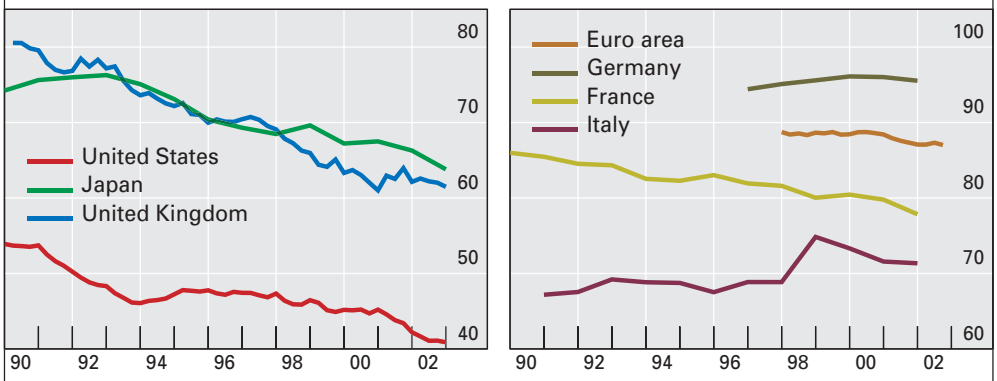
Improved measurement and management of credit risk on the part of banks supported these developments. Banks benefited in particular from the use of improved information technology, which facilitates the assessment and pricing of borrower risk and aids in the monitoring of potential concentrations of risk. Banks' heightened attention to risk was also a response to pressures from both the financial markets and supervisors to improve the pricing of risk, boost the level of capital and enhance the efficiency with which it is deployed.

... and deeper markets for risk transfer instruments:

The improved dispersion of risk was also facilitated by the development of existing and emergence of new financial markets, including the corporate bond market, the syndicated loan market, markets for asset-backed securities and markets for credit derivatives.

The shift of funding from banks to the bond market in recent years reflected both supply and demand factors. The cost and availability of bond finance was eased by the expansion of the market for high-yield securities,

## Bank loan versus capital market financing[1]




[1] Bank loans to the corporate sector as a percentage of the sum of such loans and short- and long-term securities issued by corporates. For the United States, excluding mortgage credit.

Source: National data. Graph VII.12

especially in the United States, and also by the development of the European bond market following the introduction of the euro in 1999. In addition, with bond yields near historical lows, many firms reportedly chose to lock in low funding costs and avoid rollover risk by substituting bonds for short-term credit, including bank loans (see Chapter VI). This shift to longer-term finance was also encouraged by a reduced willingness of banks to provide backup lines of credit for commercial paper issues – a development linked to improved assessments of the risks posed by such lines.

syndicated loans ...

In the market for syndicated business loans, banks shifted a substantial amount of credit risk to non-bank investors – including insurance companies, mutual funds, pension funds, hedge funds and securitisation vehicles. In recent years such investors accounted for about a tenth of the volume of US syndicated credits, and the credits they accepted were significantly riskier than those held by banks (Table VII.3). The much weaker performance of these credits presumably reflected the greater risk appetite of non-bank investors, as well as sales of distressed loans by banks wanting to limit the deterioration in their own loan portfolios. Indeed, the fraction of secondary market activity in the syndicated loan market accounted for by transactions in distressed loans increased considerably in the last few years.

## US syndicated credits[1]

| | Share of total credits (in %)[2] | | | *Memo:* | Percentage classified[3] | | | |
|---|---|---|---|---|---|---|---|---|
| | US banks | Foreign banking organisations | Non-banks | *Total credits ($ bn)* | US banks | Foreign banking organisations | Non-banks | Total credits |
| 2000 | 48 | 45 | 7 | *1,951* | 2.8 | 2.6 | 10.2 | 3.2 |
| 2001 | 46 | 46 | 8 | *2,050* | 5.2 | 4.7 | 14.5 | 5.7 |
| 2002 | 45 | 45 | 10 | *1,871* | 6.5 | 7.3 | 22.6 | 8.4 |

[1] Includes both outstanding loans and undrawn commitments. [2] Dollar volume of credits held by each group of institutions as a percentage of the total dollar volume of credits. [3] Dollar volume of credits classified "substandard", "doubtful" or "loss" by examiners as a percentage of the total dollar volume of credits.

Source: Board of Governors of the Federal Reserve System. Table VII.3

... asset-backed securities ...

Intermediaries also increasingly used the market for asset-backed securities to trim their exposures to a wide variety of credits. The volume of asset-backed securities outstanding rose sharply in recent years in the United States and especially in Europe, where it grew by over 50% a year (Graph VII.13). In the United States, where the market is largest, the assets most commonly used to back issues are residential mortgages. Consumer loans, business loans and trade receivables are also used to back significant volumes of asset-backed paper. The pattern in Europe is broadly similar.

... and credit derivatives

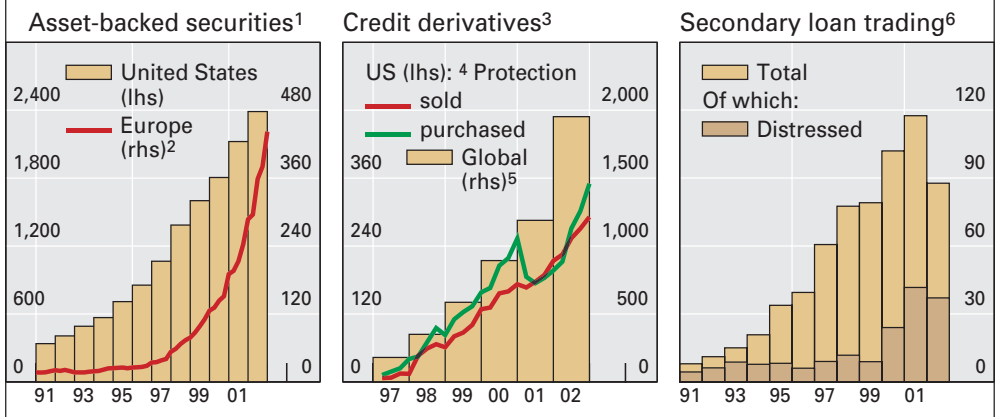
The market for credit derivatives – including credit default swaps, credit-linked notes, total return swaps and other similar derivative instruments – expanded extremely rapidly in recent years. The notional principal value of such contracts has jumped by roughly a factor of 10 since the late 1990s to about $2 trillion last year. In part, however, this large value reflects trading and market-making rather than net positions used to hedge or take on credit exposures. For example, US banks' purchases of protection in the credit derivatives market have broadly paralleled their sales of credit protection since 1997, with both rising from negligible levels at that time to about $300–350 billion by the end of 2002. Over time, the net position of US banks has fluctuated widely relative to their gross positions, with banks occasionally being net sellers of protection. Even so, at the end of last year US banks were net buyers of credit protection to the tune of $60 billion, roughly equivalent to 8% of their commercial and industrial loans.

Banks are net purchasers of credit protection ...

A survey of many major financial institutions in the United States and Europe conducted by Fitch Ratings provides further information on the size and structure of the credit derivatives market in the autumn of 2002 (Table VII.4). Gross positions taken on in the credit derivatives market by the surveyed firms totalled $1.2 trillion of notional principal value, with collateralised debt obligations amounting to another $117 billion. Banks accounted for the largest

## Credit risk transfer markets

In billions of US dollars




[1] Amounts outstanding. [2] International bonds. [3] Notional principal values. [4] All banks. [5] Market participants' estimates (BBA surveys). [6] Global; turnover data.

Sources: Board of Governors of the Federal Reserve System; British Bankers' Association (BBA); Dealogic; ISMA; Loan Pricing Corporation; Thomson Financial Securities; BIS. Graph VII.13

share of these gross positions, but insurance companies and credit guarantors also had substantial exposures. Net positions were considerably smaller than gross positions for all the institutions surveyed. At the time of the survey, both US and European banks were net purchasers of credit protection, while insurance companies and, as one might expect, financial guaranty insurers were important net sellers. Within Europe, larger banks had purchased protection from second-tier regional banks seeking to obtain more attractive yields and to diversify their credit risk.

... while insurance companies are net sellers

Financial institutions used these markets to varying degrees to transfer risk across borders as well as between sectors. Cross-border risk transfer appeared to be the greatest for syndicated loans and corporate bonds. In the syndicated loan market, European and Japanese banking organisations accounted for about 30% of the syndicated credits arranged for US borrowers in recent years (Table VII.5). Conversely, US and Japanese banks provided about 20% of the syndicated credits to firms in Europe. While similar data for the asset-backed securities market are not available, foreign

These markets also allow the transfer of risk across borders

## Credit derivatives positions[1]

At end-September 2002, in billions of US dollars

| | Credit default swaps | Portfolio products | Credit-linked notes | Total return swaps | Other | Total[2] | *Memo: CDOs*[3] |
|---|---|---|---|---|---|---|---|
| | Gross positions[4] | | | | | | |
| Total | 614.0 | 390.6 | 17.4 | 48.6 | 113.7 | 1,184.4 | *117.4* |
| United States | 259.4 | 327.6 | 8.3 | 23.0 | 110.1 | 728.5 | *85.5* |
| Banks | 246.7 | 40.2 | 7.5 | 22.2 | 110.1 | 426.7 | *10.2* |
| Insurance companies | 4.9 | 103.1 | 0.8 | 0.9 | 0 | 109.7 | *18.9* |
| Financial guarantors | 7.8 | 184.3 | 0 | 0 | 0 | 192.1 | *56.4* |
| Europe | 354.7 | 62.9 | 9.1 | 25.6 | 3.6 | 455.9 | *31.9* |
| Banks | 351.3 | 54.0 | 9.0 | 25.6 | 3.6 | 443.4 | *31.5* |
| Insurance companies | 3.4 | 8.9 | 0.1 | 0 | 0 | 12.5 | *0.4* |
| | Net positions[4] | | | | | | |
| Total | –25.3 | 206.5 | –27.7 | 2.3 | 31.6 | 187.4 | ... |
| United States | –6.9 | 215.3 | –1.0 | 1.9 | 30.7 | 240.1 | ... |
| Banks | –18.3 | –42.9 | –1.8 | 1.0 | 30.7 | –31.2 | ... |
| Insurance companies | 4.2 | 99.2 | 0.8 | 0.9 | 0 | 105.0 | ... |
| Financial guarantors | 7.2 | 159.1 | 0 | 0 | 0 | 166.3 | ... |
| Europe | –18.5 | –8.8 | –26.7 | 0.4 | 0.9 | –52.7 | ... |
| Banks | –21.7 | –17.7 | –26.9 | 0.4 | 0.9 | –65.0 | ... |
| Insurance companies | 3.2 | 8.9 | 0.1 | 0 | 0 | 12.3 | ... |

[1] These data summarise survey responses from about 150 participants in the credit derivatives markets, with an emphasis on those selling credit protection. [2] The values for other regions are $13.9 billion (gross) and $8.7 billion (net). [3] Collateralised debt obligations; the total for other regions is $0.6 billion. [4] Gross positions are intended to capture aggregate gross sales of credit protection to counterparties. They provide a measure of the maximum loss in the event of the failure of all of the reference entities on such contracts. By contrast, net positions reflect aggregate net sales of credit protection, taking account of any offsetting positions on the same reference entity. The specific definitions of gross and net exposures differ across respondents depending in part on their internal reporting systems.

Source: Fitch Ratings. Table VII.4

## Global syndicated loans of non-financial borrowers

In percentages

| Borrowers' nationality[1] | Fund providers' nationality | | | | | *Memo: Ratio to bank loans*[3] |
|---|---|---|---|---|---|---|
| | United States | Euro area | United Kingdom | Japan | Other[2] | |
| United States | | | | | | |
| 1993–95 | 49.4 | 17.2 | 3.7 | 12.6 | 17.2 | *33.2* |
| 1996–99 | 51.0 | 17.6 | 2.5 | 7.5 | 21.4 | *52.0* |
| 2000–02 | 56.4 | 20.6 | 4.5 | 5.6 | 13.4 | *48.0* |
| Euro area | | | | | | |
| 1993–95 | 8.2 | 61.1 | 5.6 | 14.5 | 10.6 | … |
| 1996–99 | 8.5 | 68.5 | 5.6 | 4.0 | 13.4 | *5.0*[4] |
| 2000–02 | 13.7 | 63.6 | 10.2 | 4.6 | 7.9 | *7.0* |
| United Kingdom | | | | | | |
| 1993–95 | 11.6 | 27.2 | 29.2 | 13.9 | 18.2 | *13.7* |
| 1996–99 | 11.7 | 35.2 | 22.4 | 9.9 | 20.8 | *23.4* |
| 2000–02 | 15.0 | 35.2 | 32.0 | 7.2 | 10.7 | *28.6* |
| Japan | | | | | | |
| 1997–99 | 4.9 | 17.4 | 4.0 | 63.2 | 10.6 | *0.5* |
| 2000–02 | 4.1 | 8.0 | 1.7 | 84.4 | 1.8 | *2.8* |

[1] Residence of borrower. [2] Includes loans of unallocated origin. [3] Average new syndicated loan agreements during the period, including drawn and undrawn portions, as a percentage of average total outstanding bank loans to non-financial corporations. [4] 1997–99.

Sources: Dealogic Loanware; national data; BIS calculations. Table VII.5

holdings of US corporate bonds have increased substantially in recent years reaching some $1.3 trillion at the end of 2002, more than 20% of the total outstanding.

By contrast, the limited data available do not suggest that the use of credit derivatives has resulted in large net cross-border transfers of credit risk. At an aggregate level, the survey noted earlier does not show net sales of protection in some regions and net purchases in others. At the institutional level, a recent survey of large US banks indicated that a large majority of the respondents' credit default swaps – the most common form of credit derivative – were undertaken with US counterparties.

## Vulnerabilities

While financial institutions generally have weathered the recent cycle relatively well, there remain risks to their continued financial strength. The most important risks reflect the uncertainty surrounding the macroeconomic outlook. Clearly, unexpected weakness in the economy going forward could trim asset values further and put additional pressure on balance sheets. In addition to these cyclical risks, some institutions also face legal and reputational risks related to their actions in the boom period of the late 1990s, and the possible fragility of new markets for credit risk transfer may pose risks to participants.

*Cyclical risks*

Prolonged economic weakness is the primary risk

The fundamental factor underlying a number of potential risks to financial firms is the performance of the global economy. The consensus view of a gradual recovery towards potential would, over time, be expected to lead to improvements in the asset quality and, thus, in the earnings of financial firms. However, a more prolonged period of economic weakness, or even a renewed downturn, could put institutions under strain by eroding further the cushions that have so far underpinned their resilience.

Key role of asset prices

Asset price weakness would be likely to play a key role in any such scenario. At the time of writing, and despite their protracted slide, equity market valuations remain relatively rich, dependent on expectations for a strong earnings rebound in the near term (see Chapter VI). Moreover, historical experience indicates that equity prices tend to overshoot at the tail end of large corrections. Hence equity prices could decline further if economic recovery were delayed enough. Similarly, property prices showed signs of softening in recent months (see Chapter VI). Continuing economic weakness could well lead to marked declines, at least in those markets where growth was strongest in recent years. In addition, the commercial real estate sector's increased reliance on market finance could prove a double-edged sword. Investor demands for safety and liquidity could well intensify if financial market conditions were to deteriorate, depressing prices of commercial mortgage-backed securities, as happened in the autumn of 1998.

Insurance companies are most exposed

Given the structure of their portfolio holdings, insurance companies are most directly exposed to a further substantial decline in these asset prices, especially in a low interest rate environment. Severely weakened capital positions leave only limited room for manoeuvre, and a deterioration in market conditions could complicate additional efforts to raise new equity. Moreover, further distress sales of equities by insurers would reinforce the drop in stock prices.

In recent years, the value of occupational pension funds' asset portfolios fell sharply in the face of lower equity prices, corporate defaults and widening credit spreads. Pension funds were also hurt by low interest rates that increased the actuarial value of their liabilities. Faced with declining coverage of these liabilities, many employers, typically large industrial companies with mature labour forces, had to increase contributions to their plans at a time of already falling profits. Furthermore, given current accounting practices in many countries, higher pension costs are likely to continue weighing on the reported earnings of corporations with large defined benefit plans, delaying the impact of an economic recovery on their stock market valuations. In a number of cases, concerns about the impact of underfunded pension liabilities on companies' capital structures triggered ratings downgrades and led to increases in funding costs (see Chapter VI).

Pension plans could also come under pressure

A further reduction in asset prices would put additional pressure on the financial condition of defined benefit pension plans and their sponsoring companies. With market participants more aware of the possible effects of post-employment liabilities on corporate balance sheets, the sensitivity of

equity and bond prices to pension funding status might increase further. In addition, in many jurisdictions changes were recently put in place, or are likely to be introduced, in the rules and practices that govern the accounting treatment of such balance sheet items and their relationship to recorded company income. These changes will arguably complicate the management of declines in asset values because they typically restrict companies' current flexibility in amortising over a longer period the earnings impact of pension funding shortfalls.

Adverse effects on banks could take longer to emerge

A protracted period of economic weakness accompanied by lower asset prices would also put pressure on the financial condition of banks, although such effects might take longer to emerge. Despite some moves to restructure balance sheets of late, business debt burdens remain high in many countries, and continued sub-par growth could, by trimming firms' revenues and profits, push up banks' losses on business loans. In particular, banks continue to have substantial exposures to firms in weak sectors, including information technology, media, telecommunications and travel services. Lower property prices could also be damaging for banks because the share of their loans backed by property is very high in many countries and recently rose further in some cases (Graph VII.14). If income and employment growth remain weak, and softer home prices limit the flexibility afforded by home equity extraction, household loan quality could well deteriorate beyond the sub-prime sector, which has already showed considerable stress. Further economic weakness and property price declines would also put pressure on commercial real estate credits, undermining a source of strength for both banks and insurance companies in the recent downturn.

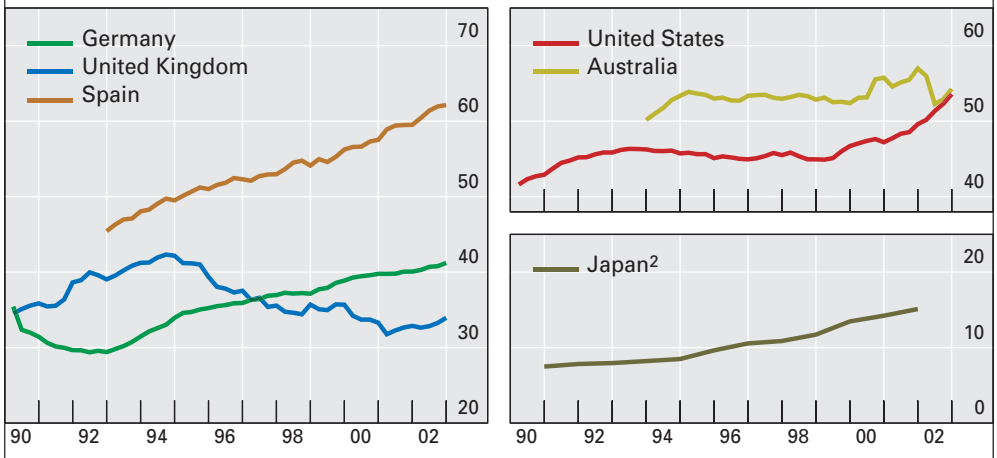
Some institutions may be exposed to an increase in interest rates

A sustained period of economic weakness could result in higher long-term interest rates, either by undermining government finances or by triggering a flight to liquidity in response to heightened uncertainty. Such a development would pose risks to financial institutions with substantial exposures to interest rate changes. While some market participants might seek such exposures in expectation of stable or declining rates, for others they might reflect the lack of attractive alternatives, as is the case for Japanese banks. Furthermore, some institutions might have difficulty hedging their complex interest rate positions, as could be the case for the mortgage-related government-sponsored enterprises in the United States, which face uncertain mortgage prepayment risks. Moreover, once a rise began, it could be amplified by reductions in market liquidity if the increase led some market participants to pull back from trading and market-making, as happened when rates rose in early 1994. Of course, a faster than expected economic recovery would also boost interest rates. In that case, however, higher incomes and asset prices would clearly help mitigate the risks to financial institutions.

*Other risks*

Even if asset values firm as the global economy continues its gradual recovery, some financial institutions could face other difficulties, reflecting, in part, a legacy of the late 1990s financial market boom. Two such sources of vulnerability are legal and reputational risks, stemming from institutions'

## Banks' real estate exposure[1]




[1] Ratio of banks' real estate related lending to total lending. Definitions vary across countries. [2] Fiscal years; excluding real estate loans to corporates.

Source: National data. Graph VII.14

actions during that period, and potential problems in the operation of the new markets for credit risk transfer. These risks are more difficult to assess and are arguably less widespread than those related to economic weakness and lower asset prices. Nevertheless, they could cause problems for large financial institutions and, depending on the circumstances, the ultimate effects could be broader.

Legal and reputational risks to the largest institutions

The scale of the legal and reputational risks that leading investment banks could face as a result of business practices engaged in during the late 1990s is hard to assess at this juncture. A number of large financial firms operating in the United States recently reached a settlement with federal and state authorities of issues related to investment research and the management of initial public offerings. This agreement imposed substantial but manageable costs on the industry. However, the settlement did not limit subsequent action by the authorities with respect to questionable interactions with Enron or other troubled firms, nor did it limit any litigation by private investors.

At the end of 2002, two large US banks set aside reserves to cover anticipated costs associated with any such investigations and litigation. Given the inherent uncertainty in such legal matters, the large number of possible participants in the legal actions, and the potential magnitude of the damages sought, it is not easy to evaluate the appropriate level of such reserves. Thus, the ultimate costs incurred could conceivably exceed the reserves that have been accumulated to date. As a result, in an extreme scenario, individual institutions may face credit rating downgrades and heightened liquidity pressures.

New markets for credit risk transfer raise concerns about opacity ...

The dependence of some financial firms on markets for credit risk transfer in the management of their credit risk raises a number of possible concerns. First, while these markets successfully handled several major corporate failures, future difficulties cannot be ruled out given that the markets are relatively new and have not been tested in times of significant stress. A particular issue is that the markets lack transparency about the

ultimate distribution of credit risks, so that some market participants may take on more risk than other participants or the financial authorities are aware of. Moreover, the central role of a handful of large financial institutions, and the resulting links among them, means that problems could spread across firms despite efforts by market participants to limit their exposures. Should such spillovers impair the liquidity and capacity of the market, other market participants might find it difficult to manage their credit risk. A possible result would be a reduction in the availability and an increase in the cost of credit.

… concentration risk …

A second risk to these markets reflects a more fundamental structural issue. Many of the financial institutions using credit derivatives to manage their credit exposures have lending or underwriting relationships with the firms whose risk they are trading. As a result, such institutions may at times have access to non-public information that could give them an unfair advantage over uninformed market participants. Trading on such inside information may violate the law and could discourage potential counterparties. Financial institutions have internal mechanisms to ensure in principle that traders do not have access to non-public information or that they cannot trade on the basis of it. These mechanisms, however, may limit, perhaps significantly, institutions' ability to use credit derivatives to manage their credit risk.

… and conflicts of interest

## Multiple financing channels and financial sector resilience

The current cycle represents a departure from typical past experience both in terms of the causes of the slowdown and of the performance of the financial sector. It also raises issues related to the complementary roles of balance sheet and market-based intermediation in dealing with financial strains. Thus, the recent experience suggests the importance of understanding the strengths and weaknesses of these two intermediation channels.

Balance sheet and market-based finance have complementary roles

The economic value of the financial system is measured by its success in channelling resources from savers to productive users and in allocating risk to those that are more willing and able to bear it. In this respect, a better system is one that performs these functions efficiently and is less susceptible to disruptions and bottlenecks.

The main benefit of on-balance sheet intermediation is that it is better suited to overcome informational and incentive obstacles through the use of monitoring and multifaceted, longer-horizon relationships. However, because intermediaries typically assume the resulting credit risk on their books, the scope for diversification is constrained by balance sheet size and by the fixed costs of engaging in information-intensive relationships.

Balance sheet finance can help solve information and incentive problems …

Market-based intermediation, by contrast, allows for better dispersion of risks across the system so long as the ultimate investors maintain well diversified portfolios. Such diversified investment is founded on the availability of public information, so that all investors can evaluate the risks and returns of various investments, and on low transactions costs, which allow portfolios to be easily adjusted in the light of new information about firms. As a result,

… but market-based finance can improve diversification

tradable securities and rules about the disclosure and handling of information are the key building blocks for an effective market-based system.

Useful redundancy in times of stress

The ability to switch smoothly between balance sheet and market-based channels of intermediation is a desirable characteristic of a financial system. Systems that offer such flexibility are likely to be more robust than those dependent on only one type of intermediation. In other words, the two channels can provide a form of diversification for the system as a whole because disruptions in one channel can be mitigated by increased reliance on the other. In addition, to the extent that financial conglomerates are engaged both in direct provision of credit and in underwriting and market-making, they may have a more resilient revenue stream than would more specialised firms.

Consolidation may reduce this redundancy ...

At the same time, the apparent economic benefits provided by having alternative channels of finance may be eroded by consolidation among large financial firms. From the perspective of an individual firm, access to a broader range of functions and products should provide opportunities for cross-marketing and diversification that could boost profitability and reduce risk. However, from the perspective of systemic stability, larger conglomerates may raise new risks. Since the same institutions are increasingly engaged in both types of financial activity, a common capital base underpins on-balance sheet intermediation, investment banking services and market-making functions (Table VII.6). As a result, losses in one activity could put pressure on the entire firm, affecting its activities in other areas.

... as the same capital base may be backing both channels ...

... and firms may come to have similar risk profiles

Such outcomes raise the possibility that a large enough shock could, through its effects on one or more large, complex financial institutions, disrupt the functioning of both channels of intermediation. The risk of spillovers may have increased because consolidation has been accompanied by a substantial concentration of transactions among the largest institutions. A related risk is that, as individual financial conglomerates become more diversified across business lines, the financial sector as a whole becomes less diversified since the largest institutions become more similar in their risk exposures. On one hand, the greater diversification of institutions may increase the resilience of the financial system in the face of small or medium-sized shocks. On the other hand, the lack of systemic diversity means that a single large shock could adversely affect all of the major financial firms in an economy simultaneously, potentially leading to macroeconomic problems. Arguably, globalisation may mitigate this risk to the extent that foreign institutions are able to substitute for troubled domestic ones.

Conflicts of interest ...

Another economic cost associated with large conglomerate institutions whose activities straddle the two channels of intermediation is the potential for the creation of conflicts of interest. The exploitation of synergies in the joint production of financial services can give rise to situations where the institution's actions could benefit some customers, or the institution itself, at the expense of others. Two examples of such conflicting incentives for conglomerate institutions are the underwriting and placement of securities for companies with which the commercial banking arm of the financial institution has ongoing credit relationships, and the provision of research on securities underwritten by the same institution. Recent experience confirms that in such

... may impair financial efficiency

## Concentration measures across financial product lines

In percentages

| Top five institutions in: | Institutions' share in: [1] | | | |
|---|---|---|---|---|
| | International bond underwriting | International equity underwriting | Arrangements of syndicated loan facilities | Total derivatives |
| Bond underwriting | | | | |
| 1991–93 | 36.5 | 42.2 | 7.4[2] | … |
| 1994–96 | 36.1 | 43.1 | 25.1 | 14.9 |
| 1997–99 | 40.9 | 43.7 | 23.6 | 19.2 |
| 2000–02 | 42.5 | 38.9 | 19.8 | 24.2 |
| Equity underwriting | | | | |
| 1991–93 | 29.8 | 60.4 | 7.7[2] | … |
| 1994–96 | 33.0 | 54.2 | 6.5 | 8.8 |
| 1997–99 | 38.5 | 53.0 | 7.1 | 12.7 |
| 2000–02 | 38.3 | 56.2 | 12.7 | 13.5 |
| Syndicated loan lead arrangement | | | | |
| 1993 | 20.3 | 20.5 | 50.0 | … |
| 1994–96 | 17.1 | 17.3 | 54.4 | 20.7 |
| 1997–99 | 13.9 | 8.6 | 49.9 | 26.6 |
| 2000–02 | 26.6 | 14.7 | 41.9 | 38.7 |
| Derivatives dealing | | | | |
| 1994–96 | 11.8 | 8.3 | 40.0 | 33.0 |
| 1997–99 | 20.4 | 14.3 | 35.5 | 38.7 |
| 2000–01 | 23.8 | 16.5 | 39.0 | 49.7 |

[1] Percentage share of the total volume of activity in a given category (columns) accounted for by the top five institutions in a given activity (rows). For example, in 1991–93, the top five bond underwriters accounted for 36.5% of the total volume of international bonds underwritten. The same institutions accounted for 42.2% of the total volume of international equities underwritten over the same period. [2] 1993 only.

Sources: Dealogic; Dealogic Loanware; Swaps Monitor; BIS calculations. Table VII.6

circumstances financial institutions may act in ways that reduce the capacity of the system to process and analyse information. The result may have been distortions in the pricing mechanism that compromised the efficiency of the allocational role of the financial system.

Complex institutions pose challenges to prudential authorities

Complex financial institutions that combine on-balance sheet intermediation with services facilitating market-based intermediation present a number of challenges to financial prudential authorities. First, from a microprudential perspective, their activities challenge the traditional risk management framework – and by extension also regulatory rules – structured around the notion of firms with specialised activities. A broader mix of activities in the same institution necessitates the adoption of a more flexible and more general risk management framework that takes a holistic view of the firm. The involvement of the insurance sector in the provision of credit risk protection through credit derivatives is a case in point. These instruments straddle the investment and underwriting activities of the firms, which are conventionally managed separately.

Second, from a macroprudential perspective, large and complex institutions exacerbate the risk that excessive concentration might pose to overall financial stability. As mentioned earlier, strains in one firm can more easily spread to its counterparties, and such institutions might well be exposed to similar risks, increasing the likelihood that a number of firms could face difficulties simultaneously. For this reason, supervisory and regulatory regimes need to be tailored to the specific nature of the risks faced by these large, complex institutions and to the potential macroeconomic costs that strains at such firms might imply.

Finally, the fact that large shocks might be more likely to have adverse effects on many institutions at the same time has implications for how policymakers respond to such shocks. If stresses are concentrated on a small group of market players, then narrowly tailored policy interventions focused on this group can be effective. However, if stresses are widespread, such an approach might not be feasible. Thus, policymakers may have to respond with more general and necessarily blunter tools, such as lower interest rates.

# VIII. Conclusion: towards more balanced global growth

The global economy faces a fundamental dilemma which is becoming more acute with time. How can imbalances in growth and external accounts across the major economic regions be resolved while maintaining robust global growth overall? Whether investment will pick up the baton in the United States, should consumer spending fade, is not the only important element of this question. The US economy is, after all, being supported by highly expansionary monetary and fiscal policies and the recent depreciation of the US dollar. Rather, a greater concern is whether domestic demand will expand elsewhere, notably in continental Europe and Japan, after a long period of weakness. In this context, a declining US dollar constitutes both a challenge and an opportunity for countries whose real exchange rate is tending to rise. Will currency appreciation simply slow their growth, and perhaps global growth in turn, or instead trigger the underlying structural reforms and more expansionary demand management policies that could significantly improve economic performance over time?

Prospects for growth in the near future will be much influenced by two underlying economic parameters: the propensity to save and the propensity to take risks. With respect to both, there have recently been sharp changes implying significant uncertainty about future developments.

What happens to the propensity to save in the United States is of particular importance since the country has been a disproportionately large source of global demand growth for almost a decade. The secular decline in the household financial saving rate in the United States has been remarkable and, through its effect on the current account, has materially supported global demand. Similar declines have been seen in a number of other countries, often along with a significant build-up of both internal and external debt. It seems likely that such major movements will eventually reverse, at least in part, limiting domestic spending in those countries and the export potential for other economies. In Asia, where saving rates have also declined but generally remained much higher, reliance has commonly been put on export-led strategies to sustain demand growth. Maintaining such strategies in the face of rising saving rates elsewhere would clearly inhibit global growth overall. Given such an environment, with inflation levels already low, it is not inconceivable that problems of more generalised deflation might also emerge.

It is, of course, possible, if less likely, that low-saving countries could carry on spending heartily and that the flow of capital from high-saving countries to low-saving countries will continue unimpeded, or even rise. Levels of external debt matter less than the ability to service that debt out of underlying productive capacity. Key elements supporting continued flows would be relatively high rates of productivity growth, and the ability to turn

greater levels of efficiency into higher rates of return on capital. In the last few years, the performance of the United States has been remarkable in the former respect, although not so outstanding in the latter.

A second consideration shaping near-term prospects will be investor attitudes towards risk. On the one hand, improprieties in corporate governance have caused financial reports to be viewed with deep suspicion. Downside possibilities are now seen much more clearly than during the recent long expansion. In the light of past losses of capital, the vulnerabilities of risk-seeking financial institutions are now better appreciated. These changing attitudes seem likely to reduce the willingness of both creditors and debtors to take on risk and could restrain the expansion. On the other hand, the recent buoyancy in equity markets and the substantial reduction in corporate spreads could indicate that an appetite for risk will re-emerge more generally.

What can be said with much greater certainty is that longer-term prospects for more balanced growth will depend, in part, on policy changes in those industrial economies with deep-seated structural problems. Both Germany and Japan have suffered for decades from serious inflexibilities, made worse in the aftermath of reunification and the bubble respectively. In both cases, underlying supply side problems were papered over with fiscal instruments and reliance on export-led growth. Both of these expediencies may now be approaching the limits of their usefulness.

A related issue affects a much broader range of countries. The opening-up of emerging market and transition economies, with the transfer of modern production methods, has already led to startling productivity increases and downward pressure on goods prices. This is proving discomforting to many established goods producers worldwide, albeit providing sales opportunities to many others. The implication is that the secular shift towards a service-based economy in the industrial world must now accelerate. Unless job opportunities are created in new sectors, or wages adjust sufficiently, this will lead to a lingering increase in unemployment. Nor is the adjustment problem limited to the industrial world. In East Asia, for example, countries must adapt to the growing importance of China, with a liberalising India perhaps not far behind. Moreover, they too have unresolved financial problems dating from the last decade which could make lenders hesitant to underwrite these necessary changes.

Broadly put, the need to be able to respond flexibly to prospective developments has never been greater – all the more so since the alternative might be a relapse into protectionism. Concerns in this regard have been heightened by the limited progress made to date in the Doha round of trade negotiations and by various transatlantic frictions. Deflationary pressures and the need for painful adjustment to post-bubble realities would further exacerbate such insular tendencies. We have, in fact, seen such a reaction before, in the early 1930s, and it was not a pretty sight.

Against this historical background, policymakers need to be reminded of two things. First, since we are all in the same economic boat, more cooperation is needed at the national level – between monetary, fiscal and prudential authorities – and at the international level as well. Second, quick

fixes almost always have longer-run costs as well as shorter-run benefits. Policy frameworks that blend the capacity to respond flexibly to short-run difficulties with sustainability over the medium term thus have a great deal to recommend them.

## Opportunities and vulnerabilities looking forward

The end of the war in Iraq should reduce some of the uncertainties holding back the economic expansion. Both consumer demand and private fixed investment might be expected to benefit, particularly in countries where such spending has been atypically weak. In addition, the desire to rebuild business inventories from very low levels, not least to improve the security of supply chains, could also contribute to demand growth. Nevertheless, future spending propensities must also be evaluated against the backdrop of the extraordinary optimism of the late 1980s in Japan and the late 1990s in the United States. Both left a residue of high debt levels, excess production capacity and deflated equity valuations.

The Japanese experience teaches us that such excesses can feed back on the health of the financial system and even culminate in deflation. However, the US upswing differed from that in Japan in at least three significant ways. One welcome difference is that there was no comparable run-up in the commercial property market in the United States. A second difference, equally welcome, is that, whereas the Japanese boom was financed almost entirely through the banking system, the sources of funding in the United States were much more diversified. A third difference may have less benign implications, though not necessarily to the disadvantage of the United States. While Japan financed its expansion domestically, indeed running a significant current account surplus as well, the US expansion was to a large degree financed from abroad. Many countries relied for growth on exports to the United States, for which they provided ample financing via the capital account.

Should the dollar fall further, for whatever reason, it is the creditors who would this time have to bear a double burden of adjustment. They would first have to generate more domestic spending to keep demand up and unemployment down. And, at the same time, they would have to recognise declines in the domestic value of their dollar-denominated financial assets, reflecting both lower market prices and the fall in the value of the dollar itself. In contrast, the recent decline in the dollar strengthens prospects for growth in the United States and lessens the probability of deflation there.

Beginning in the latter half of 2000, investment in the United States was cut back unusually sharply. However, partly because of aggressive monetary easing, US consumption remained resilient. The principal questions now are whether investment will continue to recover, and whether consumption might falter. The wide variance in current forecasts for the United States reflects a simple fact: neither of these crucial components of spending has recently been behaving as expected on the basis of postwar experience.

In some respects, the outlook for US investment appears to be brightening a little. In spite of weak growth overall, profits and cash flows have recovered

somewhat and interest coverage remains high. Yet it would seem rash to call for a strong revival in US corporate investment, especially with capacity utilisation levels at 20-year lows and debt levels still high. Caution about other possible claims on future profits, not least unfunded pension liabilities and higher costs for insurance and healthcare, could lead companies towards still more balance sheet cleansing. Indeed, this might be what the financial markets expect. While other interpretations are possible, the recent sharp decline in corporate credit spreads is consistent with a market belief that corporate managers will take the steps required to cut costs and reduce the probability of defaults in the future.

Increased corporate investment in ever more productive capital was an important component of the "new era" story in the United States. Not only did such spending stimulate demand directly, it also led to perceptions of increased wealth that boosted spending indirectly. Indeed, as a share of nominal GDP, household spending has been trending upwards for many years, recently quite strongly. In this important respect, and despite the decline in stock prices, the boom cannot yet be said to have ended. Lower mortgage rates, the continued rise in house prices, and financial innovations that have made it easier to withdraw equity as cash to spend, have all contributed to the strength of household spending.

The practical manifestation of this behaviour is that US households have also been prepared to push up debt to record levels. Debt service requirements have also risen in spite of very low interest rates. However, balance sheet exposures might yet become a greater source of concern were employment levels to come under further pressure, and were stock prices and pension fund values to decline still more. In any event, the sustaining effect on spending of mortgage refinancing must at some point diminish. House prices are rising less rapidly and, unless mortgage rates fall substantially further, much of the refinancing that could be done profitably has probably been done already.

Given the uncertainty surrounding economic prospects in the United States, it would be comforting if a quick rebound in demand elsewhere seemed likely. Unfortunately, identifying alternative poles of growth is not easy. Continental Europe was initially expected to benefit from having fewer financial imbalances than the United States. In fact, it has been Europe that has more consistently failed to meet growth forecasts and, in the light of recent negative surprises, forecasts have been revised sharply downwards. The outlook in Germany seems particularly problematic, with personal saving rates, along with unemployment, rising after a number of years of steady decline. Virtually everywhere in continental Europe, confidence has been weakening. This possibly reflects losses suffered by European investors, who financed a large part of the US expansion, as well as the surge in telecommunications investments in Europe itself. Nor have higher oil prices and political uncertainties, both at home and abroad, been helpful. Fortunately, looking forward, some of these problems seem to be receding, especially given the recent decline in oil prices.

In other parts of the world, the outlook is also quite mixed. After so many years of slow growth in Japan, due in large part to investment cutbacks, it

takes a leap of imagination to envisage any improvement. Nevertheless, it should also be noted that the degree of corporate debt reduction has been remarkable and that the operating profits of many larger firms have risen appreciably. The turning point must come sometime, even if predicting when is never easy. In China and India, the consensus now is that the recent norm of steady, quite rapid growth will be maintained. Elsewhere in Asia, regional demand is expected to make an increasing contribution to robust expansion. The SARS epidemic could, however, yet significantly hamper production in China and consumer confidence in other countries. The outlook for the major Latin American economies also seems better, as greater political stability and renewed confidence in financial markets have contributed to some recovery from the earlier downturn.

How individual regions fare over the next year or so will depend in part on currency movements, in particular against the dollar. In principle, creditor countries should be prepared to accept currency appreciation to allow debtor countries, like the United States, to adjust. In practice, given uncertain prospects for domestic growth, some creditor countries in Asia have already begun to resist this outcome using a variety of means, both conventional and unconventional. On the one hand, this might be thought desirable if it implies lower interest rates which would increase domestic demand. On the other hand, such resistance to appreciation in Asia implies that the burden of exchange rate adjustment is likely to fall disproportionately on those currencies that are truly floating, like the euro. Another factor that could potentially affect the relative value of the major currencies would be an erosion of the willingness of creditor countries to hold their reserves, as they currently do, overwhelmingly in dollars.

Currency movements do not only affect output; they also affect price levels. The direct effects of currency pass-through to prices seem to have declined in recent years, in both industrial and emerging market countries. This is probably the result of better policies of inflation containment, augmented by an increased consolidation of inflation expectations at low levels. However, indirect effects on domestic prices, reflecting changes in output due to trade substitution and asset valuation effects, still appear substantial. Appreciation might then seem particularly unwelcome in countries like Japan and China, where deflation is already a reality. But it might also complicate life in the growing number of countries where inflation is already so low that deflation cannot be ruled out. Well known sampling biases in the measured CPI in many countries, together with a tendency for the consensus to overestimate future inflation, also indicate that this possibility of deflation needs to be taken seriously.

It should be recognised that deflation is not necessarily a bad thing if it reflects positive supply shocks superimposed on an initially (and desirably) low inflation rate. But problems can surface when other conditions are in place. One of these would be strong resistance to nominal wage cuts. Thus, if price declines were greater than increases in productivity, unit labour costs would rise and employment would suffer. A second problem arises from the zero bound on nominal interest rates, implying a dangerous dynamic where

expected real rates might rise as deflation increases. Finally, inflation falling below the level anticipated when interest rate contracts were struck tends to raise the cost of debt servicing in real terms. The higher the level of indebtedness, of course, the greater the burden on the borrower. The difficulty at the present juncture is that many of the prior conditions needed for deflation to become a problem seem to be in place. In many countries, policy rates are already at low levels, debt levels have never been so high, and nominal wage cuts seem unlikely.

One welcome aspect of recent developments has been the relative resilience of the global financial system, particularly banks. Nevertheless, some strains have already begun to appear, and these would be likely to worsen were the anticipated expansion to falter. Presumably, equity prices would be affected to some degree since current prices, especially in the United States, can only be justified by expectations of an economic rebound and sharp increases in profits. These negative effects would be greater still if equity risk premia were to rise in this altered environment. Credit spreads might also be affected, since they normally rise as equity prices fall, and they have recently fallen quite significantly. Finally, property prices might also decline, or at least stop rising in the case of housing. In a number of countries, current house prices remain at record levels, whereas historical experience indicates that they should, with some delay, have followed equity prices downwards. All of these price effects would further impair corporate and household balance sheets, tending to restrain spending.

Even if such a combination of events might be thought unlikely, it would surely be prudent for policymakers to reflect on its possible effects on the health of the financial system. In a number of countries, the proportion of bank loans related to real estate has been rising steadily, indicating a growing exposure to price decreases. Further declines in the prices of financial assets would prove particularly uncomfortable for banks in Germany and Japan, since both are struggling to raise operating profits. For banks in emerging market countries, many of which have less experience of such events in a liberalised market environment, a further bout of economic weakness would also prove uncomfortable. In Asia, banks are predominantly domestically owned and, in many countries, the bad debt problems from the last crisis have still not been resolved. In Latin America and eastern Europe, while the banks are largely foreign-owned, this also means that retrenchment in the industrial countries could threaten credit availability elsewhere.

Further declines in the prices of financial assets might also cause difficulties for insurance companies and pension funds that have already been hard hit. Concerns about the ability of such institutions to honour long-standing contracts might be expected to affect consumer confidence and the propensity to save. Insurance and reinsurance companies have also taken on credit risk exposures, of as yet undetermined size, through credit risk transfer instruments. Were they, for prudential reasons, to take steps to reduce their involvement this could impair the functioning of the credit risk transfer market and, perhaps, the willingness of originators to provide financing in the first place.

The implications of further pension fund losses would be rather different. In the case of defined benefit schemes, losses first constitute a claim on the profits of the parent company. At the extreme, parent companies could be downgraded or even forced into bankruptcy if the losses were large enough. Since lower profits imply lower share prices, this feeds back onto other pension funds in a fashion similar to direct cross-shareholding. While these problems seem to affect only a limited number of long-established companies, they do include some of the world's most famous brand names.

Compared to the concerns associated with possible further economic weakness, other financial vulnerabilities looking forward seem less worrisome. One set of concerns, which has received attention in connection with the New Basel Capital Accord, relates to operational risk in the financial system. As systems, particularly for risk mitigation, grow ever more complex, legally challenging and technology-dependent, the likelihood that something will go wrong clearly rises. Moreover, at the tail end of a boom period, all sorts of fraudulent or at best dubious behaviour are typically revealed, inviting litigation and potentially costly settlements. A second set of concerns has to do with increased volatility in financial markets, and the possibility that some financial institutions might have insufficient means in place to protect themselves. A concrete example might be the possibility of sudden, sharp increases in long-term interest rates and the effects on institutions that essentially borrow short and lend long. Finally, a third set of concerns is connected with recent trends towards consolidation in certain financial markets. With large firms increasingly trading among themselves, perceived difficulties with one counterparty might very quickly involve others. Moreover, large players can move markets in ways that could affect the cost and availability of needed hedging. In this way, idiosyncratic shocks could conceivably turn systemic.

The stability of the financial system to date has commonly been ascribed to its having become a more market-oriented system. In the United States in particular, the share of total lending provided by banks has shrunk dramatically. Markets are more complete, in that they now offer borrowers a growing diversity of channels through which financing can be obtained. By the same token, they also seem more resilient. Losses are now more widely dispersed across the financial markets, most recently through the growing use of instruments for credit risk transfer. The fact that shocks are shared across interrelated markets might also make them easier to absorb. Information about value is now easier and cheaper for users to obtain and evaluate, which presumably reduces counterparty risk and helps keep markets functioning even under stress.

Yet it would be naive to suppose that this system does not have its own shortcomings. The fact that borrowers can go through a wide variety of channels to obtain credit could easily tempt them to overextend themselves. This would seem especially likely if credit originators dispense with due diligence, on the assumption that even bad loans can be passed on via market mechanisms to someone else. The resilience that is presumed to arise from a

shifting of risks, particularly out of the banking system, depends on the risks becoming more widely dispersed and ending up in the hands of those who can best bear them. There is, in fact, very little hard evidence to support either hypothesis. Interrelated markets may dampen shocks on the one hand, but they may, on the other, expose already troubled sectors to new difficulties sufficient to push them over the edge of insolvency. Finally, good information about value is costly for producers to generate. If efficient markets prevent information providers from making profits, the quality of the information collected could deteriorate, leading in turn to market mispricing and resource misallocations. Arguably, this is exactly what was observed in the last few years of the 1990s. In short, a reasonably satisfactory performance to date should not lull us into complacency about financial stability, nor monetary stability for that matter.

## Policies to achieve monetary and financial stability

In retrospect, the last decade reveals something of a paradox. Policies to achieve monetary stability, defined as a low level of inflation, appear to have been very successful in most industrial countries and in large parts of Asia. Even in Latin America, Africa and central and eastern Europe, measured inflation rates have moved sharply downwards. In addition, the volatility of output growth seems to have diminished in many regions, consistent with what those championing low inflation would have expected. At the same time, the incidence of financial disruptions and outright crises appears to have increased. A number of countries seem to have suffered from excessive optimism and credit expansion, asset price and spending bubbles, and balance sheet problems that subsequently rebounded on the financial system. Clearly, the achievement of price stability, with its unquestioned merits, has not been sufficient to ensure the avoidance of financial instability. The possibility of deflation, with all its potential downside risks, further supports this conclusion.

It is important to ascertain the cause of increasing financial instability in recent years. One explanation might be that it is simply a by-product of the deregulation and liberalisation of financial systems seen in many countries. Viewed pessimistically, such reformed systems would be judged to be allocatively more efficient at any moment in time, but more procyclical over time and more prone to crises. Viewed more optimistically, the recent high incidence of financial crises may not be inherent in a liberalised financial system, but rather a temporary by-product of the process of deregulation itself. The fact that the global economy has been in transition from a high-inflation to a low-inflation environment may also have contributed to raising the likelihood of crises. As inflation came down, expectations might have been generated of more stable growth and less variance in projected income streams. This would have lowered risk premia on investments. At the same time, as both nominal and real rates declined from higher levels, investors might have judged them inadequate and adopted more aggressive investment strategies. With time, experience and continuing low inflation,

these private sector tendencies to excess should diminish, while the public sector's capacity to moderate them should increase.

Regardless of whether problems of financial instability are assumed to be permanent, or only temporary, features of the landscape, how to lower the likelihood and costs of such disruptions remains an important policy question. One possibility that has been widely debated is that monetary policy might be used pre-emptively to moderate credit cycles. Tightening, with CPI inflation initially under control, would probably mean undershooting CPI objectives in the short term. However, such a policy could be rationalised as a means of reducing the risk of an even bigger undershoot later, once the financial imbalances had unwound. Interpreted in this way, such pre-emptive behaviour on the part of the monetary authorities could even be justified as the lesser evil within an inflation targeting framework. Unfortunately, other problems remain. An increase in interest rates sufficient to offset wildly exuberant expectations in some sectors of the economy could wreak havoc elsewhere. Convincing the public of the need for such a policy would also be difficult. In this context, having more reliable indicators of prospective future crises would be very useful both for formulating policy decisions and for justifying pre-emptive policy moves to the public.

Another option might be to put more reliance on the prudential framework. While it might be possible to minimise the excesses, a more important objective would be to keep the financial system functioning properly even after a credit or asset price bust. If much of the economic damage arises from bad credits feeding back on the financial system, such a prudential approach would have obvious attractions. Implementation of the New Basel Capital Accord, with its associated culture of improved risk management, would be an important step in the right direction. Looking further ahead, changes to provisioning or other procedures to foster the build-up of capital in good times would also seem to have merit. Again, however, there are inherent limitations to such an approach. Excesses at supervised financial institutions are easier to moderate than credit extended through financial markets, but it is this latter source of credit that is becoming increasingly important. Moreover, information on how credit risks have been shifted across the financial system is still in very short supply. In any event, financial regulators will need encouragement to focus less on consumer protection and more on system-wide risks and what they might do to mitigate them. The need for more formal interaction between central bankers and regulators in this area of shared interest would also need to be more explicitly recognised.

What is not subject to caveats is that the institutional underpinnings of the financial system require further strengthening. A number of recent reports have made suggestions that warrant serious consideration. The remaining risks in the cross-border settlement of securities transactions were the topic of an insightful G30 report. The recent agreement to work towards a compatible set of international accounting standards awaits implementation. National oversight boards for auditing firms, operating subject to internationally agreed principles, need to be established. And conflicts of interest in the

governance structure of firms in general, but financial firms in particular, should be identified and dealt with. If trust in the integrity of the capitalist system is crucial to its proper functioning, then it is important that wrongdoers are punished and are seen to have been punished. Given the flagrant excesses of recent years, it is by no means clear that enough has yet been done to re-establish trust in the system.

The preceding comments mostly have to do with preventive actions to moderate the build-up of economic and financial imbalances and thereby preserve monetary and financial stability. Yet, in the current circumstances, it would also seem appropriate to ask how public policy might best be used in the aftermath of such excesses, in effect shifting the focus from prevention to cure. In this spirit, and in the light of the Japanese experience in particular, it would also seem useful to discuss the policy options in the case of outright deflation. In such a situation, certain instruments may lose their potency while others may come into their own. The question of complementarities and packages of policy responses also comes to the fore.

Monetary authorities primarily focusing on the objective of price stability could face a dilemma in the aftermath of a boom. As they watch the previous imbalances unwind, or become increasingly concerned about the threat of this happening, they will see the need to ease monetary policy sharply to take out insurance against a possible undershoot of their price objectives. The behaviour of the Federal Reserve over the last two years seems to reflect such concerns. If financial instability is also an immediate issue, this tendency to easing will be further accentuated, as seems to have been the case in Japan. The same conclusion follows if the channels of transmission of an easier monetary policy are judged to have become compromised in some way. For example, during 2001 and much of 2002, substantially lower policy rates in the United States were met with higher corporate bond rates, weaker equity prices and further increases in the value of the US dollar. This gave added justification for the sharp easing of policy by the Federal Reserve.

The dilemma arises only if such easing threatens to further stimulate imbalances, whether in old markets or new ones. The problem of old imbalances confronted the Bank of England and a number of other central banks in the period under review. While many indicators seemed to call for ease, concerns about still further price increases in the housing market pointed in the opposite direction. The problem of new imbalances has, more arguably, surfaced in the United States, where monetary easing, first in the wake of the LTCM crisis and then following the collapse in stock prices, may have contributed to further price increases in the housing market. While the associated increase in spending has been clearly desirable, given the cyclical position of the US economy, it could also be the case that any eventual downturn will be more severe because of the debt build-up encouraged in the interim.

In the light of the recent Japanese experience, it also seems worth asking how demand might be stimulated by monetary policy in a situation where policy rates have run into the constraint of the zero lower bound. In this environment, unconventional means of expanding liquidity might be required.

The central bank might choose to broaden the range of assets it is prepared to purchase: first and foremost financial assets, but if necessary also real ones. This would, however, raise some delicate issues, not least concerning inter-agency cooperation and the independence of the central bank.

It would seem normal for the central bank first to contemplate large-scale purchases of longer-term government bonds. To the extent that long rates fell, this would have a welcome stimulative effect on the economy. However, should long rates ultimately reverse, the central bank might find itself bearing heavy losses and be obliged to seek recapitalisation from the government. Purchases of unconventional domestic assets would pose similar problems since they would imply an absorption by the central bank of private sector risk, and again the possibility of losses. Indeed, since the magnitude of purchases required to reverse expectations of future price movements could be very large, the potential losses might also be very large.

These perceived inter-agency problems should not act as a limitation on public policy. Ideally, the government would decide how much risk it was prepared to take on, and it would then be decided how that risk should be apportioned between the government and the central bank. Concerns that the central bank's independence would be politically constrained, and remain so even after better times returned, might be mitigated through the explicit introduction of some framework for inflation targeting. The purpose of the framework would not, however, be to fight deflation, but rather to ensure that inflation was kept under control once unconventional methods of injecting monetary reserves began to take effect.

A decision by the central bank or government to expand domestic liquidity by intervening in markets to purchase foreign exchange would pose another, intergovernmental, problem. Such a policy could be interpreted as a managed depreciation, as is sometimes suggested for the yen. Or it could be a means of resisting appreciation, as some currently suggest for the euro. In either case, the effects on other currencies might not be welcomed by other governments. Clearly, some sort of dialogue to avoid attempts at competitive devaluation, perhaps even leading to protectionism, would be desirable. In the case of the euro area, where policy rates are still well above zero, the response to an excessively disinflationary appreciation of the euro would presumably be lower interest rates rather than intervention.

Reference to the increased need for cooperation between the monetary and fiscal authorities, when the effectiveness of monetary policy is constrained, raises directly the question of fiscal policy. Fiscal easing would be useful, as long as the economy is not too open, but its advisability should depend on initial debt levels and levels of taxes rather than the size of the fiscal deficit. Thus viewed, the fiscal room for manoeuvre varies across Europe, with some large countries now facing the painful implications of having failed to tighten adequately during the good times. In Japan, the problems of mounting government debt are even more severe. In the United States and a number of Asian countries, the potential for expansionary measures seems greater, although the stimulative effects would be enhanced by nesting them in a credible medium-term framework for ensuring fiscal

sustainability over time. In this latter regard, the recent changes in US tax legislation have not been helpful.

How the government stimulates the economy also makes a difference. For example, wasteful expenditures – bridges to nowhere – would seem less likely to instil confidence and support spending than expenditures with a positive social rate of return. Finally, how an increase in the deficit is financed can also be crucial. The "helicopter drop" of money, sometimes recommended by academics, essentially comes down to some kind of fiscal stimulus financed by a central bank purchase of government liabilities. Again, inter-agency cooperation seems key to a successful outcome.

While the degree of cooperation has been less than optimal in Japan to date, it cannot be denied that there has been massive monetary and fiscal stimulus. The fact that it has not succeeded in generating self-sustaining growth points to a further complication influencing developments in any post-bubble period. This complication might be better characterised as a supply side problem, though it manifests itself as weak demand. In particular, given high levels of excess capacity and associated debts, the prospects for profits can remain poor for many years. In this environment, investment cannot recover. What is needed to deal with this is a speedy recognition of those firms whose debt would not be viable under normal circumstances. In some cases this might result in insolvency and a withdrawal of production capacity, in other cases simply an agreement by creditors to write down debt levels. Since economic recovery also requires a financial system willing to extend new credit, such a writing-off of corporate losses would, in the Japanese case, have necessitated recapitalisation of the financial system along with measures to ensure its future profitability. Looking at the adaptability of the US corporate sector, and at the resilience of the US financial sector, it is a source of significant solace that these Japanese problems do not appear to have been replicated in the United States.

Structural changes, whether on the economic or financial side, are always politically difficult to push through. This is unfortunate, because more flexible economies grow faster, have lower unemployment rates and adapt better to shocks. Were these benefits already being seen in continental Europe, there would be the added advantage of increased absorption in these countries. This would counter the likely future need for disabsorption in the United States, to resolve its looming problems of external deficits and inadequate household saving. If Asian countries took further steps to foster stronger domestic demand, this too would help. Indeed, the burden of adjustment of international imbalances should rightly fall more heavily on creditor countries as a group, once deflation comes to be more feared than a resurgence of inflation. Recent statements by governments in both Asia and Europe indicate clearly that they are very aware of the benefits of structural reform. They are, however, facing vigorous opposition from those without the vision to discern the common benefits, as well as those who see their own personal potential for loss all too clearly. What is required now is primarily the political courage to see the needed reforms through.

# Activities of the Bank

This chapter reviews the activities of the Bank and the international groups it hosts over the past year. These activities focus on the promotion of cooperation among central banks and other financial authorities, and the provision of financial services to central bank customers. The chapter also presents an overview of significant developments in the internal organisation and management of the Bank. The reports mentioned in this chapter, as well as most of the Bank's research output, are available on the BIS website (www.bis.org) or, on request, in hard copy. Details of the activities of the major standing committees hosted by the BIS can also be found on the Bank's website.

## 1. Promotion of international cooperation: direct contributions of the BIS

### *Regular consultations on monetary and financial matters*

The bimonthly meetings of Governors of BIS member central banks are at the heart of the Bank's contribution to international financial cooperation. During the period under review these meetings continued to provide Governors and senior central bank officials with an opportunity to exchange views on conjunctural developments and issues of topical interest or concern. The November 2002 bimonthly meeting was hosted by the Bank of Mexico in Mexico City.

Several meetings are organised on the occasion of the bimonthly gatherings, each with a different set of participants. The *Global Economy Meeting* brings together the central bank Governors of the main industrial and emerging market economies for a discussion of recent developments and prospects in key economies and financial markets. During the year under review, Governors sought to assess the strength of the global economy within the context of a particularly uncertain environment. The uncertainties to a large extent related to the impact of the protracted decline in equity prices, debt sustainability concerns in a number of major Latin American economies, deflation in several Asian economies, possible strains in a range of financial industries and, as the year progressed, geopolitical tensions centred around Iraq.

During the *meetings of the Governors of the G10 countries*, specific aspects of the cyclical situation were analysed in greater detail, often with a focus on potential policy reactions in the event of a sharp weakening of the global economy. G10 Governors were also briefed on discussions in the committees reporting to them and approved a number of committee documents for public release or consultation (see below). In March 2003,

Governors met jointly with the heads of the (non-central bank) supervisory agencies of the G10 countries to review the progress made in drafting the New Basel Capital Accord (see below) and to exchange views on its prospective implementation.

In-depth discussions of a particular topic of interest to central banks take place in a meeting to which all central bank Governors attending the bimonthly gatherings are invited. During the period under review, a broad range of monetary and financial stability themes were debated in these *All Governors' Meetings*, including the implications of demographic changes for the macroeconomy and the financial system; accounting issues in the financial industry; crises of confidence and debt sustainability; dealing with deflation; and central bank approaches to communication with the public.

The Bank continued to organise high-level meetings between central bank Governors and senior representatives of the financial industry. Three such meetings were held during the period under review, producing a fruitful exchange of views on the interaction between developments in the financial industry and the conjunctural situation, and on how to deal with existing or potential weaknesses in the current infrastructure of financial markets.

Outside the framework of the bimonthly gatherings, a series of meetings on issues of special central bank interest were organised throughout the year, in some cases with the participation of a broad range of public and private financial sector specialists.

These meetings included the traditional spring and autumn meetings of central bank economists. The *Spring Economists' Meeting* focused on major issues in the current conjunctural situation and outlook. The *Autumn Meeting of Research Economists* considered new challenges for central banks posed by a world of low and stable inflation, supply side transformations, liberalised financial markets and pronounced cycles in asset prices and credit.

In addition, several ad hoc meetings were organised at the Bank's headquarters as well as at its Asian Office (see below). In September 2002, both the economic and legal aspects of regional currency areas and the use of foreign currencies were discussed among a group of central banks that are either already working under such a regime or aim to establish one. Senior central bank and academic experts explored the link between monetary stability, financial stability and the business cycle in a conference held in March 2003. The BIS also co-organised with Università Bocconi, Milan, as part of the university's centenary celebrations, a conference on risk and stability in the financial system. The conference brought together researchers from central banks and academia and considered the role of markets, corporate managers and regulators in promoting the robustness of the financial system.

A significant number of meetings focused on topics of particular relevance to emerging market economies. As in previous years, working parties on regional monetary policy were held in Asia (Manila, the Philippines, in June 2002), Latin America (Cartagena, Colombia, in October 2002) and Europe (Warsaw, Poland, in February 2003). The annual *Deputy Governors' Meeting* in Basel considered the implications of fiscal policy for central banking in

emerging market economies. To celebrate the inauguration of the Bank's Representative Office for the Americas (see below), a roundtable on the choice of exchange rate regimes was organised for Governors from Latin American and other major emerging economies. Finally, in December 2002, Governors from Africa convened in Basel for a two-day discussion of a broad range of issues of relevance to their central banks.

## *Other areas of central bank cooperation promoted by the BIS*

### *Central bank governance*

The objective of the work on central bank governance undertaken by the BIS is to compile, analyse and disseminate information on institutional and organisational matters of interest to central banks. These activities are overseen by the Central Bank Governance Steering Group and are conducted through the Network on Central Bank Governance. The Steering Group comprises eight Governors from a broadly based and representative range of central banks. The Network currently spans about 40 major central banks and monetary authorities around the world.

The Steering Group provides guidance to the Bank on how best to respond to the needs of central banks for governance information, and discusses topical questions of interest to Governors. Following the advice of the Steering Group, the Bank has accorded priority to requests from central banks that are critical for the effective operation of independent and accountable monetary authorities. During the year, demand for governance information spanned a wide range of subjects. The collegial cooperation by the members of the Governance Network in supplying related information for the benefit of the central bank community once again proved a crucial asset for this work. It allowed the Bank to increase its knowledge base on central bank governance matters, which is now electronically available to central banks.

### *Cooperation on statistics*

The BIS continued to work closely with central banks and other international organisations in various statistical areas. Last year, seven new central banks of emerging market countries began to report economic, monetary and financial data on a regular basis, and an additional seven signed up to join the BIS Data Bank. Several initiatives are under way to broaden the topical coverage of the Data Bank, particularly in the area of financial stability.

Central banks from major financial centres continued to share with the BIS comprehensive statistics on the international lending and borrowing activities of banks in their jurisdictions, on a balance of payments basis as well as on a consolidated basis. In response to recommendations by the Committee on the Global Financial System (see below), the BIS and the reporting central banks last year developed new guidelines for improved reporting of banks' consolidated country risk exposures on an ultimate risk basis. This will result in more detailed and comprehensive data on specific types of country risk exposure, including off-balance sheet positions relating to banks' derivatives transactions.

In response to recommendations made by the Markets Committee (see below), an agreement was reached on the methodology to be used for the next Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity, scheduled for 2004. Central banks and the BIS have also been exploring how to enhance or complement reporting arrangements under the existing BIS surveys of derivatives to take account of credit risk transfers.

During the past year, the BIS prepared and published a new version of its *Guide to the international financial statistics*, which covers not only the BIS statistics on international banking and foreign exchange, but also those on securities and derivatives. The new Guide includes an assessment of the quality of the BIS statistics as well as an indication of how the data can be used for analysing capital flows and financial market developments globally. For instance, the BIS banking and securities statistics are an important input to the joint BIS-IMF-OECD-World Bank statistics on external debt, compiled on the basis of creditor data collected by these international organisations. To address the concern that these data sometimes differ noticeably from external debt data reported by the debtor countries themselves, the BIS undertook a study to identify the major gaps between the creditor and debtor data and organised a workshop with emerging market central banks to discuss the issue. A report covering the results of the workshop and the study was published in December 2002.

In August 2002, the BIS hosted the first independent conference of the Irving Fisher Committee on Central-Bank Statistics (IFC), a forum for discussion on statistical issues that are of interest to its more than 60 central bank members. The conference reviewed the challenges to central bank statistical activities with respect to both monetary and financial stability. Attention was also paid to cooperation with national statistical offices and improving the use and usefulness of central bank statistics (see www.ifcommittee.org).

Finally, steps have been taken to strengthen international cooperation on electronic standards for statistical information exchange, in response to an ongoing request from Data Bank participants. Various projects were launched under the auspices of the Statistical Data and Metadata Exchange (SDMX) initiative, in which the BIS works together with the ECB, Eurostat, IMF, OECD and UN. An updated Generic Statistical Message for batch exchange of Time Series – GESMES/TS – has been agreed and will be implemented by all sponsoring organisations. This will result in significant cost savings in central banks, as they will no longer have to submit and receive statistical data in a variety of formats. A demonstration is also being prepared of how new web-based technologies can improve the collection, compilation and web-based dissemination of statistical information. The joint BIS-IMF-OECD-World Bank statistics on external debt are used as a practical case study. A number of central banks contribute to the various projects, which are documented on the SDMX website (www.sdmx.org).

*Cooperation with central bank groupings*

As well as through the BIS's own activities, central bank cooperation takes place in various parts of the world through existing regional central

bank associations. The regional groups provide an effective platform for disseminating information on BIS activities, as well as for establishing relations with central banks that do not otherwise participate in these activities directly. This cooperation, where possible through the Bank's regional offices, takes the form of participation in meetings arranged by these groups and the organisation of ad hoc joint meetings or workshops.

As mentioned below, the BIS Asian Office worked closely on a number of occasions with EMEAP (Executives' Meeting of East Asia-Pacific Central Banks and Monetary Authorities). Various BIS business areas organised joint events with SEACEN (South East Asian Central Banks), which was invited to the meeting of the BIS Data Bank Experts. In addition the BIS provided support to SEANZA (Central Banks of South East Asia, New Zealand and Australia) and has been liaising with the Secretariat of SAARC (South Asian Association for Regional Cooperation) and the central banks of the GCC (Gulf Cooperation Council).

The BIS continued to assist the central banks of the major industrialised countries in coordinating their technical assistance and training for central banks of countries in southeast Europe and the Commonwealth of Independent States (as well as some Asian countries in transition). This takes place through regular consultation meetings, in which the IMF and the ECB also participate, and the maintenance of a database on technical assistance and training to which donor and recipient central banks contribute. The BIS also continued to support the Joint Vienna Institute (JVI), in close cooperation with the Financial Stability Institute (FSI) and the Basel-based groups (see below), by offering a number of seminars for central banks from transition economies on topics relating to monetary and financial stability. Though the BIS will formally cease to participate in the JVI in 2004, the Bank will continue to provide support.

Last year the Governors of the central banks of MEFMI (Macroeconomic and Financial Management Institute of Eastern and Southern Africa) held their annual meeting at the BIS, and a number of BIS experts were made available for MEFMI training events. A joint meeting was also organised with the central banks of SADC (Southern African Development Community). Moreover, in cooperation with the Bank of France, the BIS for the first time helped in capacity building at CESAG (Centre Africain d'Etudes Supérieures en Gestion), within a programme sponsored, amongst others, by the BCEAO (Central Bank of West African States) and BEAC (Bank of the States of Central Africa). Finally, the establishment of the BIS's Americas Office has facilitated active cooperation with CEMLA (Centro de Estudios Monetarios Latinoamericanos). A number of BIS experts have made presentations at CEMLA events, and the BIS Data Bank Experts have supported the CEMLA initiative to establish a regional database on economic and monetary statistics.

*Group of Computer Experts*

The major goals of the participants in the Group of Computer Experts and its Working Party on Security Issues are to share technical and organisational

experiences, to develop and maintain contacts with other central bank IT managers, and to keep abreast of IT developments at central banks.

In the light of the events of 11 September 2001, business continuity planning and provision of alternative IT infrastructure received significant attention from both the main Group and its Working Party during the past year. In this connection, IT security was another important theme. Meetings also focused on how central banks can take advantage in a secure manner of the benefits of the internet, with a number of presentations describing initiatives at central banks to provide secure, high-capability internet infrastructure and applications. Finally, control of the costs of IT has remained a central concern of the Computer Experts. During the past year, participants reported regularly on cost control initiatives and their results.

*Internal Audit*

Over the past few years, central bank auditors have met regularly to share experiences in their area of expertise, and to explore new and challenging issues. In this context, the Bank of England hosted the 16th Annual Conference of Heads of Internal Audit in May 2002. The main topics for discussion included operational risk, internal auditing standards, the auditing of outsourced activities and corporate governance. In addition, delegates reviewed key business risks faced by their banks, control issues and auditing innovations that had arisen during the previous year. A conference subgroup on IT issues prepared papers on information architecture, internet security, remote access and laptops.

## *Representative Office for Asia and the Pacific*

Benefiting from four years of experience since its opening in 1998, the Representative Office for Asia and the Pacific (the Asian Office) stepped up its efforts to foster central bank cooperation in the region. As part of these efforts, the Office serves as the secretariat for the Asian Consultative Council (ACC), which provides a vehicle for communication between central banks in the region and the Board and Management of the BIS. The ACC has met twice a year since 2001. In addition, the Regional Treasury dealing room, which was opened in late 2000, has enhanced the level and scope of the Office's banking services to the region, not only through daily trading activities but also through assistance provided during visits to reserve managers of central banks.

During the period under review, the Asian Office hosted and supported a series of high-level meetings in Hong Kong SAR and elsewhere in Asia, sometimes jointly with regional central banks and related institutions. The fifth Special Meeting of Asian central bank Governors took place in Sydney in February 2003; participants reviewed the current economic situation and discussed capital flows in East Asia. In September 2002, the Asian Office jointly hosted a seminar on capital account liberalisation with the Chinese State Administration of Foreign Exchange (SAFE) in Beijing, assembling central bankers and economists from four continents. In the same month, a

second meeting on monetary policy operating procedures brought together central bank practitioners from within and outside the region to discuss common challenges in this area and potential responses to them. In December 2002, the Office hosted the EMEAP Forum of regional and global officials responsible for the implementation of foreign exchange policy. Finally, in February 2003, a meeting on the experience of deflation in East Asia brought together monetary strategists from central banks within and outside the region. The Office also provided secretariat support to various meetings pertaining to financial stability.

The Asian Office continued to contribute to the Bank's financial and economic research on Asia and the Pacific, and to provide expertise to various meetings organised by regional central banking groups and individual central banks. Topics analysed included the integration of regional bond and banking markets; the investment of dollar foreign exchange reserves; living with flexible exchange rates; the monetary transmission mechanism; foreign currency deposits in domestic banks; and Chinese asset management companies. In the area of banking supervision, the Office has cooperated with regional central banks and bank supervisors in promoting the New Basel Capital Accord through various channels, such as by coordinating and analysing regional participation in the third quantitative impact study.

### *Representative Office for the Americas*

In June 2002, the Host Country Agreement between the BIS and the government of the United Mexican States entered into force. This allowed the Bank to open a Representative Office for the Americas (the Americas Office) in Mexico City. The Americas Office was formally inaugurated in November 2002, in the presence of Governors and representatives of around 50 central banks. The Office will coordinate the activities of the BIS in the Americas, aiming to strengthen further the relations between, and to promote cooperation among, the Bank and the central banks and monetary authorities in the region. In addition, the Office will support BIS banking services provided to institutions based in the region, improve the exchange of information and facilitate the organisation of meetings and seminars.

In pursuing these goals, the Americas Office is cooperating with regional central banking and supervisory organisations, in particular CEMLA. It has contributed to the Bank's financial and economic research on Latin America and the Caribbean, and has provided expertise in support of various events organised by regional central banking groups, individual central banks and the FSI.

### *Financial Stability Institute*

The FSI assists financial sector supervisors globally in implementing sound supervisory standards. Its work is concentrated on banking and insurance sector issues. High-quality, up-to-date information is required for financial sector supervisors to keep pace with innovations in financial markets, the

progressive shift to risk-focused supervision systems, and increasingly complex capital requirements. The FSI meets this demand through an intensive programme of disseminating standards and best practices and providing assistance on a wide range of supervisory matters. In particular, the FSI designs and delivers focused and special seminars, as well as regional workshops, for financial sector supervisors around the world. These events also serve the purpose of fostering cross-border supervisory contacts and cooperation.

Over the past year, the FSI organised a total of 49 events, comprising 27 seminars and 22 regional workshops held jointly with regional groups of supervisors. These seminars and workshops covered a variety of topics chosen after consultation with supervisors from a wide range of countries. Topics included the management of credit, market, operational and other risks; risk-focused supervision; corporate governance; consolidated supervision; problem bank resolution; accounting and audit issues; and steps to counter money laundering. The FSI continued to place special emphasis on providing banking supervisors with a better understanding of the proposed changes to the Basel Capital Accord. This effort will continue through the implementation phase for the New Accord. Over 1,600 representatives of central banks and banking and insurance supervisory agencies from all regions of the world participated in FSI events in the past year.

Cooperation with other institutions providing programmes of assistance to supervisors is an important part of the FSI's work. Therefore, it continued to collaborate with such organisations as the World Bank, the IMF, the Toronto International Leadership Centre and regional development banks. The FSI also supported the commitment of the BIS to the JVI. In addition to presentations made at FSI events, FSI staff also spoke on a broad range of topics at various non-FSI conferences and meetings.

In order to provide senior supervisors with information on supervisory developments and key issues affecting financial sector supervision, the FSI publishes a quarterly newsletter, *FSI World*. In 2002 the FSI also presented its first biennial award for research conducted on issues related to banking supervision.

An important new project initiated during the past year has been the FSI's e-learning programme for financial sector supervisors (e-LP). This programme will offer courses over the internet on a wide range of topics of interest to financial sector supervisors. The e-LP will be a valuable tool for all levels of expertise: for the senior-level supervisor, who needs to keep abreast of supervisory issues that are constantly changing; for the technical expert, who needs to be up to date on the state of the art; and for the more junior supervisor, who will have the opportunity to become familiar with the essential elements of sound supervisory practices. The initial courses are expected to be available in the first half of 2004 and will cover various risk management topics, as well as the proposed New Basel Capital Accord. The e-LP is viewed as a strong complement to the FSI's existing activities and will enable the Institute to reach out to a wider audience of financial sector supervisors globally.

## 2. Promotion of financial stability through the permanent committees

A number of committees have their secretariats at the BIS. These standing committees trace their origin back to requests made by the Governors of the G10 central banks over the course of the past 40 years for study of the basic aspects of the functioning of international financial markets and financial institutions. The committees are chaired by senior officials of member central banks and are composed of central bank experts and, in the case of the Basel Committee on Banking Supervision, members from non-central bank supervisory authorities. Although members are mainly (though not exclusively) from G10 countries, special initiatives are increasingly being undertaken to share experiences with, and invite the views of, those not directly involved in the work of the committees.

### *Basel Committee on Banking Supervision*

Over the past year, the Basel Committee on Banking Supervision has continued its efforts to strengthen the international financial system by promoting prudential supervisory standards and good banking practices for risk management. The development of a new framework for assessing bank capital adequacy has been the Committee's most important and highest-profile initiative during this period. However, the Committee has also been active in the work of the international community to address weaknesses in market foundations, has issued guidance to address key banking risks, and has extended its support for combating the financing of terrorism.

The work of the Basel Committee to develop a new capital adequacy framework for the global banking system made substantial progress during the period under review and is now close to completion. On 29 April 2003, the Committee released its third and final consultative paper on the New Basel Capital Accord for a three-month comment period. It expects to publish the Accord in final form by the end of the year. The New Accord is intended to increase the risk sensitivity of bank capital requirements by aligning them more closely with modern risk management practices. Not only will more risk-sensitive capital requirements lead to more meaningful and informative measures of capital adequacy, but they will also provide benefits through stronger and more accurate incentive structures. These quantitative measures are supported by specific standards designed to strengthen supervisory review and disclosure.

The third consultative paper is a fully specified proposal for the New Accord. It represents the results of a comprehensive and sustained period of consultation with the industry as well as with supervisors not represented on the Committee. A major input into the development and refinement of the new capital framework has come from various "field tests" of the proposed changes to the current Accord. The biggest and most wide-ranging field test (known as the third quantitative impact study) was carried out in the fourth quarter of 2002. Over 300 banks from some 40 countries worldwide took part in the exercise. The field test was undertaken with the goals of ensuring the

quality of the Committee's proposals and gathering information helpful to making further modifications prior to the release of the formal consultation paper. A report assessing the results of this field test was released by the Committee in early May 2003.

With the New Accord nearing finalisation, the Accord Implementation Group (AIG), a subgroup of the Basel Committee, has been leading work in the area of implementation. In particular, the AIG has been looking at how to promote greater convergence across jurisdictions in supervisors' approaches to implementation of the New Accord, through information sharing among Committee members about bank and supervisory practices related to the adoption of the new framework. Also, the AIG has been meeting with the Core Principles Liaison Group (consisting of representatives from 15 non-G10 countries, the IMF and the World Bank) to discuss implementation issues, and will continue to do so throughout the implementation process.

Across its range of work, the Basel Committee strives to strengthen prudential supervisory standards throughout the world's banking systems, in both G10 and non-G10 countries. Although the Committee is not an accounting or audit standard setter, at a time when high-profile corporate accounting irregularities have called into question the veracity of accounting practices and the reliability of audits, it has been a priority for the Committee to support the efforts to develop high-quality international standards in these areas. This has been done through active participation in the advisory bodies of the International Accounting Standards Board (IASB) and the International Auditing and Assurance Standards Board (IAASB), and by closely following the work in both these forums. In this regard, the Committee has commented on important proposals for new international accounting and auditing standards, and has developed guidance for banks and supervisors on policy issues in these and related areas.

As part of its efforts to promote better supervisory standards during the past year, the Basel Committee has continued to provide guidance on the treatment of key banking risks. It has finalised guidance on the management of operational risk and of cross-border electronic banking activities, both of which are significant and growing risks facing the banking sector. The Committee has also undertaken several projects designed to help strengthen the integrity of the global banking system, and has followed up its work on customer due diligence with recommendations for effective customer identification. Customer identification is not only an essential element of a programme of effective customer due diligence, which banks need to put in place to guard against reputational, operational, legal and concentration risks. It is also necessary for compliance with legal requirements to counter money laundering, and as a prerequisite for the identification of bank accounts related to terrorism. Meanwhile, guidance has been issued concerning certain banking structures that can pose significant obstacles to effective banking supervision and which, in some cases, have also been linked to suspicious or illegal banking activity.

One of the strengths of the Basel Committee is that it acts as a forum for central banks and supervisory authorities to discuss and share information on

a range of important issues, and promotes working relationships between supervisors at both the senior and staff levels. The Committee is a keen supporter of research on banking and finance, and regularly sponsors events for researchers in central banks and supervisory agencies to exchange views on their latest work. Other events have been aimed at fostering links between researchers in central banks and supervisory agencies and those in the wider academic community. One highly valued forum for promoting discussion and information sharing among senior supervisors on a global basis is the biennial International Conference of Banking Supervisors (ICBS). In September 2002, the 12th ICBS was held in Cape Town, South Africa. The conference, which was attended by over 250 senior banking supervisors from more than 120 countries, was jointly sponsored by the Committee and the South African Reserve Bank. The discussions focused on recent developments concerning the New Basel Capital Accord and on how to foster a stable financial environment in emerging market countries.

In April 2003, William J McDonough stepped down as Chairman of the Basel Committee on Banking Supervision in anticipation of his retirement as President of the Federal Reserve Bank of New York. Jaime Caruana, Governor of the Bank of Spain, was nominated as his successor. Nicholas Le Pan, Canada's Superintendent of Financial Institutions, was appointed Deputy Chairman.

### *Committee on the Global Financial System*

The CGFS pursued its regular monitoring of financial markets in industrialised and emerging economies with the objective of identifying potential risks for financial stability. One issue of recurring interest was how innovative financing techniques, institutional arrangements in the financial industry and macroeconomic policies affect the behaviour and resilience of the financial sector. Another area of focus was adjustment by corporations, households and financial institutions to the changing financial conditions, and the repercussions these adjustments could have on economic activity. In November 2002, the Committee formed a working group on foreign direct investment in the financial sectors of emerging market economies.

During the period under review, the CGFS published two working group reports that reflect its continuing efforts to improve the understanding of the functioning of financial markets. In January 2003, the report entitled *Credit risk transfer* was published. Against the background of a considerable widening of the range of credit risk transfer instruments, the report describes the characteristics of the markets for these instruments, as well as recent developments in these markets. It also examines possible implications of this evolution for the overall functioning of the financial system and discusses some of the concerns that have been expressed about the impact of credit risk transfer on financial stability.

In March 2003, the report entitled *Incentive structures in institutional asset management and their implications for financial markets* was released. The report analyses the agency structures and corresponding incentive

schemes in an industry that has grown rapidly since the mid-1990s, and also enquires into ways in which these incentive mechanisms might affect market efficiency and volatility, liquidity and risk management.

The Committee's analyses and assessments have contributed to an informed discussion among G10 Governors and, through the representation of the CGFS in the Financial Stability Forum (FSF), the broader official community. In January 2003, the G10 Governors appointed Roger W Ferguson Jr, Vice Chairman of the Board of Governors of the Federal Reserve System, as the new Chairman of the CGFS. He succeeded Yutaka Yamaguchi, then Deputy Governor of the Bank of Japan.

### *Committee on Payment and Settlement Systems*

The Committee on Payment and Settlement Systems (CPSS) continued to promote sound and efficient payment and settlement systems with the aim of strengthening the infrastructure of financial markets. The Committee enhanced its cooperation with other international institutions and groupings, and associated an increasingly wide group of non-G10 central banks with its work.

In November 2002, the CPSS and the Technical Committee of the International Organization of Securities Commissions (IOSCO) published the *Assessment methodology for "Recommendations for Securities Settlement Systems"* (these recommendations were issued in November 2001). The methodology is primarily intended for use in self-assessments by national authorities, or in peer reviews of such self-assessments. It is also meant to provide guidance for the IMF and the World Bank when undertaking their Financial Sector Assessment Program (FSAP) reviews and for other forms of technical assistance. To that end, the IMF and the World Bank took part in developing the assessment methodology. Moreover, the CPSS hopes that the methodology will also prove useful to private market participants conducting their own assessments of the safety and efficiency of securities settlement systems.

Carrying forward its analysis of issues related to retail payments, the Committee published, in March 2003, a report on *Policy issues for central banks in retail payments*. The report focuses on the present involvement of central banks in retail payments and reveals both common policy themes and significant institutional differences across countries. The common themes are expressed in the form of high-level public policy goals, which could also be of relevance for public authorities other than central banks with an interest in the safety and efficiency of retail payments. The report concludes with a number of recommendations regarding minimum actions appropriate for all central banks to further these goals, as well as policy options for some central banks to respond to special circumstances. The Committee has also been studying issues regarding the use of central bank money in payment systems. An analytical report on this subject is likely to be published in the near future.

A key aspect of the Committee's work remains the implementation of its strategy, endorsed by the G10 Governors in 1996, to mitigate foreign exchange

settlement risk. To this end, it continued to monitor and encourage market initiatives in this area.

In order to extend its outreach beyond the G10 countries, the CPSS pursued its efforts in the past financial year to strengthen cooperation with non-G10 central banks, particularly those of emerging market economies. The Committee also provided support and expertise to workshops and seminars on payment system issues organised by the BIS in cooperation with regional central banking organisations.

### *Markets Committee*

The bimonthly meetings of the Markets Committee (bringing together senior G10 central bank officials responsible for market operations) focused on shorter-term developments in foreign exchange and related financial markets. On several occasions, the Committee invited representatives from major non-G10 central banks to join the discussion. Topics on the Committee's agenda included the forces behind changes in the external value of the US dollar; volatility in key foreign exchange markets; the impact of economic and political developments in Brazil and commodity price movements on Latin American currencies; and financial risks in the run-up to the war in Iraq. Members were also briefed on specific issues, such as the practice of undisclosed principal trading (when a bank transacts, via a fund manager acting as agent, with a principal whose identity is not disclosed) and recent developments regarding the Continuous Linked Settlement (CLS) Bank. In addition, the Committee initiated a review of the current reporting basis and methodology for the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity. The proposals of a group of experts were approved by the Committee in January 2003 and now form the basis of preparations for the upcoming survey exercise.

### *Central Bank Counterfeit Deterrence Group*

The Central Bank Counterfeit Deterrence Group (CBCDG) is mandated by the Governors of the G10 central banks to examine the threat to paper currency caused by the increasing use of personal computers and other devices in counterfeiting banknotes. The BIS continued to support the work of the CBCDG by hosting its Secretariat and by acting as its agent in contractual arrangements.

## 3. BIS contributions to broader international financial cooperation

A number of independent organisations have established their secretariat at the BIS. The Bank provides various secretariat services and logistical support to these groupings and is involved in the discussions taking place within some of them. The agendas, and the approval and public release of documents, are the responsibility of the specific body or organisation to which each of these groupings report.

## *Group of Ten*

The Bank continued to contribute actively to the work of the G10 Finance Ministers and central bank Governors, their Deputies, and the working and contact groups set up under their auspices, both through its participation as an observer institution and through the provision of secretariat support alongside the IMF and the OECD. The G10 reviewed progress in the areas of collective action clauses, codes of good conduct for debt workouts and the sovereign debt restructuring mechanism; examined questions of debt sustainability; and agreed to renew the General Arrangements to Borrow (GAB).

During the period under review, three major documents were released. A report by the G10 Working Group on Contractual Clauses sets out the key features of collective action clauses for sovereign bonds that, if widely adopted, the G10 Ministers and Governors believe would make the resolution of debt crises more orderly. A contact group report entitled *Turbulence in asset markets: the role of micro policies* concluded that appropriately designed taxes, regulations and disclosure policies can help dampen undesirable fluctuations in asset prices. Finally, the report *Insolvency arrangements and contract enforceability* by another contact group demonstrates the importance of having effective means to achieve rapid, efficient and equitable resolution of troubled and insolvent companies that have extensive financial operations.

## *Financial Stability Forum*

The FSF was established in early 1999 to promote international financial stability through enhanced information exchange and cooperation in financial supervision and surveillance. The Forum brings together on a regular basis the national authorities responsible for financial stability – treasuries, central banks and financial supervisors – in key financial centres, as well as senior representatives of the international financial institutions, international supervisory or regulatory standard-setting bodies and central bank expert groupings. The BIS hosts the Forum's Secretariat, which is composed of staff seconded from FSF member countries and institutions. In May 2003, the G7 Ministers of Finance appointed Roger W Ferguson Jr, Vice Chairman of the Board of Governors of the Federal Reserve System, as Chairman of the FSF in succession to the Forum's first Chairman, Andrew Crockett. More information on the FSF is available on its website (www.fsforum.org).

Since April 2002, the Forum has met twice, in Toronto and Berlin, and held various teleconferences with its membership. The principal subjects discussed on these occasions were conjunctural and other vulnerabilities in the international financial system and the actions needed to address the weaknesses revealed by recent corporate reporting irregularities. The Forum also held regional meetings to promote wider discussion of financial vulnerabilities and to enable regional representatives to air views on the FSF's work. Three such regional meetings were held last year – for central and eastern European countries, for Latin American countries, and for the Asia-Pacific region. In addition, the Forum's Chairman held regular exchanges

of views with private sector participants and academics on financial stability issues through the FSF Chairman's Advisory Council.

A central theme of all the FSF meetings in the period under review was the reforms needed nationally and internationally to restore confidence in the financial reporting framework following the spate of corporate reporting and accounting irregularities. The FSF closely monitored the many initiatives being undertaken in this area by market participants, national authorities and international standard setters, and focused attention on gaps and significant divergences in reform efforts. The international dimension of the problems and their remedies has been a preoccupation of the Forum, which has sought to promote international and cross-sectoral coherence whenever this offers opportunities to increase the efficiency, integrity and stability of financial markets. In this context, the FSF arranged in October 2002 a roundtable discussion on the policy implications of recent corporate failures, involving corporate board members, institutional investors, senior bankers, audit firms, rating agencies, governance experts, policy authorities and standard setters. The roundtable recognised that many factors had contributed to the erosion of internal and external discipline that had led to recent corporate governance and reporting failures. Nevertheless, the single most critical element in re-establishing trust in the financial reporting framework was seen to be the restoration of confidence in the quality and integrity of external audits – through public oversight and stronger enforcement mechanisms.

In the past year, the FSF also focused on a number of issues related to the reinsurance industry. This industry plays an indispensable role in the provision of insurance coverage and has become increasingly engaged in the underwriting and distribution of financial risk. While the industry has performed well in the face of recent shocks, the opaqueness of the reinsurance market and of reinsurers' public disclosures makes it difficult to assess the potential impact of problems in the industry, should they arise, on the insurance sector as a whole and on financial stability more generally. Some of these issues are also relevant to other parts of the insurance industry.

The FSF has therefore worked with regulators in the key jurisdictions in which large parts of the global reinsurance industry are based to lead efforts nationally, as well as within the International Association of Insurance Supervisors (IAIS), to produce data and reporting on the global reinsurance market. The Forum has also called for improvements in the frequency, and in the quantitative and qualitative content, of public disclosures by individual reinsurers and insurance companies.

In collaboration with agencies from among its membership, the Forum also carried forward work in other areas, including issues raised by credit risk transfer activities, the availability of information on large and complex financial institutions, and strengthening supervisory standards in offshore financial centres.

Throughout the year, the FSF continued to inform the G7 Finance Ministers and central bank Governors, and the IMF's International Monetary and Financial Committee, on all its activities.

## *International Association of Insurance Supervisors*

The BIS has hosted the Secretariat of the IAIS since the Secretariat's establishment in January 1998. Similar to the Basel Committee on Banking Supervision, but directed at insurance supervision, the IAIS aims at contributing to global financial stability by improving supervision of the insurance industry through the development of standards for insurance supervision, provision of mutual assistance and exchange of information on members' respective experiences. More information on the IAIS is available on its website (www.iaisweb.org).

In collaboration with other international regulatory bodies (in the framework of the Joint Forum of the Basel Committee, IOSCO and the IAIS), the IAIS has also helped develop principles for the supervision of financial conglomerates. Moreover, the IAIS actively participates in the FSF.

The IAIS has issued a wide range of papers setting out supervisory standards in the insurance area. Last year, the IAIS finalised the *Principles on Minimum Requirements for Supervision of Reinsurers* and released an issues paper entitled *Risks to insurers posed by electronic commerce*. In April 2003 the IAIS issued a paper on *Credit risk transfer between insurance, banking and other financial sectors*. Ongoing work includes formulating standards, guidelines or issues papers on insurance liabilities, the use of actuaries, control solvency levels, stress testing, insurance securitisation, disclosure by non-life insurers and reinsurers, supervision of reinsurance companies, risk management for electronic commerce in insurance products and credit risk management. In addition, the Insurance Core Principles and associated Methodology are being revised in order to reinforce their contents. In collaboration with the FSF, the IAIS is developing a framework to enhance the transparency of the global reinsurance market and improve risk-oriented disclosure by individual reinsurance firms. The IAIS coordinates with the IASB in its work on the Insurance Project and other major accounting projects. The IAIS is also working closely with the Financial Action Task Force (FATF) on countering money laundering and combating the financing of terrorism.

Jointly with the FSI and national insurance supervisory authorities, the IAIS organised numerous seminars and training programmes and provided training materials for insurance supervisors in order to help them comply with IAIS supervisory standards. Regional training seminars for insurance supervisors were held in Africa, Asia, central and eastern Europe, Latin America and offshore jurisdictions.

## *International Association of Deposit Insurers*

The IADI was established in May 2002 and opened its Head Office at the BIS in October. The Association provides its members with a forum to contribute to the stability of financial systems by promoting international cooperation in the field of deposit insurance. Forty-four organisations are involved in the activities of the IADI.

The IADI seeks to enhance the understanding and exchange of information on common interests and issues related to deposit insurance. It also sets out guidance to increase the effectiveness of deposit insurance systems taking into account different circumstances, settings and structures.

The Association actively promotes networking and training opportunities for deposit insurers and other authorities concerned with the financial safety net. One of the ways in which this is accomplished is through an annual conference focused on topical deposit insurance issues. The first IADI conference was held at the BIS in May 2002; the next will be held in Seoul, Korea in October 2003.

The Chair of the Executive Council and President of the IADI is Jean Pierre Sabourin, President and CEO of the Canada Deposit Insurance Corporation. Extensive information on the IADI's activities can be found on its website (www.iadi.org).

## 4. Financial services of the Bank

The BIS's banking operations are exclusively focused on serving the financial needs of central banks and a number of international financial institutions. As of April 2003, some 130 central banks held part of their international reserves at the BIS. In intermediating these funds, the Bank relies on two linked trading rooms in Basel and Hong Kong SAR and offers a range of instruments that are specifically designed for central banks. Security, liquidity and return are the three key features of these products. Other financial services provided by the BIS include asset management, short-term lending to central banks, trustee activities and collateral agent functions. In performing these tasks, special attention is paid to monitoring credit, market and operational risk under the responsibility of an independent risk control unit, reporting directly to the Deputy General Manager, and to supervising the soundness of banking operations as part of the internal audit function.

### *Operations of the Banking Department*

At 31 March 2003 the balance sheet stood at 92.8 billion gold francs,[1] a third successive new record for the end of a financial year, which represented a 5.8% increase over the previous financial year-end figure of 87.7 billion. This year-on-year increase was entirely attributable to the appreciation of other currencies against the US dollar, which inflated the balance sheet total by 6.2 billion gold francs. Indeed, after adjusting for exchange rate effects, the balance sheet actually declined by 1.1 billion gold francs during the financial year.

[1] Until the end of the 2002/03 financial year, the Bank's unit of account was the gold franc. Prior to its amendment (see Section 6), Article 4 of the Statutes defined the gold franc as equivalent to 0.29032258… grams of fine gold. Assets and liabilities were converted to gold francs on the basis of a gold price of US$ 208 per fine ounce (equivalent to 1 gold franc = US$ 1.94149…).

After reaching historically high levels in the early part of the past financial year, the balance sheet eased back in the subsequent months before rising again as from November. This inflow of funds towards the end of 2002 was partially inflated by exchange rate effects, but was also driven by normal year-end factors as well as a "flight to safety" effect arising from mounting geopolitical tensions. In contrast to previous years, this trend continued well into the new year, to the extent that the balance sheet reached successive new highs in the first quarter of 2003, registering an all-time record of 94.3 billion gold francs on 13 March. By the end of the financial year, however, it had declined by 1.5 billion.

*Liabilities*

On 31 March 2003 borrowed funds in gold and currencies (excluding repurchase agreements) totalled 86.4 billion gold francs, compared with 82.0 billion at the end of the previous financial year. Gold deposits rose by 0.1 billion gold francs to 2.6 billion, representing 3.1% of total borrowed funds (unchanged from a year earlier). Currency deposits, on the other hand, increased by 4.3 billion gold francs (excluding repurchase agreements), reflecting an appreciation of other currencies against the US dollar. But for these currency translation gains, currency deposits would have declined by some 0.6 billion gold francs, as reductions in euro and yen placements were partly offset by inflows of US dollars and sterling.

At 31 March 2003 the US dollar accounted for 67.2% of total borrowed funds in currencies (including repurchase agreements), a modest decline from 69.2% a year earlier.

Currency deposits by central banks and other national monetary authorities rose from 76.2 billion to 80.0 billion gold francs, representing 95.5% of total borrowed funds in currencies (excluding repurchase agreements) at end-March 2003, little changed from the previous year. Funds placed by other depositors (mainly international institutions) amounted to 3.8 billion gold francs. Over the financial year, central bank customers significantly increased their investments in longer-maturity BIS tradable instruments. On the other hand, there was also an expansion in shorter fixed-term deposits, partly reflecting a tendency by certain customers to keep liquid funds at the BIS at a time of heightened geopolitical uncertainty.

*Assets*

BIS assets for the most part take the form of investments with top-quality commercial banks of international standing and government and quasi-government securities, including reverse repurchase transactions. The BIS also grants short-term credits to central banks, usually on a collateralised basis. The share of sovereign and quasi-sovereign securities increased noticeably during the past financial year to reach almost one third of total assets on 31 March 2003.

The BIS also makes use of various derivative instruments with a view to managing its assets more efficiently (see note 15(a) to the accounts). For the most part, these derivative instruments are of the plain vanilla variety, in particular futures and interest rate swaps.

BIS financial operations, in both Basel and Hong Kong, are carried out within a general policy framework established by the Board. This framework imposes certain general as well as specific limits on the various categories of risk (credit, market and liquidity risk) to which the Bank is inevitably exposed through its market activities. These limits have been set to a stringent standard in order to maintain the outstanding credit quality of the BIS as a counterparty to central banks and commercial institutions.

Investments in currencies stood at 89.4 billion gold francs on 31 March 2003, compared with 83.7 billion at the previous financial year-end. This total included 0.2 billion gold francs in the form of advances to central banks, against 0.1 billion a year earlier. The Bank's assets in gold rose from 3.2 billion gold francs to 3.3 billion over the same period, reflecting a small increase in gold deposits received.

### *Functions as agent and trustee*

#### *Trustee for international government loans*

The Bank continued to perform its functions as trustee for the funding bonds 1990–2010 of the Dawes and Young Loans during the year under review (for details on the Bank's functions in this regard see the 63rd *Annual Report* of June 1993). With regard to these funding bonds, the Deutsche Bundesbank as Paying Agent notified the Bank that in 2002 the Bundeswertpapierverwaltung (BWV – German Federal Securities Administration) had arranged for payment of a total amount of approximately €5.5 million in respect of redemption and interest. Redemption values and other details were published by the BWV in the *Bundesanzeiger* (*Federal Gazette*).

The Bank maintained its reservations regarding the application by the BWV of the exchange guarantee clause for the Young Loan (stated in detail in its 50th *Annual Report* of June 1980), which also extend to the funding bonds 1990–2010.

#### *Collateral agent functions*

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

## 5. Net profits and their distribution

### *Net profits for the financial year*

The accounts for the 73rd financial year ended on 31 March 2003 show a net profit of 362.0 million gold francs, compared with 268.5 million gold francs for the preceding financial year. The rise primarily reflected the increase in net interest and other operating income for the financial year 2002/03, which in

turn was related to the reduced level of losses booked on the repayment at market value of the Bank's securitised liabilities (FIXBIS and Medium-Term Instruments). These losses in the borrowed funds book were recognised in accordance with the Bank's accruals accounting principles. This book is managed on a matched basis with limited interest rate, currency and maturity transformation risk, and the market values of the financial instruments on both sides of the borrowed funds balance sheet rise and fall together.

These accruals book losses, which were temporary in nature, were incurred as BIS customers actively managed their portfolios of BIS instruments in an environment where interest rates continued to fall and the market values of their claims on the BIS increased. Under the Bank's accruals accounting methodology these losses were being recovered over time, as the repaid liabilities were soon replaced by borrowings with the same maturities at lower interest rates, while the corresponding assets and derivative instruments remained in place. This year's profit thus benefited from the widening of margins resulting from the recovery of past book losses from early repayment of liabilities. As interest rates fell during the year, borrowed funds accruals profits benefited from book gains from sales of trading investments.

Under the Bank's revised accounting policies, which came into effect on 1 April 2003, such losses will be offset in the profit and loss account by booking the corresponding movements in the market values of the financial instruments on both sides of the balance sheet.

Excluding these factors, underlying profits from the Bank's borrowed funds operations showed mild growth, with the increase in deposits from customers being reinforced by a widening of intermediation margins, which was attributable to developments on the assets side of the balance sheet.

Interest income from investments financed by the Bank's own funds (equity) fell slightly, as the downward impact of lower interest rates outweighed the growth in the volume of the Bank's own funds.

The annual financial accounts show a rise in the costs of administration after depreciation from 76.8 million gold francs in 2001/02 to 98.3 million gold francs in the past year, an increase of 28%. Most of this increase was attributable to the appreciation of the Swiss franc, the currency in which most of the Bank's expenditure is incurred, which was on average 18% higher against the gold franc than in the previous year. In addition, under the Bank's revised accounting policies for provisions and retirement benefit obligations, costs of 48.3 million Swiss francs were booked in the Bank's annual financial accounts to costs of administration, compared with costs of 31.1 million on the same basis in 2001/02. This increase was due to a one-off payment of 33.9 million Swiss francs to restore the coverage ratio of the Staff Pension Fund following its lower than actuarially assumed investment performance. Depreciation costs declined by 7% in Swiss francs, but increased by 8% in terms of gold francs.

The environment of lower interest rates also led to realised capital gains of 108.2 million gold francs on the Bank's own funds investment portfolio. This compares with gains of 85.7 million gold francs under this heading in the previous financial year.

## *Distribution of the net profit for the year*

On the basis of Article 51 of the Statutes, the Board of Directors recommends that the net profit of 362.0 million gold francs be applied by the General Meeting in the following manner:

(i) 68.7 million gold francs in payment of a dividend of 400 Swiss francs per share. It should be noted that the dividend will be paid on 452,073 shares. The number of issued and paid-up shares before the repurchase of shares is 529,125. Of these shares, 77,052 are held in treasury, comprising 74,952 shares repurchased from former private shareholders and central banks, and 2,100 other shares. No dividend will be paid on treasury shares;

(ii) 29.3 million gold francs to be transferred to the general reserve fund;

(iii) 3.0 million gold francs to be transferred to the special dividend reserve fund; and

(iv) 261.0 million gold francs, representing the remainder of the available net profit, to be transferred to the free reserve fund. This fund can be used by the Board of Directors for any purpose that is in conformity with the Statutes.

The Board of Directors has proposed that the above-mentioned dividend be paid on 7 July 2003 to the shareholders whose names are contained in the Bank's share register on 31 March 2003.

## *Distribution of prior year reserves adjustment*

The changes in the Bank's accounting policies adopted in this year's balance sheet and profit and loss account have resulted in a prior year adjustment, which has increased reserves by a total of 1,639.4 million gold francs at 31 March 2002. This is described in detail in note 3 to the annual accounts. On the basis of Article 51 of the Statutes, the Board of Directors recommends that the prior year reserves adjustment of 1,639.4 million gold francs be applied by the General Meeting in the following manner:

(i) 163.9 million gold francs, being 10% of this amount, to be transferred to the general reserve fund; and

(ii) 1,475.5 million gold francs 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.

## *Report of the auditors*

The Bank's accounts have been duly audited by PricewaterhouseCoopers AG, who have confirmed that the balance sheet and the profit and loss account, including the notes thereto, give a true and fair view of the Bank's financial position at 31 March 2003 and of the results of its operations for the year then ended. Their report is to be found immediately following the accounts.

# 6. Institutional matters

## *Amendments to the Bank's Statutes*

### *Change of the Bank's unit of account*

An Extraordinary General Meeting (EGM) of the Bank was held on 10 March 2003 and decided, on the recommendation of the Board of Directors, to replace the gold franc by the Special Drawing Right (SDR), as defined by the International Monetary Fund (IMF), as the Bank's unit of account with effect from the beginning of the next financial year, ie from 1 April 2003. Accordingly, the EGM approved an amendment of Article 4 of the Bank's Statutes for the redenomination of the Bank's capital and shares in SDRs. This change involved a reduction of the share capital of the Bank in order to obtain a round amount of SDR 5,000 for the nominal value of each share.

The Bank's use of the gold franc as its unit of account had been regarded as non-transparent and inconsistent with current standards of accounting best practice. For these reasons, and in order to assist in managing the Bank's operations and economic capital more efficiently, it was decided to adopt the SDR as the Bank's new unit of account.

The SDR is the unit of account of the IMF and is also used in private contracts and international treaties and as the unit of account of other international organisations. The SDR's value is based on that of a basket of currencies (currently the US dollar, the euro, the Japanese yen and the pound sterling). The basket is reviewed by the IMF every five years to ensure that the currencies included in it are representative of those used in international transactions and that the weights assigned to the currencies reflect their relative importance in the world's trading and financial system. The valuation basket was last changed in 2001 to take account of the introduction of the euro.

In connection with the replacement of the gold franc by the SDR, the gold franc amounts in which the capital of the Bank had been expressed were converted into SDRs. The EGM decided that the nominal value of the shares should be rounded down from its precise converted amount (SDR 5,696 at 31 March 2003) to SDR 5,000. Following the reduction of 12.2% in the share capital, the excess amount of SDR 92.1 million at 31 March 2003 was transferred from the paid-up capital to the Bank's reserve funds. The change to the SDR had no impact on the Bank's equity.

### *Other statutory changes*

In addition to the amendment of Article 4 of the Statutes of the Bank, the EGM adopted two other amendments. The first of these simplifies the text of Article 5 by removing details of the subscription of the second tranche of the share capital of the BIS, which was completed long ago. The second amendment updates Article 20 of the Statutes, which defines the currencies in which the Bank may carry out operations for its own account. The previous wording, which referred to "the practical requirements of the gold or gold exchange standard", had become obsolete and was therefore replaced by a

reference to "currencies deemed suitable by the Board" to reflect the Bank's current practice.

*Withdrawal of privately held shares*

Following the decision taken by the Extraordinary General Meeting held on 8 January 2001 to withdraw all privately held shares of the BIS (described in detail in the 71st *Annual Report* of June 2001, pages 172–3), the Bank paid registered former private shareholders compensation in the amount of 16,000 Swiss francs per share. Certain former private shareholders contested this amount (see also the 72nd *Annual Report* of July 2002, pages 172–3) by initiating claims before the Arbitral Tribunal provided for by the Hague Agreement, which, pursuant to Article 54 of the Bank's Statutes, has sole jurisdiction to hear disputes between the Bank and its former private shareholders arising from the withdrawal. The Arbitral Tribunal issued a Partial Award on 22 November 2002 confirming the legality of the mandatory repurchase, but nevertheless concluding that the compensation should be increased. It ruled that the former private shareholders are entitled to receive a proportionate share of the net asset value of the Bank, subject, however, to a 30% discount. This formula is equivalent to that which has been applied by the BIS to new central bank subscriptions of shares. The precise amount of additional compensation will be determined by the Arbitral Tribunal after further proceedings to be held in the course of 2003. The Bank has confirmed its past declaration that it will voluntarily apply to all registered former private shareholders the decision of the Arbitral Tribunal in final settlement of all claims. Once that decision is issued, these former shareholders will be contacted in writing to arrange for payment of the additional compensation.

In a proceeding brought by a separate group of former private shareholders, the Commercial Court in Paris made a preliminary determination (without addressing the substance of the matter) in March 2003 that it has jurisdiction over their claims seeking to increase the amount of compensation. The BIS has requested review of this procedural decision by the Paris Court of Appeals, arguing that the Arbitral Tribunal in The Hague has exclusive jurisdiction over the matter.

## *Changes in accounting policies*

*Financial year 2002/03*

Following a review of its accounting policies, the Bank has decided to amend its policies for recognising profit on the sales of own funds securities, and for accounting for provisions and retirement benefit obligations. These changes are described in note 2 to the accounts. The comparative figures in the balance sheet, profit and loss account and notes to the accounts for the financial year 2001/02 have accordingly been restated. The impact of these restatements on the reserves and net profit for that year is shown in note 3 to the accounts. The accounts set out in comparative form the financial results for the years 2001/02, as restated, and 2002/03.

*Financial year 2003/04*

The introduction of the SDR as the Bank's unit of account (see above) has facilitated a number of further changes to the Bank's accounting policies, which have been put into effect as from 1 April 2003. These changes provide a better picture of the Bank's financial position and performance.

An unaudited reconciliation to a pro forma balance sheet in SDRs as at 31 March 2003 and to a profit and loss account in that currency for the year then ended, incorporating the new accounting policies, is presented on pages 201–5 of the attached balance sheet and profit and loss account.

## *Budget policy*

The process of formulating the Bank's budget for the next financial year starts about six months in advance with the setting by Management of the broad business orientation and of staffing and funding envelopes. Within the context of this general budgetary framework, business areas subsequently specify their plans and corresponding resource requirements. The process of reconciling the detailed business plans and overall resource availability culminates in the determination of a draft financial budget. This must be approved by the Board before the start of the financial year.

In drawing up the budget, a distinction is made between administrative and capital expenditures. Staff remuneration represents about half of the administrative costs. Other major expenditure categories, normally accounting for a further 25% of administrative spending, are IT and telecommunications expenditures, and charges under the Bank's Pensions System. Because of the nature of the expenditures, capital spending tends to vary significantly from year to year. Most of the Bank's administrative and capital expenditure is incurred in Swiss francs.

Costs of administration before depreciation during the financial year 2002/03 amounted to 199.2 million Swiss francs, 5.3% below the budget of 210.3 million Swiss francs.[2] The budget was drawn up assuming that the Bank would quickly replace those members of staff who had taken advantage of an early retirement offer in the previous financial year. This proved difficult to accomplish, with the resulting saving constituting the primary cause of the underspending of the administrative budget. Capital expenditure, at 16.1 million Swiss francs, was 11.9 million below budget: expenditure on some IT projects was postponed as the completion of the Bank's new IT infrastructure was delayed.

The Board approved an increase in the administrative budget for the financial year 2003/04 of 2.3% to 215.1 million Swiss francs. The capital budget

[2] The Bank's budgetary accounting excludes the impact of the amended accounting policies for provisions and retirement benefit obligations, which are reflected in the financial accounts and discussed in Section 5.

foresees an increase of 2.7 million Swiss francs to 30.7 million. In addition to a 2% increase in staff salary ranges, the budgets incorporate the continuation of the e-learning initiative for bank supervisors, the costs of moving to new offices in Hong Kong, and enhanced IT and financial control support for banking activities.

## *BIS remuneration policies*

### *General BIS salary policy*

The jobs performed by BIS staff members are assessed on the basis of a number of objective criteria, including requisite qualifications, experience and responsibilities, and are classified into distinct job grades. Regular salary surveys are conducted in which BIS salaries are compared with salaries paid in comparable institutions or market segments. These comparisons take into account differences in the taxation of salaries of the staff of the surveyed institutions. When applying the market data to BIS salaries, the BIS focuses on the upper half of market salaries in order to attract highly qualified staff.

The job grades are associated with salary ranges that are adjusted annually for the rate of inflation in Switzerland and the average increase of real salaries in the business sector of major industrial countries. Movements of salaries of individual staff members within each salary range are based on merit subject to a regular evaluation of performance. The BIS does not apply a bonus scheme.

Non-Swiss and non-locally hired staff (including senior management) are entitled to an expatriation allowance, which currently ranges between 14 and 18% of annual salary depending on family status. In addition, the BIS offers health insurance and a defined benefit contributory pension plan.

### *Remuneration of senior management*

The salaries of Heads of Department are adjusted annually, normally in line with the increase in the staff salary ranges. The salaries of the General Manager and the Deputy General Manager are reviewed periodically by the Board. As of 1 July 2002, the remuneration of senior managers was as follows (number of function holders in parentheses):

- General Manager (1) 617,050 Swiss francs
- Deputy General Manager (1) 566,500 Swiss francs
- Heads of Department (3) 526,070 Swiss francs

### *Remuneration of the Board of Directors*

The Annual General Meeting approves the remuneration of members of the Board of Directors. Adjustments take place every three years. Since 1 July 2002, the overall fixed annual remuneration paid to the Board of Directors has amounted to 844,800 Swiss francs. In addition, all Board members receive an attendance fee for each Board meeting in which they participate. Assuming the full Board is represented in all Board meetings, the annual total of these attendance fees amounts to 777,240 Swiss francs.

## *Changes in the Board of Directors and the Bank's Management*

In September 2002, Antonio Fazio, Governor of the Bank of Italy, reappointed Vincenzo Desario as a member of the Board of Directors for another period of three years, expiring on 7 November 2005. Ernst Welteke, President of the Deutsche Bundesbank, renewed the appointment of Hans Tietmeyer as a member of the Board of Directors in November 2002 for a further term of three years, expiring on 31 December 2005. In March 2003, Guy Quaden, Governor of the National Bank of Belgium, reappointed Vicomte Verplaetse as a member of the Board of Directors for another three-year period, expiring on 28 February 2006.

At the end of December 2002, Urban Bäckström resigned from his position as Governor of Sveriges Riksbank and vacated his seat on the Board. From 1 January 2003, the Board elected Lars Heikensten, the successor to Mr Bäckström at Sveriges Riksbank, as a member of the Board for the unexpired period of Mr Bäckström's term of office, ie until end-March 2005.

On 19 March 2003, Masaru Hayami retired from his position as Governor of the Bank of Japan and vacated his seat on the Board. In May 2003, the Board elected his successor at the Bank of Japan, Toshihiko Fukui, as a member of the Board for the unexpired period of Mr Hayami's term of office, ie until 12 September 2003. Upon his retirement as President of the Federal Reserve Bank of New York on 10 June 2003, William J McDonough relinquished his appointment as member of the Board.

As regards the Management of the Bank, Andrew Crockett relinquished his position as General Manager at the end of March 2003. He was succeeded by Malcolm Knight on 1 April 2003.

Lists of Board members, senior officials of the Bank and member central banks are provided at the end of this chapter.

# Balance sheet and profit and loss account

at 31 March 2003

# Balance sheet at 31 March 2003

(in millions of gold francs – see note 2(a) to the accounts)

| 2002 | Assets | 2003 |
|---|---|---|
| | Gold | |
| *1 910.3* | Held in bars | *1 990.0* |
| *1 299.6* | Time deposits and advances | *1 309.6* |
| 3 209.9 | | 3 299.6 |
| 3 292.3 | Cash on hand and on sight account with banks | 3 041.5 |
| 9 588.1 | Treasury bills | 14 027.3 |
| | Time deposits and advances in currencies | |
| *28 435.1* | Not exceeding 3 months | *22 725.5* |
| *17 102.9* | Over 3 months | *17 483.6* |
| 45 538.0 | | 40 209.1 |
| | Securities purchased under resale agreements | |
| 1 660.7 | Not exceeding 3 months | 5 302.2 |
| | Government and other securities at term | |
| *3 753.3* | Not exceeding 3 months | *4 625.1* |
| *19 857.6* | Over 3 months | *22 165.9* |
| 23 610.9 | | 26 791.0 |
| 115.4 | Land, buildings and equipment | 138.9 |
| 699.1 | Miscellaneous assets | 21.7 |
| 87 714.4 | | 92 831.3 |

| After allocation of the year's net profit | | | Before | After |
|---|---|---|---|---|
| Before allocation of prior year reserves adjustment | After | | allocation of the year's net profit and prior year reserves adjustment | |
| 2002 as originally stated | 2002 as restated | Liabilities | 2003 | |
| 330.7 | 330.7 | Capital | 330.7 | 330.7 |
| 3 307.8 | 4 947.2 | Reserves | 3 307.8 | 5 240.5 |
| | | Prior year reserves adjustment | 1 639.4 | |
| | | Profit and loss account | 362.0 | |
| (384.0) | (384.0) | Shares held in treasury | (522.7) | (522.7) |
| 25.5 | 24.1 | Valuation difference account | 303.9 | 303.9 |
| 3 280.0 | 4 918.0 | Equity | 5 421.1 | 5 352.4 |
| | | Deposits (gold) | | |
| *1 909.8* | *1 909.8* | Sight | *1 989.3* | *1 989.3* |
| *266.4* | *266.4* | Not exceeding 3 months | *245.8* | *245.8* |
| *355.2* | *355.2* | Over 3 months | *403.3* | *403.3* |
| 2 531.4 | 2 531.4 | | 2 638.4 | 2 638.4 |
| | | Deposits (currencies) | | |
| *2 510.3* | *2 510.3* | Sight | *2 410.7* | *2 410.7* |
| *36 369.5* | *36 369.5* | Not exceeding 3 months | *32 970.2* | *32 970.2* |
| *40 606.6* | *40 606.6* | Over 3 months | *48 378.5* | *48 378.5* |
| 79 486.4 | 79 486.4 | | 83 759.4 | 83 759.4 |
| | | Securities sold under repurchase agreements | | |
| 660.0 | 660.0 | Not exceeding 3 months | 51.8 | 51.8 |
| 1 704.0 | 66.0 | Miscellaneous liabilities | 960.6 | 960.6 |
| 52.6 | 52.6 | Dividend | | 68.7 |
| 87 714.4 | 87 714.4 | | 92 831.3 | 92 831.3 |

# Profit and loss account

for the financial year ended 31 March 2003
(in millions of gold francs)

| | 2002 as restated | 2003 |
|---|---|---|
| Interest and discount, and other operating income | 6 015.7 | 4 999.6 |
| Less: interest and discount expense | 5 410.1 | 4 358.9 |
| loss on repayment of liabilities at market value | 346.0 | 288.6 |
| Net interest and other operating income | 259.6 | 352.1 |
| Less: costs of administration | | |
| Board of Directors | *0.9* | *1.2* |
| Management and staff | *47.2* | *65.6* |
| Office and other expenses | *19.9* | *22.0* |
| Costs of administration before depreciation | 68.0 | 88.8 |
| Depreciation | *8.8* | *9.5* |
| | 76.8 | 98.3 |
| Operating profit | 182.8 | 253.8 |
| Profit on sales of investment securities | 85.7 | 108.2 |
| Net profit for the financial year | 268.5 | 362.0 |
| The Board of Directors recommends to the Annual General Meeting that the net profit for the year ended 31 March 2003 be allocated in accordance with Article 51 of the Statutes as follows: | | |
| Dividend: 380 Swiss francs per share on 452 073 shares | *52.6* | |
| 400 Swiss francs per share on 452 073 shares | | *68.7* |
| | 52.6 | 68.7 |
| | 215.9 | 293.3 |
| Transfer to general reserve fund | 31.2 | 29.3 |
| | 184.7 | 264.0 |
| Transfer to special dividend reserve fund | 3.0 | 3.0 |
| | 181.7 | 261.0 |
| Transfer to free reserve fund | 181.7 | 261.0 |
| | – | – |

# Movements in the Bank's capital and reserves

during the financial year ended 31 March 2003
(in millions of gold francs)

## I. Capital

| | Number of shares | Gold francs (millions) |
|---|---|---|
| Shares of 2 500 gold francs, of which 25% has been paid up: | | |
| Balance at 31 March 2002 as per balance sheet | 529 125 | 330.7 |
| Balance at 31 March 2003 as per balance sheet | 529 125 | 330.7 |

Further information is given in note 9 to the accounts.

## II. Development of the reserve funds

| | Legal reserve fund | General reserve fund | Special dividend reserve fund | Free reserve fund | Total of reserve funds |
|---|---|---|---|---|---|
| Balances at 31 March 2002 after allocation of net profit for the financial year 2001/02 – as previously stated | 33.1 | 1 330.6 | 74.5 | 1 869.6 | 3 307.8 |
| The Board of Directors recommends to the Annual General Meeting that the transfer to reserve funds resulting from the changes in accounting policies described in notes 2 and 3 be allocated in accordance with Article 51 of the Statutes as follows: | | 163.9 | | 1 475.5 | 1 639.4 |
| Balances at 31 March 2002 – as restated | 33.1 | 1 494.5 | 74.5 | 3 345.1 | 4 947.2 |
| Add: allocation of net profit for the financial year 2002/03 | – | 29.3 | 3.0 | 261.0 | 293.3 |
| Balances at 31 March 2003 as per balance sheet | 33.1 | 1 523.8 | 77.5 | 3 606.1 | 5 240.5 |

## III. Capital and reserve funds at 31 March 2003 (after allocation) were represented by:

| | Capital | Reserve funds | Total of capital and reserves |
|---|---|---|---|
| Net assets in | | | |
| Gold | 330.7 | 330.5 | 661.2 |
| Currencies | – | 4 910.0 | 4 910.0 |
| Balances at 31 March 2003 as per balance sheet | 330.7 | 5 240.5 | 5 571.2 |

# Notes to the accounts

for the financial year ended 31 March 2003
(in millions of gold francs)

## 1. Introduction

The Bank for International Settlements (BIS) is an international financial institution which was established pursuant to the Hague Agreements of 20 January 1930. The headquarters of the Bank are in Basel, Switzerland. The objects of the BIS, as laid down in Article 3 of its Statutes, are to promote the cooperation of central banks, to provide additional facilities for international financial operations and to act as trustee or agent for international financial settlements. Fifty 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 2002/03 are presented in a form approved by the Board of Directors pursuant to Article 49 of the Bank's Statutes.

## 2. Significant accounting policies

Following a review of its accounting policies, the Bank has decided to amend its policies for recognising profit on the sales of own funds securities, and for accounting for provisions and retirement benefit obligations. These changes are described in detail in the relevant paragraphs under this heading below. The comparative figures in the balance sheet, profit and loss account and notes to the accounts for the financial year 2001/02 have accordingly been restated. The impact of these restatements on the reserves and net profit for that year is shown in note 3 to the accounts.

With effect from 1 April 2003, the Bank's unit of account is the Special Drawing Right (SDR) as defined by the International Monetary Fund. An unaudited reconciliation to a pro forma balance sheet in SDRs as at 31 March 2003 and a profit and loss account in that currency for the year then ended is presented on pages 201–5.

*(a) Unit of account and currency translation*

The unit of account used in these accounts is the gold franc, which is equivalent to US$ 1.94149… . Article 4 of the Bank's Statutes, prior to its

amendment on 10 March 2003, defined the gold franc (abbreviated to GF) as representing 0.29032258... grams of fine gold. Items representing claims on gold are translated into gold francs on the basis of their fine weight. Items denominated in US dollars are translated into gold francs on the basis of a gold price of US$ 208 per ounce of fine gold (this price was established by the Bank's Board of Directors in 1979, resulting in the conversion factor of GF 1 = US$ 1.94149...). Items denominated in other currencies are translated into US dollars at the spot market rates of exchange prevailing at the balance sheet date, with the resulting US dollar balances converted into gold francs accordingly.

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

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

*(b) Basis of valuation and determination of profit*

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

Profits and losses arising on the sale of investment securities designated by the Bank as belonging to its own funds are taken to the profit and loss account. Previously, such profits and losses were credited to the securities equalisation account, which was included under the heading "Miscellaneous liabilities" in the balance sheet, and amortised to the profit and loss account over a period corresponding to the average term to maturity of the Bank's investment portfolio. The impact of this change in accounting policy on reserves and net profit for the previous financial year is shown in note 3.

*(c) Gold*

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

*(d) Treasury bills; government and other securities at term*

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

*(e) Time deposits and advances in currencies*

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

*(f) Securities purchased under resale agreements*

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

*(g) Land, buildings and equipment*

The cost of the Bank's land, buildings and equipment is capitalised. The cost is depreciated on a straight line basis over the estimated useful lives of the assets concerned, as follows:

Land – not depreciated.
Buildings – 50 years.
Building installations and machinery – 15 years.
Information technology equipment – 4 years.
Other equipment – 4 to 10 years.

*(h) Valuation difference account*

The valuation difference account records the effect of exchange differences as described in item (a) above; these valuation changes relate essentially to that portion of the Bank's own funds held in currencies other than the US dollar.

*(i) Deposits*

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

Gains and losses on the repayment of the transferable book entry claims described in note 12(c) at their market values are incorporated in the profit and loss account under the heading "Loss on repayment of liabilities at market value".

*(j) Securities sold under repurchase agreements*

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

*(k) Provisions*

Provisions are recognised when the Bank has a present legal or constructive obligation as a result of past events and it is probable that resources will be required to settle the obligation, provided that the amount of the obligation can be reasonably estimated.

In previous years, the Board of Directors reviewed the level of, and if necessary set aside an amount to, a provision for banking risks and other eventualities, which was included under the heading "Miscellaneous liabilities" on the balance sheet. As a result of this change in accounting policy, the Board of Directors recommends to the Annual General Meeting that the balances on this and other provisions be credited to the reserve

funds. The impact of this change on reserves and profits for the previous financial year is shown in note 3.

*(l) Retirement benefit obligations*

The Bank operates defined benefit pension and health and accident schemes. The liability in respect of these defined benefit schemes is based on the present value of the defined benefit obligation at the balance sheet date, less the market value of the scheme assets (if the scheme is funded) at the balance sheet date, together with adjustments for unrecognised actuarial gains and losses and past service cost. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by the estimated future cash outflows using discount interest rates of highly rated corporate debt securities which have terms to maturity approximating the terms of the related liability. The impact of this change in accounting policy on reserves and net profit for the previous financial year is shown in note 3.

The amount charged to the profit and loss account represents the sum of the current service cost of the benefits accruing for the year under the scheme, and interest at the discount rate on the defined benefit obligation. In addition, actuarial gains and losses arising from experience adjustments, changes in actuarial assumptions and amendments to the schemes are charged to the profit and loss account over the service period of the staff concerned. The resulting assets or liabilities are included under the headings "Miscellaneous assets" or "Miscellaneous liabilities" in the balance sheet.

## 3. Restatements of reserves and net profit

Following the changes in accounting policy described in note 2 and in accordance with the recommendations made by the Board of Directors to the Annual General Meeting concerning allocations to the reserve funds, the Bank's reserves and net profit for the financial year 2001/02 have been restated as follows:

| | Reserves | Net profit |
|---|---|---|
| As previously published | 3 307.8 | 225.7 |
| Changes in accounting policy: | | |
| Sales of own funds investment securities – *note 2(b)* | | |
| Transfer of the balance on the securities equalisation account | 101.1 | |
| Reversal of amortisation of accumulated profits on sales of investment securities | | (33.5) |
| Profits on sales of own funds investment securities | | 85.7 |
| Provisions | | |
| Transfer of general provision for banking risks and other eventualities – *note 2(k)* | 1 582.1 | (1.2) |
| Other provisions – *note 2(k)* | 9.5 | (0.8) |
| Retirement benefit obligations – *note 2(l)* | (53.3) | (7.4) |
| Increase due to changes in accounting policies | 1 639.4 | 42.8 |
| As restated | 4 947.2 | 268.5 |

The net increase in reserves from the change in accounting policy was offset by a corresponding reduction in "Miscellaneous liabilities". The proposed allocations are shown in Table II of "Movements in the Bank's capital and reserves".

## 4. Gold holdings

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

| Assets | *2002* | 2003 |
|---|---|---|
| Gold bars held at central banks | *1 910.3* | 1 990.0 |
| Gold time deposits: | | |
| Not exceeding 3 months | *328.4* | 283.7 |
| Over 3 months | *971.2* | 1 025.9 |
| | *3 209.9* | 3 299.6 |

The Bank's own gold holdings at 31 March 2003 amounted to GF 661.2 million, equivalent to 192 tonnes of fine gold (2002: GF 661.4 million; 192 tonnes).

## 5. Treasury bills

The Bank's holdings were as follows:

| | *2002* | 2003 |
|---|---|---|
| Book value | *9 588.1* | 14 027.3 |
| Market value | *9 587.0* | 14 027.6 |

## 6. Government and other securities at term

The Bank's holdings were as follows:

| | *2002* | 2003 |
|---|---|---|
| Book value | *23 610.9* | 26 791.0 |
| Market value | *23 649.6* | 27 312.6 |

## 7. Land, buildings and equipment

| | Land & buildings | IT & other equipment | Total |
|---|---|---|---|
| Cost: | | | |
| Opening balance at 1 April 2002 | 129.1 | 40.8 | 169.9 |
| Capital expenditure | | 5.8 | 5.8 |
| Disposals and retirements | | (0.5) | (0.5) |
| Exchange adjustments | 30.9 | 10.1 | 41.0 |
| Cost at 31 March 2003 | 160.0 | 56.2 | 216.2 |
| Depreciation: | | | |
| Accumulated depreciation at 1 April 2002 | 32.6 | 21.9 | 54.5 |
| Depreciation charge for the current year | 2.7 | 6.8 | 9.5 |
| Disposals and retirements | | (0.5) | (0.5) |
| Exchange adjustments | 7.9 | 5.9 | 13.8 |
| Accumulated depreciation at 31 March 2003 | 43.2 | 34.1 | 77.3 |
| Net book value at 31 March 2003 | 116.8 | 22.1 | 138.9 |

The cost of the Bank's land at 31 March 2003 was GF 29.2 million (2002: GF 23.5 million).

## 8. Miscellaneous assets

These comprised:

| | *2002* | 2003 |
|---|---|---|
| Net balances on forward operations and swaps | *691.6* | – |
| Other amounts recoverable | *7.5* | 21.7 |
| | *699.1* | 21.7 |

## 9. Capital

The Bank's share capital consisted of:

| | *2002* | 2003 |
|---|---|---|
| Authorised capital: | | |
| 600 000 shares, each of 2 500 gold francs | *1 500.0* | 1 500.0 |
| Issued capital: 529 125 shares (2002: 529 125) | *1 322.8* | 1 322.8 |
| of which 25% paid up | *330.7* | 330.7 |

(a) The Extraordinary General Meeting on 8 January 2001 amended the Bank's Statutes to restrict the right to hold shares in the BIS exclusively to central banks, thereby effecting a mandatory repurchase of 72 648 shares from the American, Belgian and French issues held by private (ie non-central bank) shareholders against compensation of 16 000 Swiss francs per share. The Bank also repurchased at the same price 2 304 shares of these three issues held by other central banks. The Board will, in due course, redistribute these shares to the Bank's existing central bank shareholders in a manner which it considers appropriate. The voting rights attached to these shares remain unaffected; they continue to be exercisable by the American, Belgian and French central banks, respectively.

(b) Following the decision of the Arbitral Tribunal in The Hague in November 2002 the cost of repurchasing the total of 74 952 shares above, excluding interest thereon, is estimated to amount to GF 522.7 million (2002: GF 384.0 million). This amount is shown as a negative liability under the caption "Shares held in treasury" in the Bank's balance sheet.

(c) The number of outstanding shares on which the dividend for the financial year 2002/03 is payable is as follows:

| | |
|---|---|
| Issued capital as at 31 March 2003 | 529 125 |
| Less: shares held in treasury | |
| From private shareholders and central banks | 74 952 |
| Others | 2 100 |
| Total outstanding shares eligible for dividend | 452 073 |

(d) The Extraordinary General Meeting on 10 March 2003 amended the Bank's Statutes to redenominate in SDRs the Bank's share capital and the nominal value of each share with effect from 1 April 2003. In order to obtain a round sum amount for the nominal value of each share (SDR 5 000, of which 25% is paid up), the total share capital was reduced. The resulting excess of SDR 92.1 million (GF 65.1 million) was transferred from paid-up capital to the free reserve fund at that date.

## 10. Reserves

The Bank's reserves, after the allocations proposed by the Board of Directors and the restatement of reserves for the financial year 2001/02 resulting from the changes in accounting policies (see note 3), consisted of:

| | *2002 as restated* | 2003 |
|---|---|---|
| Legal reserve fund | *33.1* | 33.1 |
| General reserve fund | *1 494.5* | 1 523.8 |
| Special dividend reserve fund | *74.5* | 77.5 |
| Free reserve fund | *3 345.1* | 3 606.1 |
| | *4 947.2* | 5 240.5 |

The yearly allocations to the various reserve funds are governed by Article 51 of the Bank's Statutes. The proposed allocations are shown in Table II of "Movements in the Bank's capital and reserves".

## 11. Valuation difference account

The movements on this account during the year were as follows:

| | *2002* | 2003 |
|---|---|---|
| Opening balance | *56.0* | 24.1 |
| Currency translation gain/(loss) | *(31.9)* | 279.8 |
| Closing balance | *24.1* | 303.9 |

## 12. Deposits

*(a) Gold*

Gold deposits placed with the Bank originate entirely from central banks.

*(b) By maturity*

The maturity breakdown of currency deposits placed with the Bank was as follows:

| | *2002* | 2003 |
|---|---|---|
| Central banks | | |
| Sight | *2 214.2* | 2 035.2 |
| Not exceeding 3 months | *34 372.8* | 30 618.3 |
| Over 3 months | *39 641.0* | 47 309.5 |
| Other depositors | | |
| Sight | *296.1* | 375.5 |
| Not exceeding 3 months | *1 996.7* | 2 351.9 |
| Over 3 months | *965.6* | 1 069.0 |
| | *79 486.4* | 83 759.4 |

*(c) By instrument*

The breakdown of currency deposits by type of instrument was as follows:

| | *2002* | 2003 |
|---|---|---|
| Sight and Notice Accounts | *9 227.8* | 8 461.7 |
| Fixed-Term Deposits | *19 601.6* | 21 239.4 |
| Transferable book entry claims | | |
| Floating rate (FRIBIS) | *3 200.1* | 4 155.5 |
| Fixed rate | | |
| Issued at par (Coupon FIXBIS) | *14 227.1* | 13 956.8 |
| Issued at a discount (Discount FIXBIS) | *11 478.8* | 7 491.3 |
| Medium-Term Instruments | *21 751.0* | 28 454.7 |
| | *79 486.4* | 83 759.4 |

Transferable book entry claims on the BIS are registered in the name of the subscriber. FRIBIS, Coupon FIXBIS and Discount FIXBIS mature within one year of issue. Medium-Term Instruments have fixed maturities, which are in principle not less than one year and not more than 10 years from the date of original issue of the claim. The Bank is required to repurchase at the prevailing market value these claims, in whole or in part, upon request by the subscribing counterparty of at least one business day's notice. The resulting gains and losses are incorporated in the profit and loss account under the heading "Loss on repayment of liabilities at market value".

## 13. Miscellaneous liabilities

These comprised:

| | *2002 as restated* | 2003 |
|---|---|---|
| Net balances on forward operations and swaps | – | 537.1 |
| Administrative and banking payables | *7.4* | 203.4 |
| Retirement benefit obligations – *note 14* | | |
| Directors' pensions | *2.3* | 2.8 |
| Health and accident benefits | *52.4* | 68.7 |
| Payable to former shareholders | *3.9* | 148.6 |
| | *66.0* | 960.6 |

## 14. Retirement benefit obligations

*(a) Directors' pensions*

The Bank operates an unfunded defined benefit arrangement for its directors, whose entitlement is based on a minimum service period of four years. The movement in the accounts during the year was as follows:

| | *2002* | 2003 |
|---|---|---|
| Opening liability | *2.2* | 2.3 |
| Exchange differences | *0.1* | 0.5 |
| Charged to the profit and loss account | *0.2* | 0.2 |
| Contributions paid | *(0.2)* | (0.2) |
| Closing liability | *2.3* | 2.8 |

*(b) Staff pensions*

The Bank operates a final salary defined benefit Pensions System for its staff. The Pensions System is based on a fund which is similar in nature to a trust fund, having no separate legal personality. Its assets are administered by the Bank for the sole benefit of current and former members of staff who participate in the scheme. The scheme is valued annually by independent actuaries. The latest actuarial valuation was carried out at 30 September 2002.

| | *2002* | 2003 |
|---|---|---|
| Present value of funded obligations | *258.6* | 361.6 |
| Fair value of scheme assets | *257.2* | 340.1 |
| | *1.4* | 21.5 |
| Unrecognised actuarial losses | *(1.4)* | (21.5) |
| Liability in the balance sheet | *–* | – |

The movement in the accounts during the year was as follows:

| | *2002* | 2003 |
|---|---|---|
| Opening (asset)/liability | *–* | – |
| Charged to the profit and loss account | *7.9* | 21.6 |
| Contributions paid | *(7.9)* | (21.6) |
| Closing (asset)/liability | *–* | – |

The principal actuarial assumptions used in the calculations above were as follows:

| | *2002* | 2003 |
|---|---|---|
| Discount rate – market rate of highly-rated corporate bond | *4.0%* | 3.5% |
| Expected return on scheme assets | *5.0%* | 5.0% |
| Future salary increases | *4.1%* | 4.1% |
| Future pension increases | *4.1%* | 4.1% |

*(c) Health and accident benefits*

The Bank also provides unfunded post-retirement healthcare and accident benefits, based on a minimum service period of 10 years. The methodology used for the determination of the costs and obligations arising from this scheme and the actuarial assumptions used in calculating these benefits are identical to those for the Pensions System, except that there is an additional assumption for long-term medical inflation of 5.0% per annum.

The movement in the accounts during the year was as follows:

| | *2002* | 2003 |
|---|---|---|
| Opening liability | *48.2* | 52.4 |
| Exchange differences | *1.3* | 12.5 |
| Charged to the profit and loss account | *5.2* | 6.3 |
| Contributions paid | *(2.3)* | (2.5) |
| Closing liability | *52.4* | 68.7 |
| | | |
| Unrecognised actuarial loss | – | 16.2 |
| Present value of obligation | *52.4* | 84.9 |

*(d) Savings Scheme*

Until 31 March 2003 the Bank operated a Savings Scheme for its staff. This was a separate fund similar in nature to the Pension Fund. The Bank's contributions to the scheme were charged to the profit and loss account and the liabilities under the scheme were off-balance sheet. On 1 April 2003 the scheme was wound up, and its outstanding obligations were settled on that date.

## 15. Off-balance sheet items

*(a) Derivatives*

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

Notional principal amounts

| | *2002* | 2003 |
|---|---|---|
| Exchange rate contracts: | | |
| Foreign exchange swaps and forwards | *4 704.2* | 17 859.6 |
| Currency swaps | *5 438.0* | 7 083.1 |
| Options | *207.9* | 462.8 |
| Interest rate contracts: | | |
| Interest rate swaps | *69 767.5* | 85 813.8 |
| Forward rate agreements and futures | *29 837.1* | 36 554.4 |
| Options | *–* | 397.7 |

The notional or contracted principal amounts of the various derivatives reflect the degree to which the Bank is active in the respective markets but give no indication of the credit or market risk on the Bank's activities. The gross replacement cost of all contracts showing a profit at prevailing market prices on 31 March 2003 was GF 2 838.1 million (2002: GF 1 601.3 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.

| | *2002* | 2003 |
|---|---|---|
| Nominal value of securities held under: | | |
| safe custody arrangements | *4 351.0* | 5 876.5 |
| collateral pledge agreements | *2 555.0* | 2 515.1 |
| portfolio management mandates | *1 235.0* | 1 526.8 |
| | *8 141.0* | 9 918.4 |
| Gold held under earmark (in tonnes) | *170* | 168 |

The financial instruments held under the above arrangements are deposited with external custodians, either central banks or commercial institutions.

## 16. Contingent liabilities

Certain former private shareholders have expressed their dissatisfaction with the amount of compensation paid to them by the Bank in connection with the mandatory repurchase of the shares not held by central banks (see note 9(a)).

In proceedings initiated by former shareholders before the Arbitral Tribunal in The Hague, that Tribunal issued a Partial Award on 22 November 2002 confirming the legality of the mandatory repurchase, but nevertheless concluding that the compensation should be increased. It ruled that the former private shareholders are entitled to receive a proportionate share of the net asset value of the Bank, subject, however, to a 30% discount. This formula is equivalent to that which the BIS has applied to new central bank subscriptions of shares. The Bank has confirmed its past declaration that it will voluntarily apply the decision of the Arbitral Tribunal to all registered former private shareholders in final settlement of all claims. The precise amount of additional compensation will be determined by the Arbitral Tribunal after further proceedings to be held in the course of 2003. The BIS estimates the additional compensation due at 4 868 Swiss francs per share, equivalent to a total of GF 138.7 million for the 74 952 repurchased shares, such total amount being reflected in the increased amount shown on the balance sheet under the heading "Shares held in treasury". The claimants contest the amount per share, arguing that the Tribunal should award additional compensation which in total would range up to approximately GF 100 million beyond the Bank's estimate.

In a proceeding brought by a separate group of former private shareholders, the Commercial Court in Paris made a preliminary determination (without addressing the substance of the matter) in March 2003 that it has jurisdiction over their claims seeking to increase the amount of compensation. The Bank has requested review of this procedural decision by the Paris Court of Appeals, arguing that the Arbitral Tribunal in The Hague has exclusive jurisdiction over the matter. Accordingly, the Bank has not made separate provisions for these claims.

# Report of the auditors

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

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

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

In our opinion, the balance sheet and profit and loss account, including the notes thereto, have been properly drawn up and give a true and fair view of the financial position of the Bank for International Settlements at 31 March 2003 and the results of its operations for the year then ended so as to comply with the Statutes of the Bank.

PricewaterhouseCoopers AG

Ralph R Reinertsen Anthony W Travis

Basel, 12 May 2003

# Pro forma accounts (unaudited)

## Introduction

At the Extraordinary General Meeting (EGM) of the Bank held on 10 March 2003, it was decided that the gold franc would be replaced as the Bank's unit of account by the Special Drawing Right (SDR) as defined by the International Monetary Fund with effect from 1 April 2003. This change has been made to assist in managing the Bank's operations and economic capital more efficiently and to enhance the transparency of its accounts.

## Consequences of the change to the SDR

The replacement of the gold franc by the SDR[1] requires a conversion into SDRs of the gold franc amounts in which the capital of the Bank has been expressed. The EGM decided that the nominal value of the shares should be rounded down from its precise converted amount (SDR 5 696 at 31 March 2003) to SDR 5 000. Following the reduction of 12.2% in the share capital, the excess amount of SDR 92.1 million at 31 March 2003 has been transferred from the paid-up capital to the Bank's reserve funds. There is no impact on the Bank's equity from this change.

## Changes in accounting policies

The Bank has taken the opportunity to review its accounting policies and align them more closely with its business operations. Certain accounting policy changes have been made in the audited gold franc accounts. The introduction of the SDR as the Bank's unit of account has facilitated a number of further changes which have been put into effect as from 1 April 2003. These changes better reflect the Bank's financial position and performance, and are described below.

In order to reflect the increasingly market-related nature of the Bank's operations, financial instruments and gold will be shown on the balance sheet on a trade date basis at their market or fair values, instead of at amortised historical cost on a value date basis. Derivative financial instruments will be reflected on both sides of the balance sheet at their gross fair values. Profits and losses on the Bank's trading operations will be recorded in the profit and loss account based on market values. The currency composition of the assets designated as being financed by the Bank's equity (own funds) has been

[1] One SDR is equivalent to the sum of US$ 0.577, €0.426, ¥21.0 and £0.0984 according to Rule O–1 as adopted by the Executive Board of the International Monetary Fund on 29 December 2000 and effective 1 January 2001; this decision is subject to revision every five years.

realigned since 31 March 2003 to approximate the composition of the SDR currency basket. Currency translation differences will be recorded in the profit and loss account. The resulting profits will provide a better picture of the economic performance of the banking book, which is managed with limited interest rate, currency and maturity transformation risk. In addition, reserves will be created to reflect the unrealised profits of the Bank's investment securities portfolio and its own gold.

## Pro forma accounts reconciliations

These reconciliations link the figures in the audited gold franc balance sheet and profit and loss account with the values in the SDR accounts described above by:

(i) disclosing the gold franc equivalent figures translated into SDRs at the exchange rate of 31 March 2003 (SDR 1 = GF 0.7072146 or US$ 1.3730456);

(ii) making revaluation adjustments incorporating the change in the valuation of the Bank's assets and liabilities resulting from the accounting policy changes described above;

(iii) effecting transfers:
   (a) between share capital and the reserve funds resulting from the downward adjustment of the nominal value of the Bank's shares to SDR 5 000;
   (b) of the balance on the valuation difference account to reserves resulting from the change of accounting policy on currency translation differences referred to above; and
   (c) from reserves to the gold revaluation account to reflect the excess of the market value of the Bank's gold (US$ 335.18 per ounce) over its previous value, US$ 208 per ounce;

(iv) making other adjustments to reflect the change to accounting for the Bank's assets and liabilities on a trade date basis, instead of the value date basis previously used in the Bank's accounts, and to show the Bank's derivative instrument balances on a gross basis instead of net.

# Pro forma balance sheet reconciliation (unaudited)

at 31 March 2003
(in millions of Special Drawing Rights)

| | Balance sheet (GF) | Translated into SDRs | Revaluations | Reclassi-fications | Trade date adjustments | Balance sheet (SDRs) |
|---|---|---|---|---|---|---|
| Column/notes | 1 | 2 | 3 | 4 | 5 | 6 |
| **Assets** | | | | | | |
| Gold | 3 299.6 | 4 665.6 | 2 876.4 | – | – | 7 542.0 |
| Cash on hand and on sight account with banks | 3 041.5 | 4 300.7 | – | – | – | 4 300.7 |
| Treasury bills | 14 027.3 | 19 834.6 | 0.6 | – | 889.4 | 20 724.6 |
| Time deposits and advances in currencies | 40 209.1 | 56 855.6 | 48.3 | – | 1 824.2 | 58 728.1 |
| Securities purchased under resale agreements | 5 302.2 | 7 497.3 | – | – | 4 757.7 | 12 255.0 |
| Government and other securities at term | 26 791.0 | 37 882.4 | 737.5 | – | 112.7 | 38 732.6 |
| Derivative financial instruments | – | – | 3 966.1 | – | – | 3 966.1 |
| Land, buildings and equipment | 138.9 | 196.4 | – | – | – | 196.4 |
| Miscellaneous assets | 21.7 | 30.7 | – | – | 3 143.2 | 3 173.9 |
| Total assets | 92 831.3 | 131 263.3 | 7 628.9 | – | 10 727.2 | 149 619.4 |
| **Liabilities** | | | | | | |
| Paid-up capital | 330.7 | 467.6 | 285.9 | (92.1) | – | 661.4 |
| Reserves (after allocation of the net profit) | 5 240.5 | 7 410.1 | 623.4 | (49.8) | (2.5) | 7 981.2 |
| Shares held in treasury | (522.7) | (739.1) | – | – | – | (739.1) |
| Securities revaluation account | – | – | 357.0 | – | – | 357.0 |
| Gold revaluation account | – | – | – | 571.6 | – | 571.6 |
| Valuation difference account | 303.9 | 429.7 | – | (429.7) | – | – |
| Equity | 5 352.4 | 7 568.3 | 1 266.3 | – | (2.5) | 8 832.1 |
| **Deposits** | | | | | | |
| *Gold* | *2 638.4* | *3 730.7* | *2 291.9* | – | – | *6 022.6* |
| *Currencies* | *83 759.4* | *118 435.6* | *1 595.8* | – | *2 487.4* | *122 518.8* |
| | 86 397.8 | 122 166.3 | 3 887.7 | – | 2 487.4 | 128 541.4 |
| Securities sold under repurchase agreements | 51.8 | 73.2 | – | – | – | 73.2 |
| Derivative financial instruments | – | – | 3 234.4 | – | | 3 234.4 |
| Miscellaneous liabilities | 960.6 | 1 358.4 | (759.5) | – | 8 242.3 | 8 841.2 |
| Dividend | 68.7 | 97.1 | – | – | – | 97.1 |
| Total liabilities | 92 831.3 | 131 263.3 | 7 628.9 | – | 10 727.2 | 149 619.4 |

# Notes to the pro forma balance sheet reconciliation

1. The figures in this column contain the audited balance sheet figures in gold francs at 31 March 2003, and assume that the recommendations made by the Board concerning transfers to the reserve funds are adopted.

2. The figures in this column are translated from the gold franc figures in column 1 to SDRs at the exchange rate of the balance sheet date, SDR 1 = GF 0.7072146 (SDR 1 = US$ 1.3730456).

3. The adjustments in this column principally relate to the following revaluations:
   (a) gold from the equivalent of US$ 208 per ounce of gold to its market value of SDR 244.11 (US$ 335.18) at 31 March 2003.
   (b) financial instruments in currencies from amortised historical cost to market value, based on mid-market prices. The balance on the securities revaluation account represents the unrealised revaluation surplus of investment securities.
   (c) derivative financial instruments to fair value. From 1 April 2003, derivative assets and liabilities (principally on currency and interest rate contracts) are reflected separately at fair value on each side of the balance sheet. Under the Bank's accounting policy until 31 March 2003, they were netted off and their net value included either in miscellaneous assets or in miscellaneous liabilities.

4. The amounts in this column comprise:
   (a) the rounding down of the paid-up portion of the shares to SDR 1 250 per share resulting from the downward adjustment of the nominal value of the Bank's shares to SDR 5 000 per share, and the transfer of the resulting excess of SDR 92.1 million from share capital to reserves. The Bank's capital and reserves in total are not affected by this adjustment.
   (b) the transfer of the balance on the valuation difference account to reserves. From 1 April 2003, exchange differences on currency translation will be reflected in the profit and loss account.
   (c) the transfer from reserves to the gold revaluation account of the excess of the market value of the Bank's own gold over its previous value in the gold franc accounts, based on US$ 208 per ounce.

5. The figures in this column relate to the adjustment to reflect the Bank's assets and liabilities on a trade date basis instead of the previous value date basis.

6. The figures in this column are the final SDR pro forma balance sheet figures and are equal to the sum of the figures in columns 2 to 5.

# Pro forma profit reconciliation (unaudited)

for the financial year ended 31 March 2003
(in millions of Special Drawing Rights)

| | Profit and loss account (GF) | Translated into SDRs | Revaluations | Transfers | Trade date adjustments | Profit and loss account (SDRs) |
|---|---|---|---|---|---|---|
| Column/notes | 1 | 2 | 3 | 4 | 5 | 6 |
| Net interest and other operating income | 352.1 | 497.9 | 66.0 | – | (2.5) | 561.4 |
| Less: costs of administration | (98.3) | (139.1) | – | – | | (139.1) |
| Operating profit | 253.8 | 358.8 | 66.0 | – | (2.5) | 422.3 |
| Profits on sales of investment securities | 108.2 | 153.0 | – | – | – | 153.0 |
| Net profit for the financial year | 362.0 | 511.8 | 66.0 | – | (2.5) | 575.3 |
| Dividend | (68.7) | (97.2) | – | – | | (97.2) |
| Profit transferred to reserves | 293.3 | 414.6 | 66.0 | – | (2.5) | 478.1 |

# Notes to the pro forma profit reconciliation

1. The figures in this column are extracted from the audited profit and loss account in gold francs for the year ended 31 March 2003.

2. The SDR equivalent figures are translated from the gold franc figures in column 1 at the exchange rate of the balance sheet date, SDR 1 = GF 0.7072146 (SDR 1 = US$ 1.3730456).

3. The adjustment in this column represents the change in the net unrealised profits of the assets, liabilities and derivatives in the Bank's trading book. From 1 April 2003, changes in the market values of the Bank's trading assets, liabilities and derivatives will be reflected in the profit and loss account.

4. There are no transfers between profit and loss account items.

5. This represents the profit impact from the introduction of trade date accounting and the revaluation of assets purchased to their mid-market values.

6. The figures in this column are the final SDR pro forma profit and loss account figures and are equal to the sum of the figures in columns 2 to 5.

# Five-year summary of the balance sheet

(in millions of gold francs)

| Financial year ended 31 March | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Gold | 3 878.7 | 3 505.8 | 3 521.1 | 3 209.9 | 3 299.6 |
| Cash on hand and on sight account with banks | 8.3 | 11.4 | 20.3 | 3 292.3 | 3 041.5 |
| Treasury bills | 7 314.0 | 7 853.9 | 4 597.8 | 9 588.1 | 14 027.3 |
| Time deposits and advances in currencies | 32 423.0 | 41 853.9 | 44 796.4 | 45 538.0 | 40 209.1 |
| Securities purchased under resale agreements | 276.0 | 1 268.1 | 3 882.0 | 1 660.7 | 5 302.2 |
| Government and other securities at term | 22 167.9 | 20 139.9 | 18 339.5 | 23 610.9 | 26 791.0 |
| Land, buildings and equipment | 124.7 | 120.7 | 113.2 | 115.4 | 138.9 |
| Miscellaneous assets | 44.5 | 82.0 | 783.7 | 699.1 | 21.7 |
| Total assets | 66 237.1 | 74 835.7 | 76 054.0 | 87 714.4 | 92 831.3 |
| Paid-up capital | 323.2 | 330.7 | 330.7 | 330.7 | 330.7 |
| Reserves (after allocation of the net profit for the year) | 4 305.0 | 4 526.6 | 4 731.3 | 4 947.2 | 5 240.5 |
| Shares held in treasury | – | – | (384.0) | (384.0) | (522.7) |
| Valuation difference account | 268.0 | 198.4 | 56.2 | 24.1 | 303.9 |
| Equity | 4 896.2 | 5 055.7 | 4 734.2 | 4 918.0 | 5 352.4 |
| Deposits | | | | | |
| *Gold* | *3 192.6* | *2 820.2* | *2 842.3* | *2 531.4* | *2 638.4* |
| *Currencies* | *57 705.8* | *65 903.7* | *67 274.8* | *79 486.4* | *83 759.4* |
| | 60 898.4 | 68 723.9 | 70 117.1 | 82 017.8 | 86 397.8 |
| Securities sold under repurchase agreements | 121.5 | 103.0 | 990.6 | 660.0 | 51.8 |
| Miscellaneous liabilities | 263.6 | 898.4 | 163.5 | 66.0 | 960.6 |
| Dividend | 57.4 | 54.7 | 48.6 | 52.6 | 68.7 |
| Total liabilities | 66 237.1 | 74 835.7 | 76 054.0 | 87 714.4 | 92 831.3 |

The figures for prior financial years have been restated to reflect the changes in accounting policies for sales of own funds investments, provisions and retirement benefit obligations.

# Five-year summary of the profit and loss account

(in millions of gold francs)

| Financial year ended 31 March | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Net interest and other operating income | 365.2 | 380.6 | 322.4 | 259.6 | 352.1 |
| Less: costs of administration | | | | | |
| *Board of Directors* | *1.3* | *1.2* | *1.1* | *0.9* | *1.2* |
| *Management and staff* | *46.0* | *47.4* | *40.4* | *47.2* | *65.6* |
| *Office and other expenses* | *18.6* | *19.4* | *21.6* | *19.9* | *22.0* |
| Costs of administration before depreciation | 65.9 | 68.0 | 63.1 | 68.0 | 88.8 |
| *Depreciation* | *6.0* | *7.6* | *8.1* | *8.8* | *9.5* |
| | 71.9 | 75.6 | 71.2 | 76.8 | 98.3 |
| Operating profit | 293.3 | 305.0 | 251.2 | 182.8 | 253.8 |
| Profit on sales of own funds investment securities | 124.1 | (81.4) | 2.1 | 85.7 | 108.2 |
| Net profit for the financial year | 417.4 | 223.6 | 253.3 | 268.5 | 362.0 |
| Dividend | 57.4 | 54.7 | 48.6 | 52.6 | 68.7 |
| Profit transferred to reserves | 360.0 | 168.9 | 204.7 | 215.9 | 293.3 |

The figures for prior financial years have been restated to reflect the changes in accounting policies for sales of own funds investments, provisions and retirement benefit obligations.

# Board of Directors

Nout H E M Wellink, Amsterdam
Chairman of the Board of Directors,
President of the Bank

Lord Kingsdown, London
Vice-Chairman

Vincenzo Desario, Rome
David Dodge, Ottawa
Antonio Fazio, Rome
Toshihiko Fukui, Tokyo
Sir Edward George, London
Alan Greenspan, Washington
Hervé Hannoun, Paris
Lars Heikensten, Stockholm
Guy Quaden, Brussels
Jean-Pierre Roth, Zurich
Hans Tietmeyer, Frankfurt am Main
Jean-Claude Trichet, Paris
Alfons Vicomte Verplaetse, Brussels
Ernst Welteke, Frankfurt am Main

*Alternates*

Bruno Bianchi or Vincenzo Pontolillo, Rome
Roger W Ferguson or Karen H Johnson, Washington
Peter Praet or Jan Smets, Brussels
Jürgen Stark or Stefan Schönberg, Frankfurt am Main
Marc-Olivier Strauss-Kahn or Michel Cardona, Paris
Paul Tucker or Paul Fisher, London

*Subcommittees of the Board of Directors*

Consultative Committee
Audit Committee

both chaired by Lord Kingsdown

# Senior Officials of the Bank

| | |
|---|---|
| Malcolm D Knight | General Manager |
| André Icard | Deputy General Manager |
| Gunter D Baer | Secretary General, Head of Department |
| William R White | Economic Adviser, Head of Monetary and Economic Department |
| Robert D Sleeper | Head of Banking Department |
| Renato Filosa | Manager, Monetary and Economic Department |
| Mario Giovanoli | General Counsel, Manager |
| Günter Pleines | Deputy Head of Banking Department |
| Peter Dittus | Deputy Secretary General |
| Josef Tošovský | Chairman, Financial Stability Institute |

# BIS member central banks

Central Bank of the Argentine Republic
Reserve Bank of Australia
Austrian National Bank
National Bank of Belgium
Central Bank of Bosnia and Herzegovina
Central Bank of Brazil
Bulgarian National Bank
Bank of Canada
The People's Bank of China
Croatian National Bank
Czech National Bank
National Bank of Denmark
Bank of Estonia
European Central Bank
Bank of Finland
Bank of France
Deutsche Bundesbank
Bank of Greece
Hong Kong Monetary Authority
National Bank of Hungary
Central Bank of Iceland
Reserve Bank of India
Central Bank and Financial Services Authority of Ireland
Bank of Italy
Bank of Japan
The Bank of Korea
Bank of Latvia
The Bank of Lithuania
National Bank of the Republic of Macedonia
Central Bank of Malaysia
Bank of Mexico
Netherlands Bank
Central Bank of Norway
National Bank of Poland
Bank of Portugal
National Bank of Romania
Central Bank of the Russian Federation
Saudi Arabian Monetary Agency
Monetary Authority of Singapore
National Bank of Slovakia
Bank of Slovenia
South African Reserve Bank
Bank of Spain
Sveriges Riksbank
Swiss National Bank
Bank of Thailand
Central Bank of the Republic of Turkey
Bank of England
Board of Governors of the Federal Reserve System
National Bank of Yugoslavia[1]

[1] Following the constitutional changes in February 2003 which transformed the Federal Republic of Yugoslavia into the State Union of Serbia and Montenegro, with two separate central banks, the legal status of the Yugoslav issue of the capital of the BIS is currently under review.

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