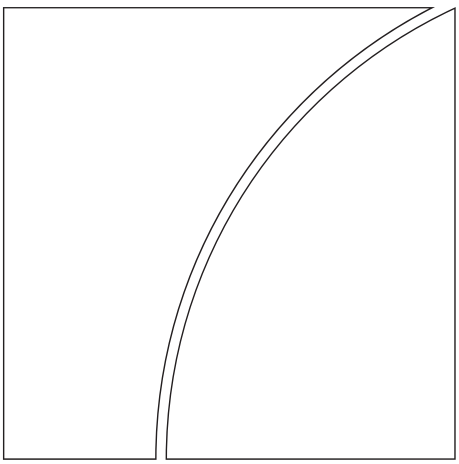
BANK FOR INTERNATIONAL SETTLEMENTS



75th Annual Report

1 April 2004–31 March 2005

Basel, 27 June 2005

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The chapters of this Report went to press between 2 and 10 June 2005.

Graphs

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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.

75th Annual Report

submitted to the Annual General Meeting
of the Bank for International Settlements
held in Basel on 27 June 2005

Ladies and Gentlemen,

It is my pleasure to submit to you the 75th Annual Report of the Bank for International Settlements for the financial year which ended on 31 March 2005.

The net profit for the year amounted to SDR 370.9 million, compared with SDR 536.1 million for the preceding year. Details of the results for the financial year 2004/05 may be found on pages 179–181 of this Report under "Net profit and its distribution".

The Board of Directors proposes, in application of Article 51 of the Bank's Statutes, that the present General Meeting apply the sum of SDR 114.4 million in payment of a dividend of SDR 235 per share, payable in any constituent currency of the SDR, or in Swiss francs. This year's proposed amount compares to the dividend of SDR 225 per share paid out last year.

The Board further recommends that SDR 25.7 million be transferred to the general reserve fund, SDR 6.0 million to the special dividend reserve fund and the remainder – amounting to SDR 224.8 million – to the free reserve fund.

If these proposals are approved, the Bank's dividend for the financial year 2004/05 will be payable to shareholders on 1 July 2005.

Basel, 10 June 2005

MALCOLM D KNIGHT
General Manager

I. Introduction: so far, so good

On the occasion of the 75th anniversary of the BIS, it seems appropriate in this Annual Report to look back over a longer historical period than normal. Granted, placing the primary focus on the events of the Bank's last financial year has its advantages. In particular, even casual readers of the newspapers will be familiar with the issues. Yet this focus on the recent past also has its shortcomings. The first is that inadequate attention might be paid to the implications of underlying structural changes in the economy. Powerful but glacial developments can easily be missed in analysis directed to short time spans. A second, related problem is that events come to be viewed in isolation, rather than as the dynamic consequences of much earlier developments. A third issue is that of short-sightedness in policy advice, which could turn today's solution into tomorrow's problem. All these considerations indicate the merits of analysing not only the current state of the global economy, but also the forces that have shaped and will continue to shape it.

A number of trends in the global economy have become well established over the last two decades or so, some welcome, others less so. Moreover, recent developments have also been broadly consistent with these trends. This has frequently elicited the comment "so far, so good", from optimists and pessimists alike. The former see no good reason why the favourable aspects of these long-standing developments should not continue. The latter focus rather on such underlying issues as internal and external imbalances, and see the potential for trouble ahead.

This Introduction begins with a description of these salient features, before going on to provide some alternative explanatory hypotheses. The subsequent chapters of the Annual Report analyse and distinguish between these alternatives, and provide support for the Conclusion. The policy issues raised centre around two questions. What policies might best help preserve the many satisfactory features of today's economic and financial world? And in the longer term, is there a need for a new macrofinancial stabilisation framework to prevent future build-ups of both domestic and international imbalances?

It must be said at the outset that both questions raise difficult issues. Opinions may reasonably differ about either paradigm choices or trade-offs within chosen paradigms. This implies that arriving at an international consensus on the answers will be no easy task. Yet a retrospective glance at the BIS's long history of fostering cooperation among central banks, and increasingly other involved parties, offers grounds for optimism, given how many agreements were in fact reached in similarly contentious circumstances in the past.

Economic and financial trends over recent decades

Looking back over the last two decades or so, four features stand out. The first has been a welcome reduction in the level of inflation worldwide and an associated decline in its volatility. The second has been generally robust growth in the global economy, again accompanied by lower short-term volatility, with sluggish growth in Japan and Germany more recently an important exception to the rule. The third feature has been the widening of external imbalances. And finally, one must note the increasing prominence of credit, asset price and investment booms, often followed by financial difficulties of various kinds.

In broad terms, these established trends were also evident in the BIS financial year completed at the end of March 2005. Yet as the year progressed, evidence also began to accumulate which suggested a heightened probability of turning points. Inflationary pressures appeared to be growing, even as output growth in the industrial countries showed signs of slowing. In addition, the prices of many financial assets started to soften after looking increasingly disconnected from both fundamentals and the mounting uncertainties about the economic outlook.

Turning to the longer-run features, inflation in every industrial country has fallen sharply from its peaks in the 1970s. A similar pattern has been observed in the majority of emerging market economies. Even in countries which previously suffered from hyperinflation, notably in Latin America, inflation is now generally at single digit levels. Significantly, in Argentina and Brazil the pass-through from the most recent large depreciations failed to reignite inflation expectations as had almost always happened previously. Global inflationary pressures have, in fact, receded so far that deflation was actually recorded for a time in China, Hong Kong SAR and Japan, and was briefly viewed as a serious possibility in the United States, Germany and Sweden.

Over this last financial year, higher commodity prices, particularly for oil, have finally begun to feed down the production line almost everywhere. Moreover, in the United States fears have increased that core consumer prices might also be moving up and that a further depreciation of the dollar could exacerbate these pressures. Nevertheless, it is still too early to say whether the earlier trend has ended. Indeed, a wide body of empirical evidence indicates that inflation upticks have recently become much less persistent, that exchange rate pass-through to domestic prices has fallen considerably, and that inflation expectations are now much better anchored at low levels than in the past. To this must be added recent, massive increases in production capacity in China and India which are beginning to come on line. In sum, the jury is still out on the future path of inflation.

A second broad trend has been towards faster economic growth at the global level, often accompanied by lower short-term output volatility. As to growth rates, phases of expansion in industrial countries have lengthened, while the rate of expansion in many emerging market economies has turned sharply upwards. China, for example, has recorded an average growth rate of about 10% per annum over the last 20 years, and India also seems to be on a

significantly higher growth path than two decades ago. Together, these two countries now account for a much larger share of global growth than in the recent past. As for output volatility, economic downturns have generally become less common and less severe. In the United States, growth during the last 20 years or so has been interrupted only twice: by the mild recession of 1990–91 and the even milder one of 2001–02. In contrast, all the countries hit by financial crisis over recent decades, as described below, did experience a very sharp slowdown during the worst phase of the crisis. Moreover, in the case of Japan, very rapid growth through the 1980s gave way to a much more sluggish output trend after the bubble burst.

Growth rates recorded over the period under review were again broadly consistent with these longer-term trends. Many industrial countries advanced strongly, with consumption and housing continuing as important drivers, and fixed investment finally showing signs of a response to sharp increases in profits. Japan, Germany and Italy generally remained laggards, although there were some encouraging signs in early 2005. The growth of the emerging market economies was particularly impressive, notwithstanding some moderation as the period wore on. China, despite the use of both administrative and market means to slow growth, decelerated only slightly in aggregate. In addition, while some very buoyant sectors at first appeared to be slowing more markedly, evidence subsequently emerged of a rapid rebound.

Even if the economic features described above have been broadly satisfactory, two other, less welcome, longer-term trends deserve to be singled out. The first of these has to do with global current account imbalances. For at least the last 15 years, the US external deficit has been trending upwards, accompanied by rising, if still relatively low, external debt. Correspondingly, various other countries have recorded substantial surpluses, not least the slower-growing economies of Germany and Japan. The period under review was no exception. The US deficit expanded to a record high as a proportion of GDP (almost 6%), and this in spite of a reduction in the effective real value of the dollar of more than 20% from its peak in early 2002. It is unprecedented for a reserve currency country to have a current account deficit of such magnitude.

Concerns about the implications over time of these external imbalances have been heightened by another longer-term trend. The global financial system seems to have become increasingly prone to financial turbulence of various sorts. The Mexican, Asian and Russian crises of the last decade indicated the force with which shocks could be transmitted both across liberalised financial markets and across countries. Short-term price volatility in financial markets, often associated with a sudden drying-up of previously abundant liquidity (as in the Long-Term Capital Management (LTCM) episode), has at times been another source of turbulence. A number of small but high-profile bankruptcies of financial firms (eg Drexel Burnham Lambert and Barings) have occurred, raising sensitivities to the potential implications of larger and more complex institutions getting into difficulties. And finally, financial losses due to operational risks seem to have been on an upward trend. This has reflected not only the increased complexity and IT dependence

of modern financial systems, but also governance issues (eg Enron, Parmalat and AIG) and the new reality of terrorist disruptions (11 September 2001).

Yet the single most remarkable feature in the financial area has been the recurrence of credit, asset price and investment booms and busts. A first cycle began in the industrial countries in the 1970s, affecting both equities and real estate. A second cycle started in the mid-1980s, ending in a property bust a few years later. While the Nordic countries, Germany and Japan were most affected, each made vulnerable by other domestic problems, many other countries were also caught up by the exuberance. Moreover, it seems increasingly evident that we are today well into the boom phase of a third such cycle, dating from the economic upturn of the mid-1990s. Equity prices were affected first but, after their sharp decline in early 2001, the upward momentum of demand was transferred to the housing market. Indeed, it is not an exaggeration to say that, over the last year or so, the house price phenomenon has achieved global sweep. Most industrial countries are showing symptoms of overheating in the housing market. So too are many emerging market economies, including China and Korea.

In virtually every instance, the bust phase of credit, asset price and investment cycles has been accompanied by some kind of headwind that has slowed down the subsequent economic recovery. The most serious effects have generally been due to outright crises in the banking system, as was the case in the Nordic countries in the late 1980s, Mexico in 1994 and a number of Asian countries in 1997–98. Within this class of problems, the economic costs were usually greatest when large-scale borrowing abroad in foreign currencies contributed subsequently to joint banking and foreign exchange crises. Fortunately, the overall health of financial systems in most industrial countries appears in recent years to have improved significantly. In eastern Europe and Latin America, where the local presence of foreign banks has increased markedly over the last 10 years or so, a similar conclusion seems warranted. However, in some parts of Asia the robustness of the system remains open to question. In particular, the continuing rapid growth of credit in China could well translate into a rebound in non-performing loans over time.

In any event, even short of financial crisis there have been many examples in recent decades of loss-impaired financial institutions restricting lending, with negative effects on real economic activity. Moreover, headwinds seem sometimes to have arisen also from overstretched corporate and household balance sheets and the overhang of unprofitable capital investment. The decade-long decline in corporate investment in Germany and Japan, the continuing weakness of post-crisis investment in most countries in Asia (excluding China), and the recent sluggishness of consumption in Korea and the Netherlands may all be illustrations of this phenomenon. From this historical perspective, the continuation last year of the longer-term trend towards increased household debt in many industrial countries, particularly those characterised by relatively rapid economic growth, is worth watching. The same might be said for the balance sheets of the production sector in China, assuming that the basic data are reliable enough to support such examination.

How did we get here and where are we going?

Explaining these broad macroeconomic developments in a parsimonious way presents a great analytical challenge. What is clear is that they have taken place against a background of at least three welcome structural shifts in the global economy. First, the liberalisation of the economies of many emerging markets has unleashed competitive forces that have led to major changes in the industrial world as well. Indeed, the integration of China and other previously socialist countries into the global market economy is an unprecedented occurrence. Second, there has been a similar pattern of liberalisation in financial markets, which has both made them more efficient and given them global reach. And third, monetary authorities almost worldwide have focused increasingly on bringing inflation down to low levels and keeping prices stable thereafter. What is not so clear is whether the interaction of these structural forces has had, or might still have, some unwelcome side effects as well. At the least, such massive changes must raise questions about the dynamics of modern economies, and uncertainties as to the proper conduct of policies looking forward. These policy issues are returned to in the Conclusion of this Annual Report.

Finding explanations for low and stable inflation is perhaps the easiest task. Recognising the harm done by high and volatile inflation in the 1970s, a public consensus emerged for central bankers to reduce it in both these aspects. They have indeed succeeded admirably. And their subsequent commitment to price stability has also contributed materially to the maintenance of low inflation over almost all of the last two decades. In particular, expectations about future inflation developments seem much more firmly anchored than before, and wage setting behaviour accordingly more stable. The growing recourse to inflation targeting regimes in emerging market economies attests to the efficacy of anti-inflationary policies.

It is a fact, however, that central bankers were also aided by powerful non-monetary forces supporting disinflation, particularly over the last 15 years or so. In the industrial countries, there has been continued (if still uneven) liberalisation of markets for goods and services as well as factors of production. Technological advances have also boosted productivity growth in some countries, particularly the United States, and technology transfers have benefited many others. Globalisation and the impact of massive increases in the supply of manufactured goods, especially from China and other transition economies, have resulted in the prices of traded goods falling for almost a decade. The increasing cross-border mobility of labour, the growing contestability of labour markets and the threat of factories moving to lower-cost jurisdictions have had further disinflationary effects on wages and work practices. Everywhere, the emphasis has been on cost cutting. Supermarkets, car makers and others directly serving consumers have been putting relentless pressure on global suppliers to provide more for less.

In this environment, explaining more rapid growth, and less volatile growth, also becomes easier. Trend growth is now higher, without the inefficiencies associated with inflation, and cyclical fluctuations have also

abated. In part, this reflects the fact that monetary policy no longer has to lean vigorously against periodic bursts of rising inflation expectations. With such expectations now more firmly anchored in the framework of monetary policy, the risks of inadvertently triggering a recession are much lower. This reduced uncertainty also helps explain the remarkably muted response of long-term bond rates, even in the face of rising policy rates in the United States over the last year.

Another benefit of the low-inflation environment is that monetary policy has been able to react vigorously whenever growth and employment have been threatened on the downside. Consider, for example, how aggressively policy rates were lowered worldwide in the aftermath of the 1987 global stock market crash. Consider too the policy reaction to the property collapse of the late 1980s and the associated problems in many banking systems. After tightening sharply in 1994, and moderately thereafter, it was possible to put further monetary restraint on hold in the wake of the Asian crisis. In 1998, still further into the economic upturn, policy rates were lowered in response to the Russian debt moratorium and the LTCM crisis. And, again, after stock markets nosedived in 2001, and the global economy slowed markedly, policy rates were cut sharply and have only recently begun to rise again.

Yet the cumulative impact of these policy responses is also worth noting. The real policy rate gap (defined as the difference between the real rate and estimated potential growth) in the G3 has been trending down since the early 1990s, and sharply so since around 1999. The aggregate rate of growth of credit, as well as broader measures of the money supply, has also tended to be well above the growth rate of nominal income in the industrial countries since the early 1990s. Today, real policy rates remain around zero in spite of last year's record global growth and emerging signs of tightening capacity constraints. In Japan, where the nominal policy rate has been zero for some time, the policy of "quantitative easing" has pushed the Bank of Japan's balance sheet to 28% of GDP, an unprecedented level. This policy easing has also manifested itself in many emerging market economies, for reasons also related to the world's growing external imbalances.

Explaining the long upward trend in the US current account deficit is a more challenging task. Some see the US current account deficit as largely the by-product of a stronger dollar, driven by private sector capital inflows reflecting expectations that recent, relatively rapid, growth in the United States will continue. Moreover, as countries have progressively relaxed their restrictions on holding foreign currencies, this has led to a steadily rising demand for dollar securities, particularly on the part of countries where domestic saving rates are high. However, others emphasise the decade-long decline in the US household saving rate, and the more recent massive swing into deficit of the US federal government. In contradiction to the first school of thought, they note that the US current account deficit has been increasingly financed by foreign governments rather than the private sector. As their own currencies have tended to rise against the US dollar, the monetary authorities in many countries have intervened heavily to counter this movement and have then largely recycled the resulting reserves back into dollar-denominated securities.

Such policies have impeded the reduction of external imbalances in at least two ways, though both are hard to quantify. The effective value of the dollar is arguably higher than it would otherwise have been. Moreover, long-term interest rates in the United States probably remain lower than otherwise, with associated implications for increased domestic spending. These attempts to stem currency appreciation have also tended to result in easier monetary and credit conditions than otherwise in the intervening countries. In some cases, as in Japan and China, where deflation had emerged for a time as a problem, these effects were initially welcome. However, the contribution of such policies to both domestic and global inflationary pressures, as well as financial imbalances, is now receiving increasing attention.

The recurrence of bouts of financial instability, even after inflation had been sharply reduced, also allows for alternative explanations, and perhaps alternative policy responses. One possibility is that problems encountered to date will, in the end, prove only transitional. Learning to live with low inflation, a liberalised financial sector and recent advances in financial technology simply takes time. During the learning process, disruptive mistakes have been made but their incidence and costs will decline. Support for this position is provided by the remarkable reduction in risk spreads in financial markets over the last year or so, and the equally remarkable decline in volatility. Moreover, some have put forward the complementary argument that more volatile financial conditions might even be welcome in some respects. They could be the mechanism through which shocks that might otherwise have harmful effects on the real economy are painlessly dispersed by modern financial systems to those most capable of absorbing them.

An alternative possibility is that such instability might be longer-lasting. Liberalised financial systems, while more efficient than repressed ones, might be inherently prone to instability if competitive pressures occasionally lead to excessive risk-taking. A second point is that they also seem to be inherently procyclical. That is, perceptions of value and risk move up and down with the economy, as does the willingness to take on risk. Credit spreads, asset prices, external ratings, internal ratings and loan loss provisions have all demonstrated this characteristic over the last few decades at least. This can result in powerful financial forces spurring real growth during an economic upturn, but an equally powerful downdraft should the initial optimism eventually come to be seen as excessive.

Nor is it hard to imagine that these normal tendencies to boom-bust behaviour might be aggravated by easy monetary conditions. At the heart of the matter is the "search for yield" when nominal risk-free rates are very low. Being able to borrow at very low interest rates provides incentives to credit creation, carry trade behaviour and leverage, all of which have been increasingly evident in financial markets in recent years. From this vantage point, the fact that the prices of all non-monetary, "illiquid" assets (long-term bonds, credit instruments, houses, etc) have risen rapidly over the last few years, and that measures of implied volatility are down sharply, need not be primarily due to the economic environment having become less risky, as hypothesised above. Rather, it could reflect a generalised effort to "buy

illiquidity" and "sell liquidity" given a surfeit of the latter. While this explanation might seem less compelling against the background of almost a year of policy tightening in the United States, policy rates in fact remain very low both there and elsewhere.

These different perspectives on structural changes in the financial system are nowhere more evident than in current assessments of developments affecting the household sector. Some see the greater capacity for households to borrow, including against increased housing wealth, as highly desirable. In the face of slowing wage growth in the industrial countries, and weak business investment outside China, this borrowing has allowed a form of intertemporal expenditure smoothing that has helped maintain aggregate demand across the globe. Others, however, focus rather on the decade-long decline in household saving rates in many countries, the rising share of consumption in GDP, and a potentially dangerous exposure to debt service requirements as rates rise to more normal levels. In any event, if we have just witnessed the high borrowing phase of intertemporal smoothing by households (and some governments), this must by definition imply some payback, sometime.

To summarise, we seem to have a reasonable set of explanations for how the global economy got to where it is. There can be little doubt that the easing of global liquidity conditions, made possible by well anchored low inflation and financial liberalisation, has served to sustain aggregate spending levels. Nevertheless, looking forward, alternative paths still seem plausible. A continuation of steady, non-inflationary growth might seem the most likely outcome, given the positive aspects of the fundamental structural changes described above. However, it is by no means guaranteed. On the one hand, the significant monetary stimulus seen to date could yet end in overt inflation. On the other hand, the implications of growing debt levels, both domestic and international, remain a great unknown. Either debtors or creditors, or both, might retrench as debt levels mount. Reductions in asset prices and assessments of private sector wealth could reinforce such behaviour. Conversely, increases in debt levels might simply be a normal part of financial deepening as markets mature and become more complete.

Given how little experience we have had with the interactions of the many structural changes identified above, these less welcome possibilities cannot be ruled out. Thus, one important task for policymakers in this new environment is to assess what policies might best help limit the costs of something going wrong. Another, no less challenging, is to consolidate, at the same time, the significant benefits these structural changes have already provided.

II. The global economy

Highlights

The world economy grew strongly in 2004, supported by expansionary monetary policies and unusually accommodative financial conditions. Sharply rising commodity prices failed to spark generalised inflation, but contributed to a moderation of the global expansion in the latter part of the year. After a synchronised upswing in the first half of 2004, growth differentials widened again as commodity importers experienced a slowdown – with the notable exception of the United States and China – while activity in commodity-exporting countries generally continued to grow apace.

The momentum of the world economy was surprising in a number of ways. One surprise was the strength of growth in the emerging economies, reflecting the ongoing structural shift in the global balance of growth, especially towards emerging Asia. Another surprise was the robustness of the US expansion in the face of rising oil prices. At the same time, renewed economic weakness elsewhere raised questions about the capacity of other advanced economies to adjust to the changing global environment. The large shift in relative prices between commodities and manufactured goods, associated with the emergence of a new group of dynamically growing emerging market economies, is one example of such global changes. Another is the sharp appreciation of the euro and the yen vis-à-vis the US dollar in 2004.

The consensus projection for 2005 is for further robust global growth, generally subdued inflationary pressures and widening international imbalances. However, the combination of diverging cyclical positions for the major economies, unusually low interest rates and structural changes related to the ongoing integration of key emerging market countries into the global economy makes forecasting more difficult. In particular, the strong increase in commodity prices since spring 2004, associated with rapidly growing demand from China and India, has given rise to concerns about global resource utilisation, the inflation outlook and the resolution of international imbalances. Another, related question is whether the current patterns of saving and investment are sustainable – both internationally and at the sectoral level. The need for fiscal consolidation is one key issue in this regard.

Economic growth

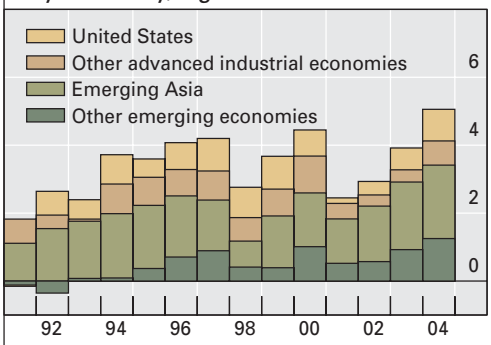
Strong global growth

Strong growth in the United States and emerging Asia ...

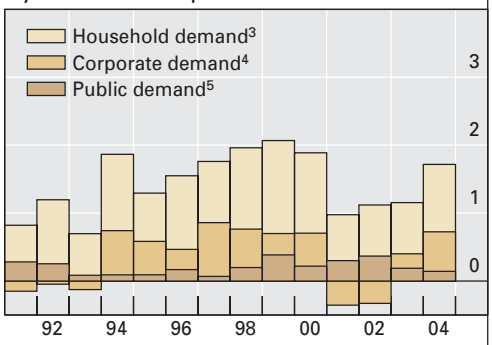
World output expanded by almost 5% last year, the highest rate for nearly three decades. The United States and emerging Asia accounted for more than half of the increase in global output (Graph II.1). The regional composition of growth

Contributions to world growth[1]

By economy/region



By demand component[2]



[1] In percentage points. [2] Advanced industrial economies. [3] Private final consumption expenditure plus private residential gross fixed capital formation. [4] Private non-residential gross capital formation. [5] Government final consumption expenditure plus government gross fixed capital formation.

Sources: IMF; OECD; national data. Graph II.1

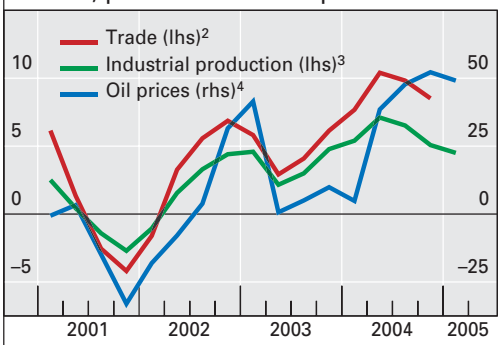
in 2004 was consistent with the notion of an emerging new pattern of global economic expansion: the United States as the engine of growth in the advanced economies; key emerging market economies in Asia and other regions as the second pole of global dynamism; and other large advanced economies with much slower growth.

... was spread through accelerating trade

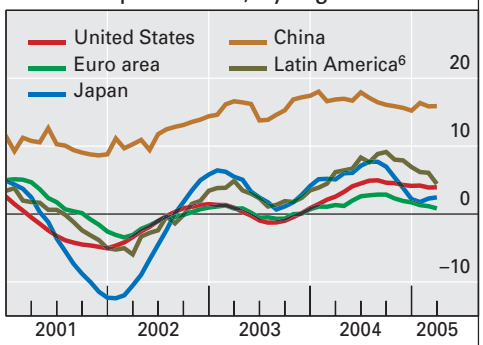
Strong US demand and the continued rapid build-up of production capacity in China led to a further acceleration of world trade (Graph II.2). The stimulus transmitted through this trade supported a synchronised upswing of production in major economic regions in the first half of last year. The main beneficiaries were the Asian economies, which recorded the strongest growth since the crisis of 1997–98, as well as export-oriented European countries such as Germany, and NAFTA.

World trade, industrial production and oil prices[1]

Trade, production and oil prices



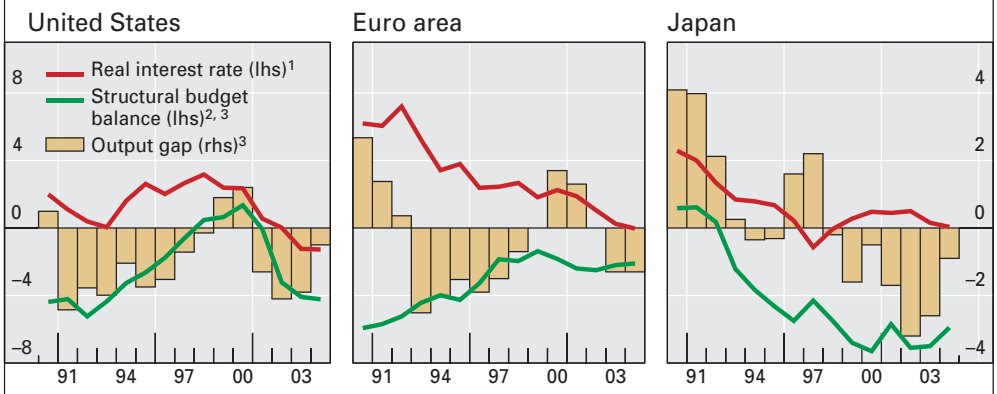
Industrial production, by region[5]



[1] Annual changes, in per cent. [2] Exports and imports in goods and services, in volume terms. [3] Weighted average of the economies and regions shown in the right-hand panel plus Canada, India, Korea, Russia, Taiwan (China), Thailand and the United Kingdom, based on 2000 GDP and PPP exchange rates. [4] UK Brent. [5] Uncentred four-month moving average. [6] Argentina, Brazil, Chile and Mexico.

Sources: OECD; Eurostat; national data. Graph II.2

Real interest rate, structural budget balance and output gap



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: ECB; OECD; Eurostat; national data. Graph II.3

Continued supportive monetary and financial conditions

While fiscal policies were less expansionary than in previous years, accommodative monetary policies continued to support the global expansion (see Chapter IV). Inflation-adjusted short-term interest rates remained in negative territory in the United States – notwithstanding the gradual tightening of monetary policy in the second half of 2004 – and stayed around zero in the euro area and Japan (Graph II.3). Financial market conditions remained favourable in the period under review, with long-term interest rates staying unusually low by historical and cyclical standards. Credit spreads for corporate and sovereign borrowers fell to historical lows and equity prices rose strongly. This configuration kept borrowing costs down and lifted asset values across the board. Households took particular advantage of favourable financing conditions, leading to rapid credit growth in many regions. As discussed in more detail in Chapter VI, long-term interest rates, credit spreads and volatility all declined despite monetary tightening by the US Federal Reserve.

A sharp increase in commodity prices ...

Strong economic growth, especially in emerging Asia, led to a large and sustained rise in commodity prices in 2004. By autumn, the average price of crude oil had increased by about two thirds to what was at the time a new record nominal high of $50 per barrel. The prices of non-oil commodities, and especially industrial supplies, also soared. The price of metals, for instance, rose by one quarter. These increases, together with rapidly rising transportation costs and spreading port congestion, suggested that the global expansion was approaching a speed limit. Indeed, in the second half of 2004 global growth slowed to rates that appear more consistent with long-term trends.

... with relatively mild effects on output and inflation

Compared to earlier episodes of sharply rising commodity prices, the impact on global activity and inflation has been relatively mild. One factor is the greater energy efficiency of advanced industrial economies. The oil intensity of OECD countries is now about half of that in the 1970s. Moreover, real oil prices in the period under review remained well below the levels reached during the oil price shocks of the past three decades. Second-round effects of higher oil prices were largely absent due to the limited pricing power of corporations, soft

labour markets and firmly anchored inflation expectations. A negative effect on global demand resulted from the redistribution of income from oil-consuming to oil-exporting countries. While the latter could not immediately spend all the windfall profits from rising oil income, their propensity to do so was markedly greater than in the past.

Widening growth differentials

Increasingly self-sustained US expansion ...

As global growth moderated in the second half of 2004, growth differentials widened. While US growth became increasingly self-sustained thanks to a pickup in corporate spending and stronger job creation, the euro area and Japan faced renewed weakness. Persistent growth differentials between the major areas led to a significant widening of external imbalances.

... but renewed weakness in the euro area ...

The slowdown in the euro area was also accompanied by larger intraregional growth differentials. France and Spain were able to maintain economic momentum on the back of robust domestic demand, but GDP in Germany and Italy contracted in the final quarter of last year. In Germany, both investment and consumption failed to revive as high unemployment and uncertainties regarding the impact of structural reforms weighed further on confidence.

... and Japan

Japan slipped into technical recession. Booming consumption at the beginning of the year and improving conditions in the corporate sector had nurtured the hope that a self-sustained recovery might be under way. However, as in the euro area, domestic demand did not pick up enough speed before export growth slowed down. The downturn was aggravated by a significant adjustment in production in IT-related sectors, which reflected measures taken to reduce relatively large inventories and excess capacity.

Robust growth in other advanced economies ...

Other advanced economies were less severely affected. The United Kingdom maintained substantial domestic growth momentum despite decelerating consumer spending. Strengthening domestic demand also ensured a continuation of solid growth in Sweden, while Australia, Canada and New Zealand enjoyed a strong improvement in the terms of trade and robust final domestic demand.

... and key emerging markets

The emerging market regions were also able to maintain considerable momentum (see Chapter III). China's expansion continued apace, despite administrative measures aimed at cooling the economy. Higher commodity prices and greater confidence in macroeconomic policies aided Latin America. Economic activity in central and eastern Europe also expanded faster than initially expected. The accession of eight countries from the region to the European Union on 1 May 2004 attracted capital inflows, while rapid credit growth and declining real interest rates strengthened domestic demand. Improving terms of trade lifted growth in Africa.

Outlook and risks

Robust growth is expected to continue in 2005 ...

The consensus forecast for this year is that the global economy will grow by about 4% (Table II.1). With healthy profits worldwide, corporate spending is expected to remain robust in the United States and accelerate in other regions in the course of 2005. Improving labour market conditions, in conjunction

with continued low inflation, should in turn support household income and consumption. The expiration of the textile quota system at the beginning of this year has provided a further boost to the exports of major Asian economies, especially China. Solid US growth in the first quarter of 2005 as well as an acceleration of activity in Japan and, to a lesser degree, the euro area from the weak fourth quarter of last year lend support to the consensus view.

... but rising oil prices ...

Yet recent developments point to certain risks to global growth. First, oil prices, which rose further in spring 2005, may well remain high for a prolonged period of time. The increase in long-term oil futures prices is consistent with the view that there has been a major upward shift in the equilibrium price of oil. Further rises – if they materialise – may have more severe consequences than currently anticipated. Recent signs of inflationary pressures in the United States underline these risks.

... and the possibility of higher interest rates ...

Second, a return of long-term interest rates, which are unusually low, to more normal levels could curtail spending by households, and may dampen residential construction. House prices in a number of countries appear vulnerable to downward corrections of uncertain magnitude.

... underline the need to tackle macroeconomic imbalances

Against this background, the reduction of macroeconomic imbalances remains a third key challenge. One issue is the mounting US current account deficit and growing surpluses elsewhere, especially in Asia. A related development is the continued rise in household debt and low household saving in many advanced industrial countries. Finally, fiscal deficits have remained high.

Growth and inflation

Average annual changes, in per cent

	Real GDP				Consumer prices[1]			
	Average 1991–2002	2003	2004	2005[2]	Average 1991–2002	2003	2004	2005[2]
Total[3]	3.5	3.6	4.8	3.9	12.9	2.9	3.2	3.1
Advanced industrial economies[3]	2.3	1.9	3.1	2.3	2.2	1.8	2.0	2.0
United States	2.9	3.0	4.4	3.4	2.7	2.3	2.7	2.8
Euro area	1.9	0.5	1.8	1.5	2.4	2.1	2.1	1.8
Japan	1.2	1.4	2.6	1.0	0.6	–0.3	–0.0	–0.1
United Kingdom	2.4	2.2	3.1	2.5	2.4	1.4	1.3	1.8
Other[3, 4]	2.7	1.9	2.9	2.5	2.2	2.4	1.6	1.9
Emerging economies[3]	5.1	6.1	7.1	6.3	28.5	4.5	4.9	4.8
Asia[3, 5]	7.1	7.5	7.8	7.2	6.5	2.3	3.9	3.8
Latin America[3, 6]	2.7	2.0	5.9	4.3	64.0	7.0	6.7	6.3
Central and eastern Europe[3, 7]	0.1	5.9	6.8	5.3	88.1	12.2	8.3	8.0
Other[3, 8]	2.1	4.5	4.3	4.5	5.6	3.8	1.0	2.3

[1] For the euro area and the United Kingdom, harmonised index; for Latin America, end-year data. [2] Consensus forecast published in May. [3] Weighted average based on 2000 GDP and PPP exchange rates. [4] Australia, Canada, Denmark, New Zealand, Norway, Sweden and Switzerland. [5] China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan (China) and Thailand. [6] Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. [7] The Czech Republic, Hungary, Poland, Russia and Turkey. [8] Saudi Arabia and South Africa.

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

Inflation

Low and stable inflation

Subdued inflationary pressures

Global inflation remained subdued in the period under review despite the sharp increase in oil and non-oil commodity prices, accommodative monetary and fiscal policies and diminishing slack in many economies. In the advanced industrial economies, consumer price inflation increased from 1½% at the beginning of 2004 to about 2½% towards the end of the year. The acceleration of inflation since early 2005, especially in the United States, has not fundamentally changed this picture. The inflationary impact of rising oil prices was more substantial in the emerging market economies, where the dependence on oil is generally higher than in advanced industrial economies (see Chapter III). Indeed, coupled with the impact of a rise in food prices, headline inflation in Asia increased from about 3% at the beginning of 2004 to a peak of almost 5% in the third quarter. The inflation picture also worsened in central and eastern Europe in the course of last year, following several years of disinflation.

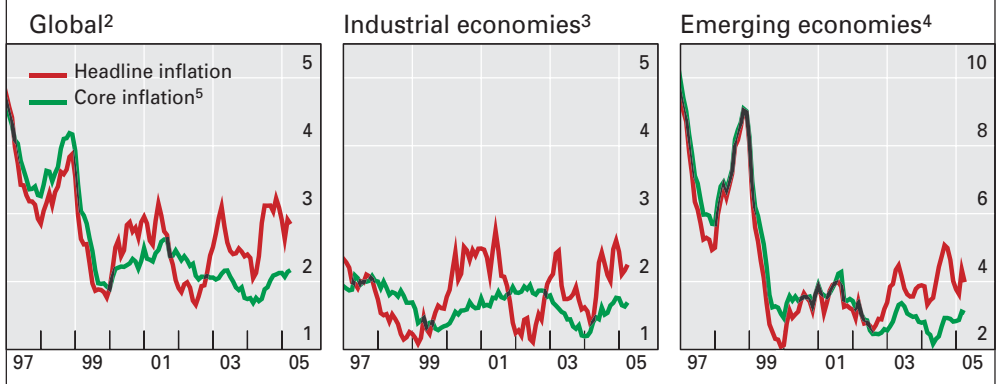
Core inflation broadly unchanged

Nevertheless, underlying inflationary pressures remained contained globally. Core CPI inflation (which excludes food and energy components from headline CPI) was essentially stable in many advanced and emerging economies. US core inflation remained around 1% below headline inflation of about 2½% in 2004. Mild deflation continued in Japan: core inflation was –½% in 2004 compared to zero headline inflation, reflecting a cut in public service prices. Sticky core inflation in the euro area was mainly attributable to the impact of tobacco and administrative price increases in 2004. Core inflation in major emerging market economies has not exceeded 3% since mid-2003. As a result, the wedge between headline and core inflation rates widened in 2004 (Graph II.4).

Low variability of inflation rates ...

From a longer historical perspective, inflation rates have remained low and stable. The monthly variability of inflation rates in advanced industrial countries has fallen, from about 1 percentage point in the early 1980s to 0.2 percentage

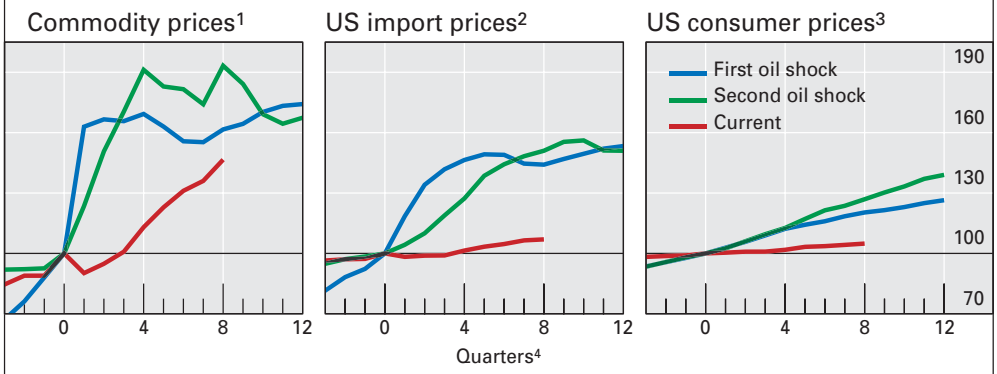
Headline and core inflation[1]



[1] Uncentred 12-month moving averages of annualised monthly changes in consumer prices, in per cent; weighted averages based on 2000 GDP and PPP exchange rates. [2] Industrial and emerging economies cited. [3] Canada, Denmark, the euro area, Japan, Norway, Sweden, the United Kingdom and the United States. [4] Brazil, Chile, China, Hungary, India, Indonesia, Korea, Mexico, Poland, South Africa and Thailand. [5] CPI excluding food and energy components.

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

Episodes of rising commodity prices and inflation



1 World market; raw materials; in terms of US dollars. 2 Goods and services. 3 All urban consumers. 4 Zero quarters correspond to 1973 Q4 (first oil shock), 1978 Q4 (second oil shock) and 2003 Q1 (current).

Sources: Hamburg Institute of International Economics (HWWI); national data. Graph II.5

points in 2004. The same is true for the dispersion of inflation rates across countries. In 2004, core CPI inflation rates in advanced industrial economies varied from 0% to 3%. This stands in marked contrast to the early 1980s, when core inflation rates in industrial countries ranged from 4% (Japan) to more than 12% (Norway and the United Kingdom).

... compared to earlier commodity price shocks

The relative stability of inflation rates in 2004 is particularly striking when set against past periods of rising oil prices (Graph II.5). While the increase in oil prices itself was small compared with the past two episodes, that in commodity prices as a whole is roughly equivalent. Despite the sharp depreciation of the dollar, which should have added to upward pressures, import price inflation in the United States has remained surprisingly contained. The effect on consumer prices is almost negligible.

Limited impact on major advanced economies ...

Thus the impact of changes in commodity prices on consumer prices has declined, not only in the United States, but also in other countries. Since the

Inflation pass-through

	From commodity prices to import prices1		From exchange rates to import prices1		From import prices to core CPI2	
	1971–89	1990–2004	1971–89	1990–2004	1971–89	1990–2004
United States	0.29 **	0.21 **	0.48 **	0.18 **	0.25 **	0.10
Japan	0.35 **	0.26 **	0.74 **	0.36 **	0.23 **	0.05
Germany	0.22 **	0.16 **	0.37 **	0.28 **	0.17 **	–0.03
France	0.20 **	0.12 **	0.76 **	–0.06	0.27 **	–0.14
United Kingdom	0.19 **	0.11 **	0.68 **	0.45 **	0.29 *	0.01
Italy	0.33 **	0.25 **	0.56 **	0.41 **	0.32 **	0.46

Note: ** and * indicate that the figures are significantly different from zero at the 99% and 95% confidence levels respectively.

1 Changes, in per cent, in import prices in response to a 1% increase in commodity prices (measured in domestic currency), or in response to a 1% depreciation in the nominal effective exchange rate. 2 Changes, in per cent, in core consumer prices in response to a 1% increase in import prices.

Sources: OECD; HWWI; national data; BIS calculations. Table II.2

1990s, for major advanced industrial economies, import prices have become significantly less sensitive to changes in commodity prices than in the previous two decades, which included the two large oil shocks (Table II.2).

... associated with a large shift in relative prices

Low consumer price inflation in the face of sharply rising commodity prices implies a considerable change in relative prices: between 1995 and 2004, the price of consumer goods in the United States fell 30% relative to raw materials. Similar relative price adjustments have taken place in the euro area and Japan.

Factors behind low and stable inflation

Changing composition of imports ...

One factor behind the reduced impact of higher commodity prices on the level and variability of domestic inflation, especially in advanced industrial countries, is the changing composition of imports. Oil accounts for a smaller portion of imports than two decades ago as energy consumption per unit of GDP has declined. Moreover, the share of energy and raw materials in the imports of industrial countries has fallen as the production of manufactured goods has shifted to emerging market economies.

... and growing competition in goods markets ...

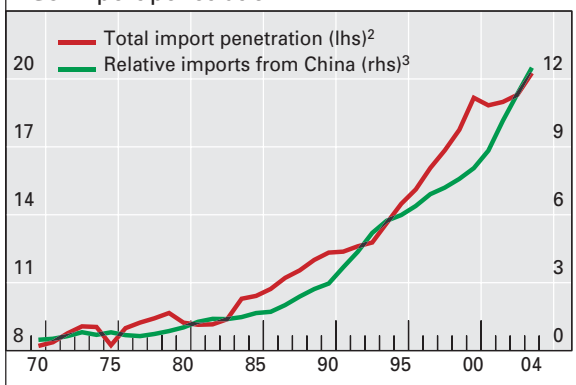
A second factor is changes in the pricing behaviour of producers of manufactured goods. Deregulation and technological progress have increased competition in goods markets and limited the room for raising prices even in the presence of cost shocks. Similarly, the possibility of switching to cheaper sources in the world market has put downward pressure on the markups of current suppliers. The steadily growing import penetration from emerging market countries such as China illustrates this effect (Graph II.6). However, higher productivity, for instance the setting-up of more efficient retail networks in the United States and the United Kingdom, has also allowed firms to maintain profit margins.

... as well as labour markets

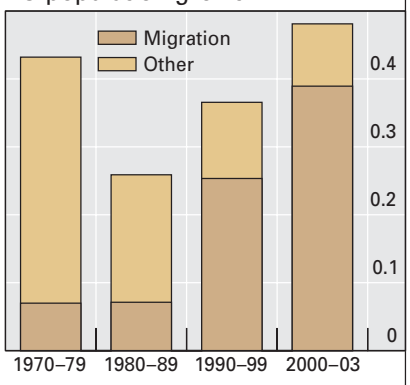
Third, higher energy prices have not led to greater wage pressure. Unit labour costs in the business sector of OECD countries increased by ½% in 2004 compared to an annual average of about 4½% in the 1980s. Many

Indicators of globalisation

G3 import penetration[1]



EU population growth[4]



[1] The United States, the euro area and Japan; in per cent. [2] Weighted average of the ratio of real imports of goods and services to real GDP, based on 2000 GDP and PPP exchange rates. [3] Goods imports from China as a share of total goods imports. [4] Contributions to population growth in the EU 15; annual averages, in percentage points.

Sources: OECD; Eurostat; national data. Graph II.6

observers believe that the widespread relocation of production, the outsourcing of some services and the increased mobility of labour across borders have curtailed the bargaining power of workers and trade unions in many industrial countries. For instance, hourly labour costs in most western European countries exceed those in the new EU member states by a factor of five to 10. This has encouraged the migration of workers from new member states to western Europe (often with a second wave of migration from the countries further east to the new member states). The steady growth of remittances from industrial to developing countries (in particular to Latin America and emerging Asia) suggests that similar developments are taking place in other parts of the world. Even where actual migration is limited, the threat that higher wages will lead to a relocation of production has had a similar effect on wage behaviour. In Japan, this has contributed to a growing number of part-time workers. In Germany, several large firms have recently negotiated contracts that contain a job guarantee in exchange for real wage cuts.

Enhanced credibility of monetary policy

Finally, changes in the inflation process itself may have reduced the immediate effect of rising commodity prices. Many observers have argued that, because of firmly anchored expectations of low inflation and the greater credibility of monetary policy, cost shocks in industrial countries are now more likely to be perceived as temporary (see Chapter IV). Under such circumstances, firms may hold their prices constant for a significant time.

Reduced pass-through as a broad phenomenon

These factors may also explain a lower pass-through of exchange rate movements into import and consumer prices (Table II.2). The lower share of raw materials in imports has reduced not only the direct impact of higher commodity prices on inflation, but also the impact of exchange rate changes as raw materials tend to exhibit a high exchange rate pass-through. In addition, the greater contestability of markets and a commensurate reduction in the market power of dominant firms have mitigated inflationary pressures arising from depreciation. For exporters, wage moderation has provided leeway to keep prices in the importer's currency stable and maintain profit margins despite an appreciation of the domestic currency. In Germany, for instance, real unit labour costs have fallen by almost 20% over the past two decades. Finally, by reducing the persistence of inflation, the greater credibility of monetary policy may have increased the readiness of firms to absorb exchange rate shocks that are perceived as temporary.

Outlook

Low inflation is expected to continue ...

Inflation is expected to remain low in 2005 (Table II.1). This prospect is broadly consistent with the expected cyclical position of the major economies: a slowdown of US growth to rates closer to potential, combined with a moderate deceleration in productivity growth; continued spare capacity in the euro area; and declining slack in Japan.

... and downward pressure on prices is possible ...

Further downward pressure on consumer prices might come from the structural changes discussed above. For instance, the removal of textile quotas in North America and Europe this year has boosted imports from China and India. Yet it is too early to assess the effect on the prices of clothing and textiles, although the experience of countries such as Japan and Norway,

Output gap and inflation[1]

	United States	Japan	Germany	France	United Kingdom	Italy	Canada
1971–89	0.11 **	0.37 **	0.10 **	0.18 **	0.10	0.17 **	0.11 **
1990–2004	0.07 **	0.08	0.09	0.05	0.28 **	0.05	0.09

[1] Changes, in per cent, in core consumer prices in response to a 1 percentage point change in the output gap. ** indicates that the figures are significantly different from zero at the 99% confidence level.

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

which had not imposed textile quotas or had lifted them earlier, suggests that it might be significant. More generally, the large reduction in the relative price of manufactured goods vis-à-vis commodities could be seen as an indication of a high elasticity of supply in those emerging economies that have become key exporters of manufactured goods.

... as is a diminished impact of domestic factors

Increased globalisation could well mean that domestic factors have become less of a determinant of inflation in individual countries. In particular, the integration of countries with abundant labour supply may have reduced wage pressures in the global economy as a whole. Indeed, estimates of the Phillips curve show that coefficients of output gaps, which largely reflect domestic supply and demand conditions, have become smaller for most industrial countries, even if not decisively so for some of them (Table II.3).

Uncertainties remain

Nevertheless, the impact on inflation of smaller domestic output gaps, in combination with unused capacity at the global level, remains uncertain. The increase in core goods prices in the United States around the turn of the year might indicate that firms have regained some pricing power. Looking further ahead, higher incomes in emerging economies might lift the demand for goods and services. Eventually, capacity constraints on labour supply will reappear at the global level, as they have always done at the national level.

Current account developments

Widening external imbalances

Larger current account imbalances ...

Global current account imbalances increased further in the period under review. The growing external deficit of the advanced industrial economies primarily reflects a further widening of the US current payments gap, which reached about $670 billion or over 5½% of GDP in 2004 (Table II.4). In contrast, the current account surpluses of net commodity exporters rose. Several major Asian economies also continued to run sizeable surpluses, despite deteriorating terms of trade and rapid growth. Japan, with a surplus of about 3½% of GDP, accounts for about half of the Asian external current account balance. While China's net surplus was not large in 2004, it has recently been increasing sharply. The euro area again posted a small current account surplus in the order of ½% of GDP in 2004; while Germany had a surplus of almost 4% of GDP, Spain recorded a deficit of about 5%. The current account positions

of other advanced economies changed little, with the United Kingdom and Australia again recording considerable deficits. Central and eastern European countries also continued to run significant current account deficits while, in contrast, Latin America maintained the trend improvement that began in the late 1990s.

... in part due to rising commodity prices ...

One major factor behind the growing global imbalances was the sharp rise in commodity prices. Higher prices added more than $100 billion or ¼% of GDP to the net oil imports of OECD countries. This is comparable to the effect of the oil price increases in the 1990s, but much less than during the two earlier oil price shocks. High commodity prices boosted export revenues in the Middle East, Russia and other net exporters of commodities. One notable exception to this picture was Australia. It recorded a larger deficit, despite the considerable improvement in the terms of trade, in part because exports were apparently held back by capacity constraints.

... and continued US-led growth

The second factor explaining the global pattern of current account balances was that the United States continued to lead the recovery in the advanced industrial world. Weak domestic demand growth in other major economies restrained the demand for US products abroad, while imports accelerated due to buoyant US consumption. This was essentially a continuation of the pattern observed since 2001. In addition, firmer business investment in the United States was associated with some strengthening of imports of capital goods in 2004.

International saving and investment imbalances

National saving and investment balances by definition mirror current account positions. Growing surpluses in Asia and the oil-exporting countries in 2004 reflected a further increase in aggregate saving rates in these regions. Investment rates in emerging Asia also increased, but remained well below the

Current account balances

In billions of US dollars

	Average 1991–2000	2001	2002	2003	2004	*Memo: 2004*[1]
United States	–153	–386	–474	–531	–666	*–5.7*
Euro area[2]	20	13	54	26	36	*0.4*
Japan	107	88	112	137	172	*3.7*
Other advanced industrial economies	–7	36	33	52	42	*0.8*
China	13	17	35	46	69	*4.0*
Other emerging Asia	9	74	96	124	124	*4.6*
Latin America	–49	–54	–16	7	16	*0.8*
Central and eastern Europe	–12	–17	–24	–37	–51	*–5.0*
Russia	10	34	29	35	60	*12.2*
Saudi Arabia	–8	9	12	28	52	*20.7*
Rest of the world	–14	25	10	30	65	*3.9*
Memo: World[3]	*–84*	*–161*	*–133*	*–83*	*–81*	...

[1] As a percentage of GDP. [2] Sum of the balance of individual euro area economies. [3] Reflects errors, omissions and asymmetries in balance of payments statistics.

Sources: IMF; national data. Table II.4

levels seen prior to the Asian crisis – with the notable exception of China. The widening of the US current account deficit in 2004 had its counterpart, for the first time since 2000, in growing private investment rather than a decline in national saving. The latter remained broadly unchanged at a historically low level.

Adjustment mechanisms in the real economy

Previous patterns of external adjustment

Past current account reversals in advanced industrial economies typically involved a combination of exchange rate and interest rate adjustments as well as a rebalancing of global growth. For instance, the dollar depreciated sharply in broad real effective terms before the US current account deficit began to narrow in 1987 (Graph II.7). The resulting shift in relative prices in favour of US tradable goods was then followed by a sharp acceleration of US exports. The effect was accentuated by the stronger income growth for major trading partners relative to the United States. High real interest rates in the United States helped to raise private savings in the early 1980s, thereby limiting the impact of a growing fiscal deficit on the current account. Fiscal tightening in the late 1980s supported the current account reversal.

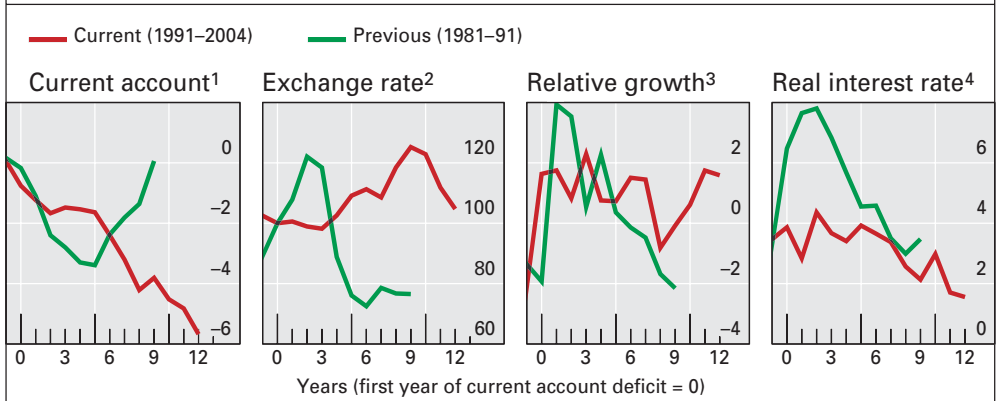
US export growth picked up ...

All of these adjustment mechanisms were considerably muted in the period under review. First, the dollar has depreciated in broad real effective terms by about 20% over the past two years. This is much less than in the mid-1980s, when it fell almost 50% between 1985 and 1988 in terms of relative unit labour costs. While US export growth accelerated in 2004, exports still lacked the dynamism seen in the second half of the 1980s.

... but US imports grew faster ...

Second, growth in the major trading partners provided little stimulus to exports. The fact that US import growth has continued to outpace exports in the past few years – even taking into account the effect of rising oil prices – is in part the mirror image of the relative strength of US domestic demand vis-à-vis that of major trading partners. Projections for this year and 2006 show only a gradual and incomplete convergence of growth rates. An aggravating factor is that, to

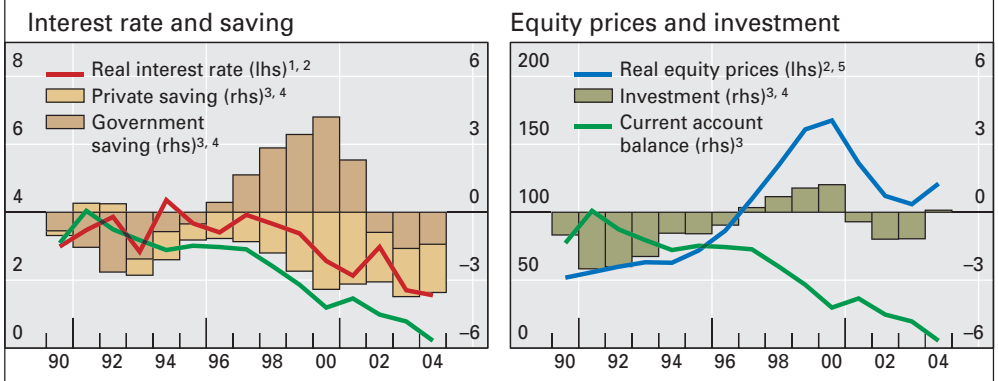
Periods of US current account deficits



[1] Current account balance as a percentage of GDP. [2] Real effective exchange rate, in terms of relative unit labour costs; first year of current account deficit = 100. [3] Annual change in US real GDP less that in four main trading partners (weighted average based on 2000 GDP and PPP exchange rates). [4] Long-term interest rate deflated by annual consumer price inflation.

Sources: National data; BIS. Graph II.7

US asset prices and current account



[1] Ten-year Treasury notes and bonds. [2] Deflated by consumer prices. [3] As a percentage of GDP. [4] Cumulative changes from 1989 level, in percentage points. [5] S&P 500; 1990–2004 = 100.

Source: National data. Graph II.8

date, the slower pass-through of exchange rate movements into import prices in the United States may have blunted the incentives to reallocate spending from imports to domestic goods, and to invest in the production of tradable goods.

... as low interest rates hindered adjustment

Third, the unusually low level of long-term real interest rates also seems to have contributed to the US current account deficit in the past few years (Graph II.8). Low interest rates have meant lower borrowing costs and an associated increase in asset values (especially residential property; see below). This has also facilitated the financing of growing US fiscal deficits, which in large part resulted from tax cuts. Both channels have contributed to higher household demand for imports. These developments stand in sharp contrast to the late 1990s, when the growing US current account deficit reflected higher business investment on the back of rising equity prices.

Policy measures to facilitate adjustment

Enhancing the effectiveness of the adjustment mechanisms in the real economy will require a combination of several policy elements in deficit and surplus countries. The general elements of such policies are largely undisputed: higher household saving and fiscal consolidation in the United States in particular (discussed below); structural reforms that generate stronger growth in the non-tradable sectors in Europe and Asia; and greater exchange rate flexibility in emerging Asia (see Chapter V). All these measures would enhance the effectiveness of equilibrating mechanisms at the global level, which could reduce external imbalances in the medium term.

Private sector saving and investment

Trends

Growing global saving

Global saving continued to grow in 2004. World national saving rose to 25% of GDP, about 1 percentage point more than the annual average for the current decade and 2 percentage points above that for the 1990s (Table II.5). This increase was driven by higher saving in the developing world. The major contributor was Asia, especially China, where the national saving rate rose to

Global saving and investment trends

As a percentage of GDP

	Average 1990–99	Average 2000–02	2003	2004	*Memo: 1991–2004*[1]
World saving	22.9	23.4	23.9	24.9	*1.7*
Advanced economies[2]	21.3	20.6	19.1	19.4	*–2.8*
United States	16.3	16.2	13.5	13.7	*–2.5*
Euro area	21.5	21.3	20.3	20.9	*–1.1*
Japan	31.6	27.8	27.1	27.6	*–6.8*
Emerging economies[3]	25.3	27.2	29.8	31.5	*6.9*
Developing Asia	31.0	32.6	36.5	38.2	*9.5*
China	40.3	39.9	45.5	48.0	*9.6*
Latin America	18.3	17.8	20.0	21.0	*1.9*
Central and eastern Europe	20.6	18.8	18.6	19.1	*–7.0*
World investment	24.0	23.2	23.5	24.6	*0.1*
Advanced economies[2]	21.8	21.0	20.0	20.7	*–2.5*
United States	18.7	19.4	18.4	19.7	*1.1*
Euro area	21.1	20.9	19.5	20.2	*–2.9*
Japan	29.3	25.3	23.9	23.9	*–9.0*
Emerging economies[3]	27.2	26.1	27.9	29.2	*2.8*
Developing Asia	32.2	30.8	33.6	35.5	*5.1*
China	38.5	37.9	42.4	43.9	*8.7*
Latin America	20.9	19.8	19.0	19.8	*0.3*
Central and eastern Europe	23.3	23.1	23.2	23.8	*–2.9*

[1] Cumulative change, in percentage points. [2] Including Asian newly industrialised economies (NIEs). [3] Emerging economies other than Asian NIEs.

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

48%. Little is known about sectoral saving patterns in China and possible shortcomings of national accounts statistics, but a largely unchanged fiscal deficit suggests that the rise is primarily attributable to the private sector. Growing saving by oil-exporting countries as a consequence of higher export revenues was the next major contributor to higher saving worldwide in 2004. The immediate effect was probably primarily on public saving, as about two thirds of oil income boosted fiscal revenues.

Marginally higher saving in advanced economies

National saving in the advanced industrial economies increased in aggregate for the first time since 2001, although only marginally. However, saving rates remain well below the averages of the past two decades. The slight reduction in fiscal deficits was the main factor behind the recent stabilisation. Higher corporate saving in the form of retained profits, a development that has been observed since 2000, also contributed to rising saving rates. At the same time, the trend decline in household saving continued, although with considerable variation across countries. While household saving rates in the United States declined further, they increased moderately in a number of European countries and Japan. Increases were most notable in countries where there was uncertainty about employment prospects and pensions, particularly in Germany and the Netherlands.

Buoyant residential investment ...

Aggregate investment (including residential and business capital formation) picked up in most advanced industrial and emerging market economies. The rate of acceleration varied, with China and the United States recording the largest increases (Table II.5). One common feature seems to be the global strength of investment in residential housing. In OECD countries, such investment grew in real terms by more than 6% in 2004, the highest rate since the mid-1990s.

... but business investment also picked up

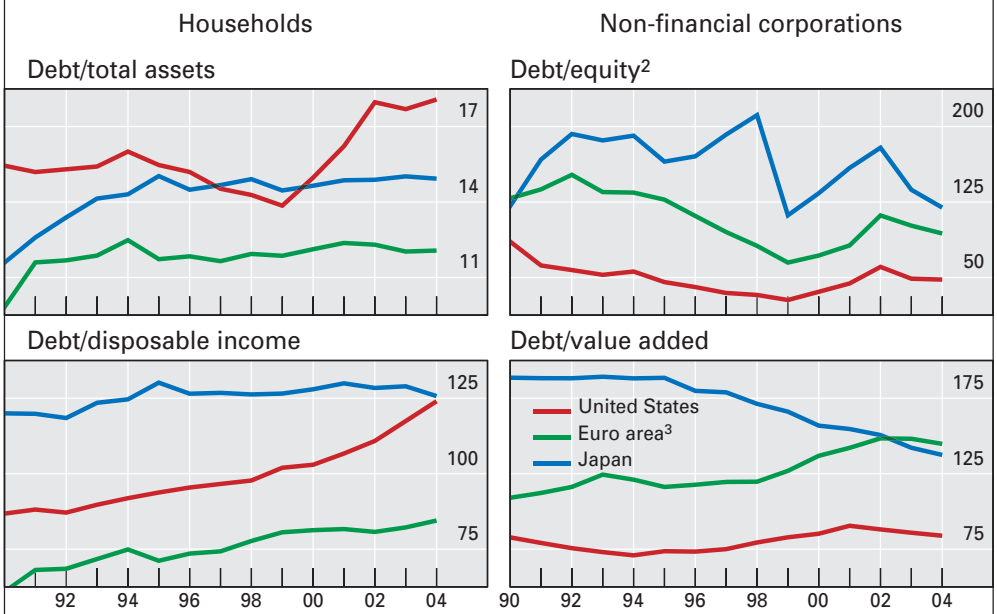
Business investment also gained momentum, especially in the advanced industrial countries, after a slow recovery from the cyclical trough in 2002. This was primarily a reflection of firming corporate spending in the United States in the course of 2004. Corporate spending in the euro area expanded after two years of contraction, although at a modest pace. Investment rates in Japan remained stable. Overall, however, corporate investment in advanced economies was still below that of the second half of the 1990s, both in terms of growth rates and as a share of GDP.

Corporate balance sheets and investment

Stronger corporate balance sheets ...

Corporate balance sheets improved in the three major currency areas in 2004. Debt declined relative to equity and value added across the board, although US corporations still appear stronger than those in the euro area and Japan (Graph II.9). Robust profit growth supported this improvement of corporate balance sheets. The marked rise in profits was a global phenomenon (Graph II.10). In the United States, both the profit share and margins were close to record levels in 2004, while in Europe profit shares were near the levels of the mid-1990s, and in Japan the situation improved substantially.

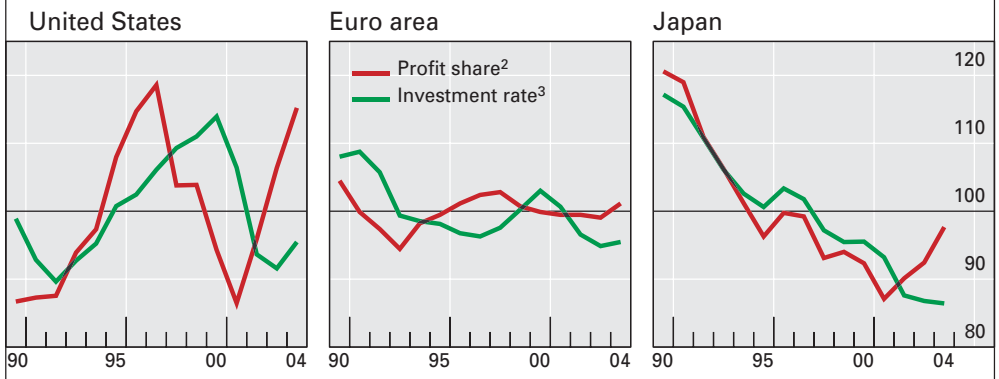
Private sector assets and debt[1]



[1] In per cent. [2] Equity defined as the market value of outstanding equities. [3] Weighted average of France, Germany and Italy, based on 2000 GDP and PPP exchange rates.

Sources: OECD; national data; BIS estimates. Graph II.9

Profit share and investment rate[1]



[1] 1990–2004 = 100. [2] Property and entrepreneurial income/GDP (whole economy); for the United States, corporate profit/business GDP. [3] Investment/GDP; for the United States, business sector.

Sources: ECB; OECD; Eurostat; national data. Graph II.10

... but relatively sluggish investment ...

Given a background of unusually high profits and favourable supply side conditions, the relative sluggishness of corporate investment was something of a surprise. Low real interest rates, tight credit spreads and rising equity prices kept the cost of capital down. Moreover, labour productivity in the business sector grew by about 3% in the OECD countries, although the euro area was lagging considerably.

... attributable to risk aversion ...

Increased risk aversion shown by corporate management after the equity market collapse appears to have restrained fixed capital formation. Firms had focused primarily on the restructuring of balance sheets, visible in the efforts to reduce debt ratios and in "cash hoarding" (see Chapter VI). The focus on the reduction of leverage probably reflected concerns about continuing vulnerability to changes in financial market conditions. Greater caution on the part of corporate management regarding the accessibility of credit under adverse economic conditions, against the backdrop of changes in bank behaviour in the past few years, seems to have been an additional financial consideration in Japan and some European countries.

... the sectoral composition of profits ...

In the United States, the sectoral composition of profit growth also played a role. Many service sectors – such as retail trade and financial services – have recorded relatively high and stable profit growth in the past few years. In contrast, profits in manufacturing dropped by almost 70% in 2001–02. The share of manufacturing profits in total profits declined from 25% to less than 10%. Manufacturing profits recovered in 2004, although they remained well below their late 1990s level, both in dollar terms and as a percentage of the sector's value added. Investment declined in line with profits in 2001 and 2002. Even after recovering in 2003, business spending in manufacturing was only 10% higher than during the 1990s, while investment in the business sector as a whole was up almost 50%.

... and subdued growth of home markets

In the euro area and Japan, the uncertain outlook for domestic demand continued to weigh on corporate spending. Surveys carried out in the euro area revealed the ongoing pessimism of corporations, especially regarding the prospects for domestic markets. In an environment of sluggish growth, rising

profits have been associated with moderate increases in compensation and persistently high, and in some countries growing, unemployment. One reason for this has been the continued emphasis of corporations on capital deepening and labour shedding, primarily in manufacturing, where global competition is particularly fierce. Measures to increase potential growth – especially in the service sectors – and more flexible labour markets are key to improving employment prospects and in turn demand.

Household balance sheets and spending

Household wealth rose ...

Rising house and equity prices increased the wealth of private households in many countries in 2004. In the advanced industrial economies, for which data on household assets and liabilities are available, household wealth grew both in absolute terms and relative to disposable income (with the notable exception of Japan). The prices of residential property, which accounts for the lion's share of household assets in most economies, rose sharply across a broad range of countries. In many cases, house prices at the end of 2004 were at, or close to, historical peaks (Table II.6).

... but so did debt

Rising household wealth was associated with a commensurate build-up of debt. As a consequence, the debt/asset ratio of households remained broadly unchanged in the euro area and increased in the United States (Graph II.9). Correspondingly, debt as a share of disposable income continued to rise, especially in the United States. The bulk of the increase in household

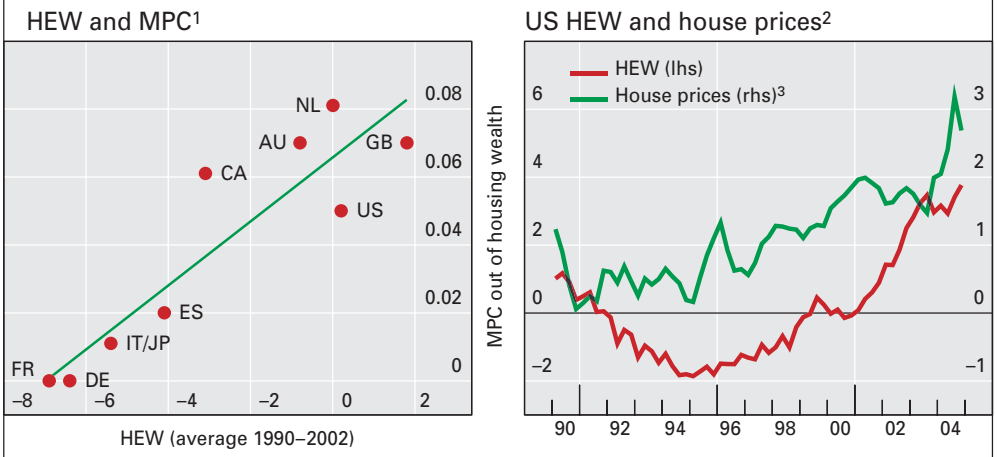
Residential property prices and mortgage debt

	Residential property prices[1]				Change in residential mortgage debt[2]
	Annual change		Change from peak 2004	Date of peak	
	1996–2003	2004			
United States	6.0	11.2	0.0	2004 Q4	3.9
Japan	–3.3	–6.1	–37.1	1991 H1	–0.8
Germany	–0.1	–1.0	–2.0	2002	–0.8
United Kingdom	11.7	12.3	0.0	2004 Q4	5.2
France	7.2	15.6	0.0	2004 H2	1.9
Italy	4.6	9.7	0.0	2004 H2	1.9
Canada	4.5	7.8	0.0	2004 Q4	1.7
Spain	10.8	17.4	0.0	2004 Q4	4.7
Netherlands	10.2	1.8	–2.5	2004 Q3	4.8
Australia	10.2	2.7	–0.2	2004 Q2	5.4
Switzerland	0.5	1.8	–12.9	1989 Q4	3.4
Belgium	5.8	4.2[3]	0.0	2004 Q2	0.1
Sweden	7.8	10.0	0.0	2004 Q4	2.7
Norway	7.8	10.5	0.0	2004 Q4	2.7
Denmark	6.7	11.3	0.0	2004 Q4	1.8
Finland	8.1	5.6	0.0	2004 Q4	2.7
Ireland	14.4	7.8[4]	0.0	2004 Q3	9.5

[1] End of period; nominal changes, in per cent; for Japan, land prices. [2] Between 2003 and 2004; in percentage points of GDP. [3] Up to second quarter. [4] Up to third quarter.

Sources: OECD; various real estate associations; national data; BIS estimates. Table II.6

Housing equity withdrawal



AU = Australia; CA = Canada; DE = Germany; ES = Spain; FR = France; GB = United Kingdom; IT = Italy; JP = Japan; NL = Netherlands; US = United States.

[1] HEW = housing equity withdrawal, expressed as a percentage of disposable income; MPC = marginal propensity to consume. [2] Four-quarter moving average. [3] Quarterly changes in residential property prices, in per cent.

Sources: OECD; *Economics Department Working Papers*, ECO/WKP(2004)17; national data. Graph II.11

debt was attributable to borrowing against housing collateral in the form of mortgage loans.

Housing equity withdrawal supported consumption ...

In many countries, such as France and Spain, increased mortgage borrowing was used to finance purchases of residential property. However, housing equity withdrawal – the extraction of housing wealth through borrowing against housing collateral in excess of investment in residential property – has added substantially to effective purchasing power in a number of other countries in the past few years. These include the United States, the United Kingdom, the Netherlands and Australia. Housing equity withdrawal has been closely correlated with the propensity to consume out of housing wealth since the 1990s (Graph II.11). While a higher cost of housing services should, in principle, have reduced spending on other products by those who do not own houses, this effect is hard to find in the data.

... but poses risks going forward

How vulnerable private consumption is to a future decline in house prices is difficult to judge. The experience of the United Kingdom, Australia and the Netherlands, which have recently witnessed decelerating or even falling house prices, suggests an adverse effect of slowing housing markets on spending. In the United Kingdom and Australia, consumption has decelerated recently. Private consumption in the Netherlands has been weak during the past two years or so amidst rising unemployment. Overall, the impact on spending seems likely to depend on a number of factors, such as a revision of long-term expectations regarding income from labour and pensions or changes in interest rates. One, more comforting development is that the correlation between housing equity withdrawal and house price increases in the United States has recently not been as strong as in the past. The fact that housing equity extraction was on average close to zero during 1990–2002 could indicate that households regard it primarily as a means to smooth

consumption over time. Looking forward, some payback might then be expected from the equity extraction of the past few years. A nationwide decline in nominal house prices in the United States, the world's largest market, would, in any event, be without precedent in the last few decades.

Fiscal policy

Recent fiscal performance

Budget deficits remained high in the main industrial countries

Despite a modest tightening of fiscal policies in 2004, the budget deficits of the major industrial countries remained well above historical averages (Table II.7). The widening of deficits was particularly pronounced in Germany, the United Kingdom and the United States, where fiscal positions have deteriorated by 5–7% of GDP since 2000 (Table II.8). By contrast, in the smaller industrial economies (Australia, Canada and Spain, among others), as well as many emerging market economies, fiscal positions have improved in recent years. While some of this improvement reflected favourable cyclical conditions, many emerging market economies also initiated structural fiscal reforms (see Chapter III). There was also some progress in containing the growth of public debt, partly reflecting low interest rates. However, contingent liabilities related to ageing populations will add significantly to future public sector liabilities unless policies are changed. Public debt remains especially high in Italy and Japan.

Deficits are mainly structural

The reasons for larger budget deficits in the major industrial countries are varied but essentially structural (Table II.7). Wider US budget deficits in recent years have, for the most part, resulted from tax cuts and increased spending on the military and on security. The US budget deficit in 2004 was lower than expected because economic growth generated higher revenues and non-defence spending was restrained. Stronger growth and expenditure restraint also reduced the deficit in Japan last year. However, the authorities there have yet to tackle the consequences of large fiscal imbalances inherited from the

A historical comparison of fiscal positions[1]

	Average 1980–2003			2004			
	Financial balance	Structural balance[2]	Gross debt	Financial balance	Structural balance[2]	Gross debt	Debt stabilising effort[3]
Industrial economies[4]	–3.4	–3.4	67	–3.8	–3.5	80	2.1
United States	–3.3	–3.1	63	–4.3	–4.2	64	2.0
Euro area	–3.9	–3.6	66	–2.8	–2.1	78	0.8
Japan	–3.1	–3.2	89	–6.1	–5.9	158	6.8
Emerging economies[5]	–3.0[6]	…	44[6]	–2.5	…	47	…

[1] General government, as a percentage of GDP. [2] Cyclically adjusted financial balance, as a percentage of potential GDP. [3] Change, in percentage points, in financial position necessary to stabilise net debt assuming nominal GDP growth at potential rate. [4] Weighted average of Australia, Canada, France, Germany, Italy, Japan, the Netherlands, Spain, the United Kingdom and the United States, based on 2000 GDP and PPP exchange rates. [5] Weighted average of the 24 largest emerging market economies, based on 2000 GDP and PPP exchange rates. [6] 1998–2003.

Sources: IMF; OECD; Institute of International Finance (IIF); JPMorgan Chase; BIS calculations. Table II.7

Recent fiscal performance[1]

	Financial balance			Debt		
	2003	2004	Cumulative change 2001–04[2]	Net 2004	Gross 2004	Gross Cumulative change 2001–04[2]
United States	–4.6	–4.3	–5.9	44	64	5
Euro area	–2.8	–2.8	–2.9	53	78	1
Germany	–3.8	–3.7	–5.0	55	70	9
France	–4.1	–3.7	–2.3	46	73	7
Italy	–3.0	–3.0	–2.3	96	119	–6
Japan	–7.7	–6.1	1.4	84	158	24
United Kingdom	–3.4	–3.4	–7.2	36	44	–2
Canada	0.6	1.3	–1.6	31	70	–11
Australia	0.8	0.8	–0.1	2	21	–5

[1] General government, as a percentage of GDP. [2] In percentage points.

Sources: IMF; OECD. Table II.8

1990s. Budget deficits in the euro area are also mainly structural. Despite a smaller cyclical component of deficits than in 2003, almost half the members of the monetary union failed to meet the fiscal criteria of the Stability and Growth Pact (in some cases for the third year in a row).

Little room for further fiscal policy ease

Fiscal expansion over the past few years has thus left many countries little room for further policy ease. Indeed, in the euro area the need for consolidation now coincides with weaker economic activity. Strong output growth and the large current account deficit in the United States make it both easier and more desirable to cut the deficit.

Deficit reduction goals still lack specifics

Against this background, most industrial countries have announced plans to cut budget deficits by the end of the decade (Table II.9). The US administration has committed itself to reducing the fiscal deficit to below 2% of GDP by 2010. In Japan, the authorities aim to achieve a primary surplus (excluding social security) by the early 2010s, and to stabilise the gross government debt at around 150% of GDP. In the euro area, countries with weak underlying fiscal positions have committed themselves to improving those positions by about ½ percentage point of GDP per year until 2007. However, specific policy changes to achieve these objectives have generally yet to be confirmed.

Policy options for fiscal consolidation

Tax reform, including flat tax proposals, gains attention

Tax reform has recently returned to the policy agenda, partly because of the apparent success of earlier tax reforms in Ireland and the United Kingdom. The recent flat tax experiments in Slovakia (which introduced a flat corporate and individual income tax rate and a uniform VAT rate, all at 19%) and elsewhere in central and eastern Europe have also attracted attention. More intense global competition and the possibility of production relocation suggest limited scope for increasing direct taxes, especially for corporations, in the future. Relying on indirect taxes might appear increasingly attractive against this background.

Few changes to expenditure programmes ...

Cuts in public current expenditure and entitlement programmes (other than pensions) have not featured prominently in recent reform proposals. In the euro area, a major constraint has been high unemployment. Where steps towards reform of unemployment benefits and health care financing have been taken (for instance in Germany), the authorities have encountered significant difficulties.

... but pension reforms have started

Several countries have taken steps to reform their pension systems. Japan's pension reform, passed in 2004, features gradual cuts in pension benefits and increases in individual contributions as well as transfers from the government to the pension system (possibly including tax increases). These changes are projected to cut the system's long-term deficit. Italy's pension reform, also introduced last year, will raise the effective retirement age starting in 2008. In addition, it will allow workers to top up their mandatory retirement pension by paying contributions into complementary private pension funds. The US administration also announced in its 2005 budget a plan to introduce voluntary pension accounts. In Germany, the ratio of pension benefits to average wages has been reduced, and benefit levels have been linked to the old-age dependency ratio.

Market discipline could provide incentives for fiscal consolidation

Regarding incentives to implement fiscal consolidation plans, pressures coming from government debt markets are expected to play an important role. Somewhat surprisingly, financial markets at present have not built in much of a risk premium for current and prospective fiscal imbalances in major industrial countries. In the euro area, for instance, despite some rating downgrades, the spillovers from large budget deficits or high debt levels to real interest rates or sovereign bond spreads have so far been rather limited. One explanation is that the successes in curbing budget deficits in the mid-1990s have lent credence to recent official statements of intent to cut deficits in the future. Another is that investors see the risks associated with current fiscal deficits as limited, perhaps because the global trend towards deregulation and privatisation

Medium-term fiscal projections[1]

	Financial balance			Structural balance[2]		Gross debt		
	2005	2006	Change from 2004[3]	2005	2006	2005	2006	Change from 2004[3]
United States	–4.2	–4.1	2.0 (2010)	–4.2	–4.1	66	68	–6 (2010)
Euro area	–2.6	–2.4	0.4 (2006)	–1.9	–1.9	79	79	0 (2006)
Germany	–3.3	–2.6	2.2 (2007)	–2.0	–1.7	73	74	2 (2007)
France	–3.1	–2.9	1.7 (2008)	–2.7	–2.8	74	74	1 (2008)
Italy	–3.9	–4.3	2.0 (2008)	–3.5	–4.2	119	119	8 (2008)
Japan	–6.4	–5.7	1.9 (2008)	–6.2	–5.7	161	164	–10 (2008)
United Kingdom	–3.2	–3.2	1.4 (2010)	–3.3	–3.3	47	49	–3[4] (2010)
Canada	1.3	1.1	0.2 (2008)	1.3	1.0	66	62	14[4] (2008)
Australia	0.4	0.3	–0.2 (2007)	0.6	0.6	18	18	4[4] (2007)

[1] General government, as a percentage of GDP. [2] Cyclically adjusted financial balance, as a percentage of potential GDP. [3] Change in balance and gross debt respectively, in percentage points, between the year shown in parentheses and the 2004 outcome. Positive numbers indicate a reduced deficit/increased surplus and reduced gross debt respectively. [4] Net debt.

Sources: IMF; OECD; national data. Table II.9

is thought likely to restrain the role of governments and public spending in the long run. Other explanations focus on the favourable borrowing conditions for all debtors, not just governments (see Chapter VI).

Could consolidation have expansionary effects?

An additional incentive to consolidation, in particular for large euro area countries and Japan, might be evidence that some past fiscal consolidations were positively correlated with economic growth. If consolidation is perceived as implying a permanent reduction in government spending and public debt, it might create expectations of lower taxes and long-term interest rates in the future. About half of the fiscal contractions in the EU 15 countries from the 1970s onwards were in fact followed by stronger growth. Perhaps the most cited episodes are Denmark and Ireland in the mid- to late 1980s and Spain in the second half of the 1990s. Yet much of the expansionary effect in these cases has been attributed to the fact that the contractions coincided with an easing of monetary policy along with real currency depreciation. Borrowing costs at the time were also high, making possible large gains from reductions in interest rates and country risk premia. In contrast, interest rates at present are very low. Nevertheless, fiscal adjustments that reduce the inefficiencies of traditional welfare programmes might well signal a commitment to rein in public spending in the future and could have a positive impact on expectations.

Fiscal consolidation can help moderate aggregate demand

In cases where fiscal imbalances have widened in a period of strong growth, fiscal consolidation should be more straightforward. A combination of higher taxes and lower government spending would help cut budget deficits as well as moderate aggregate demand. In the United States, fiscal consolidation would also help reduce the large current account deficit.

Fiscal rules might support fiscal consolidation, but enforcement is key

Incentives for fiscal consolidation could also be strengthened by relying on fiscal rules. Where domestic budget processes are closely integrated in a medium-term framework, countries may be more likely to meet their fiscal targets. There can be little doubt that numerous EU countries made substantial fiscal adjustments to comply with the Stability and Growth Pact and, before that, with the convergence criteria under the Maastricht Treaty. Fiscal rules have also been successfully used to discipline fiscal policy at different levels of government within countries, as well as in some emerging market economies. Recently, there have been calls in the United States to consider reinstating a rule similar to the Budget Enforcement Act to signal a renewed commitment to fiscal discipline. Yet recent problems with the Stability and Growth Pact indicate that even established fiscal rules can fail if there is a lack of commitment to adhere to them.

Population ageing as a major long-term fiscal challenge

The main impetus for fiscal reforms in the longer run is likely to come from challenges associated with the ageing of populations. The first wave of baby boomers will start retiring over the next decade. This will make increasing demands not only on public retirement schemes, but also on health care provision. Even after taking into account the impact of existing measures designed to cut the level of future benefits, pension- and health-related spending for the OECD countries is projected to rise on average by nearly 7% of GDP over the next four decades. Further policy action will thus become increasingly unavoidable.

III. Issues in emerging market economies

Highlights

Over the last year, growth in all the major emerging market regions was surprisingly strong (Table III.1). The already healthy rates observed in 2003 were exceeded, and growth reflected a better balance between external and domestic demand. Indeed, global conditions remained unusually favourable for exports from emerging economies and for capital inflows. Consumer and investor confidence rebounded in all regions. This rapid growth put pressure on many critical resources, such as oil. In sharp contrast to the past, however, higher oil prices did not lead to a marked resurgence of inflation. Interest rates in Asia and elsewhere remained low – in part because currency appreciation pressures may have encouraged monetary policy to be easier than it would otherwise have been.

Output growth and inflation[1]

	Real GDP				Consumer prices[2, 3]			
	Average 1995–2003	2004	2005		Average 1995–2003	2004	2005	
			First quarter	Forecast			First quarter	Forecast
Asia[4]	6.6	7.8	7.3	7.2	4.2	4.4	3.7	3.9
China	8.5	9.5	9.5	8.9	3.0	3.9	2.8	3.2
India	5.9	7.1	6.7	7.1[5]	5.2	6.7	5.1	5.6[5]
Korea	5.1	4.6	2.7	4.0	3.9	3.6	3.2	3.2
Other Asia[4, 6]	3.6	6.0	4.7	4.8	5.8	3.4	4.3	4.2
Latin America[4, 7]	2.0	5.9	4.3	4.3	11.2	6.6	6.6	6.3
Argentina	0.4	9.1	8.3	6.8	4.8	6.1	9.1	10.0
Brazil	2.1	5.2	3.8	3.6	9.3	7.5	7.5	6.5
Mexico	2.5	4.4	2.4	3.9	16.6	5.2	4.4	4.0
Central Europe[4, 8]	3.7	4.8	3.3	4.0	10.2	3.9	3.1	2.4
Russia	2.4	7.1	6.0	5.8	49.5	10.2	12.9	11.6
Turkey	3.7	8.9	0.1	5.7	64.9	10.6	8.6	8.0
Africa	3.7	5.1	…	5.0	15.6	7.7	…	7.7
Middle East	4.1	5.5	…	5.0	9.2	8.3	…	8.6
Total[4, 9]	5.2	7.2	6.2	6.3	9.4	5.4	5.0	5.0
Memo: G7 countries	*2.4*	*3.2*	*2.5*	*2.3*	*1.9*	*2.0*	*2.2*	*2.0*

Note: Forecasts and most first quarter 2005 GDP data are based on May consensus forecasts, JPMorgan Chase and IMF, *World Economic Outlook*.

[1] Average annual changes, in per cent. [2] For Latin America, end of period. [3] For India, wholesale prices. [4] Weighted average of the economies listed, based on 2000 GDP and PPP exchange rates. [5] Fiscal year beginning in April. [6] Hong Kong SAR, Indonesia, Malaysia, the Philippines, Singapore, Taiwan (China) and Thailand. [7] Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. [8] The Czech Republic, Hungary and Poland. [9] Economies above excluding Africa and the Middle East.

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

In this setting, an ongoing issue is whether emerging market economies have become more resilient to shocks. A number of considerations indicate that the answer is yes. First, the increasing importance of domestic demand suggests that growth could continue even if external demand were to weaken. Second, there have been noticeable improvements in fiscal positions, in some cases supported by legislative reforms and the development of local bond markets. Third, inflation appears to have become more stable, in some instances reflecting improved monetary policy credibility. And, to the extent that countries have become less committed to an explicit exchange rate target, this too reduces their vulnerability to shocks. Fourth, the current accounts of most emerging market economies have strengthened. Fifth, there have been improvements in banking performance.

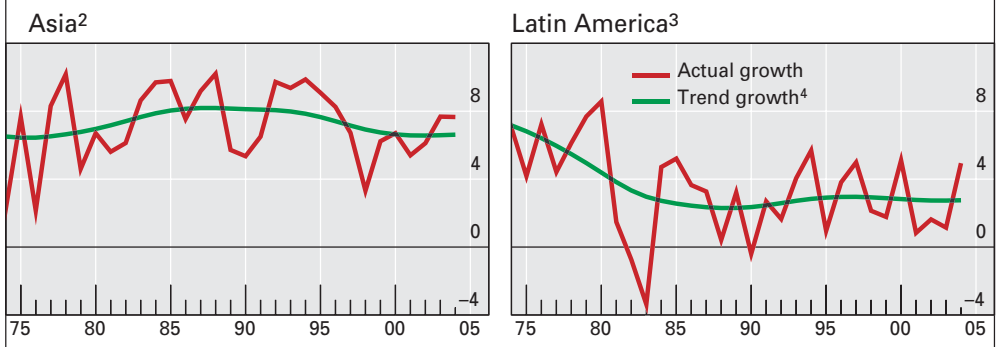
However, these observed gains may themselves be the result of favourable cyclical factors. A global slowdown could undo some recent improvements, just as a monetary tightening in industrial countries could slow the pace of capital inflows, reverse recent currency appreciation and pose fiscal challenges. In contrast, should growth be maintained, inflation expectations in some countries might rise. Ratios of short-term to total external debt also remain high in some countries, although risks have been considerably attenuated by high levels of official foreign reserves. Finally, banking sectors are still exposed to various risks, and improvements in the regulatory environment need to go further in some cases.

Recent developments

Exceptional growth in 2004

Virtually all emerging market economies have shared in the current expansion, which started in late 2001 (Table III.1). Last year, output growth was strong in most countries and appears to have exceeded trend growth during the past two years (Graph III.1). Despite some recent adverse shocks, such as higher oil prices, average growth in emerging economies is forecast to remain

Actual and trend growth[1]



[1] Real GDP; annual changes, in per cent. Weighted average of the economies listed, based on 2000 GDP and PPP exchange rates. [2] China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan (China) and Thailand. [3] Brazil, Chile, Mexico and Peru. [4] Estimated using a Hodrick-Prescott filter.

Sources: IMF; national data. Graph III.1

Balance of payments developments

In billions of US dollars

	Current account balance			Net private capital flows[1]			Change in reserves[2]		
	Average 1990–96	Average 2000–03	2004	Average 1990–96	Average 2000–03	2004	Average 1990–96	Average 2000–03	2004
Asia	–10.3	120.7	184.9	47.1	2.9	148.4	43.8	141.6	363.4
China	5.1	29.8	68.7	20.8	30.5	110.7	12.6	62.1	206.7
India	–4.4	1.9	–3.9	5.6	14.7	24.7	2.4	16.4	27.5
Korea	–7.1	9.4	27.6	11.4	10.2	13.8	2.6	20.2	43.7
Other Asia[3]	–3.9	79.6	92.5	12.8	–52.5	–0.8	26.2	42.8	85.5
Latin America[4]	–28.6	–21.5	20.8	50.2	24.9	–5.1	16.3	9.2	21.1
Brazil	–6.0	–12.7	11.7	18.2	15.0	–3.6	7.3	3.6	3.6
Mexico	–14.8	–14.9	–8.6	20.3	21.5	12.9	1.9	6.7	5.0
Central Europe[5]	–6.1	–15.0	–18.0	3.2	18.0	18.4	7.8	5.1	7.7
Russia	8.6	36.3	60.1	8.8	–9.8	–3.4	5.2	16.2	47.6
Turkey	–1.7	–4.1	–15.5	3.5	1.1	18.0	1.7	2.7	1.7
South Africa	0.5	–0.5	–7.0	1.1	2.0	9.9	–0.0	0.0	6.6
Total[6]	–72.7	130.8	277.3	116.1	24.8	155.3	89.3	176.1	454.6
Memo:									
Oil-exporting countries[7]	*–8.9*[8]	*53.2*	*120.4*	*37.3*	*–16.2*	*–18.9*	*9.5*[9]	*26.5*	*60.6*

[1] Direct investment, portfolio investment, financial derivatives and other investment excluding investment by monetary authorities and government. Partly estimated. [2] A positive value indicates an increase. [3] Hong Kong SAR, Indonesia, Malaysia, the Philippines, Singapore, Taiwan (China) and Thailand. [4] Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. [5] The Czech Republic, Hungary and Poland. [6] Economies above plus Israel and Saudi Arabia. [7] Indonesia, Mexico, Russia, Saudi Arabia and Venezuela. [8] 1994–96. [9] 1996.

Sources: IMF; national data. Table III.2

steady at over 6% this year. In Asia, the expansion has been led by China and India, but other economies are not far behind. In Latin America, Argentina, Brazil and Mexico have all witnessed a strong revival; growth in a number of economies in the region has been above trend. In central and eastern Europe, despite a recent slowdown, all major economies are expected to grow strongly in 2005. Moreover, over the last year growth has rebounded in Turkey and remains robust in Russia. Economic activity has also accelerated in most of Africa.

Growth boosted by strong global demand ...

Several factors played a role in supporting growth in emerging market economies. First, global demand conditions were highly favourable to these economies, mainly reflecting buoyant growth in the United States and China. Many countries witnessed export growth of 20–40% last year. In Asia, despite some weakening of the IT cycle in the second half of 2004, export growth remained strong as US and Chinese demand for non-electronic exports rose. Demand for commodity exports from Latin America, Russia and South Africa was also brisk. The strength of exports led to improved current account balances. Indeed, the aggregate surplus of emerging economies reached a record high of $277 billion in 2004 (Table III.2). While Asia accounted for much of this surplus, several Latin American countries also enjoyed significant current account surpluses, which helped them to reduce external debt exposures and rebuild reserves. In central Europe, however, current account deficits remained large.

... large capital inflows ...

Second, stronger domestic macroeconomic fundamentals improved the credit standing of many countries. Combined with ample global liquidity, this led to an increase in private capital inflows to emerging market economies. Last year flows to China picked up significantly as buoyant inward direct investment coincided with a marked expansion in portfolio inflows and private commercial borrowing; expectations of a renminbi revaluation probably contributed to this. Foreign direct investment to India and Korea rose sharply, with India also witnessing strong portfolio inflows. Capital flows to Southeast Asia also revived in 2004, although they remained depressed compared to the levels seen prior to the 1997–98 financial crises. In Latin America, some countries repaid external debts and refinanced part of their high-cost debt by borrowing at lower interest rates. Net flows to the major countries in the region nevertheless fell slightly. Capital inflows to central Europe remained strong, and those to South Africa increased.

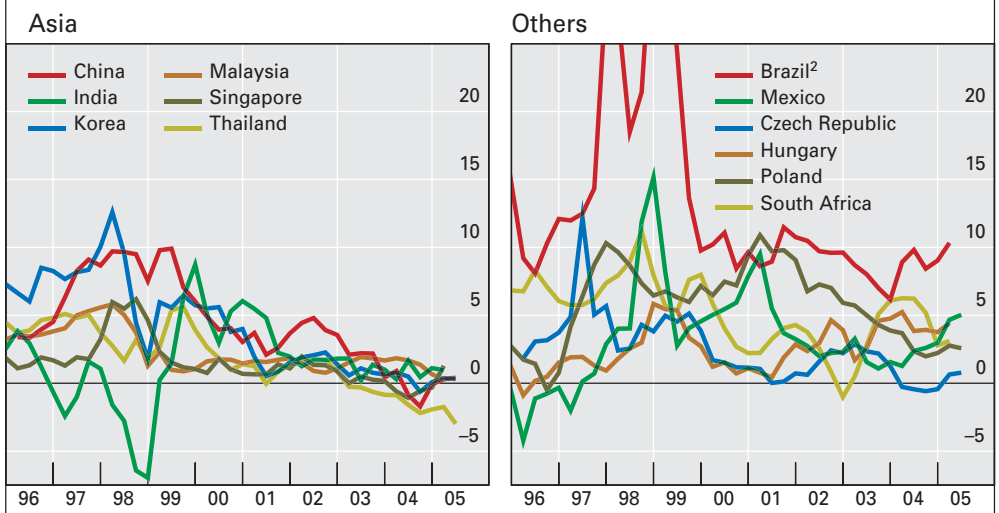
... and buoyant domestic demand

Third, domestic demand rebounded in all regions. Notwithstanding the recent increase in policy rates by several central banks, monetary policy remained supportive of demand in all regions in spite of signs that in some cases capacity utilisation had risen significantly. Real short-term interest rates have been near zero or negative in most of Asia over the past three years (Graph III.2, left-hand panel). By past standards, real short-term rates also remain low in much of Latin America and in central Europe. In many countries – and especially Asia – currency appreciation pressures may have led policy rates to be lower than otherwise, perhaps reflected in further declines in real long-term bond rates and higher equity prices (Graph III.3).

Higher investment in Asia ...

In Asia, easier financing conditions and stronger investor confidence translated into higher capital spending. Although still below the levels seen prior to the 1997–98 crises, investment ratios recovered in a number of

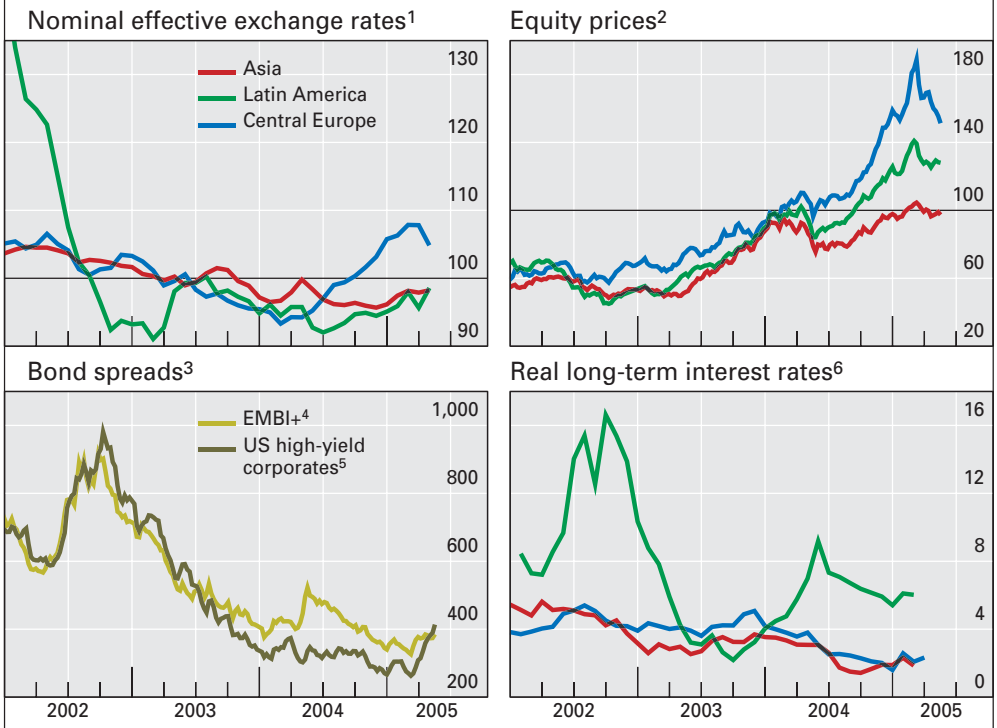
Real short-term interest rates[1]



[1] Three-month annual interest rates deflated by annual consumer price inflation. Definitions may differ across countries. [2] Peak values close to 35% in 1998 Q4 and 1999 Q1.

Sources: Bloomberg; Datastream; national data. Graph III.2

Financial market conditions



Note: The country composition for Asia and Latin America differs between panels. Regional averages using 2000 GDP and PPP exchange rates.

[1] 2002–04 = 100; an increase indicates an appreciation. [2] In US dollar terms; US S&P 500 peak (24 March 2000) = 100. [3] In basis points. [4] Over US Treasuries, as calculated by JPMorgan Chase. [5] Index yield for a basket of non-investment grade corporate bonds denominated in US dollars over 10-year swap rates. [6] Domestic currency, deflated by annual consumer price inflation; in per cent.

Sources: Bloomberg; Datastream; JPMorgan Chase; national data; BIS. Graph III.3

Southeast Asian economies last year. Following monetary and administrative tightening measures, nominal fixed investment growth in China slowed substantially during 2004. Even so, the ratio of nominal fixed asset investment to GDP increased further from 47% in 2003 to 51% in 2004, and investment in some overheated sectors such as real estate continued apace. Moreover, capital spending in projects outside the already overheated sectors is reported to have grown strongly last year, in part due to demand diverted by the administrative measures. Several calculations based on macroeconomic data suggest that the rates of return on some investments have been unusually low. At the same time, private consumption has recovered in China and exports have remained strong.

... and a recovery of demand in Latin America

In Latin America, the rebound in domestic demand during 2004 was striking. Private consumption recovered in Argentina, Brazil and Venezuela from the collapse suffered during recent crises, and strengthened further in Chile and Mexico. Several countries recorded real growth rates of investment between 10 and 40% last year. A similar picture was seen in major central and eastern European economies, with investment growth of between 5 and 10% in the Czech Republic, Hungary and Poland. In Russia, while consumption has been the major driver of domestic demand, investment has slowed over the

past year. In Turkey the return of confidence after the recent financial crisis has been associated with a sharp acceleration of domestic demand.

Inflation poses challenges ...

Nevertheless, the current expansion has also posed challenges for authorities on several fronts. For instance, strong demand and higher commodity prices last year raised inflation rates in some emerging market economies. In Asia, for example, although average inflation in 2004 was only slightly higher than in 1995–2003, several countries saw a general increase in inflation rates (Table III.1). In China, consumer price inflation rose to over 5% in the third quarter of 2004 before falling in subsequent months. In contrast, producer prices continued to grow strongly. Similarly, in India inflation rose to 8% during 2004 before declining in early 2005. In Latin America and central and eastern Europe, inflation remained low by past standards in 2004. During the first quarter of 2005, however, Argentina saw increased inflationary pressures, and inflation also rose in Brazil in April.

... leading to some tightening of monetary policy

As a result, some countries have had to tighten monetary policy. China and India have tightened both through direct measures, such as raising reserve requirements on banks, and indirectly by increasing interest rates. Thailand has raised interest rates substantially since August 2004 to reduce the risk of future inflation. The Philippines and Indonesia raised policy rates by 25 basis points in April 2005. Interest rates have also gone up in several countries in Latin America, including Brazil and Mexico.

Currency appreciation ...

In addition, sizeable balance of payments surpluses have put upward pressure on currencies in countries with flexible exchange rates. In all regions, this was reflected in greater currency appreciation against the dollar (euro for central Europe) in 2004 than in previous years. Nevertheless, as discussed in Chapter V, the authorities in most Asian economies continued to intervene in the foreign exchange market to limit the appreciation of their currencies or to maintain a fixed exchange rate. Consequently, aggregate foreign exchange reserves in emerging Asia rose at an unprecedented rate last year (Table III.2). In nominal effective terms, therefore, most Asian exchange rates continued to depreciate through much of last year before reversing the trend in early 2005 (Graph III.3, top left-hand panel). As noted above, the accumulation of reserves appears to have been complemented by monetary policy that tightened less than might otherwise have been the case.

... with constraints on intervention

As inflationary pressures rise, this accommodative stance of monetary policy may have to be reversed. In addition, the rapid household credit growth seen in many countries last year, accompanied by an increase in property prices (see below), could also lead central banks to quicken the pace of monetary tightening. Moreover, intervention policies might also have to be revisited. The growing carrying costs of reserves entail fiscal costs – and perhaps balance sheet losses should currencies be forced to appreciate. The market perception that such heavy exchange market intervention might not be sustainable could in itself lead to sizeable short-term speculative inflows. In India, inflows into the stock market are reported to have risen sharply towards the end of last year. In Korea, expectations of currency appreciation during that same period reportedly prompted residents to repatriate capital invested abroad.

High commodity prices: causes and effects

Commodity price developments have exerted an important influence on the emerging economies. Since the beginning of 2002, oil prices in US dollars have risen by 150%. The increase has been particularly pronounced over the past year, with oil prices reaching successive new peaks before falling back in mid-March 2005 (Graph III.4). Nevertheless, oil prices in real terms remain below the levels seen during the second oil crisis in 1979. Real metal prices have also recovered strongly from their late 1990s trough, although at their current level they are no higher than at the beginning of 1990 (Graph III.5, left-hand panel). The prices of key industrial inputs such as copper, lead and coal, which grew modestly during 2003, have risen sharply since early 2004.

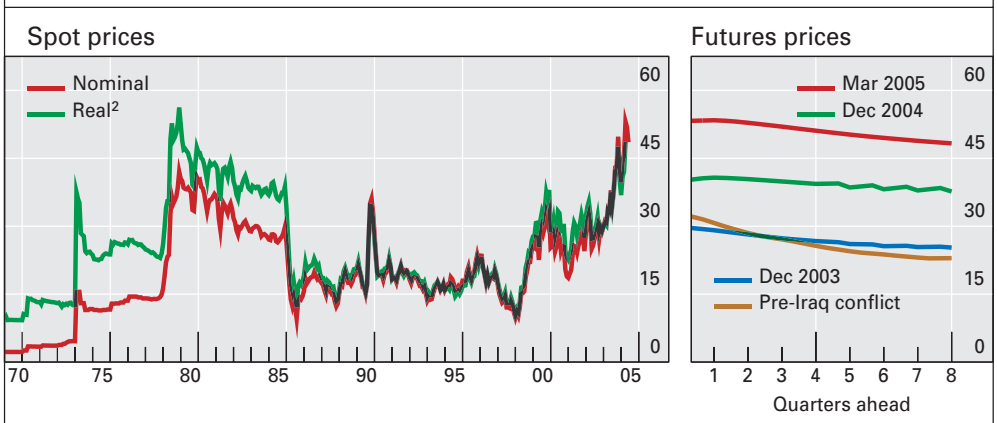
Booming oil demand ...

Commodity prices have been driven by a number of common factors. The strong global expansion of manufacturing has raised the demand for primary inputs and, given low short-run supply elasticities, lifted prices. A key factor for oil prices has been the increasing concentration of global growth on a number of oil-intensive economies in Asia. As a result, the growth of global oil demand accelerated from less than 1% in 2002 to 3½% in 2004. China alone accounted for about one third of incremental oil demand last year, and other Asian economies an additional 17%.

... and tight supply constraints ...

At the same time, despite increased production by non-OPEC countries, global oil supply has become progressively tighter, reflecting a long period of low investment in the oil sector. The spare capacity of OPEC (excluding Iraq) has fallen to very low levels in recent months – between 1 and 2 million barrels a day or about 2% of global oil supply. Such tight market conditions have accentuated the oil price reaction to recent adverse factors such as growing uncertainty about supply from the Middle East and recurrent production disturbances in non-OPEC countries. Temporary refinery constraints in converting heavier crude into transportation fuel have also contributed to a widening price differential between lighter and heavier crude. The difference between the lighter Brent and heavier Dubai benchmark crude widened from

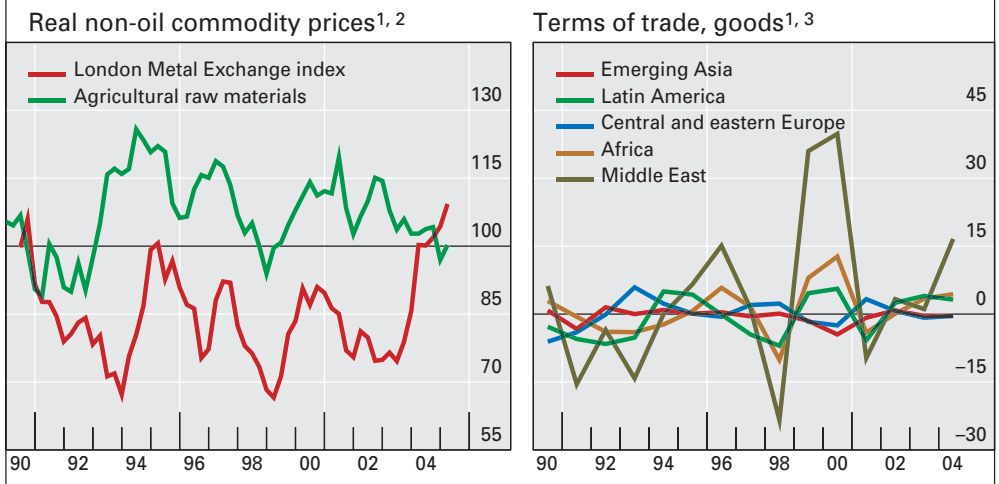
Brent oil prices[1]



[1] Monthly averages, in US dollars per barrel. [2] Deflated by world export prices; base year 1990.

Sources: IMF; Bloomberg. Graph III.4

Non-oil commodity prices and terms of trade



[1] Average of period. [2] 1990 = 100; deflated by world export prices. [3] Annual changes, in per cent. Country coverage according to the IMF.

Sources: IMF, *World Economic Outlook*; Datastream; national data. Graph III.5

less than $3 a barrel in 2003 to about $14 a barrel in mid-October 2004 before falling back considerably in the past few months.

... may imply a fundamental change in the oil price outlook

Expectations that the medium-term level of oil prices will remain high have also had a major impact. In the early part of the cycle, for example, when spot prices were pushed up to high levels, oil futures prices rose less rapidly or even declined on the expectation that the shock would be temporary. In February 2003, for instance, the spot price of Brent stood 27% above the one-year futures price. In contrast, in more recent months, both spot and futures prices have tended to move together. The upward shift of oil futures curves across the entire maturity range since the beginning of 2003 (Graph III.4, right-hand panel) suggests a change in the fundamental outlook for the level of oil prices.

Yet another factor has been the role of current low real interest rates. With yields from financial assets remaining low or falling and the scarcity value of oil rising, some non-commercial investors have been increasingly attracted to the commodity market. The greater use of commodities as a hedge against future dollar depreciation may also have added to this trend. One indicator of the growing role of non-commercial traders is the recent sharp rise in their positions on oil futures. At the same time as long positions in the New York Mercantile Exchange – the largest segment of the oil futures market – more than tripled between January 2002 and March 2005, the share of non-commercial traders rose from about one quarter to two fifths (see Chapter VI).

Terms-of-trade gains for exporters ...

The boom in commodity prices has boosted the terms of trade of most commodity-exporting countries (Graph III.5, right-hand panel). Last year, export windfalls from higher oil prices are estimated to have exceeded 8% of GDP in oil-exporting countries. Gains were also substantial for major non-oil commodity exporters such as Brazil and Chile. In Chile, for instance, revenue from copper increased by over 80% in 2004. A number of African countries have also experienced significant gains from commodity exports.

For oil-exporting countries, dealing with oil windfalls has not proved easy in the past, particularly during the second oil shock in 1979. In many countries, the revenue gains were assumed to be permanent, and led to structural increases in government spending programmes. When the gains proved only temporary, underlying fiscal imbalances became apparent. Such policy challenges were often compounded by currency appreciation and a loss of competitiveness. When oil prices subsequently collapsed in the 1980s, many oil-exporting countries experienced difficulties.

... but better managed than in the past

In the current cycle, however, responses to windfall gains appear to have improved in a number of commodity exporters. One reason is that many countries now have established procedures (eg commodity stabilisation funds) and specific fiscal rules to deal with revenue volatility. Last year, for example, Mexico transferred excess oil revenues amounting to $1 billion to an oil stabilisation fund established in 2000. Moreover, a large part of such revenues was earmarked for infrastructure investment, including in the oil sector. In Algeria, the outstanding balance in the oil stabilisation fund, which was established in early 2000, had risen sharply in relation to GDP by December 2004. Russia also set up such a fund last year. A second welcome response is that many oil-exporting countries have used a large part of their oil revenues to repay outstanding debt. In Saudi Arabia, the government has reduced the public debt to GDP ratio by 32 percentage points since 2002. Payments to cut outstanding debts have also been significant in Algeria and Russia. To the extent that exceptional revenues in oil stabilisation funds were invested abroad or were used to repay debts, they might also have helped to contain short-term pressures for currency appreciation.

One possible risk for commodity exporters is that a combination of strong global demand and sharp increases in commodity prices across the board might lead to expansions in production capacity that could later prove to be unprofitable. If supply came on line after demand had begun to subside, experience would suggest that price reversals could be both sudden and

Importance of oil

	Net oil imports[1]			Oil consumption[2]		
	1995	2000	2003	1995	2000	2003
Asia	1.1	2.2	2.2	0.15	0.15	0.14[3]
China	0.2	1.3	1.5	0.18	0.17	0.15
India	1.9	3.1	2.8	0.16	0.16	0.15[3]
Korea	2.4	4.2	3.8	0.14	0.12	0.11
Other Asia[4]	0.6	1.5	1.9	0.14	0.15	0.15[3]
Latin America[5]	–1.2	–2.1	–2.4	0.12	0.12	0.12[3]
Central Europe[6]	1.5	2.0	1.4	0.10	0.09	0.08[3]
Memo: G7 countries	*0.5*	*0.9*	*0.9*	*0.06*	*0.05*	*0.05*

[1] Petroleum, petroleum products and related materials (SITC Rev. 3), as a percentage of nominal GDP. Negative values indicate that exports exceed imports. [2] Barrels per unit of GDP at 1995 prices and US dollar exchange rates. [3] 2002. [4] Hong Kong SAR, Indonesia, Malaysia, the Philippines, Singapore and Thailand. [5] Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. [6] The Czech Republic, Hungary and Poland.

Sources: United Nations, *Commodity Trade Statistics*; WTO; US Energy Information Administration; national data. Table III.3

large. The growing links between financial and commodity markets could accentuate volatility in commodity prices even further. Such considerations may partly explain why investment in commodity-producing sectors has remained moderate to date, in spite of higher profits.

The effects of oil price increases ...

For oil-importing countries, higher oil prices raise inflation and reduce aggregate demand. Asia tends to be particularly hard hit because of its marked dependence on imported oil and higher oil intensity of output (Table III.3). Estimates by the International Energy Agency suggest that a sustained $10 per barrel increase in oil prices would cut GDP growth by close to 1 percentage point in Asia, a year after the shock, while inflation might rise by 1½ percentage points.

... have been muted

The output effects of higher oil prices in most oil-importing emerging markets appear to have remained muted so far. Part of the reason is that strong global demand and a general upturn in the prices of Asian exports have contained the adverse terms-of-trade implications. For example, in contrast to a decline of about 1% during 2000–02, export prices in developing Asia increased by over 7% in the past two years.

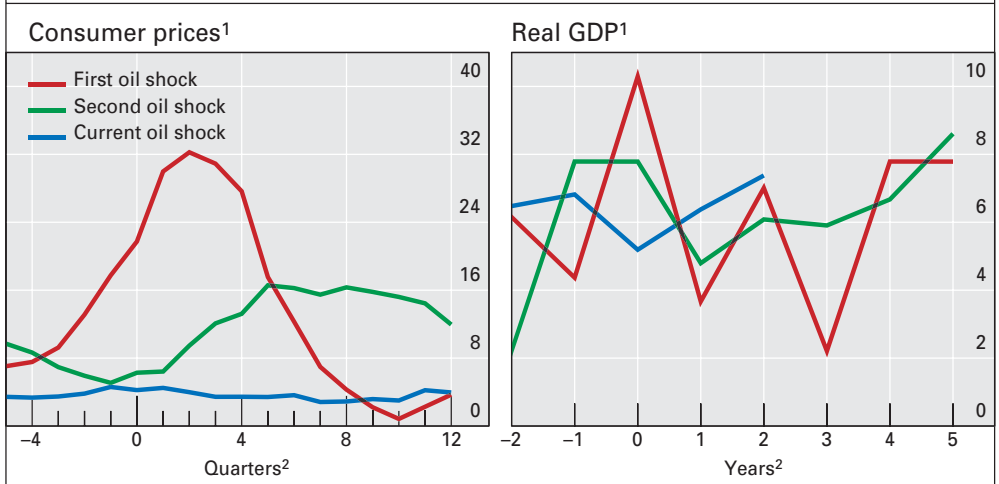
Inflation is comparatively low ...

Such developments could well have raised domestic inflation even more. As noted earlier, headline inflation rates in a number of countries have indeed risen – most notably in India and the Philippines. Nevertheless, the impact has remained muted, particularly when compared with the experience during the first and second oil crises in 1973 and 1979, which were associated with inflationary pressures throughout Asia (Graph III.6).

... owing to the different cycle ...

There are a number of reasons for this muted behaviour. First, the underlying cycle has been different. In earlier episodes, inflation was already accelerating before oil prices rose markedly: the negative supply shock was thus associated with much higher inflation. In contrast, in the current episode,

Inflation and growth in Asia following oil shocks



[1] Annual changes, in per cent. Weighted average of China (except for inflation), Hong Kong SAR, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan (China) and Thailand, based on 2000 GDP and PPP exchange rates. [2] Zero quarters/years correspond to 1973 Q4/1973 (first oil shock), 1978 Q4/1978 (second oil shock) and 2001 Q4/2001 (current oil shock).

Sources: IMF; national data. Graph III.6

the increase in oil prices has followed upon several years of low inflation. To the extent that inflation expectations are better anchored, this may have contributed to reducing second-round effects (see below).

... and large oil subsidies in Asia

Second, several Asian economies have administered prices for oil. Increases in domestic oil prices were then postponed, which in effect provided direct fiscal subsidies. Some countries have also reduced taxes on imports and sales of oil to partly offset higher international prices. Oil subsidies remained particularly high in India, Indonesia, Malaysia and Thailand last year. Such policies inevitably weaken fiscal positions, blunt incentives to limit oil use and thus exacerbate oil dependency. Many Asian economies have therefore more recently begun to pass on higher oil prices to consumers. Third, in some countries with flexible exchange rates, currency appreciation against the dollar may have helped contain the direct impact of higher oil prices.

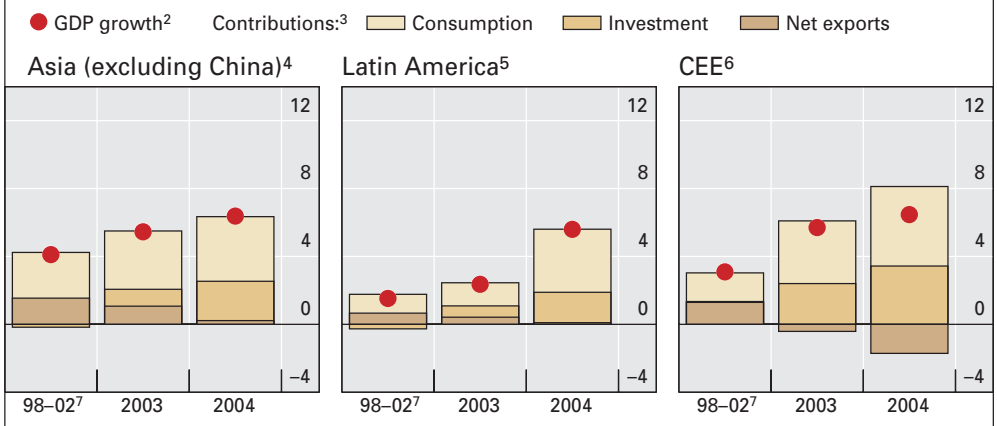
Factors influencing resilience to external shocks

The authorities in many emerging market economies are faced with a still relatively weak fiscal structure, a more formal framework for monetary policy that is of only recent vintage, and a marked degree of exposure to external financial shocks. Yet several developments over the past two years could help enhance emerging market economies' resilience to external shocks.

The influence of stronger corporate balance sheets ...

First, domestic demand has played a much greater role in the past two years than previously (Graph III.7). Such a development might better cushion growth should global demand slow sharply. Moreover, the sustainability of domestic demand might be helped by the fact that it has been accompanied by structural reforms to boost private sector investment. In Asia, the expansion has followed a period of corporate restructuring, as firms have reduced debt levels and improved their profitability. In Korea, for instance, the debt/equity

Contributions to GDP growth[1]



[1] Weighted average of the economies listed, based on 2000 GDP and PPP exchange rates. [2] In per cent. [3] In percentage points. [4] Hong Kong SAR, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan (China) and Thailand. [5] Argentina, Brazil, Chile and Mexico. [6] Central and eastern Europe: the Czech Republic, Hungary, Poland, Russia and Turkey. [7] Annual average for the period.

Sources: United Nations; CEIC; JPMorgan Chase, *World Financial Markets*; national data. Graph III.7

ratio in the manufacturing sector fell from close to 400% at the end of 1997 to about 100% at the end of March 2004. In India, business spending has been underpinned by strong corporate earnings. In Latin America, investor confidence has improved substantially following important structural reforms. In Chile and Mexico, for example, capital spending has been supported by a significant increase in productivity growth. In central and eastern Europe, a special factor in recent years has been convergence towards the European Union, which has strengthened capital inflows and promoted foreign investment in the region.

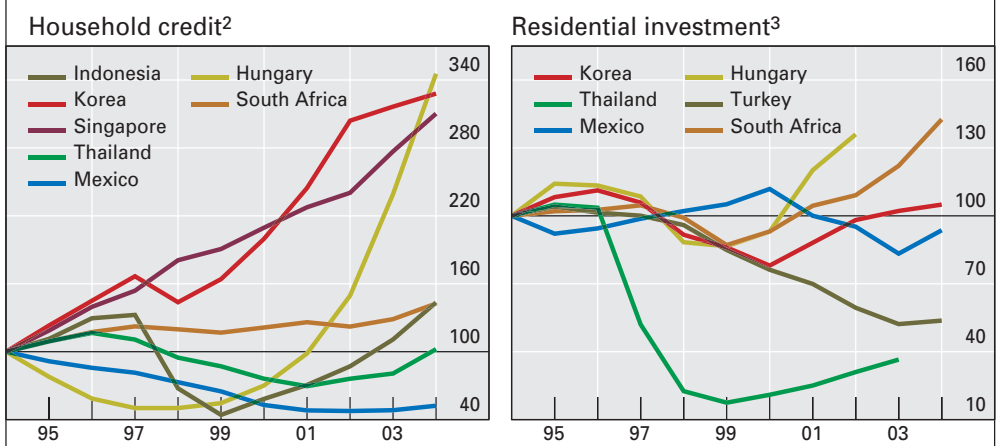
... and household spending

Second, households have played a more important role in domestic demand developments than in previous cycles. In particular, many countries with an inadequate housing stock have seen a sharp rise in residential investment over the past few years (Graph III.8), and in spending on household durables. While low mortgage and consumer financing rates have encouraged households to borrow, banks became more willing to lend to households in the wake of corporate losses during and after the Asian crises. Other factors such as credit market liberalisation and increased competition in retail banking, often led by foreign banks, have also played a major role.

Strong household demand partly structural ...

In countries where household debt/income ratios remain low, and the banking system is well equipped to manage new types of risks arising from exposure to the credit card and property sectors, lending to households could well rise further without difficulties emerging. In many countries, the demand for housing and consumer durables appears to be driven by such secular factors as rising household income and urbanisation, as well as the growing realisation that home ownership is a realistic option. In India, for instance, such a trend has been supported by the growing size of the middle income segment of the population. Some credit allocated to households is actually credit to small businesses, and may reflect the growing importance of the services sector. In Latin America, the recent reduction in interest rate volatility – which

Household credit and residential investment[1]



[1] In real terms; 1994 = 100. [2] For 2004, partly estimated. [3] For Korea, Mexico and Turkey, private residential investment only.

Sources: OECD; United Nations; CEIC; national data. Graph III.8

in the past inhibited the development of the mortgage finance market – has been another particularly important factor.

... but with a risk of overborrowing

Nevertheless, there are also potential risks. Households might borrow too much. As Korea's experience suggests, a sharp rise in the household debt/income ratio could curtail future household spending. In Korea, the adjustment involved a contraction in outstanding household debt, from about 64% of income at the height of the credit card bubble in 2002 to 60% of income at the end of 2004. Following several quarters of decline, private consumption picked up only towards the end of 2004. Another risk is that the rapid growth in household credit might lead to excessive increases in property prices. For instance, in Thailand, residential and commercial property prices have been rising strongly since 2003. In Shanghai, real estate prices were, by the first quarter of 2005, rising at about 20% a year, and the nationwide index by about 10%. Finally, the financial sector could also be hurt by a decline in property prices (see below).

Greater exposure to China

A third development has been the greater exposure to China. The combined trade surplus of major emerging economies vis-à-vis China increased from about $7 billion in 2000 to $30 billion last year. Because of their proximity and trade complementarities, the impact has been strongest on Asian economies, but the effect on Latin America has also been important. In addition, China has contributed to improving the terms of trade of most commodity exporters.

The growing Chinese penetration of specific export markets could, however, also create some challenges for other emerging markets. Since the abolition of export quotas in textiles at the beginning of 2005, there has been a sharp increase in China's textile exports. Moreover, given their cost and productivity advantages, both China's and India's share of textile exports is expected to rise, putting pressure on other textile-exporting countries to adjust.

Reduced fiscal vulnerability?

The ratio of the fiscal deficit to GDP declined in several emerging market countries last year (Table III.4). In Asia, for instance, average fiscal deficits have fallen from the high levels reached in 2001 and 2002, when many countries provided fiscal stimulus to boost domestic demand. Nevertheless, fiscal deficits remain large in India and the Philippines, and debt-to-GDP ratios have in some cases risen. In China, although conventional fiscal ratios improved, they do not reflect the large contingent liabilities arising from the actual and potential cost of bank restructuring (see below).

Low fiscal deficits in Latin America

Significant improvements in fiscal positions have recently been recorded in Latin America, particularly in countries exposed to international capital markets. In Argentina, the federal government primary surplus rose from a little over 2% of GDP in 2003 to 4% in 2004, exceeding the target of 2½% agreed with the IMF. In January 2005, the government relaunched the debt restructuring programme it announced last year. If successful, this would have a substantial impact on the country's medium- to long-run fiscal position. Similarly, with its primary surplus rising to over 4½%, Brazil recorded a reduction in the net public debt ratio in 2004, the first time in the past decade.

Fiscal balances and public and external debt[1]

As a percentage of GDP

	Fiscal balance			Government debt			Total external debt	
	2002	2003	2004	1997	2000	2004	2000	2004
Asia[2]	–4.4	–4.1	–3.5	26	41	43	27	21
China	–3.0	–2.5	–1.5	11	22	25	14	14
India[3]	–9.5	–9.4	–9.1	59	66	78	25	19
Other Asia[2, 4]	–1.8	–2.0	–1.8	25	55	45	58	41
Latin America[2, 5]	–2.8	–2.5	–0.9	37	45	59	37	43
Argentina	–1.5	0.5	2.7	35	46	121	55	111
Brazil	–4.6	–5.1	–2.7	34	49	52	36	34
Mexico	–1.2	–0.6	–0.4	47	42	44	26	21
Central Europe[2, 6]	–5.2	–6.5	–4.3	40	36	45	45	42
Russia	1.3	1.5	3.0	54	56	20	67	36
Turkey	–12.6	–8.8	–3.9	53	57	81	60	53
South Africa	–0.7	–2.5	–2.1	49	44	38	28	19

[1] Definitions differ across countries. Some 2004 data are estimates and projections. [2] Weighted average of the economies listed, based on 2000 GDP and PPP exchange rates. [3] For government debt, fiscal years beginning in April, of central and state governments. [4] Indonesia, Korea, Malaysia, the Philippines and Thailand. [5] Argentina, Brazil, Chile, Mexico and Peru. [6] The Czech Republic (except for external debt), Hungary and Poland.

Sources: Asian Development Bank; Economic Commission for Latin America and the Caribbean; IMF; European Commission, *Economic Forecasts*; Institute of International Finance (IIF); JPMorgan Chase, *Emerging Markets Debt and Fiscal Indicators*; Moody's; national data. Table III.4

Public debt ratios also fell in Chile, Mexico and Peru last year. These countries either increased their primary surpluses or used part of the revenue from higher commodity prices to retire outstanding debts.

Better debt composition

In several cases, the composition of debt has also improved. One indicator of this has been a greater reliance on domestic rather than foreign borrowing in fiscally vulnerable countries. In Brazil and Mexico, for instance, the share of domestic public debt in total outstanding debt increased by about 5 percentage points last year. Another indicator is the declining share of short-term liabilities in total domestic debt in certain countries, which has lowered the refinancing risk. Moreover, the fiscal authorities in some countries have been able to cut their exposure to currency risks by reducing the share of debt that is linked to the exchange rate. For example, in Brazil the share of dollar-indexed bonds in total domestic debt fell from 37% at end-2002 to 10% by end-2004.

Similarly, the fiscal situation has improved markedly in Turkey since the crisis in 2001. The consolidated public sector primary surplus increased to 6½% of GDP last year. The authorities also reduced the share of foreign currency-linked securities in total domestic debt to 18% at the end of 2004, down from 36% at the end of 2001. Turkey's improved fiscal position enabled it to enter a new standby agreement with the IMF in May 2005.

In contrast, in central Europe fiscal imbalances remain large. Hungary last year lowered its budget deficit to 4½% of GDP from over 7% in 2002–03. The 2004 deficit in Poland was lower than originally projected because of strong economic growth in 2004; yet the fiscal imbalance remained high.

Fiscal balances in Africa generally improved last year, reflecting higher growth and commodity prices as well as efforts to strengthen fiscal management in several cases. In South Africa, with the government stepping up infrastructure and social sector spending, fiscal policy at the national level has been expansionary.

Sustainability of fiscal improvements?

One reason for optimism that recent improvements will endure is that several countries have introduced fiscal responsibility legislation that aims explicitly to discipline fiscal policy. A notable example is Chile, which introduced a structural budget surplus rule of 1% of GDP in 2000: it has adhered to this rule in both the downward and upward part of the cycle. With rising copper revenues, the overall budget surplus increased to over 2% of GDP last year. In Brazil, the 2000 fiscal responsibility law has had a similar impact by setting a primary surplus target for each level of government and prohibiting unfunded permanent spending programmes. This has had the effect of insulating fiscal programmes from electoral cycles. The law has probably enhanced investor confidence, contributing to the reduction in the large risk premium that the country previously had to pay on its foreign currency debts. Fiscal responsibility laws have recently been introduced in other countries as well, including Colombia, India and Peru.

Nevertheless, optimism about permanent fiscal improvements must be tempered. Economic conditions during the past two years have been very favourable for fiscal authorities. As strong growth has boosted tax revenues, low domestic and external interest rates accompanied by appreciating exchange rates have sharply reduced debt servicing costs. Moreover, debt levels are still too high in a number of countries. In some cases, a high share of floating rate and short-term debt in total domestic debt will constitute a significant exposure once the current phase of easy global monetary conditions comes to an end. In Brazil and Turkey, for instance, floating rate debt represented about 50% and 40%, respectively, of total debt at the end of 2004. In Asia, given the large financing cost of oil subsidies, budget balances remain especially vulnerable to higher oil prices.

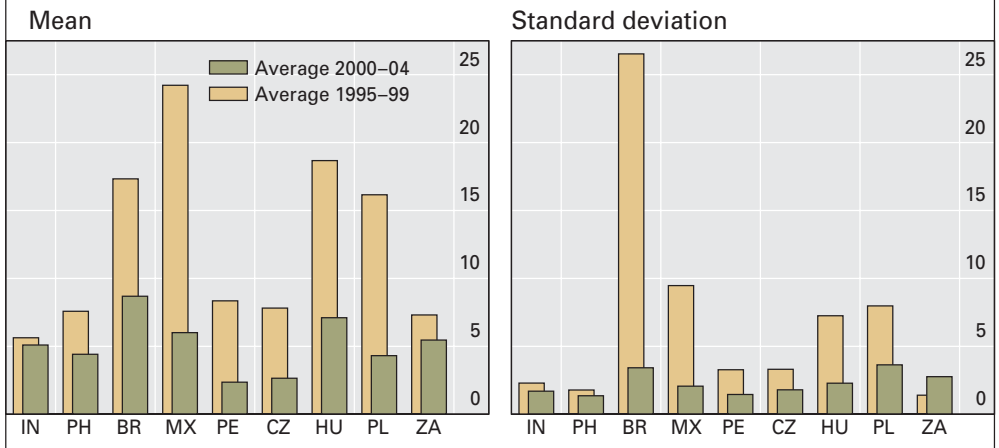
More stable inflation?

The average inflation rate in emerging economies as a whole fell from 13% in the second half of the 1990s to 5½% in 2000–04. The most notable reductions have taken place in countries with historically medium to high inflation rates (Graph III.9). At the same time, inflation volatility has fallen sharply in most cases. To the extent that inflation is seen to be under control, it could enhance investor confidence and reduce risk premia on the debts of emerging economies. In addition, low inflation should give central banks more flexibility in responding to real shocks, including relative price shocks.

Monetary regime changes foster low inflation

As discussed in Chapter II, a number of global forces have driven inflation to low levels: the greater contestability of markets; reduced pass-through of exchange rate and commodity price changes into final consumer prices; and, in some cases, significant productivity improvements. Consistent with this, core inflation has remained low in many emerging economies in recent years (see Graph II.4 in Chapter II). However, lower inflation also reflects the

Inflation[1]



BR = Brazil; CZ = Czech Republic; HU = Hungary; IN = India; MX = Mexico; PE = Peru; PH = Philippines; PL = Poland; ZA = South Africa.

[1] Annual change in consumer prices (for India, wholesale prices), in per cent.

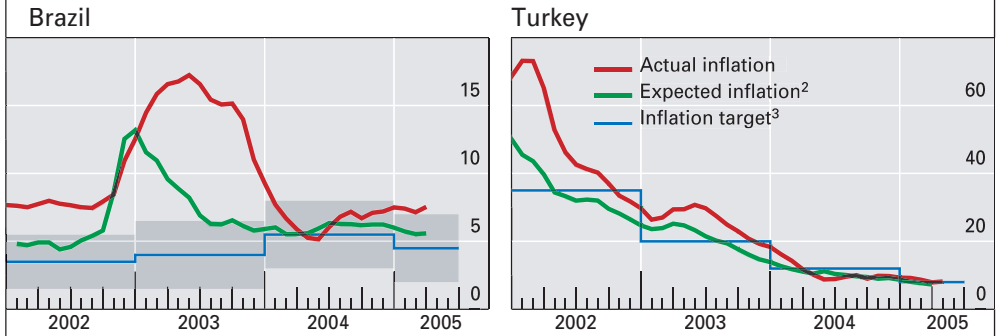
Sources: IMF; national data; BIS calculations. Graph III.9

maturing of new monetary policy frameworks in emerging economies, where the authorities have either introduced explicit inflation targeting or otherwise sharpened their focus on inflation control. The average inflation rate of the 12 major emerging market economies that have adopted formal inflation targeting regimes has fallen from 11% during the three years preceding the introduction of the regime to 5% thereafter.

Greater central bank credibility

In several cases, sounder monetary and fiscal policies seem to have been reflected in the growing credibility of the authorities and lower inflation expectations. In recent years, for instance, long-term bond rates in many countries – especially in Latin America – have become more stable. In addition, inflation expectations appear to have fallen particularly sharply in countries where they had been high and volatile. In Brazil, for example, a combination of

Inflation expectations and outcome[1]



[1] Annual changes in headline consumer prices, in per cent. [2] Twelve months ahead. [3] For Turkey, implicit end-year target; official target not yet introduced.

Source: National data. Graph III.10

tight fiscal and monetary policy has brought inflation down again, following the overshooting of the target in 2002. Moreover, the private sector responded with a very short lag by sharply reducing its inflation forecasts (Graph III.10). Similarly, Turkey has successfully stabilised both actual and expected inflation below double digits in recent months. In both cases, however, real interest rates remain high. This suggests that the inflation risk is still present in the minds of financial sector participants, even if average inflation expectations are much lower.

Reduced external vulnerability?

Current account surpluses and foreign exchange reserves in emerging market economies have increased, partly in response to more responsible and stable macroeconomic policies. External debt-to-GDP ratios have also fallen (Table III.4) along with debt service ratios. In Chile, for example, the central bank used foreign reserves to repay its foreign currency denominated domestic debt coming due within a year. Russia has also used part of its foreign reserves to pay back its debts to the IMF. Improvements such as these were reflected in a string of sovereign rating upgrades in the second half of 2004.

A possible turn in the credit cycle

The main vulnerability may lie in a possible turn in the international credit cycle, which could provoke a simultaneous worsening of the terms of trade and widening of credit spreads. A second concern is that short-term external debt as a proportion of the total has remained relatively high in a number of emerging markets. Short-term external debt averaged 11% of the total in Asia and 13% in Latin America in 2004 (3% and 6% of GDP respectively). A number of explanations can be offered: private sector issuers may not have easy access to external long-term credit, and short-term debt can appear cheaper. Moreover, some governments seem to have relied more heavily on the accumulation of foreign exchange reserves than on lengthening maturities on debt to reduce external debt vulnerability.

Reserves have risks

Foreign reserve accumulation was particularly strong in Asia in 2004, but has also been significant in other emerging market regions. The financing costs of this have been reduced by relatively low domestic interest rates. In Brazil, the central bank stepped up its efforts to acquire foreign reserves in advance of the government's decision to discontinue its IMF programme in March 2005. In many cases, however, accumulated foreign reserves now exceed common measures of reserve adequacy in emerging economies. For example, at the end of 2004, the ratio of gross reserves to short-term external debt was well above the conventional threshold of 1 in almost all countries. In response to such reflections, and recognising the carrying costs of reserves, Mexico has sought to limit reserve accumulation: a portion of the increase in foreign reserves is automatically sold if it exceeds a certain threshold.

Are banking systems stronger?

Improved bank performance ...

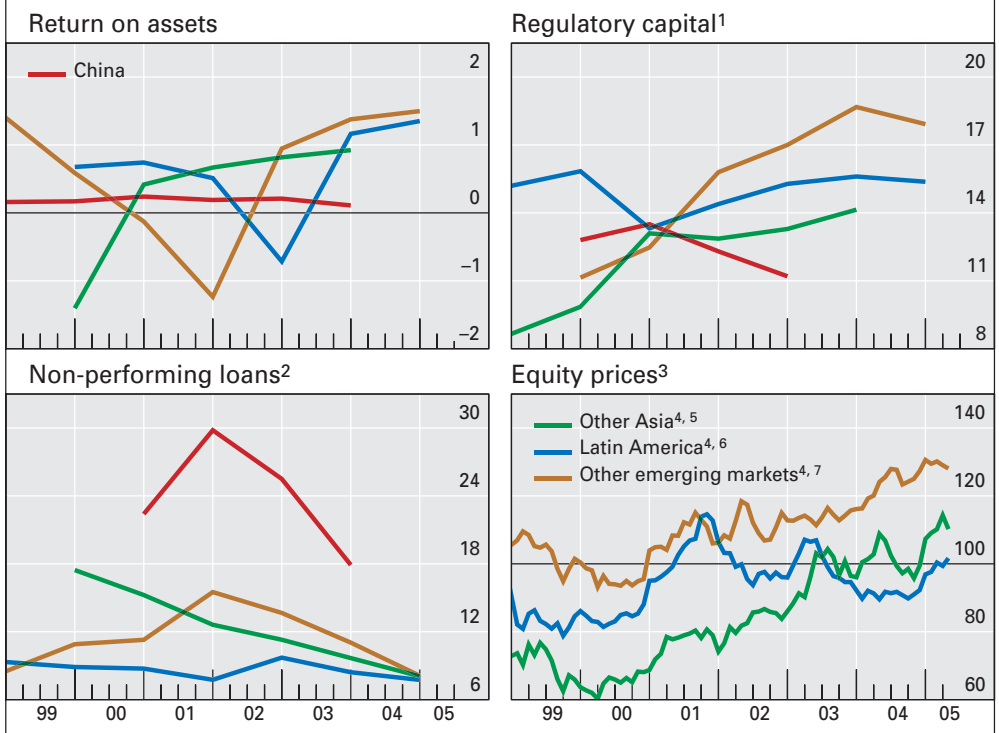
The medium-term outlook for emerging market economies has been helped by a significant and broad-based improvement in bank performance. First, profitability as measured by the return on assets (Graph III.11, top left-hand

panel) has tended to rise. This was particularly the case in 2004, when banks in a number of emerging market economies recorded high profits. Cyclical factors, such as strong growth and low global interest rates, have doubtless played a role in boosting profitability. In India, for instance, strong demand and the revival in industrial activity have increased lending and associated interest revenues, while declining long-term interest rates from 2001 to 2004 allowed Indian banks to book profits from sales of government securities. Moreover, in several countries earlier financial sector difficulties are being overcome. For example, in Korea, bank earnings increased fivefold in 2004 as problems with household credit eased.

... stronger balance sheets ...

Second, the quality of banks' balance sheets has improved. Regulatory capital ratios have risen in some regions (Graph III.11, top right-hand panel). In Brazil, for instance, capital ratios have risen in recent years to average 18.3% in 2004, well above the 11% minimum requirement. Capital ratios averaged around 12% in Korea and Thailand in 2004, and over 20% in Turkey. In some cases, higher capital ratios reflect the recapitalisation of banking systems, either by governments in the aftermath of crises in the late 1990s, or by foreign investment in the banking sector. However, increases in profitability, at times associated with significant reductions in non-performing loans (NPLs), have also played an important role. The decline in NPLs has been particularly sharp

Banking indicators



[1] As a percentage of risk-weighted assets. [2] As a percentage of total loans. [3] Relative to overall equity price indices; 1995–2004 = 100. [4] Weighted average of the economies listed, based on 2000 GDP and PPP exchange rates. [5] Hong Kong SAR, India, Indonesia, Korea, Malaysia, the Philippines, Singapore and Thailand. [6] Argentina, Brazil, Chile, Colombia, Mexico and Peru. [7] The Czech Republic, Poland, South Africa and Turkey.

Sources: IMF, *Global Financial Stability Report*; Datastream; Fitch Ratings. Graph III.11

in Asia (Graph III.11, bottom left-hand panel), although high NPLs remain an issue in the Philippines, Thailand and China (see below). While these data clearly point to improvements, they must also be interpreted with caution. For example, the rise in capital ratios in some cases could reflect just a temporary reduction in risk-weighted assets. This would be the case if a fall in the price volatility of banks' assets, in the current relatively benign financial environment, lowered estimates of market risk. Capital ratios could then decline again should volatility increase. Other issues regarding the measurement of capital adequacy in emerging market economies are discussed below.

... better market sentiment ...

Improvements in bank performance have been mirrored by better market sentiment. As illustrated in Graph III.11 (bottom right-hand panel), the ratio of bank stock price indices to overall stock indices has in recent years tended to rise or has remained flat in most major emerging market regions, even as stock prices have broadly risen. In emerging Asia, excluding China, relative prices of bank stocks have done particularly well on average, although there have been marked differences across countries. In India, the relative index has more than doubled since 2000, but it only remained flat in Indonesia. In further contrast, the relative index has broadly declined in Korea and Singapore, and fallen even more steeply in the Philippines and Thailand. In Latin America, relative bank stock prices in Mexico have performed better than the (flat) regional average. Finally, relative bank stock prices have tended to rise in recent years in central Europe and Turkey, and also South Africa, but have declined sharply in Russia since its crisis in 1998.

... but limited increase in financial strength?

Another measure of the underlying resilience of banking systems provides fewer grounds for optimism. One widely used indicator of the likelihood of a financial institution requiring outside financial support has generally remained flat or improved only modestly in recent years. This suggests that a significant part of the improvement in bank performance indicated by financial statements largely reflects cyclical factors. In particular, recent credit rating upgrades of external bank debt in emerging markets reflect not just the improvement in banking sector fundamentals, but also the greater ability of governments to support the financial sector. This capacity has also been reflected in recent sovereign upgrades.

China's banks: hard to gauge

The situation of banks in China is particularly difficult to gauge. On the one hand, available data suggest declining returns on assets and lower bank regulatory capital in recent years. On the other hand, there have also been marked reductions in NPLs. China has invested massive resources to recapitalise banks and deal with their NPL problems. The government issued 270 billion yuan, or about $32.5 billion, in special treasury bonds to recapitalise banks in 1998, and established asset management companies to assume 1,000 billion yuan in NPLs in 1999. Since 2003 the government has allocated $60 billion in foreign exchange reserves to recapitalise major banks. This has also been associated with NPL write-offs.

It may also partly be the case that NPL ratios have fallen in recent years due to rapid credit growth. If the credit quality of new loans is low, however, this could reverse. Much will depend on the extent to which credit allocation is now based on likely economic returns rather than government guidelines.

According to a survey by the People's Bank of China, government-directed lending, defaults by state enterprises on directed loans and local government involvement in credit decisions were important contributors to earlier NPLs. Sentiment towards the corporate sector, including banks, has been hurt by widely publicised corporate governance problems. However, the government is taking steps to address these problems in the banking sector through changes in management and diversification of ownership.

Factors influencing risks in the banking sector

Four sources of risk

The resilience of the banking sector will depend on the types of risks to which it is exposed. Four aspects deserve attention: first, exposures arising from the rapid growth in credit to households; second, the risks from exposure to currency mismatches; third, the significant banking sector exposure to long-term government debt; and finally, exposures arising from changes in banking structure and an increasingly competitive environment.

Increased lending to households

As noted earlier, the pickup in economic activity in emerging economies during recent years has been associated with much higher lending to households. This reflects greater demand for credit, due to the factors cited earlier, as well as increased supply due to the perception that credit to households offers banks a profitable and comparatively safe opportunity to diversify away from lending to corporations. This shift to household credit could lead to banking problems. Credit card debt has expanded rapidly and the sharp rise in delinquencies on credit card debt has already created significant problems in Korea in recent years. Mortgage debt is safer for banks than other types of consumer credit because of the collateral provided by the house, but the rapid price increases highlighted earlier underline the need for caution. A reversal in house prices would expose banks directly to default risks on property-related loans. Moreover, it could have indirect effects as well if reductions in household wealth and consumption (see Chapter VII for a fuller discussion of these effects in the context of developed markets) were to have macroeconomic consequences and further increase loan losses.

Policy responses

Policy responses in a number of emerging markets also indicate concerns that existing prudential arrangements and market mechanisms might not be able to contain the risks to banks associated with sharp increases in property prices. For example, although the rise in property prices has moderated in Korea, the government has maintained measures to penalise speculation in property markets, and in some instances has prohibited real estate transactions until perceived speculative pressures ease. In early 2005, the Chinese authorities sought to dampen property price increases in some cities, especially Shanghai, by various administrative means. They raised down payment requirements to 30% from 20%, while eliminating the favourable interest rate previously applied to mortgage financing. In addition, they imposed a 5.5% tax on price gains on property sold within 12 months of purchase. In Thailand, the down payment has also been increased.

Financial innovations mitigate risks

Recent financial innovations can reduce the risks arising from lending to households, or can allow these risks to be distributed more widely. With respect to risk reduction, the spread of credit bureaus is improving the ability to

assess borrowers' debt servicing capacity. As for risk distribution, debt is increasingly being securitised or repackaged in other ways that limit the exposure of creditors. For example, Korea's mortgage-backed securities market grew significantly in 2004, and a number of cross-border securitisation transactions have already been completed. Moreover, various countries, including China and Thailand, have also taken steps that could lead to the securitisation of mortgages in the near future. Many of these innovations, however, could themselves pose risks that are imperfectly understood.

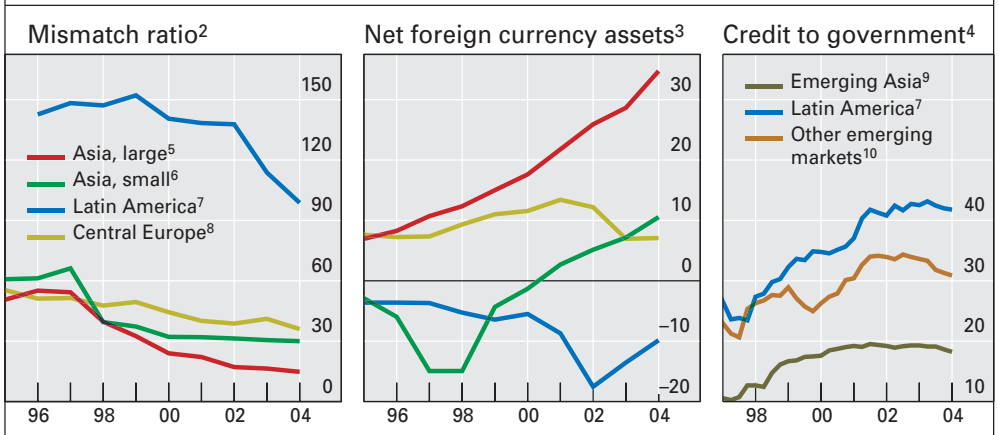
Private sector currency mismatches are a concern ...

A second risk to which banking systems might be exposed is currency mismatches in the economy as a whole. During the past decade, the degree of currency mismatch in the main regions has fallen sharply, as indicated by a measure of the size of foreign currency debt relative to exports. Net foreign currency balances have also improved (Graph III.12, left-hand and centre panels). However, in some countries (particularly in Asia), this reflects large central bank foreign reserves; indeed, private sector foreign currency mismatches remain significant in a number of countries. This points to the need to ensure that the financial sector is taking adequate care to manage the risks associated with these mismatches.

... as is exposure to government bonds

A third cause for concern is the banking sector's exposure to government, which has tended to rise in all emerging market regions (Graph III.12, right-hand panel). In some cases, increases in bank holdings of public debt reflect the recapitalisation of banks in the aftermath of crises. In other cases (eg India), banks have traditionally been major holders of government bonds. This raises the possibility that banks might face associated market risk: higher long-term interest rates could create capital losses, and such risks are not always hedged in emerging market economies.

Indicators of currency mismatch and credit to government[1]



[1] Weighted average of the economies listed. [2] Foreign currency share of total debt divided by the ratio of exports to GDP. [3] Estimate for banks and non-banks including foreign currency securities outstanding, as a percentage of GDP. [4] Banks' claims on central government as a percentage of total claims on central government and the private sector. [5] China, India, Korea and Taiwan (China). [6] Indonesia, Malaysia, the Philippines and Thailand. [7] Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. [8] The Czech Republic, Hungary and Poland. [9] Large and small Asia excluding Taiwan (China) and including Hong Kong SAR. [10] Central Europe, South Africa and Turkey.

Sources: IMF; national data; BIS. Graph III.12

Competitive pressures have risen

Finally, the resilience of the banking sector also depends on competitive pressures and structural characteristics. Such pressures have intensified in many countries, which can encourage increased bank efficiency. At the same time, pressures on profitability, brought about by stronger competition, in effect reduce the franchise value of the banking sector and encourage a switch into potentially riskier non-traditional business lines (see Chapter VII for further discussion of issues of bank profitability in the context of developed markets). Competitive pressures have not been consistently reflected in falling net interest margins, which are also influenced by a number of other factors (Graph III.13). For example, net interest margins have declined over time in Mexico, but risen recently in Brazil. However, non-interest expenses have fallen in some emerging markets, indicating higher efficiency, and the share of other operating (non-interest) income in total revenues in some emerging markets has risen, as banks have begun to move beyond traditional commercial bank lending activity. These welcome trends are all already well established in the industrial world, as a result of competitive pressures (see Chapter VII).

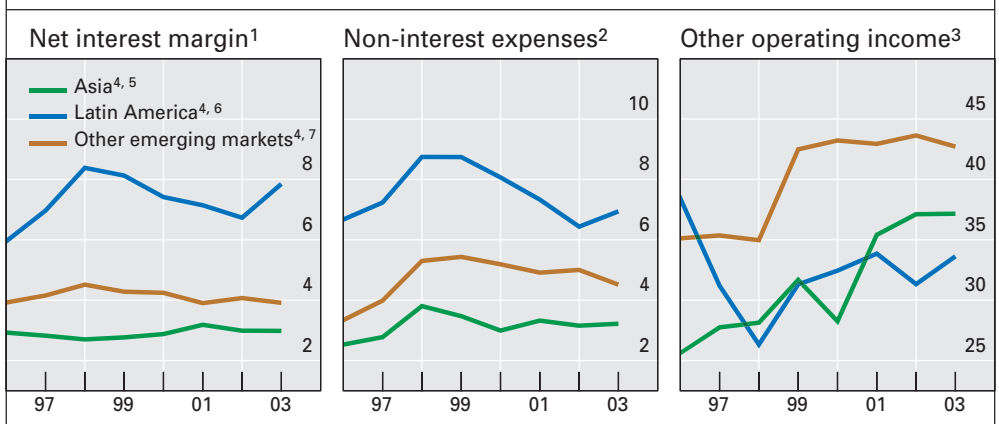
Concentration ...

At the same time, three particular trends in market structure might contribute to a greater resilience of the banking sector. First, an extended decline in bank concentration up to the mid-1990s has since shown signs of stabilising or reversing in a number of economies. Research indicates that increases in bank concentration reduce the probability of banking crises. The reason is that larger banks can diversify risk more readily, are able to earn higher profits, and are more easily monitored by depositors.

... a reduced public sector role ...

A second trend has been to a lower, albeit in some countries still large, share of assets held by public banks. A large public bank presence tends to inhibit financial market development. Moreover, public banks in emerging markets have not performed as well as private banks, according to conventional financial performance criteria, because they are usually expected to achieve

Indicators of performance



[1] Net interest income as a percentage of earning assets. [2] As a percentage of total assets. [3] As a percentage of the sum of net interest revenue and other operating income. [4] Weighted average of the economies listed, based on 2000 GDP and PPP exchange rates. [5] Hong Kong SAR, India, Korea, Malaysia, Singapore, Taiwan (China) and Thailand. [6] Brazil, Chile, Colombia, Mexico, Peru and Venezuela. [7] The Czech Republic, Hungary, Poland and South Africa.

Source: Fitch Ratings. Graph III.13

certain public policy goals regardless of the impact on profitability. According to estimates by the Inter-American Development Bank, publicly owned banks in Latin America charge lower loan rates than private banks, and have higher NPL rates and lower returns on assets. Public banks also pay lower deposit rates than private banks, further suggesting that they are being used to subsidise borrowers.

... and more foreign bank entry

Finally, a growing role has been played by foreign banks, notably in Latin America and central and eastern Europe. In addition to stimulating competition more generally, foreign banks also play an active role in introducing innovations into emerging markets, many of which help improve risk management procedures. They can also be a source of financial support to the banking system since they are less vulnerable to country-specific (systemic) risk, less sensitive to host country cycles, and can also obtain foreign currency liquidity during episodes of financial stress. These issues have recently been explored in reports by the Committee on the Global Financial System.

Some concerns

While these three trends are, on balance, expected to strengthen banking sectors in emerging market economies, some concerns remain. In certain situations, higher concentration could weaken the banking system, for example if it leads to more opaque banks, if authorities find it difficult to withhold support or if it is the result of the merger of poorly performing banks. Foreign bank entry also raises some issues, including possible exposure to shocks affecting the parent company; loss of information that can arise when domestic banks are acquired and delisted from local stock markets; lack of access to decision-makers in the parent bank whose actions may have a large impact on the foreign bank subsidiary and the host country; and challenges in achieving the required level of communication between home and host country supervisors.

The regulatory environment

Regulation and supervision have improved ...

A number of emerging market economies have taken steps to enhance bank regulation and supervision, and some have already developed quite sophisticated approaches to monitoring their banking systems. Nevertheless, improvements in the regulatory environment in recent years have in some cases been limited. Recent financial stability assessments conducted by the IMF and World Bank, focusing in part on progress in implementing the Basel Core Principles for Effective Banking Supervision, suggest that certain weaknesses in banking supervision remain.

... but some issues remain

Four issues are of particular concern. The first is the absence of consolidated supervision in some countries. This increases the risk that subsidiaries of banking institutions could experience financial difficulties which are not readily detectable, adversely affecting the financial sector and the economy. A second concern has to do with deficiencies in risk management. Many countries have not succeeded in instilling a culture of risk management in banking institutions, and thus compliance with banking regulations tends to be largely mechanical. By the same token, regulations on credit exposures and on connected lending are seen as not strict enough. In addition, in some countries there are insufficient regulations for managing market risk. A third issue is the problem of measuring bank performance. Some crucial measures

of bank performance can give a misleading picture of risks to the financial system. For example, capital adequacy ratios are sometimes not calculated on a consolidated basis, risk weightings are inadequate because of a lack of appropriate measures, or inappropriate capital components are included. Lastly, remedial measures are commonly deficient, reducing the incentives for diligent risk management. Such deficiencies include undue forbearance (ie the willingness of regulators to postpone action when certain thresholds are breached), the lack of supervisory capacity or authority for timely intervention, and the lack of immunity for supervisors. While there have been improvements in bankruptcy legislation in some countries, problems in enforcing creditor rights remain formidable.

IV. Monetary policy in the advanced industrial economies

Highlights

The stance of monetary policy in the G3 economies remained highly accommodative in the period under review. However, with the US economic expansion continuing and risks shifting away from unwelcome disinflation and economic weakness towards possible inflationary pressures, the Federal Reserve began reducing the degree of accommodation in a series of measured increases in the federal funds rate target. The ECB kept its policy rate unchanged as sub-par economic growth and the appreciation of the euro continued to hold back inflationary pressures. The Bank of Japan held its policy rate at zero as economic and financial headwinds proved sufficiently strong to rule out an end to deflation. Improving financial market conditions nonetheless seemed to bring closer an eventual exit from the Bank of Japan's unconventional policy of quantitative easing. As their respective recoveries continued in the context of low policy interest rates, G3 policymakers were mindful of the need for clear communication in their exit strategies.

Policy concerns across smaller industrial economies were more diverse. Some central banks chose very accommodative policy stances while others adopted more neutral settings. Many central banks raised policy rates modestly as expectations about growth at home and abroad firmed; in some cases, more binding resource constraints gave rise to concerns about price stability. Debt levels, frothy housing markets and exchange rate considerations continued to weigh on monetary policy decisions.

External developments, especially movements in the prices of oil and other commodities, dominated the period under review for all the economies. Comparisons of these as well as other recent developments with similar movements in the late 1960s and early 1970s seem to produce some striking parallels. In the latter part of this chapter, the historical record is reviewed and contrasted with current circumstances in order to assess the likelihood of history repeating itself. In a broader context, the comparison also helps to clarify the kinds of risks that monetary policymakers might be facing.

Review of developments

United States

The Federal Reserve raised rates in a measured ...

The Federal Reserve reduced the degree of monetary policy accommodation throughout the period under review. Despite eight measured increases of 25 basis points each, the federal funds rate target finished the period at 3%. This was still below conventional estimates of the neutral, or natural, rate of

interest for the United States. As of late spring, financial markets were still anticipating further rate increases.

... and transparent fashion

One important aspect of the Federal Reserve's tightening of policy was its transparency. The rate increases were well telegraphed, in part to minimise any potential stress on the financial system. The Federal Reserve signalled its intentions by various means, including Federal Open Market Committee (FOMC) press releases, meeting minutes and statements by Committee members. Financial markets generally took the FOMC's actions in their stride and there were few surprises about the direction or size of the moves.

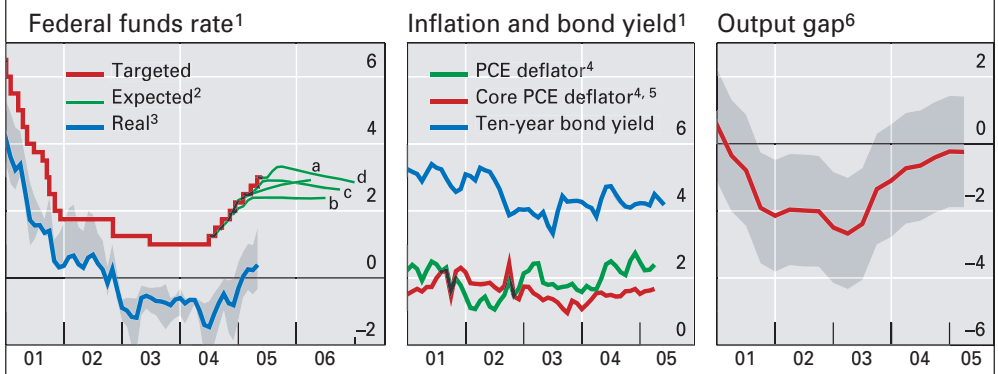
However, real policy rates remained near zero ...

This measured approach was intended to balance the risks to sustainable growth against the desire to maintain price stability, as the four-year economic expansion continued to reduce margins of underutilised resources (Graph IV.1). Nevertheless, questions arose about whether the increases in the federal funds rate were sufficient to achieve the Committee's desired reduction in policy accommodation. One concern was that rising headline inflation was resulting in very low ex post real policy rates throughout the period – below zero during 2004 and just edging above zero in early 2005.

... and long rates behaved atypically for a tightening phase ...

Moreover, the unusual reaction of longer-term market interest rates to the measured tightening was posing a number of further questions. In the past, major tightening phases had typically gone hand in hand with significant increases in market interest rates, short-term as well as long-term (Graph IV.2). This time, while short-term rates moved in a typical lockstep manner, longer-term yields on fixed income securities showed no sign of a sustained upward trend; if anything, yields drifted downwards (see Chapter VI). For some, this pattern raised concerns about whether policy actions were having the desired restrictive impact on aggregate demand. However, the Federal Reserve noted that one reason for the muted response in long-term rates was the fact that

Economic indicators for the United States

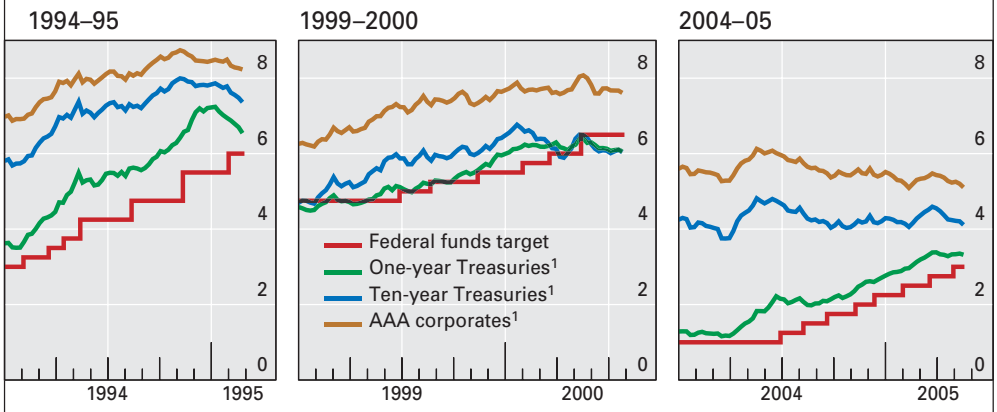


a = 30 June 2004; b = 10 November 2004; c = 2 February 2005; d = 20 May 2005.

[1] In per cent. [2] One-month federal funds and three-month eurodollar futures adjusted for term premia. [3] Federal funds rate less annual changes, in per cent, in the personal consumption expenditure (PCE) deflator. The shaded area represents the dispersion of inflation as measured by CPI, core CPI, PCE deflator and core PCE deflator. [4] Annual changes. [5] Excluding food and energy. [6] As a percentage of potential output. The shaded area represents the error band of ±1 bootstrapped standard deviation.

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

Effective monetary policy tightening in the United States



[1] Weekly averages.

Source: National data. Graph IV.2

longer-term inflation expectations appeared to be lower and more firmly anchored than in the past. This implied that less demand restraint was needed.

... raising concerns about excessive liquidity

The uncharacteristic behaviour of longer-term interest rates also underscored potential concerns about other considerations, with further conflicting implications for monetary policy. The relatively flat yield curve might indicate that the markets were expecting a reduction in long-term growth prospects, perhaps implying the need for an easier stance of monetary policy. However, the low long-term interest rates, along with yield compressions and rising asset prices, could also be seen as a sign that investors were continuing to take on excessive risk during the prolonged period of policy accommodation. Accelerating house prices also suggested that such forces were at work. Such an interpretation pointed to a possible need for a steeper rise in policy rates than was priced into financial markets, in order to absorb excessive liquidity.

Concerns also arose about surging energy prices ...

US monetary policy decisions during the period under review were further complicated by the need to deal with other unforeseen and potentially inflationary developments. The sharp increase in energy prices, especially oil prices, raised concerns about price stability and downside risks to the expansion. Nevertheless, with core inflation comfortably below 2%, policymakers assessed the inflation threat as reasonably contained, albeit deserving heightened monitoring. The sharp depreciation of the dollar also presented potential policy challenges. Even so, continued low import prices and the apparent decline in exchange rate pass-through in recent years seemed to mitigate the need for more aggressive policy actions. Anecdotal evidence at the end of the period, however, pointed to greater pricing power of firms. If it signals a new trend, this might call for a somewhat faster removal of policy accommodation.

... dollar depreciation ...

... and the productivity trend

The FOMC also faced the possibility of a slowdown in structural productivity growth, as output per hour decelerated and unit labour costs accelerated over the past year. While a trend break could not be established with any confidence, the implications had to be factored into policy. In the short run, profit margins were ample enough to moderate the inflationary

consequences and the need for a more aggressive schedule of policy rate increases in advance of more definitive evidence. Over the medium term, a decline in trend productivity could imply a lower natural rate of interest and hence a lower level for the federal funds rate at the end of the tightening phase.

An explicit inflation objective was considered

An important question for the Federal Reserve earlier this year was whether an explicit inflation target could foster even better US economic performance. The FOMC's discussion of the advantages and disadvantages of formulating an explicit price stability objective should be seen as part of a much broader ongoing review of its institutional framework to enhance transparency, recently exemplified by its decisions to expedite the release of FOMC meeting minutes and to extend its published forecast horizon. The FOMC pointed out that, on the one hand, an explicit inflation target could strengthen the economy's inflation anchor, enhance the transparency of internal deliberations and improve communication with the public. On the other hand, an explicit target might compromise the Federal Reserve's traditional mandate concerning both economic activity and inflation, and might constrain its flexibility in responding to changing economic and financial circumstances.

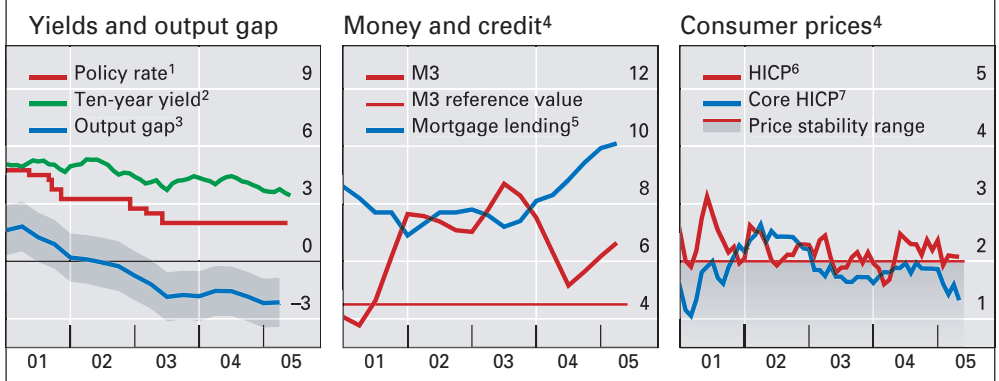
Euro area

The ECB kept rates on hold ...

... given subdued economic activity and inflation above the price stability range

With inflation generally subdued and economic activity flagging in the euro area, the ECB continued to pursue a stimulative monetary policy. As of late spring, the policy rate had been kept at 2% for two years, balancing the discomfort from an inflation rate that was above the upper limit of the Bank's definition of price stability against the concern arising from sub-par economic performance. Surging oil prices raised concerns about a possible deterioration in the short-run inflation outlook and even a return of stagflation. However, little evidence emerged that energy and other commodity price rises were passing through to core inflation, to wage setting behaviour or to medium-term inflation expectations. Thus, the ECB concluded that the risks of more generalised

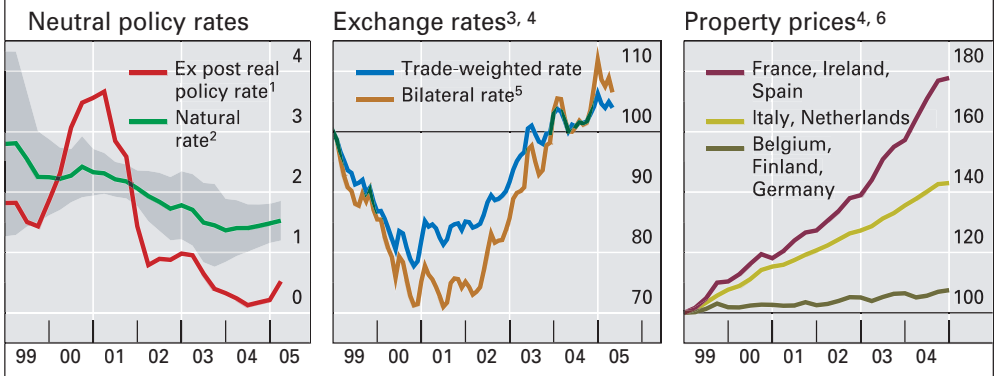
Economic indicators for the euro area



[1] Tender rate (minimum). [2] Government bonds. [3] As a percentage of potential output. The shaded area represents the error band of ±1 bootstrapped standard deviation. [4] Annual changes, in per cent. [5] Loans by monetary financial institutions to households (including non-profit institutions serving households) for house purchase. [6] Harmonised index. [7] HICP excluding unprocessed food and energy.

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

Policy rates and market developments in the euro area



[1] r_t, defined as the nominal policy rate less HICP core inflation. [2] r^N, estimated with a five-year moving window using the following equation: $r_t = r^N + \alpha(\pi^e_t - \pi^T) + \beta\, gap_t + \gamma\, r_{t-1}$, where π^e_t is the expected inflation rate (as calculated by SPF) and gap_t is the output gap; π^T is assumed to be 1.8%. A ±2 standard error interval around the estimated value of r^N is represented by the shaded area. [3] In terms of relative consumer prices. [4] Fourth quarter 1998 = 100. [5] Against the US dollar. [6] Inflation-adjusted residential property. Weighted averages based on 2000 GDP and PPP exchange rates; for France, Germany and Italy, extrapolated from lower-frequency data.

Sources: ECB Survey of Professional Forecasters (SPF); national data; BIS calculations. Graph IV.4

inflation were not sufficiently great to justify an increase in rates. In part, this was because there seemed to be continued economic slack owing to slow growth (Graph IV.3). With inflation running near the upper end of the ECB's desired range of below, but close to, 2%, the real policy interest rate stayed close to zero. As in the United States, this is well below estimates of the natural rate of interest. This indicated that, as the economy recovered, the ECB would need to tighten policy to keep inflationary pressures in check (Graph IV.4).

Rapid M3 growth added to concerns about the medium-term assessment ...

Again as in the United States, a key question arose about the consequences of a prolonged period of accommodative policy. On the one hand, the real-side measures of inflationary pressures referred to above indicated few imminent inflation threats. On the other hand, M3 growth rates continued to exceed the ECB's reference value of 4½%. Traditionally, rapid growth in the broad monetary aggregate has indicated an easy stance of monetary policy that could lead to higher inflation. While in previous years rapid M3 growth had been attributed to an increased precautionary demand for holding funds, the reasons for still further increases in such demand were harder to identify last year. Accordingly, the ECB emphasised the traditional medium-term inflation risks associated with such monetary expansion.

... as did rapid credit growth and house price increases

The ECB's two-pillar approach to its medium-term assessment also offered a less conventional way of considering the monetary policy risks. The pickup in M3 growth after mid-2004 coincided with a rise in euro area credit expansion, especially mortgage lending. Viewed from this perspective, a continuation of the low interest rate policy, with its natural implications for long-term yields, had the potential to fuel not only goods and services price inflation but also house price inflation, and to encourage the accumulation of debt to unprecedented levels. In a more conventional story, higher policy rates would be needed to prevent the economic recovery from gaining excessive momentum and inflation from rising. In a less conventional story, rate increases would be

needed to rein in financial imbalances before strong asset price appreciations and subsequent reversals threatened price stability on the downside.

Divergent regional house price trends complicate the policy environment

House price trends also underscored potential monetary policy complications arising from regional diversity across the euro area. The anaemic housing markets in Austria and Germany, for example, paled in comparison with the double digit price gains in France and Spain (see Chapter II). The ECB expressed its concern about increases in several member countries, but noted that its direct mandate only obliged it to react to the extent that they affected euro area macroeconomic conditions. The ECB also noted that national financial stability issues naturally fell under the purview of national financial supervisory authorities and euro area central banks.

Sharp euro appreciation presented a challenge

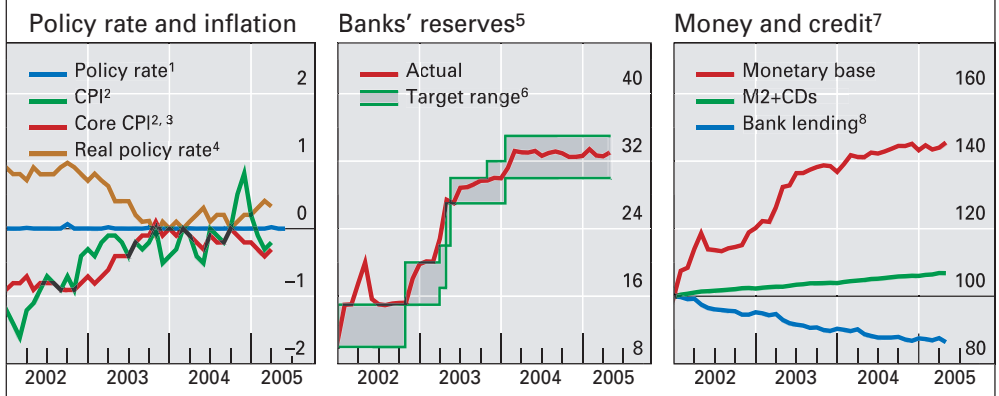
The sharp appreciation of the euro against the US dollar in 2004 presented a challenge for the ECB. While it helped to curb short-run inflationary pressures, it did so by concentrating the burden of adjustment largely on the export-oriented sector. Moreover, with the US current account deficit still growing to unprecedented levels, further dollar depreciation could not be ruled out (see Chapter V).

Japan

The Bank of Japan held its policy rate at zero as deflation persisted

The Bank of Japan maintained its very accommodative policy of quantitative easing, with short-term policy rates remaining essentially at zero (Graph IV.5). Part of the reason for continuing the unconventional policy was that deflationary forces proved to be too difficult to shake off as the economy stagnated, leaving a high, albeit declining, level of underutilised resources. Significant improvements in the financial sector, which was still labouring under the effects of the asset price collapse in the 1990s, helped reduce concerns that the Japanese economy might stumble into a deflationary spiral (see Chapter VII). Even so, the easy stance of monetary policy generated just a modest increase in the broader monetary aggregates, as bank lending showed only incipient signs of a turnaround.

Economic indicators for Japan



[1] Uncollateralised call money rate at end-month, in per cent. [2] Annual changes, in per cent. [3] CPI excluding fresh food. [4] In terms of core CPI. [5] Current account balances with the Bank of Japan, in trillions of yen. [6] As set by the Bank of Japan. [7] December 2001 = 100. [8] Lending by domestic commercial banks.

Sources: Bank of Japan; OECD; national data. Graph IV.5

Target bands for quantitative easing were left unchanged ...

The Bank of Japan kept the target band of ¥30–35 trillion for outstanding current account balances with the central bank. However, some members of its Policy Board became increasingly sceptical about the consistency of this target with the Bank's policy goals of low and stable inflation. Indeed, the Bank considered lowering the target range for the first time since the adoption of its policy of quantitative easing in 2001. This development occurred as some Policy Board members also indicated a growing concern about the potential negative side effects of the quantitative easing policy. These effects included moral hazard among borrowers, the poor functioning of money markets, a decrease in monetary policy flexibility and a weakening of fiscal discipline.

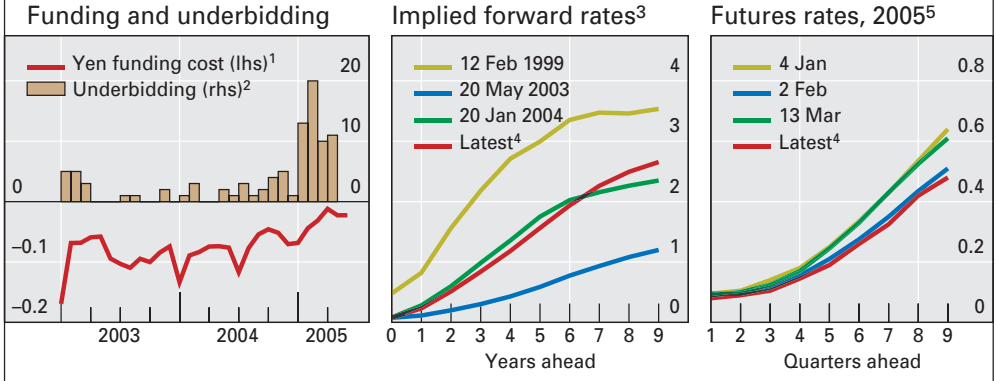
... but fundamental issues were raised about the policy ...

... and technical difficulties arose

Technical difficulties in conducting the Bank's market operations to inject liquidity complemented uncertainties about the appropriate target bands for current account balances. The frequency of underbidding (ie the number of times that the amount offered exceeded the amount bid) in its bill buying operations increased appreciably in March of this year (Graph IV.6). This was widely interpreted as an indication that market demand for liquidity was falling as a result of the improving health of the banking sector. In particular, because banks strengthened their balance sheets, they did not have to pay as high a cost to raise US dollar funds via yen swaps. For years, banks with US dollar deposits, especially foreign ones, had engaged in currency swaps for yen at negative yen funding costs in the currency swap market. These had made it profitable for the banks to hold yen balances in various low-yielding liquid assets, even zero interest bearing current accounts at the Bank of Japan. As the swap spread disappeared earlier this year, so did this type of demand for current account balances generated by the foreign banks.

While technical in nature and unrelated to the stance of monetary policy, the Bank's inability to attract sufficient demand for its operations, which

Quantitative easing and the policy duration effect in Japan



[1] Through one-month swaps. Computation based on the interest rate for raising US dollar funds and the spread between spot and forward foreign exchange rates, in percentage points. [2] Represents the number of times, in the Bank of Japan's money market operations, when the amount offered exceeded the amount of competitive bids during the month. [3] Calculated from yen/yen one-year swap rates, in per cent. The dates refer to the introduction of the zero interest rate policy and two substantial increases in the current account balance target. [4] 20 May 2005. [5] Of the three-month euroyen, in per cent.

Sources: Bank of Japan; Bloomberg; national data. Graph IV.6

remained largely confined to short maturities, initially led to market speculation about a turning point in the Bank's monetary policy. The forward interest rate curve steepened and became more volatile. These market reactions led the Bank of Japan to reiterate its view that the underbidding problem was a purely technical issue and did not signal a shift in policy stance. The Bank also reaffirmed its commitment to the zero interest rate policy. These developments indicated that the commitment to maintain the zero interest rate policy, rather than current account targets per se, was critical to a monetary transmission process geared towards keeping market interest rates low. Whatever the circumstances, the Bank of Japan's communication strategy will play an important role in shaping the policy environment once the Bank exits from its unconventional monetary policy.

Market reactions highlighted the importance of the central bank's communication strategy ...

One policy option discussed this year to help reorient expectations towards low, stable inflation was for the central bank to formulate and announce an explicit inflation objective. This issue, though raised frequently in the past, appeared to receive additional attention in the period under review, as inflation became more likely and such a commitment became more credible. As seen elsewhere in the world, inflation targeting regimes can help to shift inflation expectations down and maintain them at a low level. The Bank of Japan's challenge, however, would be somewhat different. It would be to achieve and maintain expectations of low inflation in a growing economy after a decade of deflation and sub-par economic performance. Perhaps the more important contribution made by setting an explicit inflation objective, once the economy and financial system were on a sounder footing, would be to reduce the likelihood of inflation expectations overshooting on the upside given the large reserve overhang. Such an overshoot could lead to an increase in borrowing costs and aggravate some lingering fragilities in the economy, not least problems associated with weak companies still battling for survival.

... and underscored the potential benefits of an explicit inflation objective

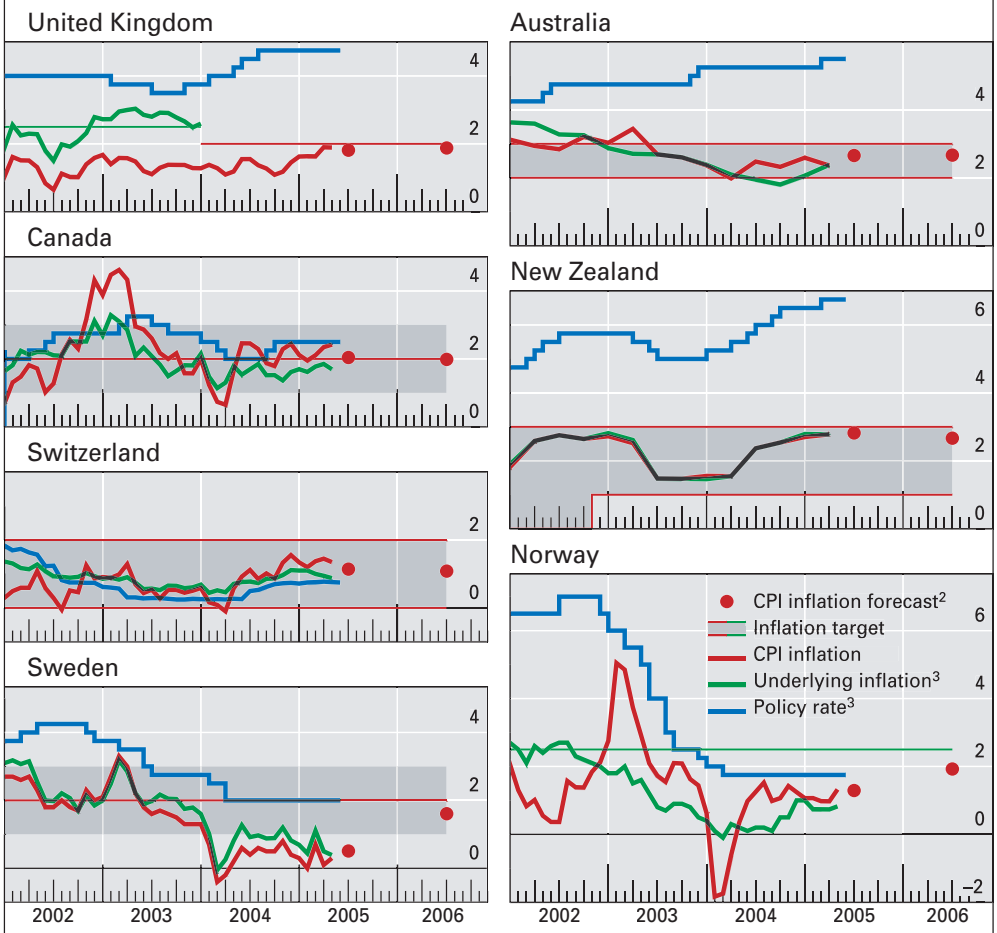
Inflation targeting countries

Many central banks in countries with explicit numerical targets for inflation increased policy rates modestly during the period under review. In general, the stronger global economy helped to bolster domestic economic conditions. Moreover, the accompanying increases in commodity prices, especially oil, directly raised concerns about inflationary pressures. And some central banks expressed the view that higher rates might also help deter further accumulation of debt and higher asset prices, which, under certain circumstances, could raise the potential costs of a subsequent adjustment.

Many central banks in countries with inflation targets tightened policy

For the Reserve Bank of Australia and the Reserve Bank of New Zealand, the rate increases last year followed a series of earlier tightening moves (Graph IV.7). In the case of the Bank of Canada and the Swiss National Bank, the rate rises were the first after troughs in their respective policy cycles. For the Swiss National Bank, this trough had seen rates pushed almost to zero. In contrast, Sveriges Riksbank and the Central Bank of Norway held their respective policy rates unchanged from the trough of their policy cycles in early 2004. In spite of initially very low inflation, the Bank of England kept its policy rate unchanged from August 2004 onwards.

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



[1] Inflation rates measured as annual changes, in per cent. CPI inflation is targeted by Australia, Canada, New Zealand, Sweden and, since 10 December 2003, the United Kingdom (previously, underlying inflation); Norway targets underlying inflation; Switzerland does not target inflation but instead uses a broad-based inflation forecasting strategy. [2] From market surveys published in May 2005. [3] For Norway, CPI adjusted for tax changes and excluding energy products, and the sight deposit rate, respectively; for the other countries, see Graph IV.7 in the *74th Annual Report*.

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

Australia, New Zealand and the United Kingdom chose policy settings close to neutral …

Policy rates in Australia, New Zealand and the United Kingdom are now close to levels seen as consistent with long-run non-inflationary sustainable growth. The Reserve Bank of Australia had expressed concerns that, after 13 years of expansion, spare resource utilisation was being stretched thin and inflationary pressures were building. In the absence of an upward adjustment in the policy rate, inflation was expected to approach the upper end of its target band. New Zealand, already near the upper end of its inflation range and with the economy showing signs of overheating, had the highest policy rate amongst the industrial economies, at 6.75%. Moreover, the Reserve Bank explicitly left open the possibility of further increases. The Bank of England raised rates throughout the first half of 2004, reaching 4.75% in August. At that time, the Monetary Policy Committee made it clear that it was closely watching the rapid growth in household debt and elevated house prices in the light of the potential vulnerability implied for the household sector. Indeed, the Bank of

England said that rate rises were justified, in part, by the desire to curb these possible excesses. This was also the case for the Reserve Bank of Australia and the Reserve Bank of New Zealand.

... while others were distinctly accommodative

The Bank of Canada and the Swiss National Bank ended the period under review with a policy stance still seen as accommodative. In Canada, there was a significant withdrawal of policy accommodation around the middle of 2004, intended to moderate growth before the economy overheated. However, in late autumn, with oil prices subsiding and the Canadian bilateral exchange rate against the US dollar appreciating, the Bank of Canada delayed further rate increases owing to somewhat more subdued short-term inflation prospects. After lifting its policy rate from the historical low of 0.25% to 0.75%, the Swiss National Bank also kept further rates rises on hold, as unexpectedly weaker European growth prospects weighed on the Swiss recovery. Sveriges Riksbank and the Central Bank of Norway, too, kept their respective policy rates very low. The Nordic countries benefited from unexpectedly favourable supply side developments, which fuelled economic growth while holding inflationary pressures and labour utilisation rates in check. Indeed, lower import prices and higher domestic productivity posed some risk of falling prices in Sweden. In spite of existing slack conditions in Norway, there was still some upside risk to inflation, in part because of more favourable investment prospects in the energy sector.

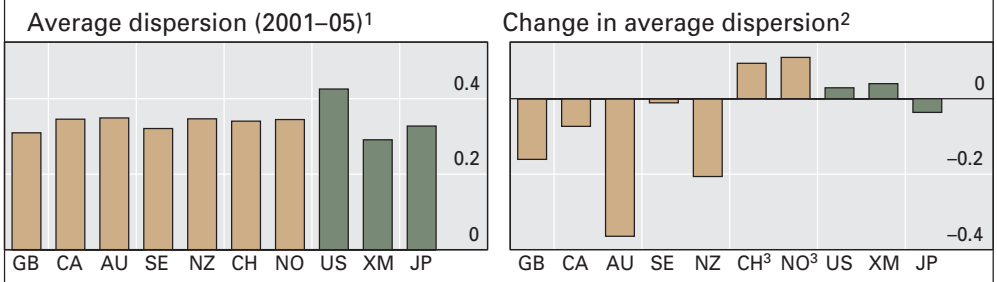
High asset prices and indebtedness represented a significant risk

Vulnerabilities arising from the coexistence of elevated asset prices with high debt levels continued to represent a significant risk for various central banks in the period under review. Australia, New Zealand and the United Kingdom, for example, experienced a marked cooling of their respective housing markets, reflecting in part the tighter stance of policy implemented over the past few years. The welcome deceleration in house prices seen so far has had benign effects relative to more disruptive potential scenarios. However, the possibility of sharper house price decreases in the future cannot be ruled out (see Chapters II and VII for further discussion of house price developments and their implications). The Riksbank faced a different set of circumstances. Even though Swedish inflation was forecast to undershoot the target for most of the two-year-ahead period, rapid growth in household debt and increases in house prices argued against looser monetary policy. The Riksbank pointed out that lower rates, if they subsequently had to be rapidly reversed, could threaten consumption growth given elevated indebtedness. It noted that, in its view, supply-driven deflation is qualitatively different from deflations associated with insufficient demand or the collapse of asset prices (see Chapter IV of the *73rd Annual Report*).

Inflation uncertainty is now on a par with that in the G3

Despite the various unforeseen developments that these central banks faced, they have recorded an impressive inflation performance over the past few years (Graph IV.8). Private sector expectations of inflation have remained largely consistent with the inflation targets of the central banks. Moreover, the average dispersions of inflation expectations in the inflation targeting countries are low and now broadly in line with those in the larger economies, in spite of their relatively poor inflation performance in previous decades. This has been seen as a testament to the transparency and credibility of such regimes. Nevertheless, further refinements of inflation targeting frameworks are possible. The Bank of

Dispersion of inflation expectations



GB = United Kingdom; CA = Canada; AU = Australia; SE = Sweden; NZ = New Zealand; CH = Switzerland; NO = Norway; US = United States; XM = euro area (weighted average of France, Germany, Italy, the Netherlands and Spain, based on 2000 GDP and PPP exchange rates); JP = Japan.

[1] Defined as the average cross-sectional standard deviation of inflation expectations from Consensus Economics' January surveys. [2] Between 1996–2000 and 2001–05. [3] Data available only from 1998.

Sources: © Consensus Economics; BIS calculations. Graph IV.8

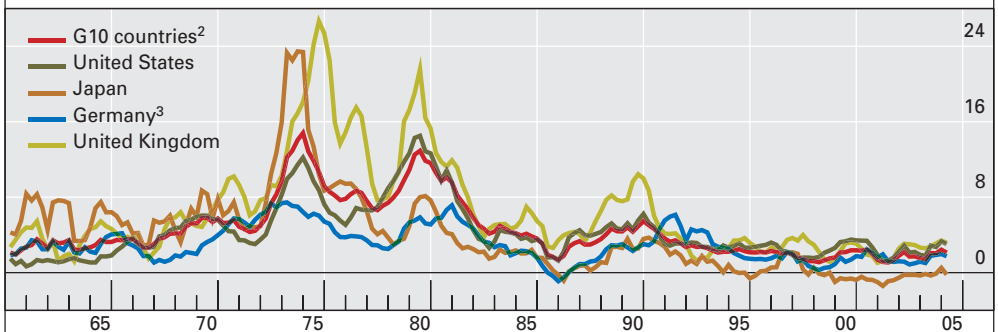
Canada, for example, is currently reviewing the 18- to 24-month timeline over which it attempts to bring inflation to its target. Even though such a horizon provides considerable transparency, responding to some types of economic shocks may best be done with a more flexible and possibly longer horizon.

Déjà vu?

Parallels between the current situation and that of three decades ago

Some of the salient developments during the period under review elicited comparisons between today's monetary policy environment and that of the late 1960s and early 1970s. The prima facie similarities include the continuation of a prolonged period of accommodative G3 monetary policy, uncertainty about the degree of economic slack, concerns about the US external position and the implications for exchange rates, a sharp rise in oil and commodity prices, and a relaxation of fiscal discipline. Such parallels have naturally raised concerns that, as in the earlier period, there might soon be an inflation flare-up, and that monetary authorities might again react too slowly.

Consumer prices in a historical perspective[1]



[1] Annual changes, in per cent. [2] Weighted average based on 2000 GDP and PPP exchange rates. [3] Prior to 1992, western Germany.

Source: National data. Graph IV.9

The backdrop for these concerns is the unwelcome inflation experience of the late 1960s and 1970s (Graph IV.9). The process of escalating inflation began in the late 1960s, gained momentum during the early 1970s and accelerated rapidly at the time of the first oil crisis. Of particular note, inflation rates remained high even after oil price increases subsided and economies slowed down. Against this background, it is worth examining the experience of the period in greater depth, explaining both similarities and differences, so as to draw implications for monetary policy in current circumstances.

The case for history repeating itself

Similarities with the earlier period:

Looking back at the monetary policy environment of the late 1960s and early 1970s, one can identify six factors that contributed to the build-up of inflationary pressures during that period. There are parallels today.

prolonged periods of accommodative monetary policy ...

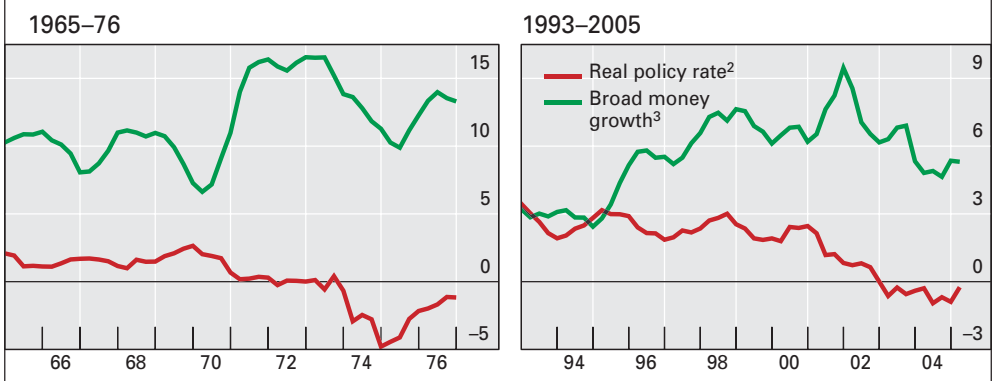
First, real policy rates were low and growth in the monetary aggregates was rapid (Graph IV.10). This accommodative monetary policy was not confined to a few countries but was generalised among the major industrialised economies. Low long-term real interest rates also contributed to the situation, especially as nominal rates remained relatively low and were generally slow to react to the rising inflation. At first, this accommodative policy helped to counter the weakness in the 1970–71 recession, but thereafter it led to an overstimulation of demand during the 1972–73 economic boom.

In recent years, as discussed earlier, monetary policy in the G3 has also been quite accommodative. Nominal and real policy rates have been low and the monetary and credit aggregates have grown rapidly. Indeed, real policy rates have been persistently near or below zero in only two periods in the past 40 years: the recent one and the 1970s. In both cases, the expansion of global liquidity was substantial. Moreover, long-term real rates have remained quite low too.

... exchange rate regimes with an inflation bias ...

Second, the international monetary system had "rules of the game" that led to the transmission of accommodative monetary policies from large

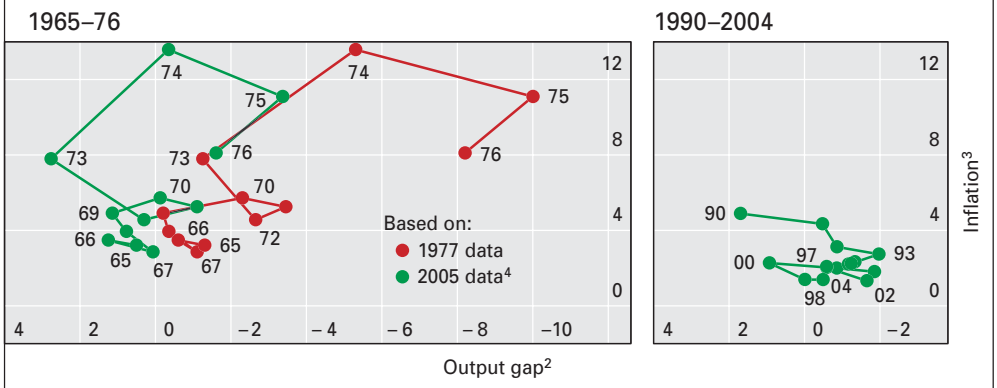
G10 real policy rate and broad money growth[1]



[1] Weighted averages based on GDP and PPP exchange rates, in per cent. [2] Nominal policy rate adjusted for four-quarter consumer price inflation. [3] Four-quarter change in broad money (M2 or M3). Includes non-G10 euro area countries.

Sources: OECD; national data. Graph IV.10

G10 output gap and inflation[1]



[1] Excluding Belgium and Switzerland. [2] Annual averages; inverted scales. [3] Annual changes in consumer prices, in per cent. [4] Weighted average of OECD data, based on 2000 GDP and PPP exchange rates; for some countries, output gap backdated using a Hodrick-Prescott filter on real GDP.

Sources: OECD, *Towards full employment and price stability* (1977), *Economic Outlook*; national data; BIS calculations. Graph IV.11

economies, specifically the United States, to the rest of the world. At first, the inflation transmission process worked through the fixed exchange rate regime of the Bretton Woods system. As the United States pursued expansionary monetary and fiscal policies at home to address domestic economic concerns, it exported inflation to the rest of the world, owing to its size and the importance of the dollar as an international currency. After the breakdown of the Bretton Woods system, other countries no longer had to accept US inflation; they could choose to let their currencies appreciate. But in practice, they often chose to resist exchange rate appreciation, particularly when it seemed to be due to speculative capital inflows. This resulted in more stimulative global monetary conditions than would otherwise have been the case.

The current international monetary system bears some similarities to previous arrangements. It is neither a fixed nor a purely flexible exchange rate system, but rather a hybrid. A key feature of the system has again been the reluctance, of various countries and to varying degrees, to accept appreciation against the dollar. Unprecedented foreign exchange intervention has led to a very large accumulation of US dollar reserves and, in some cases, lower policy rates than would otherwise have been the case. The resistance to dollar depreciation has arguably contributed to the rapid expansion of global liquidity. (See the *74th Annual Report* for a more detailed discussion.)

... seemingly flat short-run Phillips curves ...

Third, the apparent flattening of the Phillips curve in the 1960s lulled authorities into a false sense of security that stimulating the economy would not lead to rising inflation (Graph IV.11). At the time, the Phillips curve played a dominant role in the way policymakers, and economists more generally, viewed the link between monetary policy and the real side of the economy.

Today, the short-term trade-off between economic activity and inflation has also become remarkably flat – indeed, somewhat flatter and lower than in the 1960s. Graph IV.11 shows that economic activity appears recently to have had little effect on well anchored inflation expectations. Moreover, after falling into disrepute during the 1980s, the Phillips curve framework has received

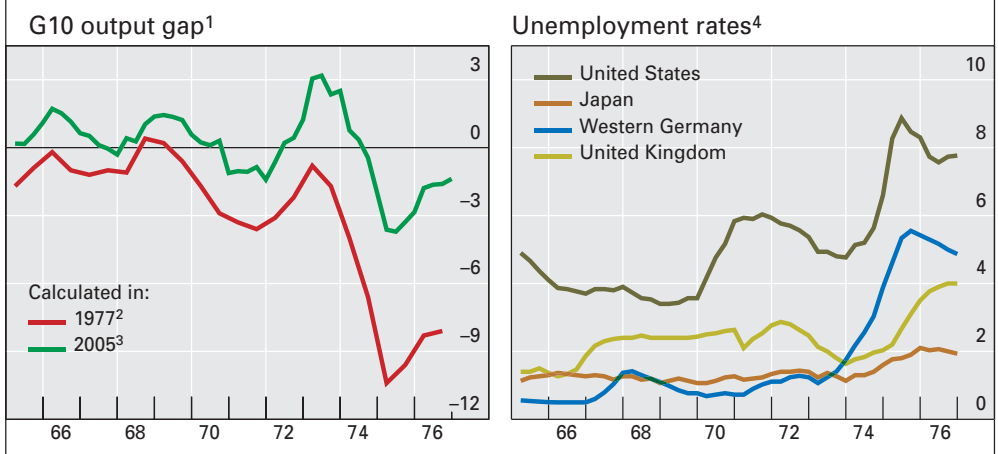
considerable interest of late. The New Keynesian Phillips curve offers a new perspective on the short-run policy trade-off between output and inflation; no such trade-off is assumed to exist in the long run, however.

... potentially erroneous signals of economic slack ...

Fourth, conventional measures of underlying inflationary pressures in the late 1960s and early 1970s were sending mixed, indeed biased, signals. One main source of error came from the fact that output gaps were perceived, at the time, to be wide and negative. In addition, unemployment rates were rising. At the time, the apparent disconnect between these estimates of growing slack along with increasing inflation led to some speculation about a fundamental change in the inflation process. Some analysts saw no urgency to tighten monetary policy in such circumstances because they assumed the rising inflation would naturally reverse itself given the extent of slack in the economy. Others turned away from a conventional Phillips curve approach to one where the economy was subject to "speed limits". In this approach, the rising inflation of the early 1970s was seen as responding to the change in resource utilisation, rather than to its level. Only later, with the benefit of hindsight, did it become clear that the situation was, at least partly, due to simple mismeasurement (Graph IV.12): the period had actually been characterised by excess demand. One underlying problem was that productivity growth had begun to decelerate and this was not appreciated at the time (Graph IV.13). Moreover, higher unemployment rates were thought to represent cyclical developments when in fact they were largely due to demographic trends and the increased generosity of social insurance programmes. At the same time, policymakers had to factor in the significant supply side developments, especially oil prices in the mid-1970s, that were adding to the opaqueness of the situation.

Nowadays, too, uncertainties about real-time estimates of output gaps, time-varying non-accelerating inflation rates of unemployment (NAIRUs) and

Output gap and unemployment, 1965–76



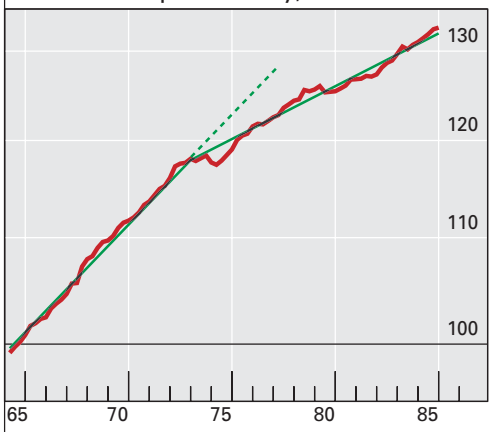
[1] Excluding Belgium and Switzerland. [2] OECD half-yearly data. [3] Weighted average of OECD quarterly data, based on 2000 GDP and PPP exchange rates; for some countries, backdated using a Hodrick-Prescott filter on real GDP. [4] In per cent.

Sources: OECD, *Towards full employment and price stability* (1977), *Economic Outlook*; national data; BIS calculations. Graph IV.12

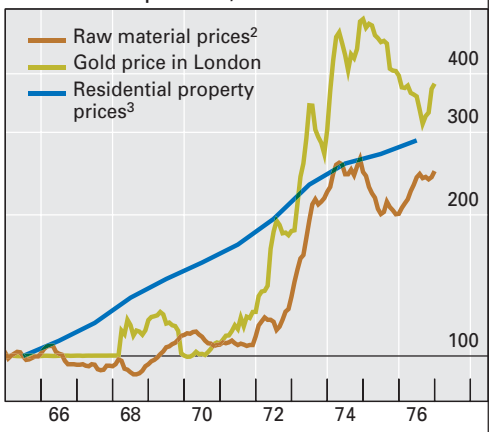
G10 labour productivity and price developments

1965 = 100; semi-logarithmic scales

G10 labour productivity, 1965–85[1]



Price developments, 1965–76



[1] Excluding the Netherlands. Defined as the ratio of real GDP to employment in the whole economy. Weighted average based on 2000 GDP and PPP exchange rates; the trend break in 1974 Q1 is estimated using the Chow break point test. [2] Excluding energy. [3] Weighted average (where data are available) for the G10 countries (excluding Italy); for Japan, land prices.

Sources: OECD; HWWI; national data; BIS calculations. Graph IV.13

other measures of slack could be sufficiently large to prevent policymakers from accurately assessing inflationary pressures. Underlying questions about domestic productivity and labour market trends still cloud the policy environment, as do questions about the supply side implications of recent commodity price movements. Some have attributed the recent incipient rise in inflation, despite what they see as global aggregate slack, to the operation of new speed limits in some sectors, especially commodity-intensive ones.

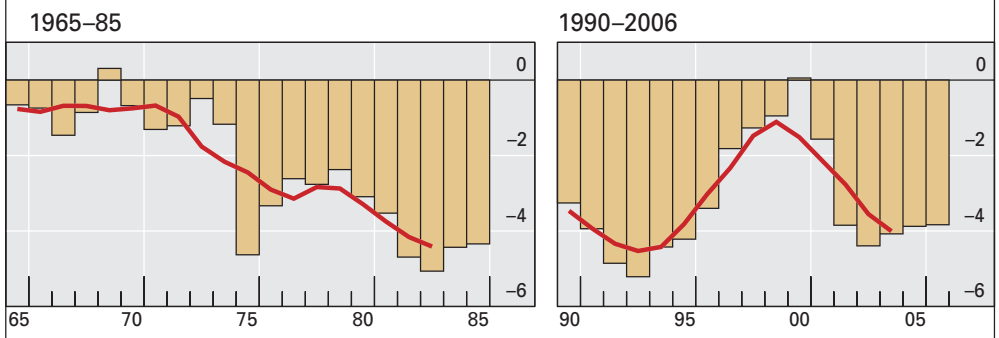
... high oil and non-oil commodity prices ...

Fifth, oil and other commodity prices in the early 1970s jumped dramatically to levels that were well outside their established historical trading ranges. Oil prices in real terms also reached unprecedented heights, only to be surpassed during the second oil crisis at the end of the decade (see Chapter III). Moreover, many inflation hedges, such as non-oil commodity prices and real estate prices, also recorded new highs at the time (Graph IV.13). These indicators, however, did not show particularly uniform timing in their turning points. Naturally, the recent behaviour of oil and non-oil commodity prices has given rise to widely cited parallels with the earlier period. Perhaps less well remembered is the rise in real estate prices during the late 1960s and early 1970s. This provides yet another interesting parallel with current house price developments (see Chapter II).

... and expansionary fiscal policies

Finally, fiscal policies in the early 1970s became rather expansionary, as fiscal deficits widened substantially (Graph IV.14). As with monetary policy, fiscal policy was generally seen through the lens of the Keynesian stabilisation goals of the time. It was meant to smooth the business cycle, despite the tendency for the policy lags sometimes to amplify rather than dampen such swings. In the mid-1970s, structural deficits began to emerge in earnest and remained large even though economic recessions became less frequent and

G10 general government fiscal balance[1]



[1] Excluding Switzerland. Weighted average based on 2000 GDP and PPP exchange rates; as a percentage of GDP. The lines represent centred five-year moving averages. 2005 and 2006 data are OECD estimates.

Sources: OECD; national data. Graph IV.14

less volatile than in the past. Today, after considerable progress in the late 1990s in bringing fiscal balances under control, larger structural deficits are again emerging (see Chapter II).

These parallels, while notable, do not necessarily augur an imminent return to the inflationary environment of the 1970s. To better understand the policy issues, it is instructive to turn to the lessons learnt and to note some important differences between the earlier period and today.

Lessons learnt

Important monetary policy lessons have been learnt

The didactic story of the late 1960s and 1970s is not one-dimensional. Indeed, no single adverse development can plausibly be held accountable for one of the worst periods of economic performance in the past 50 years. The culprit was the confluence of unfortunate and unforeseen economic developments and policy errors on top of a changing economic and financial landscape that policymakers did not fully appreciate. From a practical monetary policy viewpoint, three key lessons deserve highlighting.

The importance of price stability ...

The first lesson concerns the importance of price stability and the need to provide the institutional means to achieve it. The substantial costs of high inflation became all too clear during the 1970s. They included wasted time and effort to avoid the effect of inflation on nominal assets, and distortions of investment activity owing to tax codes not being fully indexed. High inflation carried additional costs because of its association with high inflation variability, not the least of which were greater output variability due to the jamming of economic signals from relative price changes and elevated inflation risk premia on financial assets. The 1970s also demonstrated that there were no long-run benefits from accepting high inflation. The view at the time, of a positive long-run trade-off between inflation and output growth, was simply wrong; if anything, the trade-off was negative because of the deleterious effects of high inflation on growth. In the light of this experience, it is not surprising that an intellectual, political and social consensus to fight inflation was forged over time. The lesson learnt also helped to underpin the global trend towards giving central banks greater independence to pursue mandates more focused on price stability.

... of staying ahead of the inflation curve ...

The second lesson was the importance of reacting quickly and vigorously to inflationary pressures. Policymakers in the 1970s generally pursued accommodative monetary policies as a means to stimulate economic activity, even as inflation rose. In part, this reflected misperceptions about the costs of inflation as well as the slope of and likelihood of shifts in the Phillips curve. It also became evident that the longer the delay in resisting the updrift in expectations, the higher the ultimate cost of restoring price stability. Unsurprisingly, policymakers in the past decade have been much more careful to tighten monetary policy as clear inflationary signs have emerged. This behaviour has been key to the success of central banks in achieving and maintaining price stability.

A specific illustration of this general lesson has been the recognition of the need to respond aggressively to the second-round effects of an oil price increase. The initial impact of an oil price increase, the first-round effect, generates a rise in inflation in proportion to the energy component of the price index. A one-time jump in the price level would not necessarily have a lasting inflation impact and hence would not call for a significant change in the stance of monetary policy. However, if the jump led to an increase in inflation expectations, the second-round effect, this could trigger a wage and price inflation spiral. The 1970s taught monetary policymakers that a strong policy reaction could prevent such second-round effects. In fact, when this lesson was applied during the second oil crisis, central banks such as the Deutsche Bundesbank, the Bank of Japan and the Swiss National Bank achieved much better inflation outturns.

... and of being prudent when assessing economic slack

The third lesson from the 1970s is the importance of being cautious when assessing the degree of economic slack. Slack is a theoretical concept that is difficult to measure precisely, owing to the need to rely on unobserved variables such as potential output or the NAIRU. These policy benchmarks can change in unforeseen ways and such shifts could remain largely undetected well after the change. The slowdown in structural productivity in the 1970s, for reasons that are still not entirely clear, is a good example of how economic developments can lead to misperceptions of slack that in turn result in a more accommodative monetary policy setting than would otherwise have been the case. Such a possibility highlights the importance of having good real-time data and of cross-checking with other available data. Above all, it implies factoring into policy deliberations the inherent uncertainties about the extent to which policymakers truly know the policy environment.

Decades later: the case for a different scenario

Three key changes in the economic environment:

These lessons suggest that central banks are unlikely to make the same mistakes, so that history will not repeat itself. To be sure, this does not rule out the possibility of an unexpected flare-up of inflationary pressures, or even of inflation. But it does suggest that, if they were to materialise, the pressures would be more firmly resisted and the situation more promptly resolved than in the past.

The conclusion that history will not repeat itself is further supported by what seem to be clear differences between economic conditions now and those in the late 1960s and early 1970s. These differences pertain to the behaviour of wages, the impact of continuing globalisation and the reduced role of oil.

more muted wage behaviour ...

Wage behaviour in the late 1960s and 1970s was generally more strongly correlated with inflation than today (Table IV.1). Two key factors fostered such conditions. First, the earlier period was characterised by strong labour union power and aggressive wage bargaining. Labour unrest, especially on the European continent, also exhibited its vehemence in strike activity. From a policy point of view, a little more inflation for fewer strikes might have appeared an attractive option, especially in a time of less independent monetary authorities. Second, incomes policies were much more the norm, causing stronger linkages between wage growth and inflation. This was particularly important in the 1970s, as oil and commodity prices rose. Automatic wage escalator clauses generated nominal income gains that were not compatible with higher transfers of real income to oil- and commodity-producing countries. As a consequence, whether de jure or de facto, such escalators were also particularly effective in raising the persistence of goods and services inflation.

Today, labour markets are much more competitive and market-oriented. Union power has ebbed and wage bargaining has become considerably less aggressive. Part of the explanation is that labour supply elasticities have increased, directly via migration and indirectly through trade and market contestability. Whatever the reasons for more quiescent labour markets, the result has been a weakening of the link between wage growth and inflation, as well as a reduction in the labour share of income relative to the 1970s. These labour market developments have contributed to reducing the pass-through of various types of inflationary shocks. In turn, this has helped to keep inflation expectations well anchored (see Chapter II).

... greater globalisation ...

Another difference, though related to the first one, has been changes in global supply conditions that have contributed to keeping inflationary pressures at bay. They reflect a combination of several more favourable trends. In addition to strong labour-saving productivity gains that have boosted output growth while holding down cost pressures, the most dramatic change has been the extent of globalisation. To be sure, Japanese and Korean export penetration in the 1960s and 1970s was significant. But export penetration from Asia, especially China, is an even more important factor today keeping both import prices and wages low in most of the industrialised countries (see Chapter II). The pace of deregulation has also helped to reinforce disinflationary pressures, especially in emerging market countries, via stiffer price competition.

Correlation between inflation and wage growth, then and now

	United States	Japan	Germany	France	Italy	United Kingdom
1965–79	0.76	0.95	0.47	0.75	0.54	0.71
1991–2004	0.28	0.53	0.19	0.11	0.18	0.56

Note: The entries are the correlations between annual changes, in per cent, in consumer prices and unit labour costs.

Sources: OECD; national data; BIS calculations. Table IV.1

... and more benign linkages between oil prices and the macroeconomy

The third difference between the current policy environment and that of the 1970s concerns the macroeconomics of oil. There are several good reasons to believe that the implications of higher oil prices for inflation would be less significant in today's economic environment (see Chapter II). In particular, major industrialised economies have become less reliant on oil, as measured in terms of barrels of oil per dollar of GDP. This reflects the wider use of more energy-efficient technologies and a secular shift towards services and away from manufacturing. Current estimates of the elasticities of both inflation and output with respect to the price of oil are smaller than those for the industrial economies in the 1970s.

Changing risks?

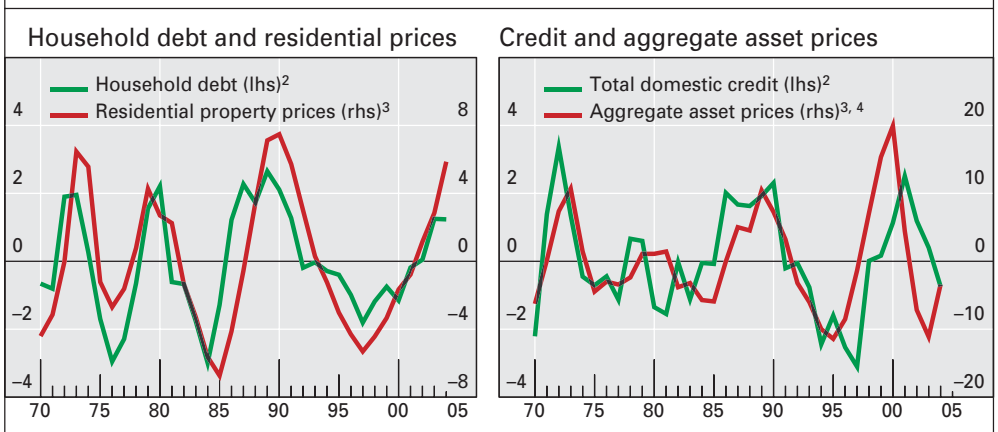
An exact repeat of history is unlikely, but significant risks exist owing to ...

While learning from past mistakes provides considerable comfort, it does not rule out the possibility of making different ones. The main risks for policy rarely come from the recurrence of circumstances; they normally reflect unforeseen developments in the economic and broader environment. And, as exemplified by the experience of the early 1970s, it is typically the interaction between policies and that environment which can result in new and unexpected challenges.

... the changing inflation process, very low policy rates, and asset price and credit growth

From this perspective, the unforeseen developments that regularly emerge serve as healthy reminders of the limitations of our understanding of the dynamics of a modern economy. Examples abound. One such is the fact that inflation has tended to be systematically overpredicted for much of the disinflation period and again more recently; in addition, inflation now appears to be less responsive to country-specific indicators of excess demand pressures (see Chapter II). This is a mirror image of the systematic underprediction of inflation in the late 1960s and early 1970s. A second unforeseen development is the confluence of policy and market rates that seem to be well below levels consistent with long-run non-inflationary growth, with actual inflation remaining

Debt, credit and asset prices in the G10 countries[1]



[1] Weighted average based on 2000 GDP and PPP exchange rates; 1970 and 2004 figures are partly estimated. Data are deviations from trend calculated using a Hodrick-Prescott filter. [2] As a percentage of GDP. [3] Nominal prices, deflated by the personal consumption deflator. [4] Weighted geometric mean, based on net wealth data, of three asset classes (equity, residential property and commercial property).

Sources: OECD; national data; BIS calculations and estimates. Graph IV.15

rather subdued. A third is the series of booms and busts in credit and asset prices, each having disruptive consequences for the economy (Graph IV.15). This has occurred despite the achievement of price stability, confounding expectations that such cycles would disappear along with inflation.

It is, in fact, possible to think of paradigms that could account for such puzzling developments. Somewhat paradoxically, it might be argued that the new challenges faced by central banks today result in part from the confluence of three unquestionably welcome developments: the globalisation of the real economy; liberalised financial markets; and the newly established anti-inflation credentials. In this view, globalisation provides the underlying disinflationary force, financial liberalisation the weaker financial constraints on self-reinforcing credit-asset price processes, and the anti-inflation credibility the anchoring of expectations that can help to delay the translation of excess demand pressures into higher inflation (see the Conclusion of this Report).

Even so, understanding the full implications of each major structural change is difficult. And fully understanding the implications of the interactions is even more challenging. There is, clearly, considerable uncertainty surrounding the processes at work. This undoubtedly complicates the setting of monetary policy. Not only do the changes potentially alter the transmission mechanism of both exogenous shocks and monetary policy but they can also shift the risks looking ahead.

Central banks may be facing new policy challenges

Some of the practical challenges that central banks have recently faced are symptomatic of this situation. In some countries, such as Sweden, the decline in inflation to well below target, in the context of a robust economy, has raised the question of whether the central bank should ease policy further. However, doing so could well exacerbate incipient signs of financial imbalances in the housing market, possibly risking an unwelcome unwinding in the future. The limited sensitivity of inflation to domestic demand pressures can add to the dilemma, implying the need for stronger easing to bring inflation back up. More generally, across many countries the comparatively high levels of household indebtedness and house prices complicate the exit strategy from the current accommodative stance. They arguably make it more difficult to calibrate the pace and timing of the tightening, by increasing the uncertainty surrounding the response of asset prices and, in turn, expenditure decisions. In Australia, a modest 25 basis point increase has been associated with a significant cooling of its housing market. Even tougher policy choices would be required if there were a sudden flare-up of inflation, because of either the lagged effects of demand pressures or higher energy prices. In such circumstances, it is not inconceivable that increases in rates generally thought to be appropriate might inadvertantly trigger an unwelcome disinflation over time.

These examples indicate that today, as in the past, central banks need to be aware of the limitations of their knowledge and to be wary about mistaking consensus for true understanding. And they must also be alert to the possible emergence of risks from unexpected quarters. There is no substitute for the careful assessment of evolving economic conditions and processes. Learning the lessons from the past is important. However, as emphasised in the Conclusion of this Report, learning is a never-ending process.

V. Foreign exchange markets

Highlights

The broad weakening of the US dollar over much of 2004 was the salient feature of foreign exchange markets during the period under review. As in the preceding two years, the dollar depreciated markedly against the euro, the yen and a number of other floating currencies. In contrast to that period, however, the dollar also lost ground against several Asian emerging market currencies. Between January and mid-April 2005, however, the currency's downward trend was partly reversed.

Three main factors appeared to underpin exchange rate movements, pulling the dollar in different directions. First, market participants' focus on the widening US current account deficit and the perceived overhang of dollars in Asian central banks' portfolios seemed to weigh on the currency. Second, in the early months of 2005, shifting expectations for relative output growth and interest rate changes tended to support the dollar. The popularity of carry trade strategies was one manifestation of this factor. Finally, official foreign exchange reserve accumulation in Asia limited the dollar's depreciation against a number of emerging market currencies in that region. However, compared to previous years, a broader range of currencies showed significant increases against the dollar.

Conditions in foreign exchange markets were characterised by low short-term volatility and high turnover. Turnover seemed to be driven by very active trading on the part of both institutional investors and leveraged players.

A question discussed later in the chapter is whether one or both of two related but different phenomena pose a problem to the international monetary system: the pattern of current account imbalances and the pattern of currency shares in global portfolios. While the former is undeniably unsustainable over time, the build-up may be at an earlier stage than is often recognised, and political constraints may bind before economic ones. With regard to potential portfolio imbalances, they are less self-evident than is often asserted. A substantial further shrinkage of the broad dollar zone in the global economy, however, might eventually produce a currency imbalance in global portfolios.

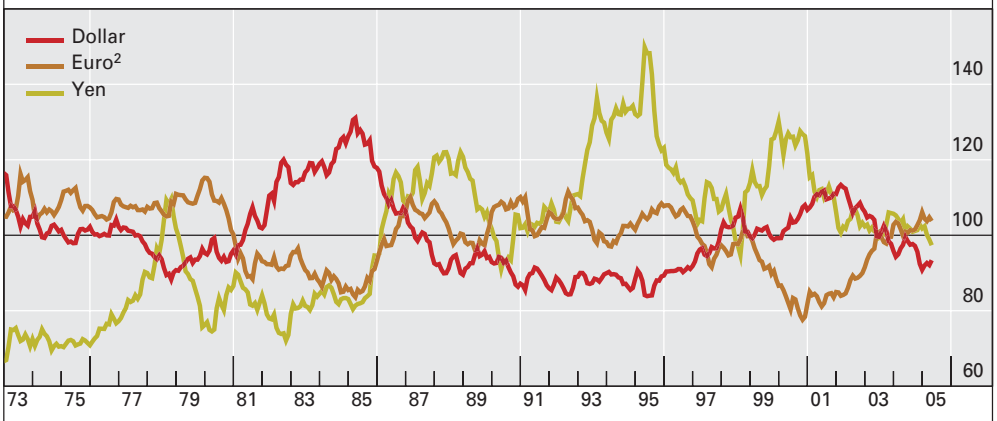
Exchange rate movements: the facts

Broad depreciation of the dollar in 2004 ...

The period under review can be divided into two main phases. During the first, from mid-May to end-December 2004, the dollar continued the broad depreciation which had started in early 2002. The currency's decline was particularly pronounced in the last quarter of 2004. As a result, at year-end it

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

Monthly averages, 1973–April 2005 = 100



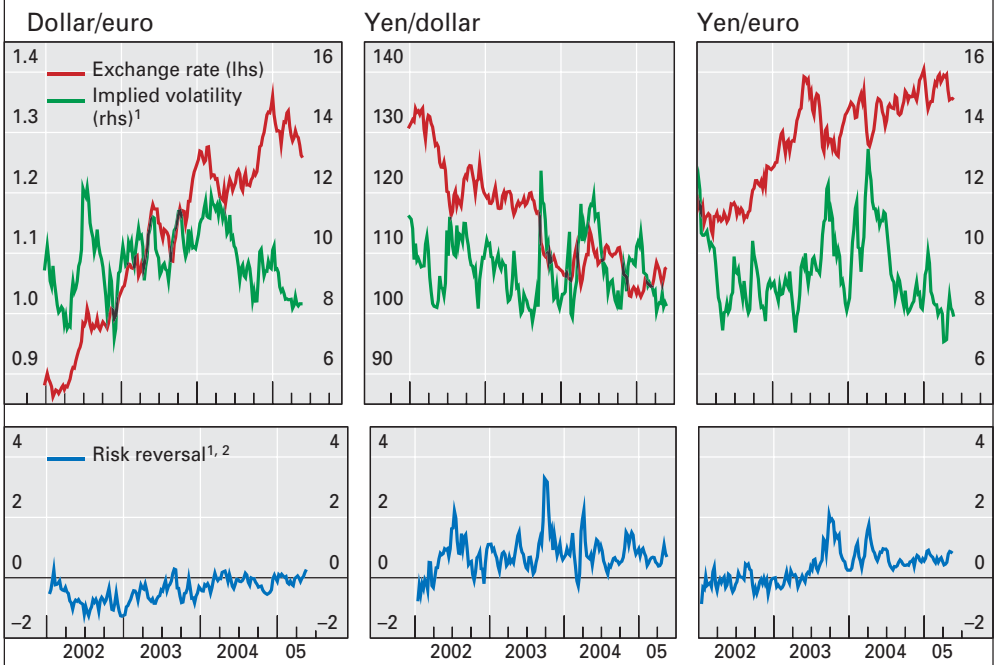
[1] In terms of relative consumer prices. [2] Prior to 1999, trade-weighted average of EMU participants.

Source: BIS. Graph V.1

was trading some 22% below its January 2002 peak in real effective terms (Graph V.1). The euro, on the other hand, ended the year 23% above its trough of January 2002, while the yen was roughly at levels observed three years earlier.

The appreciation of currencies against the dollar in 2004 was not uniform. Between May and December, the dollar declined by 13% against the euro,

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

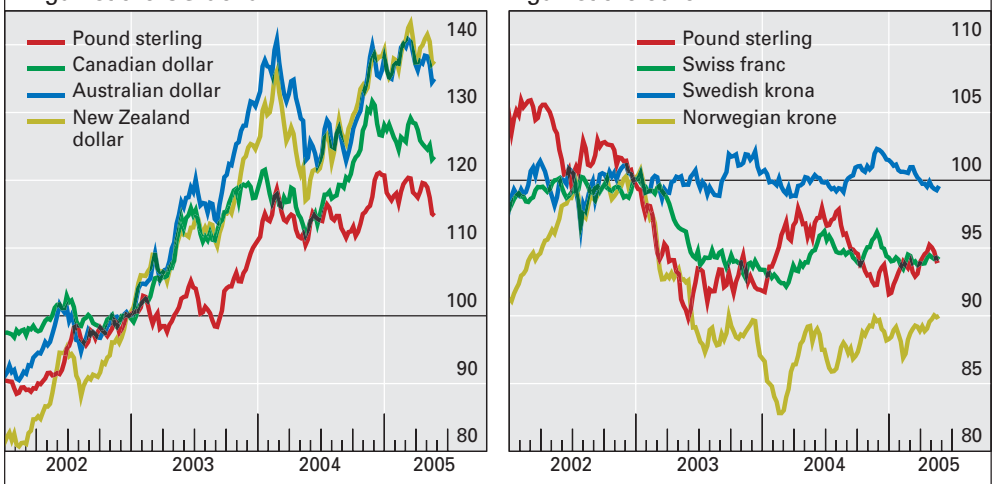


[1] One-month, in per cent. [2] A positive value indicates a bias towards dollar appreciation in the left-hand panel and towards yen appreciation in the centre and right-hand panels.

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

Exchange rates of other industrial countries

Weekly averages, end-2002 = 100



Note: An increase indicates an appreciation.

Source: National data.

Graph V.3

which on 30 December reached $1.36, the highest value since its inception (Graph V.2). The dollar also fell against the yen, albeit to a lesser extent (7%). Marking a difference from previous years, the Japanese Ministry of Finance has not intervened to limit the yen's appreciation since mid-March 2004. Other currencies that appreciated significantly against the dollar included the New Zealand and Canadian dollars (14% and 13% respectively), the pound sterling (8%) and the Australian dollar (7%) (Graph V.3). The dollar also lost ground against most European currencies outside the euro area.

During this period, the euro appreciated by 6% against the yen. The yen thus traded in between the euro and the dollar as before. The euro also gained relative to the Australian dollar (5%) and sterling (4%), while it remained broadly stable against the Swiss franc, the Swedish krona, the Norwegian krone and the Canadian and New Zealand dollars.

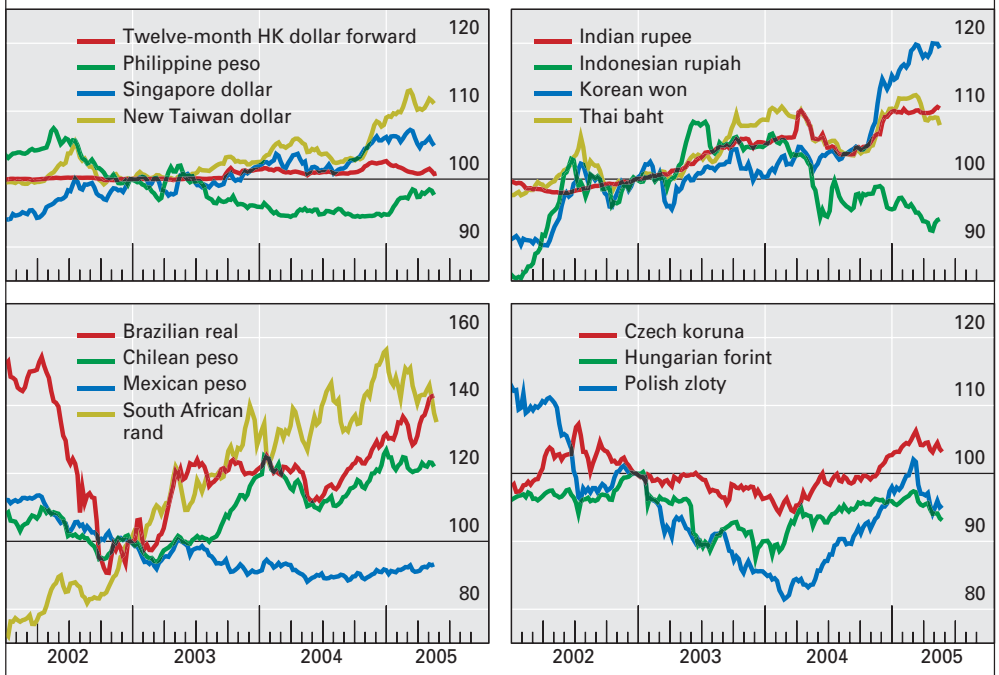
As in the past few years, a number of emerging market currencies also appreciated substantially against the dollar (Graph V.4). One difference was that the list included several Asian currencies – most notably the won and to a lesser extent the baht, the rupee and the New Taiwan dollar. With the exception of the won, emerging market currencies in Asia generally depreciated against the yen. In Latin America, the appreciation of the Brazilian real and the Chilean peso against the dollar between mid-May 2004 and early 2005 was noteworthy. The rand continued its strong appreciating trend against the dollar, while currencies in several eastern European countries – especially the Czech koruna, the zloty and the forint – posted visible gains against both the dollar and the appreciating euro.

... partially reversed in early 2005

In the second phase, from early January to mid-April 2005, the dollar regained some ground against most currencies. The rebound coincided with the publication of stronger macroeconomic data in the United States. During

Exchange rates in emerging markets[1]

Weekly averages, end-2002 = 100



[1] Against the US dollar (in the bottom right-hand panel, against the euro); an increase indicates an appreciation. For the bottom left-hand panel, compressed scale.

Sources: ECB; Bloomberg; Datastream. Graph V.4

this period, the dollar appreciated by around 6% against the euro and the yen, and by 3–4% against sterling and the Canadian, Australian and New Zealand dollars. The main exceptions to this pattern were the emerging market currencies in Asia, which continued to appreciate against both the dollar and the yen.

Shift in market sentiment ...

These developments were accompanied by a change in market sentiment, as indicated by option prices. For most of 2004, markets' assessment of the balance of risks between a much stronger and a much weaker dollar, described by risk reversals, was weighted noticeably towards weakness (Graph V.2). This pattern was particularly pronounced in the yen/dollar market. However, conditions started to change in early 2005, as option prices pointed to a more sanguine attitude towards the currency. The earlier skewness largely disappeared, with the market assigning approximately equal likelihood to a substantial strengthening or weakening of the dollar.

... in conditions of high trading activity ...

The broad exchange rate movements took place against the background of two salient developments in foreign exchange market conditions. First, as suggested by the results of the 2004 *Triennial Central Bank Survey* and market commentary, there was a broad-based expansion in trading activity between 2001 and 2004 (Table V.1). Average daily turnover amounted to $1.9 trillion in April 2004, a rise of 36% at constant exchange rates compared to April 2001, more than reversing the fall in global trading volumes between 1998 and 2001. The growth was particularly pronounced for trading between banks and financial customers, pushing its share in total turnover up from 28% to 33%.

Reported foreign exchange market turnover, by counterparty[1]

Daily averages in April, in billions of US dollars

	1992	1995	1998	2001	2004
With reporting dealers	540	729	908	689	936
With other financial institutions	97	230	279	329	585
With non-financial customers	137	178	242	156	252
Estimated gaps in reporting	44	53	60	26	107
Total "traditional" turnover	818	1,190	1,490	1,200	1,880

[1] Adjusted for local and cross-border double-counting.

Source: BIS, *Triennial Central Bank Survey*, March 2005. Table V.1

... and low volatility

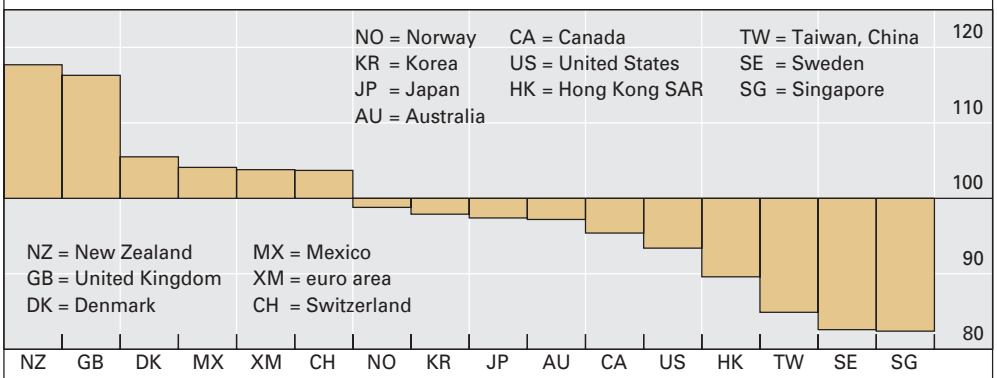
This was reportedly driven to a large extent by the greater activity of institutional investors, the leveraged investor community and corporate treasurers. Second, mirroring developments in other financial markets (see Chapter VI), both historical and implied volatility tended to decline or remain at relatively low levels. On balance, therefore, foreign exchange markets continued to be characterised by orderly conditions and high market liquidity.

Dollar decline less than in the mid-1980s

In gauging the magnitude of the changes in the main exchange rates, two points are worth noting. First, the movements in the G3 currencies between January 2002 and December 2004 were still smaller than the major correction in the mid-1980s, when the dollar lost around 50% of its value against the other major currencies, following a period of overshooting in the first half of the decade (Graph V.1). Second, the main currencies are at present not far from their post-Bretton Woods averages in real effective terms (Graph V.5). In April 2005, the dollar was only 6% below its average real effective level since 1973, while the euro and yen were close to their long-term average levels. The New Zealand dollar, sterling, the New Taiwan dollar, the Swedish krona and the Singapore dollar were the only currencies that were more than 15% off their respective averages.

Current real effective exchange rates in a long-term perspective[1]

April 2005, 1973–April 2005 = 100



[1] For further information, refer to Graph V.1.

Source: BIS. Graph V.5

Exchange rate movements: determinants

Three main factors appeared to influence the broad exchange rate movements during the period under review. First, the markets' focus on the external imbalance of the United States and the role of the dollar in international portfolios seemed to have a significant impact on the US currency. Second, domestic growth prospects and interest rate differentials also helped explain the exchange rate movements of the main currencies in early 2004 and again in the first few months of 2005. In part they also influenced emerging market currencies. Finally, exchange rate policies and intervention practices in emerging market countries, particularly in Asia, shaped the behaviour of their currencies.

The US current account deficit and the perceived potential dollar overhang

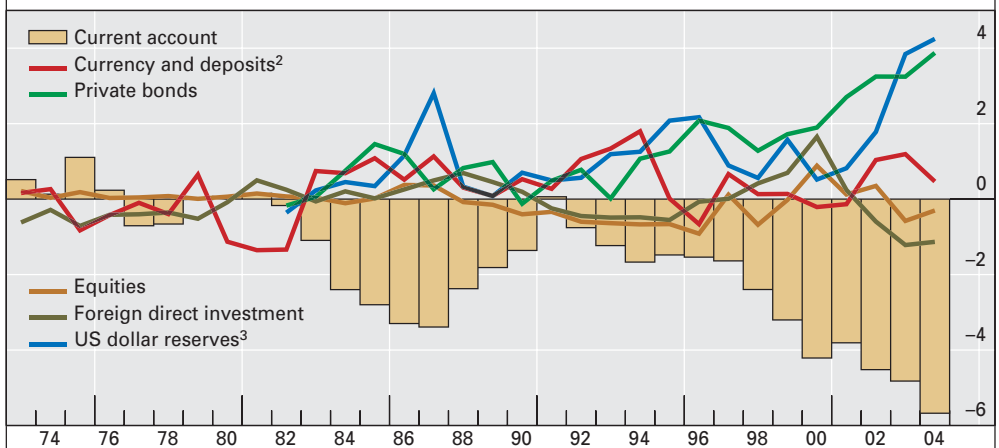
Markets focused on the US current account deficit and the potential dollar overhang

As in the previous two years, market participants' focus on the growing external imbalance of the United States, and on what some perceived as a potential overhang of dollars in portfolios, was the main factor behind the dollar's broad depreciation in the course of 2004. The fact that the current account deficit reached 5.7% of GDP (Graph V.6) and US net international liabilities exceeded 25% of GDP attracted much attention. Market participants appeared to pay less regard to the fact that, in spite of its net external debt, the United States continued to be a net receiver of investment income from abroad.

During most of 2004, market participants' expectations of a further depreciation of the dollar seemed to be reflected in an apparently reduced willingness on the part of the private sector to finance the US current account deficit. This was suggested by a further shift in the composition of financial flows into the United States away from private flows – particularly equity and foreign direct investment – and towards official flows (Graph V.6). As a result, in the course of last year, the attitude towards dollar assets of central banks

The US current account deficit and its financing[1]

As a percentage of GDP



[1] Financing variables are net flows. [2] Excluding interbank loans. [3] Changes in central bank holdings of US dollar assets; 2003 and 2004 figures are estimated.

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

News and the dollar/euro exchange rate[1]			
	Coefficient	t-statistic	p-value
Non-farm payrolls[2]	–0.0011	–2.95	0.00
Trade balance[2]	–0.0005	–2.62	0.00
TIC data:[3] Total	–0.0000	–2.84	0.00
Official	0.0000	8.30	0.00
Positive news about reserves[4]	–0.0009	–0.50	0.61
Negative news about reserves[5]	0.0038	2.50	0.01

[1] Results of a regression, estimated over the period January 2002–April 2005, explaining daily changes, in per cent, in the dollar/euro rate following news about macroeconomic data, capital flows into the United States and central banks considering changes in the currency composition of reserves. [2] Difference between actual values and the market's survey values of each indicator, divided by their standard deviation. [3] Month-on-month changes, in per cent, in net foreign purchases of US securities. [4] News, even if unsubstantiated, suggesting no currency diversification away from the dollar. [5] News, even if unsubstantiated, suggesting some currency diversification away from the dollar.

Sources: Bloomberg; Treasury International Capital System (TIC); BIS estimates. Table V.2

that had accumulated unprecedented foreign exchange reserves moved increasingly into the spotlight. Losses on dollar reserves came under public scrutiny in several countries, and markets became very sensitive to signs that central banks might be inclined to diversify away from the dollar.

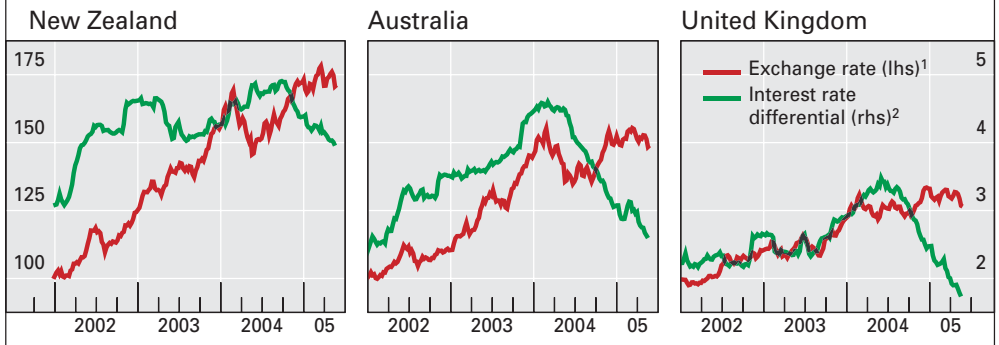
Regression analysis provides several indications that both the US external imbalance and the perception of a potential official dollar overhang may have mattered for the dollar. First, on average, the dollar fell against the euro following news of an unexpectedly wide US trade deficit, suggesting that the US current account deficit played some role (Table V.2). Second, the dollar on average also reacted to data releases recording foreign purchases of US Treasuries. It tended to appreciate following a month-on-month increase in total purchases and to depreciate following an increase in official purchases. This is consistent with the view that markets regarded shifts in the composition of the financing of the US deficit from the private to the public sector as a sign that the deficit is unsustainable. Third, the currency tended to weaken following news – even if unsubstantiated – about central banks considering diversifying their foreign exchange reserves. The effect of such news was asymmetric: the impact was greater when the news pointed to dollar weakness. The impact of news about the US trade balance or official foreign exchange reserves started to be statistically significant around August 2004, when the dollar's decline was particularly pronounced.

Interest rate differentials

Interest differentials at times played a role

The second main factor determining exchange rate movements was changing expectations of growth and interest rate differentials. A robust correlation between exchange rate movements and prevailing or expected interest rate differentials is notoriously difficult to identify. In recent years, though, there has been evidence of a positive correlation for certain economies during specific subperiods (Graph V.7). In particular, a number of currencies – most notably sterling and the Canadian, Australian and New Zealand dollars – rose against the dollar between January 2002 and February 2004, as yield-driven capital

Exchange rates and interest rate differentials



[1] Against the US dollar. An increase indicates an appreciation. [2] Three-month; domestic rate minus US rate, in per cent.

Source: National data. Graph V.7

sought higher interest rates than those in the United States. This factor compounded the influence of commodity prices and favourable terms of trade. Similarly, the dollar's appreciation against these currencies between February and May 2004, and again between January and mid-April 2005, reflected a narrowing, and in some cases a reversal, of interest rate differentials with the United States.

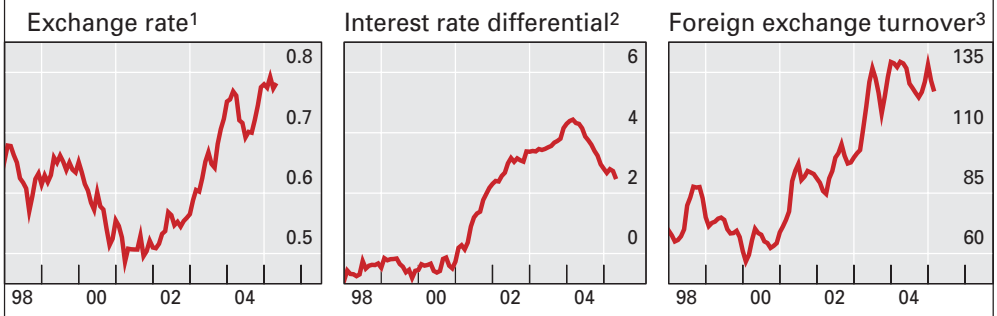
Against the background of a continuing global search for yield, interest rate differentials also remained important for a number of emerging market currencies. Until 2004, in a context of cheap funding (as suggested by low interest rates) and a high tolerance for risk (which contributed to narrow credit spreads), the currencies of emerging market countries with higher yields – in particular the Chilean peso, the rand and the real – tended to appreciate against the dollar. Conversely, as funding became more expensive and investors became less risk-tolerant, the currencies of emerging market countries with a positive but narrowing interest rate differential tended to depreciate against the dollar. Examples include, again, the Chilean peso and the rand, which fell by around 5% and 10% respectively in the first few months of 2005.

Carry trades a popular investment strategy

One mechanism through which current and prospective interest differentials influenced exchange rates was carry trades, a vehicle that international investors use in their search for yield. These trades involve borrowing in a low-yielding currency and investing in a high-yielding one on the assumption that the higher-yielding currency will not depreciate enough to offset the interest rate differential. Strategies of this kind were used by a variety of investor types over much of 2004. Hedge funds and commodity trading advisers were reported to have been particularly active in following carry trade strategies. Since 2002, institutional investors have increasingly taken on carry trade positions, often as part of currency overlay strategies, whereby foreign exchange positions are managed actively and independently of the underlying investment, with a view to picking up additional returns.

In addition to market commentary, the relevance of carry trades is supported by two further pieces of evidence. First, the *Triennial Central Bank Survey* shows that foreign exchange trading rose most strongly between banks

Exchange rate, interest differentials and turnover for Australia



[1] An increase indicates an appreciation. [2] Three-month Libor; Australian rate minus US rate. [3] In billions of US dollars; three-month moving average.

Sources: Reserve Bank of Australia; Datastream. Graph V.8

and financial customers (Table V.1). It also reveals unusually strong turnover growth in two main target currencies – the Australian (98%) and New Zealand dollars (152%) – between April 2001 and April 2004. Higher-frequency data for Australia confirm that as the interest rate differential widened, the Australian dollar appreciated and turnover rose steeply (Graph V.8). Second, regression analysis on a group of US-based hedge funds shows that in 2003 and 2004 their returns were correlated in a statistically significant way with a variable capturing interest rate differentials and exchange rate changes of the Canadian and New Zealand dollars.

Based on this evidence, carry trades appear to have underpinned the appreciation of a number of currencies against the US dollar and the yen in the course of 2004. Similarly, the unwinding of such trades in reaction to changes in current and expected US policy rates in early 2005 may have contributed to the broad rebound of the dollar.

Exchange rate policies in Asia

Intervention activity in Asia remained important ...

A third factor that continued to influence exchange rates during the period under review was the intervention activity of a number of central banks, particularly in Asia, in response to upward pressure on their currencies. While this factor had also played a major role in previous years, two differences stood out.

... although the Japanese authorities did not intervene ...

First, the Japanese Ministry of Finance stopped intervening in foreign exchange markets in March 2004. Attention thus turned mostly to China, where the monetary authorities continued to accumulate sizeable amounts of dollar reserves in their attempt to preserve the fixed exchange rate vis-à-vis the US currency (Table V.3). With the spot rate fixed, waves of speculative pressure could be traced in the non-deliverable forwards (NDF) market in the third quarter of 2004 and have been observed again since December 2004 (Graph V.9). The behaviour of the NDF rate reflected shifts in market participants' views about the likelihood of a change in the central bank's current exchange rate peg. Speculative pressure on the renminbi also affected the Hong Kong dollar, whose forward rate often tracked the renminbi NDF rate quite closely.

Annual changes in official foreign exchange reserves

In billions of US dollars

	1999	2000	2001	2002	2003	2004	*Memo: Amounts outstanding (Feb 2005)*
	At current exchange rates						
Total	139.8	157.9	110.7	355.4	619.9	709.0	*3,812.2*
Industrial countries	55.0	58.8	3.3	111.6	218.6	193.6	*1,306.4*
United States	–3.8	–0.9	–2.3	4.8	5.9	3.0	*42.1*
Euro area	–39.2	–9.4	–10.7	7.9	–27.8	–8.7	*176.8*
Japan	74.5	69.5	40.5	63.7	201.3	171.5	*820.5*
Asia	79.0	52.5	76.0	173.9	263.9	363.4	*1,624.4*
China	9.7	10.9	46.6	74.2	116.8	206.7	*642.6*
Hong Kong SAR	6.6	11.3	3.6	0.7	6.7	5.0	*123.9*
India	5.0	5.3	8.0	21.7	30.6	27.5	*130.1*
Indonesia	3.8	2.0	–1.2	3.7	4.0	–0.0	*34.9*
Korea	21.7	22.2	6.6	18.3	33.7	43.7	*201.3*
Malaysia	4.9	–1.0	1.0	3.7	10.2	21.9	*70.6*
Philippines	4.0	–0.2	0.4	–0.2	0.3	–0.5	*13.5*
Singapore	1.9	3.4	–4.8	6.5	13.6	16.5	*112.6*
Taiwan, China	15.9	0.5	15.5	39.4	45.0	35.1	*246.6*
Thailand	5.4	–1.9	0.4	5.7	2.9	7.5	*48.4*
Latin America[1]	–8.8	2.1	–0.3	4.2	30.6	21.1	*198.5*
Argentina	1.6	–1.7	–9.9	–4.1	2.7	4.9	*17.5*
Brazil	–7.8	–2.3	3.2	1.7	11.7	3.6	*58.8*
Chile	–1.1	0.5	–0.6	0.8	0.4	0.3	*15.0*
Mexico	–0.5	4.2	9.2	5.5	7.8	5.0	*62.6*
CEE[2]	0.5	18.8	12.6	36.6	51.1	69.0	*283.8*

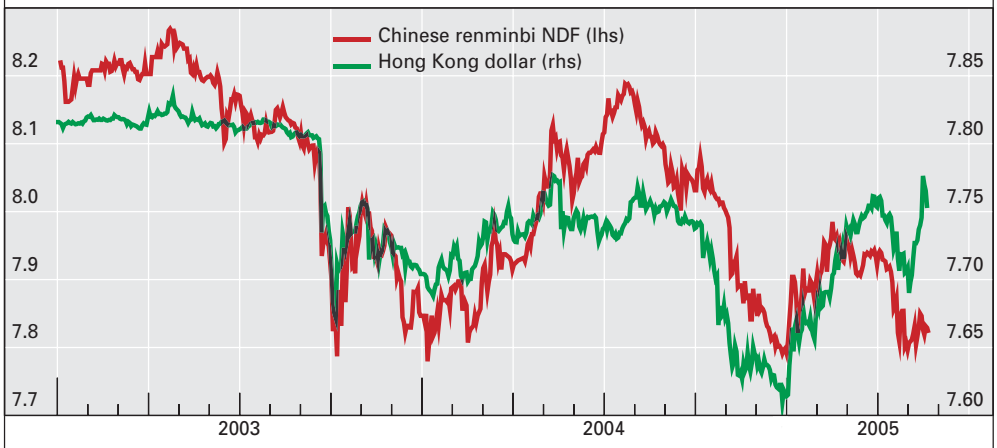
[1] Countries shown plus Colombia, Peru and Venezuela. [2] Central and eastern Europe: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovakia and Slovenia.

Sources: IMF; national data; BIS estimates. Table V.3

... and some Asian currencies appreciated more substantially

Second, even though several Asian economies – most notably Korea, Taiwan (China) and Thailand – accumulated foreign exchange reserves at a faster pace in 2004 than in previous years, their currencies tracked the dollar less closely (Graph V.10). In the second half of 2004, the won shared more than half of the movements of the yen against the dollar, much more than in previous years. In particular, for every 1% week-on-week appreciation of the yen against the dollar, the won on average appreciated by 0.6% against the US currency. One factor underpinning this development could be a further orientation of exchange rate policies in Asia towards effective rates, a process that appeared to start around 2001. Indirect evidence is provided by the fact that in Korea, Singapore, Taiwan (China) and Thailand the volatility of nominal effective exchange rates has tended to rise less or decline more than that of bilateral dollar exchange rates (Table V.4). Hence, while the dollar's role in Asia remains important, policy emphasis may have shifted from bilateral to effective exchange rates. One aspect of this reorientation is the role that evolving expectations about the renminbi seem to play in Asian foreign exchange markets. While movements in the

Twelve-month forward rates



Sources: Bloomberg; Datastream. Graph V.9

yen/dollar rate have a major influence on Asian currencies, the role of the renminbi NDF seems to be increasing. One possible interpretation is that market participants may have traded emerging market currencies in Asia that are not pegged to the dollar as proxies for the renminbi. Speculative pressures on the latter may therefore have contributed to an appreciation of the former.

A similar pattern of changing correlations with the G3 currencies was observed for those currencies that had co-moved closely with the dollar in the past even in the absence of foreign exchange market intervention. As the US dollar followed a declining trend in the course of 2004, the exchange rates of the Australian, Canadian and New Zealand dollars against the US currency were correlated unusually highly with that of the euro.

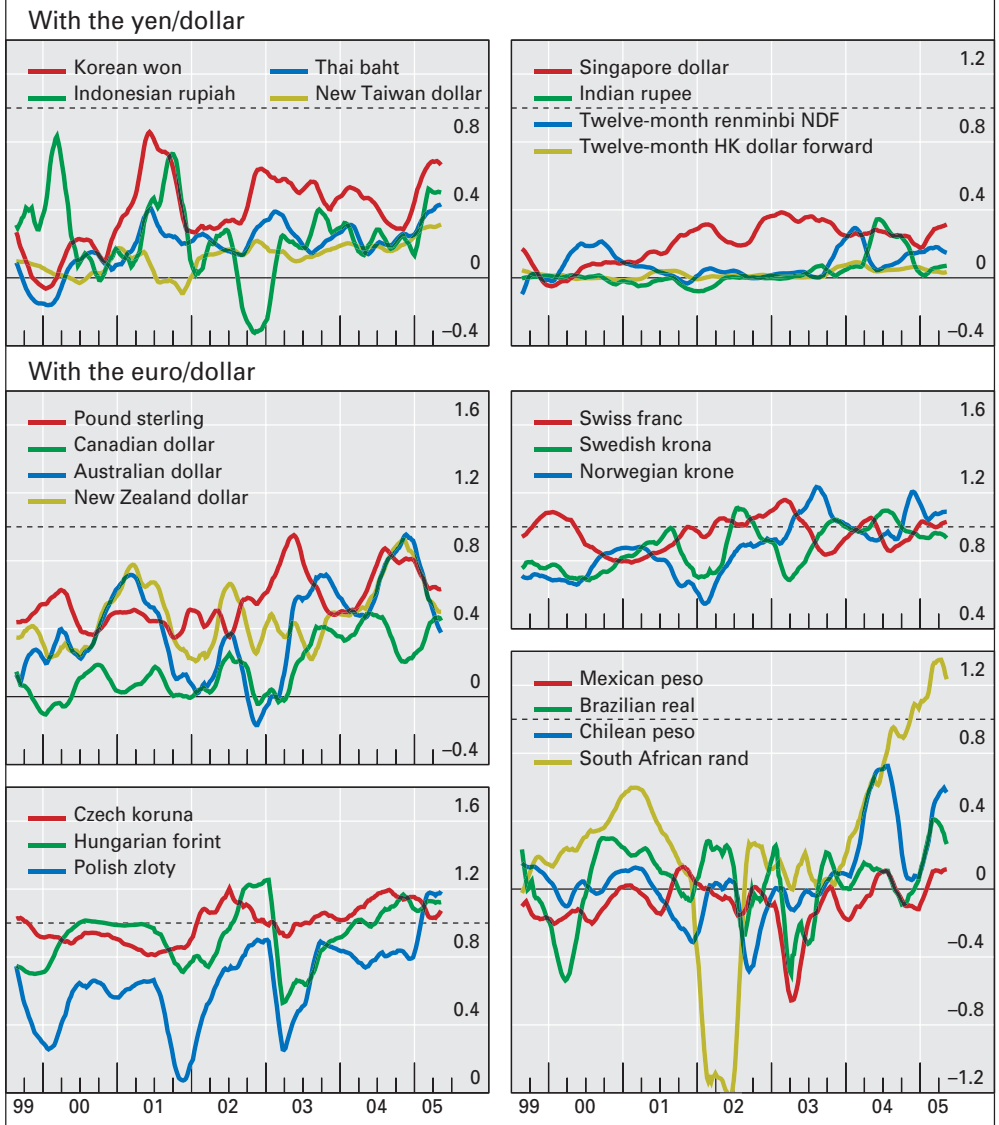
Exchange rate volatility and changes in reserves

	January 1999–December 2001			January 2002–April 2005		
	Exchange rate volatility[1]		Change in reserves[2]	Exchange rate volatility[1]		Change in reserves[2, 3]
	Bilateral	Nominal effective		Bilateral	Nominal effective	
China	0.0	3.3	57.5	0.0	3.8	372.7
Hong Kong SAR	0.1	2.6	14.9	0.4	2.9	10.5
India	1.7	4.2	13.3	2.6	4.3	68.6
Indonesia	20.5	20.1	0.8	6.6	6.3	3.6
Korea	6.5	6.3	28.8	5.7	4.7	83.8
Malaysia	0.0	3.0	–0.1	0.0	3.4	37.9
Philippines	7.7	7.6	0.2	3.2	4.1	0.5
Singapore	3.7	3.1	–1.5	3.5	2.0	30.2
Taiwan, China	3.5	3.7	16.0	3.0	2.7	89.5
Thailand	5.4	5.2	–1.4	4.2	3.1	9.3

[1] Calculated as the standard deviation of annualised weekly changes, in per cent, in the exchange rate over the period. [2] Cumulative change over the period, in billions of US dollars. [3] Until March 2005.

Sources: IMF, *International Financial Statistics*; national data; BIS. Table V.4

Currency co-movements[1]



[1] Ten-week moving averages, calculated as the coefficient in a regression of weekly changes in the domestic currency/US dollar exchange rate against a constant, the yen/dollar and the euro/dollar exchange rates, with a rolling window of 26 weeks. A coefficient near 1 (0) indicates that the currency closely tracks the yen or euro (dollar).

Sources: Bloomberg; BIS calculations. Graph V.10

Whether these are only short-lived developments or rather an indication of a more lasting change in the dollar's role as an anchor in foreign exchange markets remains an open question.

The impact of global current account and portfolio imbalances

Over the last few years, two major trends affecting the international monetary system have drawn critical attention. The first has to do with widening external imbalances. The second, related but not identical, trend has been the sizeable growth in net dollar liabilities of the United States, which have financed both the current account deficit and the acquisition of foreign currency assets. As a

counterpart to this, the nationals of other countries now hold a large and growing long dollar position, a third of which is accounted for by official holdings of foreign exchange reserves.

These developments pose the risk that imbalances may be corrected in a disorderly way, or lead to protectionism. Either outcome could damage economic growth and trade or generate financial strains. In addition, disorderly currency movements could alter the roles of the US dollar and euro as reserve currencies, with further unpredictable outcomes.

Are current account imbalances ...

Two schools of thought regarding the source of the problem and possible solutions have emerged. One has focused on current account deficits as the source of trouble. These increase debt and debt service, and threaten over time to violate the long-term solvency constraint. Eventually the overspending by one generation must be paid for with underspending by a later generation, which in turn would lead to a reduction in the real value of the currency. This approach raises the question: does the pattern of current account imbalances pose a problem for the international monetary system?

... or portfolio imbalances more of a problem?

A second school of thought is based on the premise that assets held in different currencies are imperfect substitutes. Thus, as the proportion of assets denominated in a given currency rises, so does the corresponding risk premium, and the value of the currency must fall to set up higher future returns. This approach provides the motivation for the second question: does the pattern of currency shares in global portfolios pose a problem for the international monetary system?

Do chronic imbalances have systemic roots?

Those who answer these questions in the affirmative also suggest that the international monetary system itself may have contributed to the current state of affairs. In the past, they argue, there was a degree of discipline to force adjustment before deficits or any currency overhang got dangerously large. Under the gold standard, there was an element of automaticity, even though countries could, and did, alter this process through borrowing or lending abroad. Under Bretton Woods, the IMF played a policing role, constraining debtor countries in particular. Today, there seem to be neither rule-based nor discretionary means of forcing either creditors or debtors to react as imbalances and net positions grow. Those who conclude that a problem does exist are led in turn to propose changes to the system itself, either to address a current problem or to prevent future ones from arising.

In contrast, those who answer in the negative do not see the need for systemic reform. Indeed, some suggest that we already have a new system, which they refer to as the "new Bretton Woods": Asian countries are said to stabilise their currencies against the dollar in order to sell goods to the United States, and simultaneously lend the funds to pay for them. These analysts argue that this arrangement of mutual advantage could continue for decades.

The following sections consider whether or not there is a problem and, if so, whether it is more a "current account imbalance" or a "portfolio imbalance" problem. The distinction matters because the solution proposed depends on the diagnosis. For example, a portfolio imbalance problem might be eased by US residents issuing bonds denominated in euros, yen or gold (like the US Treasury "Carter bonds" denominated in Deutsche marks, Swiss francs and

yen in the late 1970s). This, however, could aggravate a deficit and debt problem, since dollar depreciation would then worsen the US debt position.

Imbalances are related

For clarity's sake, the current account imbalance and portfolio imbalance questions are examined separately, at the risk of understating the relationship between them. In fact, the two are related in several ways. If the US current account and net international liabilities are seen to be on an unsustainable path, this might lead to a re-examination of portfolio allocations. Similarly, heavy US issuance of dollar liabilities, which the dollar's role may have eased, to finance profitable external assets has sharply reduced debt service charges. This has lessened the current perception that there might be a deficit problem. In effect, an expansion of the rest of the world's dollar holdings has helped to limit the compounding through debt service of US net international liabilities resulting from trade deficits.

A current account imbalance problem?

The arguments here relate to national intertemporal budget constraints and hence to external debt accumulation, not money. As such, they could equally apply to a regional current account imbalance in a single currency area like the euro area. In this case, the sole difference would be that only divergent price trends, not nominal exchange rate changes, could alter the real exchange rate (the relative price of traded and non-traded goods). Does this kind of imbalance pose a problem globally? This review of the arguments recognises the economic unsustainability of the US external accounts, but suggests that the build-up of debt is at an earlier stage than most analysts suppose. Political constraints could bind sooner than strictly economic ones.

The first point of contention is how unsustainable the US current account deficits are, in economic or political terms. The second is the set of reasons given for how the US external accounts got onto such a path. Differing views here lead on to differing views on the role of the international monetary system.

Yes

US deficits: economically unsustainable ...

The mainstream critical view is that the US external accounts are unsustainable in the sense that debt is rising without obvious limit relative to underlying output. The current account deficit, at about 6% of US GDP or 1% of world GDP, already represents two thirds of the rest of the world's current account surpluses and nearly 8% of its total savings. Moreover, assuming that US imports continue to be particularly responsive to income, faster growth in the United States than in its major trading partners would mean that the US deficit will widen along this path. Several studies forecast a rapid deterioration: one puts the deficit at 7.8% of GDP by 2008, others at 8.5% or even 13% by 2010.

These widening deficits imply net international liabilities doubling from a quarter to half of US GDP in just a few years. To narrow such deficits through lower absorption while maintaining employment in the US non-traded goods sector would require a large real exchange rate adjustment.

... or politically unsustainable?

Another sense in which this current account development might be unsustainable is political. It may be that the first limit reached is that of the

political willingness in the United States to run such deficits, or in Europe to accept the domestic consequences of any narrowing. From this standpoint, the risk is not so much a debt crisis as a shift towards protectionism.

Do US deficits reflect excessive global savings ...

How did such a large imbalance come into being? One view is that unsustainable US current account deficits result from the rest of the world's reliance on export-led growth and corresponding current account surpluses. Thus, the world's largest economy merely provides passive consistency, given that there can only be n–1 independent current accounts. For example, the US current account deteriorated in the wake of the Asian financial crisis of 1997–98, when the region swung into current account surplus. On this view, the US external debt at 25% of GDP and deficit at 6% of GDP enable international wealth to accumulate and surpluses to persist elsewhere. Listed in order of the dollar amount of their net international investment position, we have: Japan (net assets of 38% of GDP and a surplus of 3% of GDP in 2003); Switzerland (149%, 14%); Hong Kong SAR (252%, 11%); Taiwan, China (108%, 11%); Germany (7%, 2%); Belgium (42%, 4%); Singapore (83%, 31%); and Norway (28%, 13%).

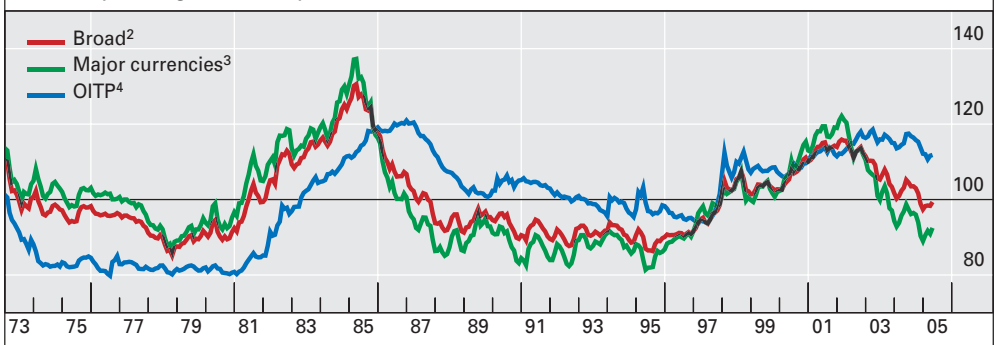
... or excessive US consumption?

Another view is that the US economy is prone to overconsumption. The US private saving rate has dipped to an all-time low and there is a large peacetime fiscal deficit. Private net investment declined even as the current account deficit widened. Moreover, investment that is directed to the non-traded goods sector does not create the wherewithal for servicing the external debt and will make the eventual adjustment more difficult.

Some observers, especially from countries with appreciating flexible exchange rates, look beyond these proximate causes of the persistence of deficits and surpluses to flaws in the international monetary system. In particular, they contrast the lack of pressure on today's surplus countries to cease resisting their currencies' appreciation through sterilised intervention with the norm under the gold standard. Then, it is argued, reserve inflows expanded domestic money and raised prices, thereby pushing up the real

Measures of the US real effective exchange rate[1]

Monthly averages, 1973–April 2005 = 100



[1] In terms of relative consumer prices. [2] Twenty-six currencies of those economies whose bilateral shares of US trade exceeded 0.5% in 1997. [3] Seven (Australian dollar, Canadian dollar, euro, yen, pound sterling, Swedish krona and Swiss franc) of the 26 currencies in the broad measure. [4] Other important trading partners: the remaining 19 currencies in the broad measure.

Source: Board of Governors of the Federal Reserve System. Graph V.11

exchange rate. In addition, the widespread view among market participants that the investment of Asian official foreign exchange reserves has held down US long-term rates suggests that recent US monetary tightening has restrained US absorption less than it might otherwise have done. Thus, according to this view, by intervening and sterilising at home, and by investing abroad in US bonds, Asian economies spare themselves and the United States the pressure to adjust. Any adjustment burden shifts onto more flexible currencies. It is noted in this connection that, were the real exchange rate of "other important trading partners" at its level of 1995–96, then the dollar's overall index would already have reached 1980 or 1995 lows at the end of 2004 (Graph V.11).

No

US current account deficits could persist for some time ...

Those who consider the US current account deficit a less imminent problem make two points. A first line of argument maintains that any US debt problem is at a very early stage and that the dynamics of the US external accounts remain very favourable. According to the US Department of Commerce, the US economy ran down its net international assets in the 1980s and went into a net international liability position only in 1989. Moreover, even in 2003, the United States still collected net international investment income of $38 billion (and $30 billion in 2004). This discrepancy reflected a higher return on US assets abroad (4%) than that on US liabilities (2.6%), more than offsetting the gap between gross assets (71% of GDP) and the higher level of gross liabilities (96% of GDP). This difference in the overall rate of return reflects two regularities: that the United States issues more short-term, low-risk liabilities to the rest of the world than it buys, and that its multinationals earn a higher rate of return abroad than do foreign multinationals in the United States. Whatever the source, if a country enjoys a rate of return on its liabilities lower than its nominal growth rate, its external liabilities can be stabilised even with a trade deficit. Many projections of the US external accounts ignore this.

A further, albeit lesser, factor limiting US external debt accumulation is that the rest of the world bears the exchange rate risk. When the home currency depreciates, emerging economies that borrow in dollars suffer exchange rate losses. In contrast, when the dollar depreciates, US external assets benefit from exchange rate gains (see below). This effect, which some have characterised as "debt relief" from dollar depreciation, helps to restrain the rise in the ratio of US net international liabilities to GDP.

A second line of argument accepts the characterisation that the US current account deficit reflects a passive, n–1 position but sees this as appropriate and, over some horizon at least, sustainable. If the capital account is seen as the driver, it is thought that free capital movements seek higher or safer returns in the United States. Thus, the world's largest economy's dissaving has done nothing more than accommodate a glut of savings abroad (or perhaps a dearth of investment). If instead the current account is the driver, then the argument is akin to the "new Bretton Woods" interpretation of the relationship between the United States and Asia. According to this view, the need for jobs in Asia is met with export-led growth. Consumer goods flow to

the United States and low-risk dollar securities flow to Asia. This is taken to be a stable bargain whatever the resulting imbalances.

... judging by the Australian example

Some have drawn a parallel with Australia, which has been running current account deficits for a very long time. As a result, the country's net international liability position, at 70% of GDP, is almost three times the relative size of that of the United States. The world is seen as seeking higher or safer returns in Australian corporate assets, equities and bonds, and as remaining prepared to accept the risk of debt denominated in domestic currency. Going by this precedent, the US current account might not be sustainable, but this would be a problem for a later generation.

Those who hold the view that there is no pressing current account imbalance might also tend to deny that the current international monetary system imposes less discipline on surplus countries than its predecessors. They would cite the risk of using a reconstructed ideal of an earlier regime rather than how it operated in practice. Sterilisation was common under both the classical gold standard and the gold exchange standard of the interwar years. If gold flow and money base growth more often than not had opposite signs during the earlier periods, then there is nothing new about the current lack of pressure on the surplus countries to adjust. Moreover, current account imbalances are no larger and no more persistent now than under the gold standard. National investment and saving behaviour are, if anything, more tightly linked now, indicating no greater net capital mobility.

In sum, there is no doubt that the US external accounts are on an unsustainable trajectory. While the absence of substantial debt service might cast doubt on the urgency with which this problem needs to be addressed, the continuing absence of a policy response increases the chances of a disorderly market adjustment. Furthermore, regardless of one's judgment on sustainability, protectionist policies and the public pillorying of trading partners give cause for concern, the latter also because it could unsettle financial markets. Finally, it is an open question whether the current international monetary system or combination of systems makes such a problem any more likely than did its predecessors.

A portfolio imbalance problem?

A dollar overhang ...

The question here is whether, at more than half of US GDP and growing, the net US liability position *denominated in dollars* represents in some sense an overhang of dollars in world portfolios. It is worth noting that, historically, the assertion of a dollar overhang came before the emergence of a chronic US current account deficit. Europeans worried as far back as 40 years ago about US firms buying European firms with dollars borrowed abroad, when the US current account was in surplus. Then, as now, low-risk dollar liabilities were already financing higher-risk foreign currency assets. In fact, this concern has since reappeared in the down phase of every dollar cycle under floating rates. As in the past, the most prominent question today is whether official portfolios are overweight the dollar. However, the broader question may be whether private portfolios are. The issue has recently gained additional force, in part

because this is the first down phase of the dollar's cycle since the euro's inception. The depth, breadth and liquidity of the euro's financial markets make it a stronger alternative to the dollar than existed before.

Yes

... in private portfolios ...

The argument that the world has a portfolio imbalance problem starts with the US international position broken down by currency. It is estimated that the United States had a net liability position denominated in dollars of $7.2 trillion, or 66% of GDP, in 2003. This is defined as dollar-denominated liabilities to the rest of the world less dollar-denominated claims on it. This far exceeded the overall net external liability position (25% of GDP), that is all external liabilities less all external assets, with the difference accounted for by US net holdings of foreign currency assets. The US short position in the dollar corresponds to a very large net long position for the rest of the world, indeed over a fifth of global GDP, less that of the United States, at current exchange rates.

The fact that creditors to the United States bear the market risk associated with dollar depreciation raises the possibility that they could try to cover their positions in times of stress. Moreover, a sense of moral hazard might also make for unstable portfolio allocations across major currencies. Since such depreciation produces exchange rate gains in US portfolios, it leads to wealth gains that support consumption (although it makes foreign goods pricier). As a result, US policymakers could feel less pressure to resist dollar depreciation and the rest of the world might fear their benign neglect.

Europe and Asia differ in the incidence of losses from dollar depreciation, but in each case some observers discern destabilising elements. In Europe, foreign exchange losses in the corporate sector drain firms' capital and prolong deleveraging, leading to caution in investment and hiring. This hinders any increase in European absorption in relation to output. In turn, this impedes current account adjustment, encouraging a belief that the dollar might have to depreciate further. In Asia, the fact that the public sector holds much of the long dollar position attenuates any behavioural response. However, when opposition lawmakers have questioned the authorities about official exchange rate losses, the latter have sometimes responded with statements of intention regarding reserve diversification that have threatened to destabilise markets.

... and official portfolios?

To many observers, the concentration of the long dollar position in official portfolios (about a third of the total), and in just a handful of Asian economies, makes maintenance of the status quo particularly problematic. Official holdings mean relatively few portfolio managers. These observers note that other reserve managers and private investors, including leveraged investors, are extremely sensitive to signs – sometimes more reported than real – of reallocations away from the dollar.

Some argue that there is already an overhang of dollars in official portfolios. The 64% of foreign exchange reserves invested in the dollar seems out of line with other measures of the dollar's share, such as the 45% share of international notes and bonds (other than those issued in home currency) that are denominated in dollars. Others argue that, even if there is no overhang now, there could be one soon, especially if currencies become more oriented

towards their effective exchange rates, as suggested by recent experience (see above).

Admittedly, in principle there need be no one-to-one mapping between the way a currency trades and the composition of the official foreign exchange investment portfolio. Those holding the overhang view, however, would point out that (known) currency shares in reserves do seem broadly to reflect currency orientations. Issuers of euro-oriented European currencies have fairly low known dollar shares: Slovakia and Croatia, 29–30%; Switzerland and the United Kingdom, 36%; and Latvia, 45%. With currencies less tied to the euro, Australia has 45% of its reserves in dollars, and Canada 53%. Hong Kong SAR, with its dollar peg, has 75–80% of its reserves in dollars.

According to this view, there would be the risk of a disorderly shift from dollars towards euros were there to be a shift in currency orientation. In the past, the switch from silver and bimetallism to gold by the new German empire, the United States and the Latin Monetary Union (Belgium, France, Greece, Italy and Switzerland) strained the gold supply and contributed to the deflation of the late 19th century. The difference today is that increases in supply are possible both for euro securities (through debt management and sterilised intervention) and for euro base money (lower interest rates). In principle, these possibilities give more scope to offset any disorderly shift towards the euro.

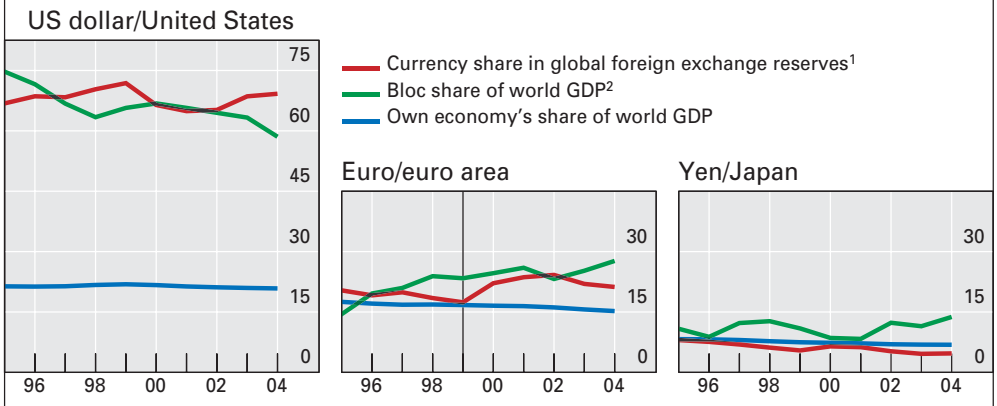
No

Private portfolios are diversifying ...

Others argue that there is no overhang of dollars. They hold that the world is not really as long dollars as some suggest. Home bias in portfolio management is receding, even as economies' international balance sheets are growing

Global reserve composition and size of currency blocs

In per cent



[1] At constant 2003 exchange rates; 2004 figure as at June. Prior to 1999, holdings in Deutsche marks, French francs and Dutch guilders used as a proxy for euro holdings. [2] Bloc share estimated as the own economy's share of PPP GDP, plus the elasticity-weighted share of all other countries' PPP GDPs. The elasticities are calculated as the coefficients in a regression of weekly changes in the domestic currency/US dollar exchange rate against a constant, the yen/dollar and the euro/dollar (prior to 1999, Deutsche mark/dollar) exchange rates, during the corresponding year.

Sources: IMF; BIS calculations. Graph V.12

faster than output. The natural first stop for a portfolio diversifying away from the home currency remains, in many cases, dollar assets.

... and the dollar share of official portfolios is not obviously excessive

In particular, the notion can be disputed that official reserves are overweight in dollars. Excluding Japan, the dollar share of foreign exchange reserves may have been no more than 57% in mid-2004. (Unreported forward sales of dollars against euros could lower this figure further.) Such a share is high in relation to the share of the US economy in the world economy, but not necessarily in relation to the share of the dollar zone in the world economy. If one allocates economies, measured at purchasing power parity, to the dollar, euro or yen zones according to the behaviour of their currencies (as in Graph V.10), the dollar zone produces an estimated 59% of global output (Graph V.12). This is almost identical to the current dollar share of reserves outside Japan.

If there were official (or private) shifts from the dollar to the euro, moreover, they could prove to have less of an impact on the foreign exchange market than is often projected. Analytically, portfolio diversification from the dollar to the euro is akin to sterilised intervention in its effects on private balance sheets. However, many observers hold the view that the substitutability between government securities denominated in these two currencies is so high that it would take very large portfolio reallocations to materially affect the exchange rate. And if such official reallocations were to be considered, the fact that the bulk of official dollar holdings are concentrated in relatively few hands might actually have an advantage. Cooperation might make it possible to avoid a "prisoner's dilemma" outcome of disorderly disinvestment.

In sum, the case for a portfolio imbalance, including in official portfolios, seems weaker than much commentary would suggest. There remains, however, a pending problem. The dollar zone has been shrinking, and any acceleration of this could eventually give rise to a portfolio imbalance in both the private and official sectors.

VI. Financial markets

Highlights

Conditions in global financial markets eased during the period under review, despite the tightening of monetary policy by the US Federal Reserve which began in June 2004. Even as short-term interest rates started to rise in the United States, long-term rates in the major markets fell, equity prices rose and credit spreads tightened. Many markets retreated in March and April 2005 owing to increased risk aversion and concerns about a pickup in inflation. Yet as of mid-May, bond and equity prices were still higher than when the Federal Reserve first began to raise rates.

Narrowing credit spreads and rising equity prices during much of the period suggested that investors in credit and equity markets were confident about corporate profits and the macroeconomic outlook. This confidence has been underpinned in recent years by significant improvements in fundamentals. In credit markets, structural changes that have facilitated hedging and promoted liquidity may also have contributed to the low level of spreads. Nevertheless, the willingness of investors to accept greater risk was a key source of support for credit and equity valuations. This willingness was in turn partly based on the persistence of an accommodative policy stance. Negative surprises in the US automobile sector contributed to a repricing of risk in credit markets in March and April.

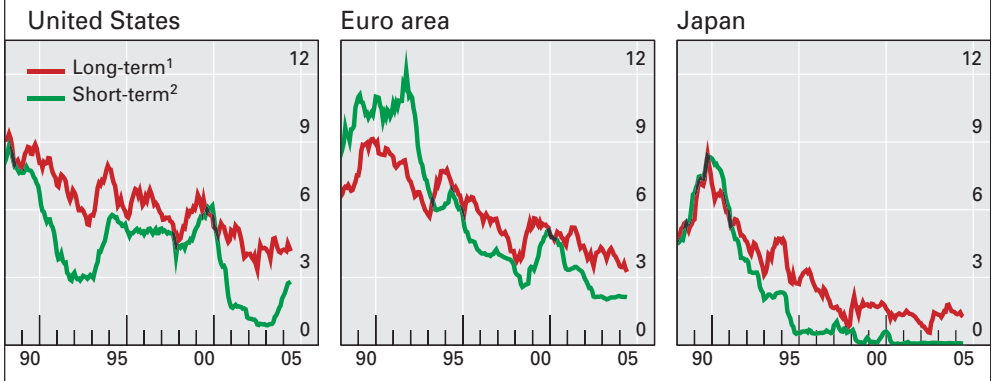
The juxtaposition of low long-term yields with a seemingly robust economy and rising US policy rates was something of a puzzle – although yields did increase in the months prior to the first rate hike by the Federal Reserve. Taken at face value, the decline in long-term yields following the rate hike suggests that investors in government securities markets took a less sanguine view of fundamentals than credit and equity investors. Contained inflation expectations and diminished uncertainty about the course of monetary policy helped to keep yields down. More technical supply-demand factors may also have played a role. However, it is difficult to ascertain the relative importance of these various explanations for why yields remained so low.

Yield curves and the low rate puzzle

Low long-term yields despite policy rate hikes ...

The low and declining level of long-term yields in major markets following the turn of the US policy rate cycle surprised many market participants during the period under review. In contrast to previous periods of monetary tightening, when higher policy rates had been accompanied by higher long-term interest

Short- and long-term interest rates



[1] Ten-year government bond yield; for the euro area, German bund. [2] For the United States, three-month Treasury bills; for the euro area, interbank offered rate; for Japan, certificates of deposit.

Sources: Bloomberg; national data. Graph VI.1

rates, 10-year US Treasury yields declined by a cumulative 50 basis points in the 10 months to mid-May 2005, to 4.12% (Graph VI.1). Other markets where monetary policy was tightened, including Australia, Canada, Switzerland and the United Kingdom, also saw long-term yields fall. In the euro area and Japan too, long-term yields declined by 107 and 49 basis points, respectively, between end-June 2004 and mid-May 2005. Long-term yields in most markets rose briefly in February and March 2005, but the rise was less sharp than during earlier sell-offs and was quickly reversed.

... were particularly puzzling in the United States

Several explanations for the low level of long-term rates were proffered. Deteriorating prospects for economic growth provided an explanation in the euro area and Japan, but not in the United States, where growth picked up significantly after the summer of 2004. Longer-term inflation expectations were exceptionally controlled, but real rates were down as well. Low volatility and reduced risk premia were also in evidence, but mostly at the short end, leaving longer-term forward rates still unusually low. Other possible explanations included prospective pension fund and accounting reforms, perceived by some market participants as increasing the demand for long-dated assets, and the accumulation of US dollar assets by Asian authorities. It is difficult to quantify the impact of these latter factors, however.

Growth prospects

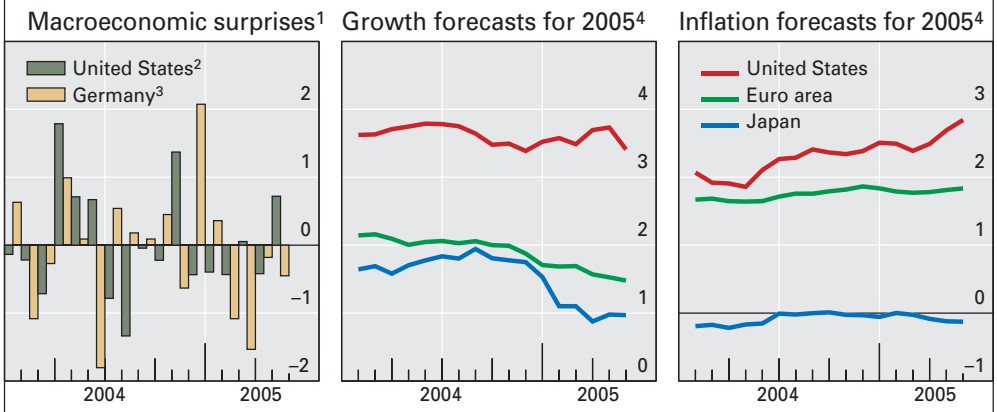
A weakening growth outlook was one explanation ...

A weakening of the outlook for growth contributed to the initial decline in yields (Graph VI.2). Yields had risen sharply in April and May 2004 when sudden strength in US labour market data and signals from the Federal Reserve led market participants to expect US policy rates to start rising much sooner than previously anticipated. The release of lower than expected US employment figures in July and August 2004 triggered a rally in global fixed income markets as investors reassessed the likely pace of monetary tightening. Downward revisions to global growth forecasts confirmed the pessimism.

... though more so in Europe and Japan

Stronger than expected data releases stemmed the fall in dollar yields in the fourth quarter, but failed to undo the earlier decline. Meanwhile, euro and

Macroeconomic news



[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 and 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] Change over previous year, in per cent. 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

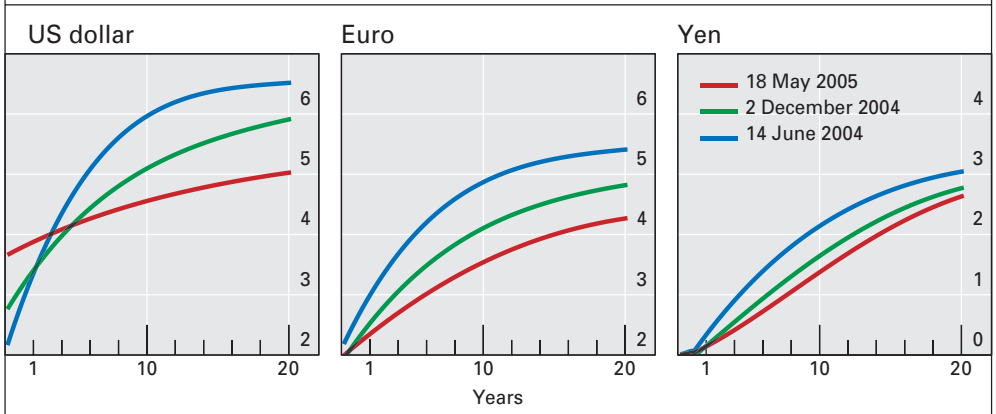
yen yields retreated further as macroeconomic news continued to disappoint in these economies. Between August 2004 and May 2005, the consensus forecast for GDP growth in the euro area in 2005 was revised downwards by a quarter, to 1.5%, and in Japan by half, to 1.0%. As a result, the differential between 10-year dollar and euro interest rates widened significantly, peaking at around 102 basis points in March 2005, the largest it had been since 1999.

A sell-off in early 2005 was of limited breadth and duration

Long-term yields bottomed out in mid-February 2005, as investors increasingly took the view that the market was due for a correction. This was particularly the case after the Federal Reserve Chairman termed the low levels a "conundrum", and pressures on inflation and signs of greater corporate

Forward curves[1]

In per cent



[1] Three-month forward rates derived from the Libor/swap curve.

Sources: Bloomberg; BIS calculations. Graph VI.3

pricing power became more evident. From 9 February, 10-year Treasury yields rose by nearly 70 basis points in less than six weeks, and bund yields also picked up by around half of that amount. But this late winter sell-off was to prove much more limited than those in summer 2003 (which had resulted in a 130 basis point increase in 10-year yields) and spring 2004 (115 basis points). The breadth of the sell-off was also more limited; unlike in the earlier episodes, the Japanese market did not move markedly as yields on Treasuries rose. Disappointing economic data in April, including lacklustre payroll and retail sales reports, allowed Treasury yields to settle into a lower trading range, while bund yields hit new all-time lows in May (Graph VI.3).

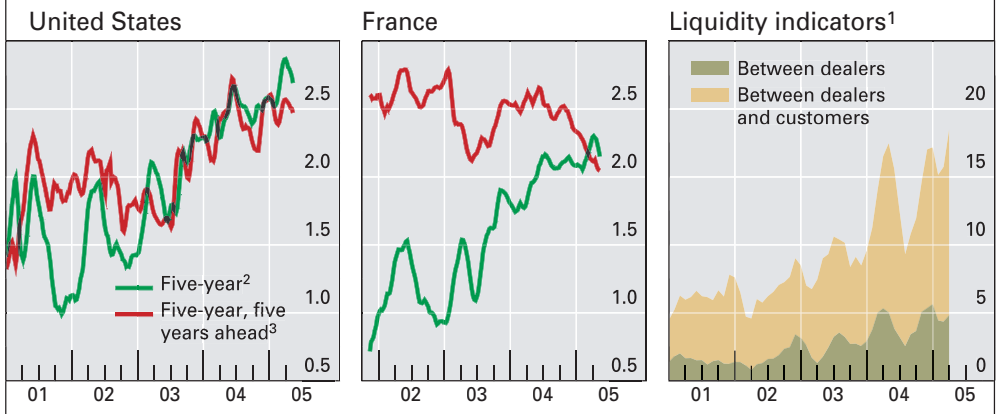
Restrained inflation expectations

Controlled inflation expectations were another factor dampening yields ...

For most of the period, one factor contributing to the unusually moderate behaviour of nominal long-term rates was that long-term inflation expectations remained well under control. This was despite soaring oil prices and forecasts of robust economic growth in the United States. Evidence for this can be found in inflation-indexed securities, whose yield differential to nominal government securities provides a rough measure of the compensation required by investors for expected inflation. While the measure of inflation compensation on five-year bonds increased by around 20 basis points from mid-2004 to the end of April, the same measure for implicit five-year rates five years ahead declined by 12 basis points for US indexed securities, and even more markedly in the case of French euro-denominated inflation-linked bonds (Graph VI.4). Since the periods surrounding previous oil shocks, central banks have gained inflation fighting credibility in the minds of market participants.

Yields on inflation-indexed bonds incorporate liquidity premia, which can complicate the interpretation of inflation compensation measures. Nonetheless, recent increases in the turnover of US Treasury-indexed bonds suggest that

Measures of inflation compensation and liquidity



[1] Weekly trading volume in US inflation-indexed government securities relative to outstanding debt; 13-week moving average. [2] Difference between nominal (for the United States, off-the-run) and real five-year yields, based on inflation-indexed government securities; one-month moving average. [3] Difference between nominal and real five-year forward rates, five years ahead; one-month moving average.

Sources: Bloomberg; Federal Reserve Bank of New York; national data. Graph VI.4

the depth and breadth of the market has improved considerably. The amount of turnover, relative to the stock of outstanding indexed debt, has grown steadily since 2000, both between primary dealers and other investors, and among primary dealers themselves (Graph VI.4, right-hand panel). Thus, while liquidity premia in inflation-indexed bonds may result in understated measures of inflation compensation, such biases are likely to have declined over time.

... but real rates also fell

At the same time, the yields on inflation-indexed bonds also indicate that a declining price of inflation compensation cannot be the whole explanation for the low level of long-term yields. Longer-term forward "real" rates also fell noticeably for both US and French indexed bonds, by around 80 and 50 basis points respectively from mid-2004.

Low volatilities and term premia

The decline in volatilities and term premia ...

Another frequently cited reason for low long-term yields during the period under review was a reduction in uncertainty about the economy in general, and the course of interest rates in particular. Lower uncertainty would normally result in lower term premia, which drive a wedge between short-term forward rates across maturities and the path of short rates expected by market participants. Indeed, both realised and implied volatilities on fixed rate contracts, already quite low by historical standards, fell further after the Federal Reserve began to raise rates. Many market analysts viewed the Federal Reserve's clear communication of its intentions, including its unchanging signal that the pace of tightening would be "measured", as contributing to this decline.

... has been most marked at the dollar short end ...

Consistent with this hypothesis, the principal decline in volatilities in developed fixed income markets since 2002 and 2003 has taken place at the short end of the curve. This is particularly noticeable in the implied volatilities from options on interest rate swaps (swaptions), the benchmark cost of funds for most global financial institutions (Graph VI.5, left-hand and centre panels). While the (annualised) implied volatilities on one-year US dollar swaps fell from 56.8% at their peak in 2003 to 21% at the end of April 2005, implied volatilities on 10-year dollar swap rates show much more muted peaks and troughs. (Volatilities in the euro swap market have followed a similar pattern, but at even lower levels.) Thus, the main source of volatility reduction in developed financial markets appears to have been short-term US dollar markets. Longer-term dollar and euro markets have remained relatively unaffected.

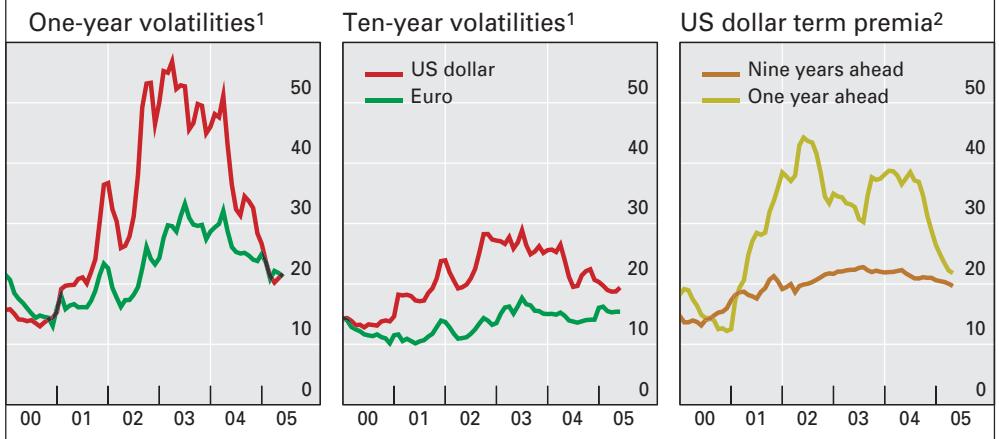
... consistent with reduced uncertainty about the course of monetary policy ...

There is indeed direct evidence that risk premia have declined principally at the short end. As estimated by a three-factor model of the yield curve, risk premia at the short end of the US Treasury curve appear to have fallen by nearly 25 basis points since early 2002 (Graph VI.5, right-hand panel). This is consistent with reduced uncertainty about the course of monetary policy over the near term. By contrast, the risk premium embedded in the one-year forward rate nine years ahead appears to have declined only marginally since late 2002, and stands at roughly 20 basis points.

... though unlikely to explain low rates at longer horizons

Thus, while declining volatilities and term premia may explain lower near-term forward rates, they appear not to explain the low forward rates that are currently apparent at long horizons. For instance, at the end of April 2005, forward short-term rates at the 10-year horizon were 4.8%. Given long-term

Swaptions' implied volatilities and term premia



[1] Based on swaptions with one-year maturity; as a percentage of the swap rate. [2] Estimated one-year implied forward rates from US Treasury securities; derived from the three-factor affine model described in Q Dai and K Singleton, "Expectations puzzles, time-varying risk premia, and affine models of the term structure", *Journal of Financial Economics*, 63, 2002, pp 415–41; in basis points.

Sources: Bloomberg; Datastream; BIS calculations. Graph VI.5

inflation expectations in the United States of around 2.5% and estimates of the real short-term interest rate consistent with stable inflation of 2.6–3.0%, the low level of forward rates at long horizons remains difficult to explain without much sharper declines in risk premia than those estimated.

Pension reforms and the demand for duration

Yield declines were pronounced at very long maturities ...

In both the United States and the euro area, yield reductions were particularly pronounced at maturities beyond 10 years. Between mid-2004 and April 2005, the difference between the rate on the longest-maturity Treasury and the 10-year rate decreased by more than 50 basis points, while the 30- to 10-year bund spread narrowed by about half that much. In response, the French government launched a 50-year bond issue in March 2005 and other European governments also announced long-dated issues. However, the increased supply did little to dampen investor enthusiasm for ultra-long-dated securities. Even the widening of dollar term spreads that followed the surprise announcement in May this year that the US Treasury was considering reissuing the 30-year Treasury note after a five-year hiatus was relatively short-lived.

... driven in part by prospective pension reforms

Many market participants cited prospective pension fund and accounting reforms as fuelling demand for long-dated paper. US Department of Labor proposals for pension reform announced in early January 2005 would significantly increase the interest rate volatility of duration mismatches, while plans for the Pension Benefit Guaranty Corporation to determine premiums on a risk-adjusted basis would raise their cost. In addition, independently initiated accounting reforms proposed a more timely recognition of duration mismatches in the financial statements of pension funds. It was felt that the combined impact of these measures, if enacted, would greatly increase the demand from US pension funds for long-maturity assets to counter duration mismatches. Similar reforms have been under discussion in various parts of

Europe, such as the introduction of international reporting standards and other pension reforms in the Netherlands and Sweden.

Recent historical experience elsewhere appears to justify the anticipation of a price impact of pension reforms on long-dated bonds, even prior to their actual implementation. The 1999 announcement of a review of pension regulations in the United Kingdom contributed to an inversion of the yield curve beyond 10 years that same year, although pension funds increased holdings of longer-duration fixed income instruments at the expense of equities only with a lag. In Denmark, where pension fund liabilities were marked to market starting in 2001, there was also a major impact on the pricing of long-dated bonds.

Reserve accumulation and the "Asian bid"

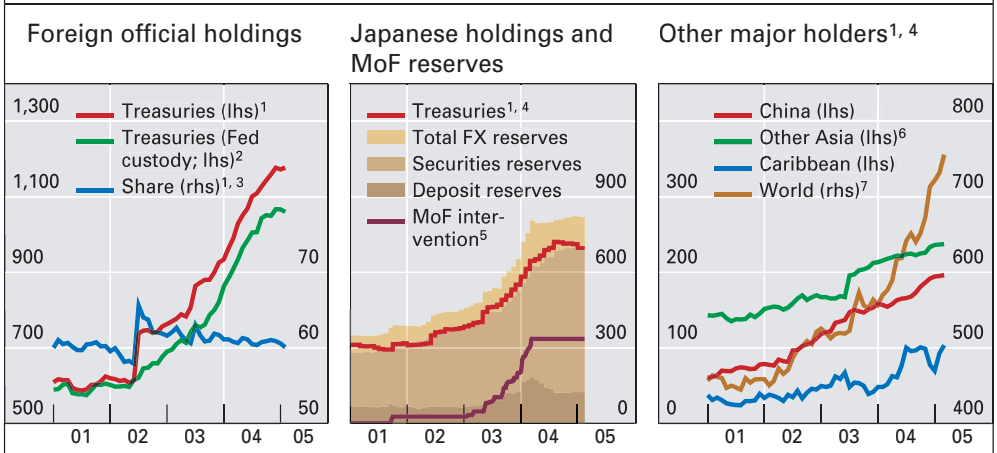
Asian authorities continued to accumulate reserves

Market participants have identified demand from Asian investors, in particular the recycling of foreign exchange reserves into US securities, as another potential contributor to the low level of yields in the United States. The efforts of Asian authorities to resist the appreciation of their currencies in the face of rising capital inflows led to the accumulation of an additional $535 billion in Asian (including Japanese) reserves in 2004, pushing total Asian reserves to $2.4 trillion. The source of this reserve growth shifted during the year from the Japanese Ministry of Finance, which ceased intervention operations, to central banks in other Asian economies. The recycling of a portion of these reserves contributed to the growth in total Asian holdings (both official and private) of US Treasury securities, which rose by an estimated $219 billion in 2004, more than the increase in the rest of the world combined (Graph VI.6).

At the same time, the extent to which this strong Asian demand for US securities contributed to the low level of long-term yields in the United States

Foreign holdings of US Treasury securities

In billions of US dollars



[1] TIC data. [2] Held in custody at the Federal Reserve on behalf of foreign official institutions. [3] Share, in per cent, of total foreign holdings. [4] Holdings of US Treasury securities by public and private entities. [5] Cumulative intervention since end-2000. [6] Hong Kong SAR, India, Korea, Singapore, Taiwan (China) and Thailand. [7] Excluding Japan, China, other Asia and the Caribbean.

Sources: Board of Governors of the Federal Reserve System; Japanese Ministry of Finance (MoF); Treasury International Capital System (TIC). Graph VI.6

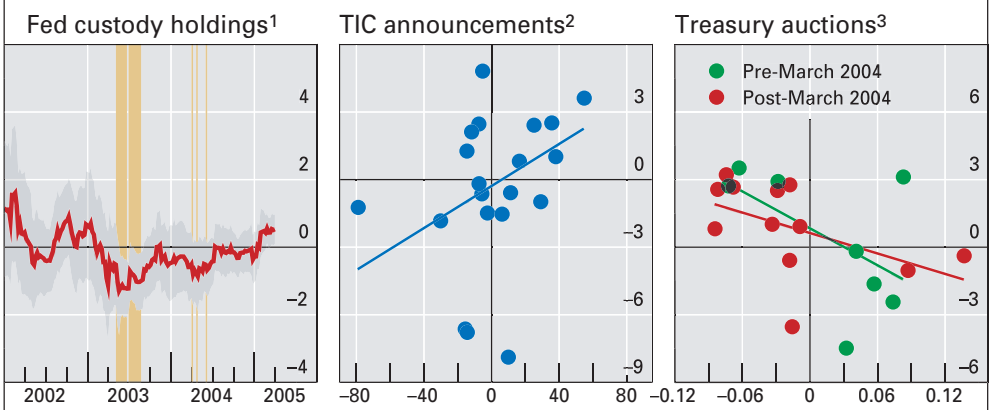
remains an open question. Some market participants have suggested that Asian purchases of US securities, particularly during the period of Japanese intervention, may have lowered yields by as much as 60 basis points, with estimates varying substantially depending on the maturity of the security, the time frame and the empirical methodology. However, a difficulty in empirically assessing this issue is the risk of falsely inferring a causal relationship; reserve managers may step up their purchases of US dollar assets *in response* to a decline in yields. This would be the case if intervention in support of the dollar seemed necessary following poor economic news from the United States, capital outflows to Asia and consequent upward pressure on Asian currencies.

It is plausible that Asian purchases of US securities affected US yields …

There is some evidence suggesting that any effect Asian purchases had on US yields waned even before the end of Japanese intervention in March 2004. A rolling regression of the weekly change in US Treasury yields on the weekly change in the stock of US securities held in custody at the Federal Reserve indicates that an association can be detected only intermittently (Graph VI.7, left-hand panel). The negative relationship for both five- and 10-year notes reached standard levels of statistical significance only between May and August 2003, fading out prior to March 2004. While this may indicate a weakened link between US yields and Asian purchases in 2004, it might also reflect the possibility that other Asian central banks channelled their investments into US securities in a less observable fashion.

… but the effects are difficult to identify in the data

Impact of foreign official investment on US Treasury yields



[1] Coefficients estimated from a 26-week rolling regression of the weekly change in five-year US Treasury bond yields on the change in custody holdings for foreign official accounts; in basis points per $1 billion change in foreign official custody holdings. The grey shading indicates the 95% confidence interval; the vertical shading indicates the periods in which the beta coefficient from the bivariate regression is negative and significant at the 95% level. [2] The vertical axis is the change, in basis points, in the yield on the two-year on-the-run US Treasury in the two hours surrounding the release of the TIC data. The horizontal axis is the estimated surprise in the monthly release of the TIC data, measured as the deviation from a three-month moving average of net foreign purchases of US Treasury securities; for the period January 2003–January 2005. [3] The vertical axis is the change, in basis points, in the yield on the two-year on-the-run US Treasury in the two hours surrounding the release of the US Treasury auction results. The horizontal axis is the estimated surprise in the indirect bid share, measured as the deviation from a three-month moving average of the ratio of indirect to total competitive bids accepted in the two-year auction. Pre- and post-March 2004 periods correspond to August 2003–March 2004 and April 2004–March 2005, respectively.

Sources: Board of Governors of the Federal Reserve System; Bloomberg; GovPx; TIC; BIS calculations.

Graph VI.7

There is scant evidence that the release of data which shed light on Asian purchases of US securities tended to move yields in a predictable way. Market participants closely follow the monthly Treasury International Capital (TIC) report, which aggregates net purchases of US Treasury securities by residents in individual countries, and provides an estimate of total foreign official holdings. Yet the Treasury market was unfazed by the relatively large $22.5 billion surprise (based on a consensus forecast) in net foreign purchases in the November 2004 TIC report, and by the $2.8 billion surprise in the December report. Looking further back, the TIC data release appears to have had little, if any, systematic impact on the US Treasury market: yields on two-year (or five-year) on-the-run US Treasuries did not seem to react negatively to estimated surprises in total net purchases (or foreign official purchases) of US securities over the past few years (Graph VI.7, centre panel).

Yields did not react to TIC surprises ...

A similar exercise based on the announcement of the results of US Treasury auctions is equally inconclusive (Graph VI.7, right-hand panel). The indirect bid, ie the competitive bid for US Treasury securities that is placed by dealers on behalf of third parties, is often taken by market participants as a proxy for Asian central bank activity in the Treasury market. While it does appear that yields on on-the-run US Treasuries fall with a higher indirect bid share, this relationship is only marginally statistically significant for the two-year note, and is insignificant for the five-year note. Moreover, the effect seems considerably less pronounced after the cessation of Japanese intervention. Prior to March 2004, a 5 percentage point upward surprise in the indirect bid share – which averaged 40% over the May 2003 to March 2005 period – is associated with a 1.4 basis point fall in the yield on the on-the-run two-year note in the hours surrounding the release of the auction results. This result is slightly weaker when the role of other factors is taken into account, including the bid-to-cover ratio and the total auction size. After March 2004, this effect decreased to 0.8 basis points.

... and reacted only marginally to indirect bid surprises

On balance, the above evidence suggests that any impact of Asian purchases on US yields weakened considerably following the period of Japanese intervention. However, such evidence should be interpreted with caution. The activity of other market participants, who possibly frontloaded purchases of US securities based on their expectations of trend Asian activity, may have clouded the direct relationship between yields and Asian purchases as proxied by Federal Reserve custody holdings. Moreover, the lack of a significant announcement effect may reflect inadequate measures of market expectations about the TIC report, and of the role of Asian central banks in the indirect bid in Treasury auctions. Finally, all of these estimates simply capture the marginal effect of purchases given the prevailing exchange rate regime. They cannot measure the impact that a combined change in exchange rate and portfolio allocation policies might have.

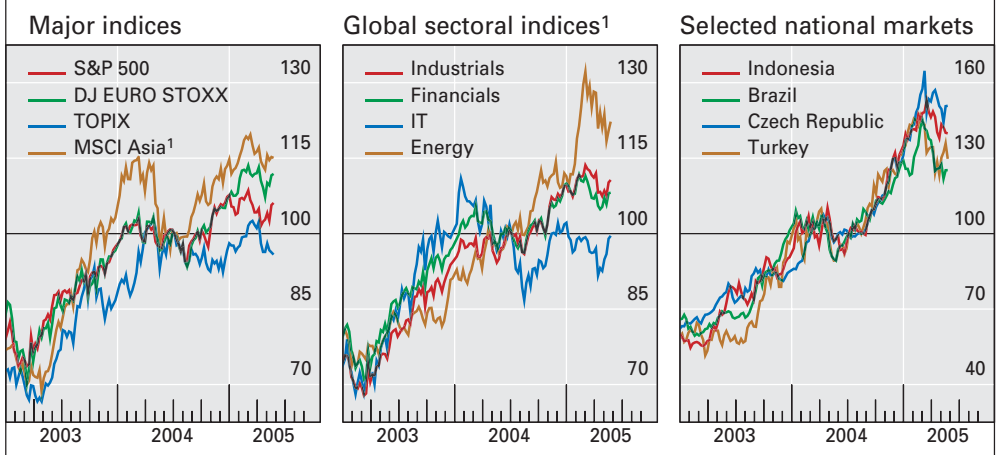
Equity markets and oil prices

Major equity markets rose only modestly ...

After rallying strongly in 2003, major equity markets rose only modestly during the period under review, with marked differences in growth rates across regions.

Equity prices

End-week data, in local currency; 2 July 2004 = 100



[1] Morgan Stanley Capital International equity index; for MSCI Asia, excluding Japan.

Sources: Bloomberg; Datastream. Graph VI.8

Markets in the euro area and Asia (excluding Japan) were the best performers, rising in local currency terms by 6.2% and 11.3%, respectively. By contrast, markets in the United States and Japan stagnated, with 1.4% and –4.9% growth, respectively, from mid-2004 to April 2005 (Graph VI.8). The best performing national markets included euro area acceding countries such as the Czech Republic and Hungary, Asian emerging markets such as India and Indonesia, and Latin American markets such as Brazil and Colombia, all of which recorded price increases of more than 20% in local currency terms. Among broad sectors, the energy industry unsurprisingly performed best, scoring a 20.9% return on a global basis, with industrials and financials also outperforming global indices at 5.7% and 4.4%, respectively; conversely, the technology sector suffered a negative return of –10%.

Robust earnings growth despite IT disappointments

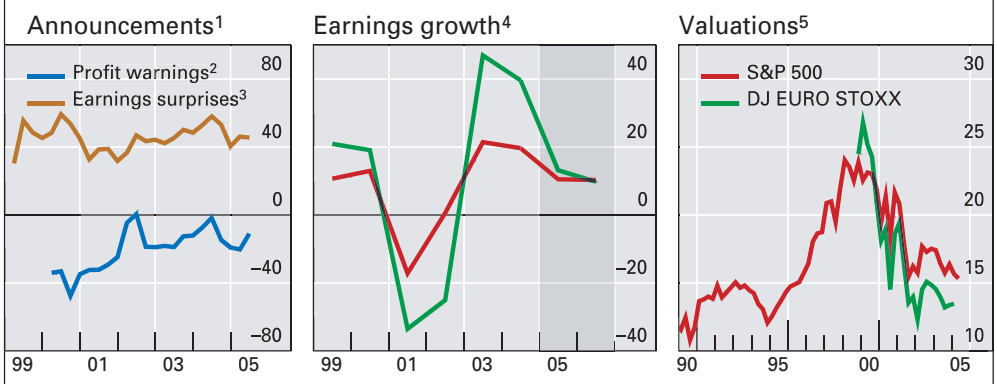
... despite respectable earnings growth ...

Though down from the exceptional pace in 2002–03, earnings growth in both the United States and the euro area was still above 10% in 2004 and early 2005 (Graph VI.9). Earnings growth disappointed in late 2004, but the ratio of positive to negative earnings surprises for S&P 500 companies rebounded slightly in the first part of 2005. Profit warnings in early 2005 also showed improvement after a worsening in late 2004. To be sure, disappointing announcements by bellwether technology firms often drew attention, including in the summer of 2004 and early 2005. Even so, on balance, earnings announcements in the United States and euro area were respectable, with earnings of a number of major financial firms in particular coming in above expectations in the first quarter of the year.

... and increased M&A activity

Merger and acquisition activity and the prospect of corporate releveraging appeared to inject life into equity markets in early 2005. Several multibillion dollar mergers were announced in the United States in late January. In Europe, takeover speculation involving Italian banks provided positive support to market indices.

Earnings and valuations



[1] Difference between number of positive and negative announcements, expressed as a percentage of all announcements; observations are positioned in the quarter of the announcement. [2] Earnings guidance provided by companies. [3] Actual earnings. [4] Annual change in operating earnings per share, in per cent; for 2005–06, forecast. [5] Price/earnings ratio based on 12-month forward earnings.

Sources: Bloomberg; I/B/E/S; Standard & Poor's; BIS calculations. Graph VI.9

A stumble in March and April 2005

However, starting in March 2005, world equity markets stumbled. Macroeconomic news in the United States, in particular the disappointing retail sales, inflation and consumer sentiment numbers announced in April, appeared to weigh on global share prices. Consumer and business sentiment also turned down in Europe. In Japan, rising political tensions with China also contributed to deteriorating sentiment, including a 3.8% drop in the Nikkei 225 on 18 April, the sharpest drop in a single day since 10 May 2004.

Markets in the shadow of rising oil prices

Rising oil prices ...

Growing demand in the face of short-term constraints on supply helped to push up oil prices, which in turn contributed to weakness in global equity markets over the period. By end-2004 the price of Brent crude had risen 34% over its end-2003 value, and another 32% by 31 March 2005. Long-term trends in the supply of and demand for oil, in particular the persistence of strong growth in large oil-consuming nations such as China and the low levels of excess capacity in the global oil industry, remained constant concerns (see Chapter III).

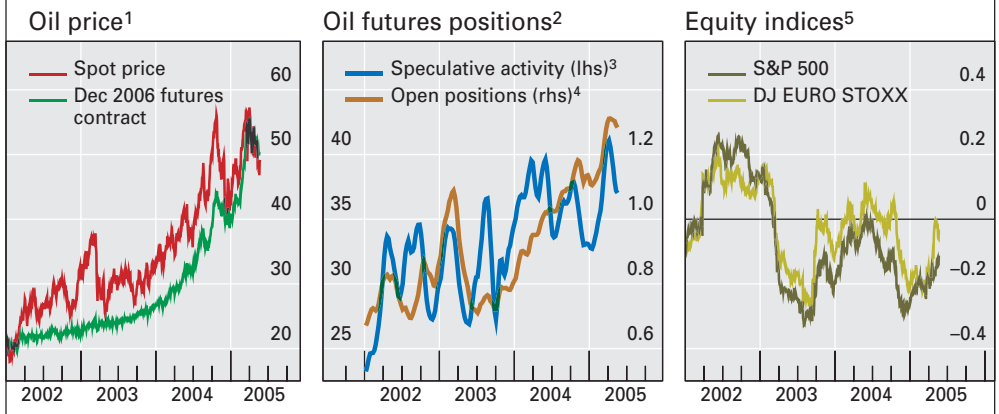
... marked by a burst of speculative activity ...

Speculative activity was often cited as a factor contributing to the most dramatic rise in oil prices in a decade. Data compiled by the US futures market regulator, the Commodity Futures Trading Commission, indicate that open positions – contracts entered into but not yet offset by a reversing trade or delivery – grew by more than 60% from late 2003 to end-March 2005. Moreover, non-commercial traders' share of long positions, though volatile, was significantly greater in 2004 (and the early part of 2005) than in both 2003 and 2002, consistent with the view that these traders substantially increased their activity in oil futures markets as oil prices rose (Graph VI.10). Even so, it is difficult to estimate the extent to which speculative activity in itself contributed to volatility in the market.

... weighed on equity markets

Sharply rising oil prices clearly weighed on equity valuations in developed markets. The six-month rolling correlations of daily changes in oil prices and

Oil prices and equity indices



[1] West Texas Intermediate, in US dollars per barrel. [2] Crude oil futures traded on the New York Mercantile Exchange; four-week moving averages. [3] Long positions of non-commercial traders as a percentage of total reportable long positions. [4] In millions of contracts. [5] Six-month rolling correlation of daily changes in equity indices with daily changes in the West Texas Intermediate price.

Sources: Bloomberg; CBOE; New York Mercantile Exchange; national data; BIS calculations. Graph VI.10

major equity indices in both the United States and Europe, which had turned sharply negative in early 2003 during the run-up in oil prices ahead of the Iraq war, turned significantly negative again in the second half of 2004 and into 2005, as oil prices and speculative activity rose. For the most part, market participants focused on the impact of higher oil prices on profit growth rather than on inflation per se. They apparently believed that, unlike the oil price shocks of the 1970s, the latest run-up in oil prices would not lead to an acceleration of inflation (see also Chapters II and IV).

Support from declining volatility and robust risk appetite

Declining risk premia reflected low volatilities and robust risk appetite ...

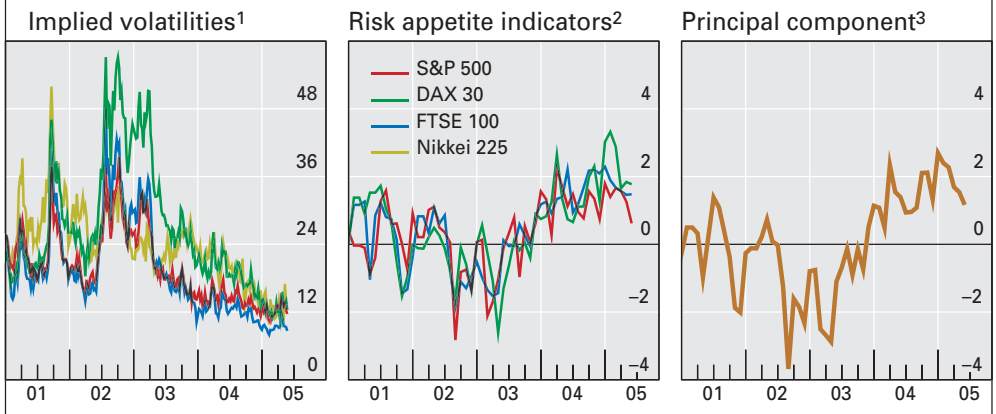
Declining risk premia, which encompass both the perception of risk and the appetite for risk, were a likely source of support for stock markets in the second half of 2004 and early 2005. Historical (and implied) volatilities on major equity market indices had fallen by early 2005 to their lowest levels in nearly 10 years. In addition, an estimate of risk appetite, derived both for different markets and globally from the pricing of equity index options and historical volatilities, edged up further during most of the period under review and remained well above its long-term average in early 2005 (Graph VI.11).

Swings in risk appetite in equity markets over the period appear to have been related, at least in part, to expectations regarding the Federal Reserve's willingness and ability to maintain a measured pace of rate rises. For instance, risk appetite dropped in January 2005 following the release of the minutes of the Federal Reserve meeting in December. The minutes led market participants to anticipate a faster pace of monetary policy tightening in the United States, though risk appetite recovered shortly thereafter.

... though risk appetite fell back in spring 2005

The degree to which risk appetite influenced equity markets perhaps became clearest during the spring of 2005. It was then that developed country markets suffered significant losses despite earnings announcements which generally exceeded expectations. The combination of unprecedented difficulties

Volatility and risk appetite in equity markets



[1] Price volatility implied by the price of at-the-money call option contracts on stock market indices; weekly averages. [2] Derived from the differences between two distributions of returns, one implied by option prices, the other based on actual returns estimated from historical data. [3] First principal component of the three risk appetite indicators.

Sources: Bloomberg; Chicago Mercantile Exchange; Eurex; London International Financial Futures and Options Exchange; BIS calculations. Graph VI.11

for major US automobile manufacturers, renewed corporate governance worries related to the insurance industry, and relatively weak macroeconomic data raised broader questions concerning the sustainability of earnings. While measures of historical volatility moved higher, implied volatility rose even further, and risk appetite dropped sharply in the United States, to levels last observed in February 2004.

The decline in equity markets in March and April, coupled with the continued strong growth of earnings, brought valuations closer to their historical average. In early 2004 valuations had looked somewhat stretched. However, by mid-May 2005 the price/earnings ratio, based on one-year forward earnings, had declined to 16 for the S&P 500 Index – not far above its 1985–95 average of 13 – and to 14 for the DJ EURO STOXX index (Graph VI.9). Forward earnings have in the past tended to be overly optimistic, and expectations for earnings growth in excess of 10% in 2005–06 – well above nominal GDP growth – could yet disappoint.

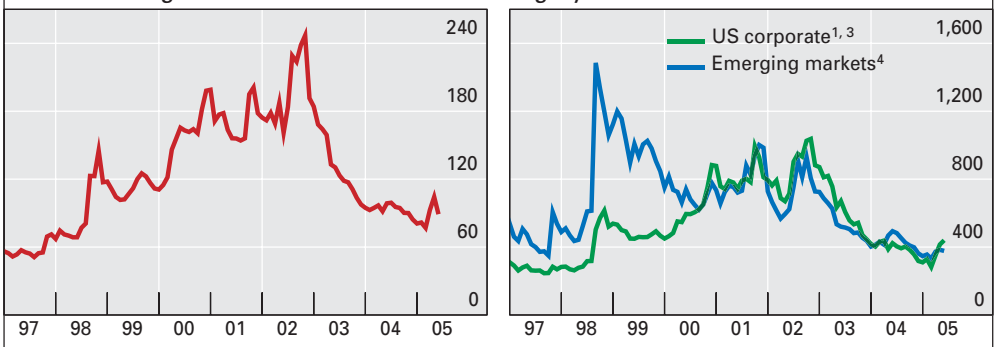
Loss of momentum in credit markets

Spreads fell close to historical lows in early 2005

The rally in credit markets that had begun in late 2002 continued in 2004 before reversing in March and April 2005. For much of the period under review, credit investors exhibited more confidence in the near-term outlook than equity investors. Spreads on all types of debt – corporate and sovereign, investment grade and high-yield, unsecured and asset-backed – tightened during the second half of 2004 and into the beginning of 2005 (Graph VI.12). By February 2005 corporate spreads had fallen close to their historical lows and emerging market spreads had dipped below theirs. Credit markets subsequently sold off as investors turned more risk-averse. In mid-May 2005, spreads on A-rated corporate bonds denominated in US dollars stood at 78 basis points, 14 basis

Credit spreads

Month-end, in basis points



[1] Option-adjusted spreads between corporate and US government bond yields. [2] Lehman Brothers US investment grade corporate bond index. [3] Merrill Lynch High Yield Master II corporate bond index. [4] Stripped spreads between emerging market sovereign and US government bond yields; JPMorgan Chase EMBI Global.

Sources: JPMorgan Chase; Lehman Brothers; Merrill Lynch. Graph VI.12

points above their February 2005 level, largely unchanged from their level a year earlier, and 33 basis points above their October 1997 low. In mid-May 2005, spreads on emerging market debt traded at 383 basis points, 38 basis points above their February 2005 level but well below their level of a year earlier and even their October 1997 low.

Credit quality: signs of peaking?

Significant improvements in credit quality ...

Credit investors' confidence was underpinned by a significant improvement in credit quality in 2004. In the major economies, the incidence of corporate defaults and credit rating downgrades – which in 2001 had been near historical highs – fell to levels last seen in 1997, at the peak of the previous credit cycle (Graph VI.13). Downgrades accounted for 54% of US corporate rating changes by Moody's in 2004, down from 83% in 2002 and similar to levels in 1998. In addition, the burden of interest payments on cash flows – a commonly referenced short-term predictor of corporate distress – declined to its lowest level for many years.

In emerging markets too, economic and financial conditions were stronger than they had been for years. While high commodity prices supported some countries, improvements in external positions, financial systems and fiscal and monetary policies made many emerging markets more resilient to shocks (see Chapter III). In 2004, sovereign rating upgrades outnumbered downgrades by a ratio of almost 5:1.

... but difficulties in some sectors, especially autos

The general improvement in credit quality notwithstanding, some borrowers experienced difficulties. The troubles of US automobile manufacturers stand out, especially those of General Motors, one of the largest issuers in the US corporate bond market. A series of weak earnings reports and negative rating announcements, including a downgrade to below investment grade, caused General Motors' credit default swap (CDS) spreads to soar from approximately 200 basis points in mid-2004 to 280 basis points by year-end and over 900 basis

points in April 2005. Other sectors in difficulty included insurance and pharmaceuticals, both of which faced increased scrutiny from US authorities following revelations of improper sales practices (on the insurance sector, see Chapter VII). Among sovereign borrowers, fiscal problems led rating agencies to downgrade the Philippines, while political uncertainty adversely affected Ukraine and Ecuador, among others.

Increase in US firms' financing needs ...

For most of the period under review, such difficulties were regarded by investors as idiosyncratic events, not symptomatic of broader credit problems. However, starting in late 2004 developments increasingly suggested that corporate credit quality might be peaking. In the United States in particular, firms stepped up their borrowing (Graph VI.14). For 2004 as a whole, outstanding bank debt and commercial paper increased for the first time since 2000. In addition, US corporations' accumulation of cash and other liquid assets slowed in late 2004 from the exceptionally fast pace recorded in 2003 and the first half of 2004.

... driven by capital spending and acquisitions ...

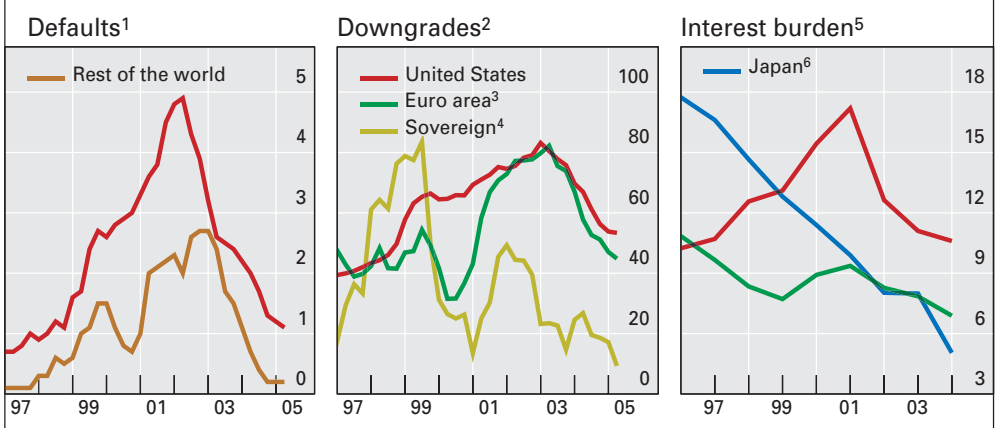
The apparent rise in US corporations' financing needs was driven in large part by an expansion of capital spending and acquisitions (and so was not necessarily detrimental to credit quality). Business investment in the United States picked up sharply in 2004 following three years of little change (see Chapter II). Mergers and acquisitions rebounded from their cyclical lows. Many of the deals were financed with equity or surplus cash, but a significant proportion relied on debt. The increase in capital spending and acquisitions coincided with a slowdown in profit growth, thereby limiting firms' ability to draw on internally generated funds.

... as well as shareholder-friendly actions

The financing needs of US corporations were further boosted by efforts to improve returns to shareholders. Many firms raised their dividend. Among S&P 500 companies, dividends per share rose by 12% in 2004, compared to an

Corporate credit quality

Four-quarter totals

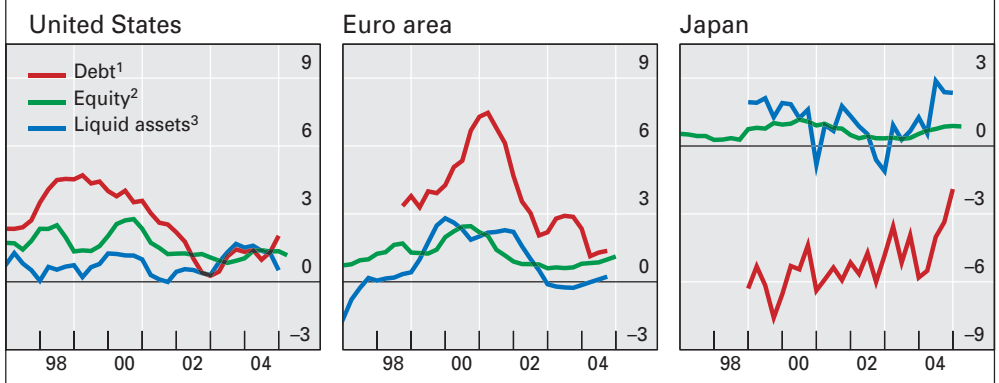


[1] Defaulting companies as a percentage of total rated companies. [2] As a percentage of total rating changes. [3] For interest burden, weighted average of France, Germany and Italy, based on 2000 GDP and PPP exchange rates. [4] Including advanced industrial economies. [5] Net interest payments by private non-financial corporations as a percentage of cash flow from operations. [6] For 2004, based on partial data.

Sources: Bloomberg; Moody's; national data; BIS calculations. Graph VI.13

Corporate financing

Net flows as a percentage of GDP; four-quarter totals



[1] Loans and securities other than shares, net of repayments; for the United States, credit market instruments. [2] Gross issuance; initial public plus follow-on offerings. [3] Currency, bank deposits and securities other than shares.

Sources: ECB; Bloomberg; Datastream; Dealogic; national data; BIS calculations. Graph VI.14

average annual increase of 3% over the previous decade. Some firms also began to releverage their balance sheets. Stock buybacks in 2004 topped their previous high, set in 2000. While the primary motivation for such buybacks was to offset employee stock options exercised during the year, a number of companies opted to operate with higher debt/equity ratios. Indeed, stock buybacks and dividend payouts were one of the main drivers of issuance in the corporate bond market in 2004, and leveraged or management buyouts accounted for a sizeable proportion of activity in the high-yield bond and syndicated loan markets.

In Europe, the need to continue to shore up balance sheets was more in evidence. To be sure, as in the United States, many large listed companies raised their dividends and announced plans to buy back their shares. Leveraged buyouts also increased, with private equity firms becoming more active in many European countries. However, in contrast to the United States, borrowing by the corporate sector slowed further in 2004, to its lowest level for years. Still weak capital spending coupled with double digit profit growth limited firms' need for external financing. In addition, changes in banks' lending practices may have prompted those firms which have historically relied on banks for funding – mainly unlisted small and medium-sized enterprises – to reduce their leverage. Finally, some firms turned to equity markets to raise new capital. While there were relatively few initial public offerings in 2004, listed companies raised record amounts through follow-on offerings, especially banks and telecoms companies.

Japanese companies continued their decade-long effort to strengthen their balance sheets. In 2004, earnings grew at their fastest pace for years. Rather than use higher cash flows solely to accelerate repayments, however, firms elected to increase their capital spending and build up their cash reserves. The pace of debt reduction thus slowed sharply in 2004, although repayments exceeded new borrowing for the ninth consecutive year.

Japanese firms reduced their debt for the ninth consecutive year

Shifts in risk aversion

With credit quality appearing stronger than it had for years, sovereign and corporate spreads were further influenced by investors' willingness to discount risks. Continuing a trend that had began in 2003, for much of the period under review investors drove up the prices of risky or illiquid assets in their search for higher yields. However, in March 2005 event risk re-entered the investor's vocabulary. Following a profit warning by General Motors, credit markets in March and April gave up all of the gains made over the previous 12 months (Graph VI.15).

Risk aversion fell to new lows in late 2004

A comparison of changes in default probabilities and credit spreads shows how the risk premium demanded by investors has shifted over time. Default probabilities derived from credit spreads are conceptually equivalent to those derived from underlying balance sheet information multiplied by some parameter for risk aversion. An estimate of this parameter is plotted in the left-hand panel of Graph VI.16. Risk aversion in CDS markets appeared to peak in mid-2002, following the collapse of WorldCom. It declined sharply in late 2002 and throughout 2003 before rising temporarily in the first quarter of 2004, during the global sell-off in bond markets. In CDS markets, the estimated rise in risk aversion in early 2004 was exaggerated by the unwinding of leveraged trades. Risk aversion then fell to new lows in late 2004 but rebounded in March and April 2005.

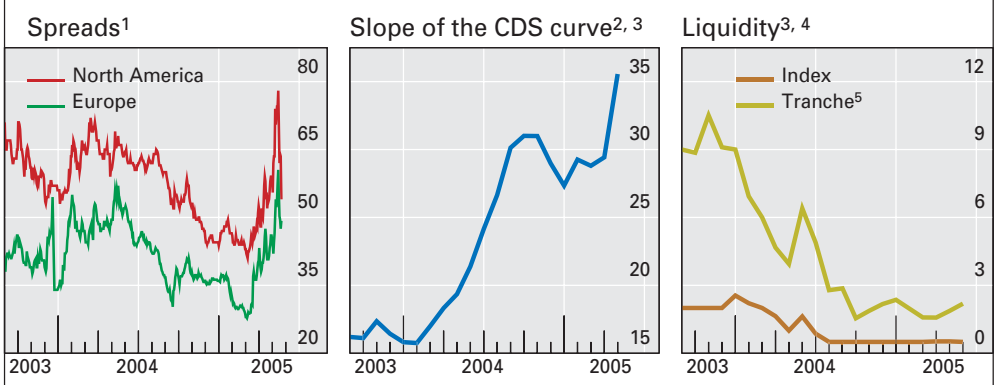
Measures of discrimination in corporate bond markets yield a similar result. The narrowing of the distribution of credit spreads for issuers in a given rating class suggests that in early 2005 investors did not distinguish between issuers as clearly as they had previously (Graph VI.16, right-hand panel). Even after the sell-off in credit markets, A-rated spreads clustered together more closely than they had on average since 1997. The same was true for other rating categories.

Strong demand for assets offering a pickup in yield

Strong demand for assets offering a pickup in yield provides further, albeit rather indirect, evidence of investors' willingness to assume risk. Structured products, such as collateralised debt obligations (CDOs), were especially

Credit default swap market

In basis points

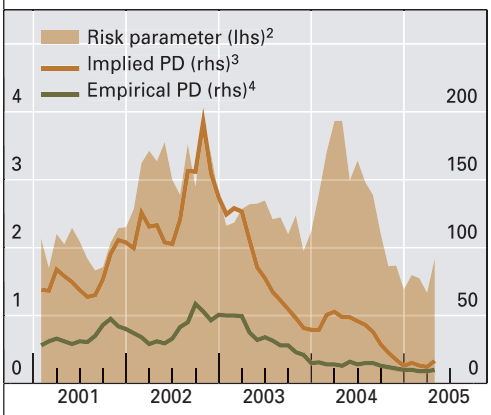


[1] On-the-run five-year investment grade CDS indices; daily data. [2] Five-year minus one-year CDS spreads averaged across the 125 constituents of the DJ CDX.NA.IG.3 index. [3] Monthly average. [4] Bid-offer spread for on-the-run five-year iTraxx Europe indices. [5] 12–22% tranche.

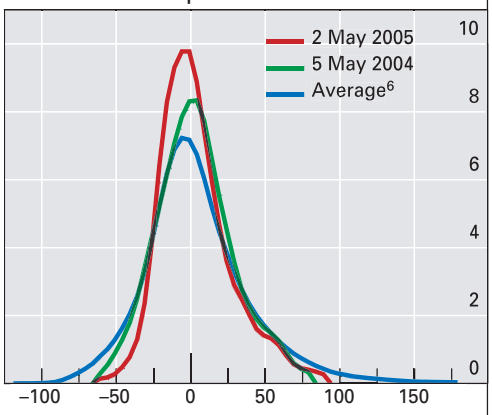
Sources: Bloomberg; JPMorgan Chase; Mark-it; BIS calculations. Graph VI.15

Risk aversion in credit markets

Parameter of risk aversion[1]



Distribution of spreads[5]



[1] Based on the 125 constituents of the DJ CDX.NA.IG.3 CDS index; monthly averages. [2] Ratio of implied (ie risk neutral) probabilities of default (PD) to empirical (ie physical) PD. [3] PD implied by one-year CDS spreads, assuming a constant recovery rate of 40%. [4] One-year PD estimated by Moody's KMV, based on balance sheet information and asset price volatility. [5] Based on the constituents of the Merrill Lynch A-rated US corporate bond index; the horizontal axis represents the difference from the median spread; fitted using a normal-based kernel density function. [6] January 1997–May 2005.

Sources: Mark-it; Merrill Lynch; Moody's KMV; BIS calculations. Graph VI.16

popular (see below). The senior tranches of structured products are usually highly rated, often AAA, yet because of their complexity, illiquidity and risk-return characteristics they yield substantially more than comparably rated corporate bonds. Attracted by the steepness of the credit curve, investors also shifted into long-dated instruments. The term premium between five- and one-year CDS spreads declined in late 2004 before rebounding in April 2005, during the sell-off in credit markets (Graph VI.15).

Taking advantage of investors' receptiveness to innovative, higher-yielding structures, emerging market borrowers stepped up their issuance of local currency bonds. In August 2004, Uruguay became only the second sovereign rated below investment grade to issue a global bond denominated in its own currency (Argentina was the first, in 1997), and in November Colombia became the third. Brazilian firms soon followed with real-denominated global bonds. Such structures also help emerging market borrowers reduce their vulnerability to currency mismatches (see Chapter III).

Low risk aversion was supported by strong growth ...

One important reason for the decrease in the premium demanded by investors for bearing risk is the perceived strength of underlying economic conditions. Over long horizons, risk appetite tends to be procyclical, rising when fundamentals are seen to improve and falling when they deteriorate. For example, robust global growth supported the decline in risk aversion in 2004, while downward revisions to global growth forecasts probably amplified the sell-off in credit markets in March and April 2005.

... changes in the composition of market participants ...

Changes in the composition of market participants represent another possible proximate factor behind the decline in effective risk aversion. The growth of the CDO market and the consequent demand from CDO managers for riskier debt – the "structured credit bid" – may have changed the collective

risk preference of participants active in credit markets (see below). The growing presence of hedge funds in credit derivatives and structured finance markets may have had a similar impact (see Chapter VII).

... and low policy rates

Last but not least, the low level of policy rates in the major markets appears to have had an influence on investors' disposition towards risk. To the extent that low policy rates have cut the cost and increased the availability of financing, they may have reduced carrying costs and boosted collateral valuations. This in turn can lead to greater risk-taking. The influence of low policy rates also operates by interacting with other determinants of risk aversion, for example by facilitating leveraged trades. Furthermore, in the presence of psychological biases and institutional constraints, low interest rates may simply trigger a search for yield. As discussed in the *74th Annual Report*, many investors seem hesitant or even unable to adjust their nominal target rates of return in response to fundamental changes in market conditions. Faced with historically low nominal yields on highly rated government securities, investors may in recent years have taken on additional credit risk in an effort to sustain the nominal returns that they were able to achieve when interest rates were higher.

Credit spreads, event risk and policy rates

A further repricing of risk could be precipitated by event risk ...

To the extent that investors may have underpriced risk, credit markets could still be vulnerable to a more severe repricing than occurred between March and May 2005. One possible trigger could be event risk. As indicated by the events of March 2005, difficulties in a particular sector or even for a particular borrower can have market-wide consequences. The sell-off in credit markets that followed General Motors' profit warning evoked memories of 2002, when investors' experience with WorldCom made them wary of holding debt susceptible to being downgraded and sensitised them to the prevalence of corporate governance irregularities. Nevertheless, credit markets adjusted smoothly in early May to the eventual downgrade to below investment grade of Ford and General Motors, even though the amount of debt owed by the two car makers was far larger than that owed by WorldCom.

... or higher policy rates

Another possible trigger might be an unexpected increase in policy rates. Rate hikes to date have been widely anticipated. Consequently, any repositioning by investors has been accommodated with little disruption in credit markets. A larger than anticipated rise in policy rates might have less benign consequences. For example, it might result in sizeable declines in collateral valuations, which in turn could lead investors to retrench towards less risky assets. The unwinding of leveraged positions might exacerbate the sell-off in those markets in which hedge funds and other leveraged investors are active, such as the market for emerging market debt.

The consequences of such a repricing are hard to assess. They would in part depend on the underlying strength of the economy. In the absence of a significant and unexpected deterioration in fundamentals, underlying conditions might help to anchor expectations and so mitigate the impact of event risk. Similarly, the impact of higher policy rates on risk aversion and credit quality might be offset by robust economic growth. This is arguably less true for emerging market borrowers, who are unlikely to benefit as much as US

companies from the growth of the US economy. It would also depend on market factors that affect the amount and distribution of risk in the system. Uncertainties in this regard have been increased by fundamental structural changes in credit markets in recent years.

Structural changes in credit markets

Significant changes in credit markets include ...

Amongst the most significant developments in finance in recent years has been the emergence of new securities for transferring credit risk. Investors now have many new outlets for expressing credit views. Moreover, financial institutions, traditionally the primary holders of credit risk, are now able to hedge and manage risk in a more efficient manner. This has been facilitated, in particular, by the development of CDS-based products and CDOs.

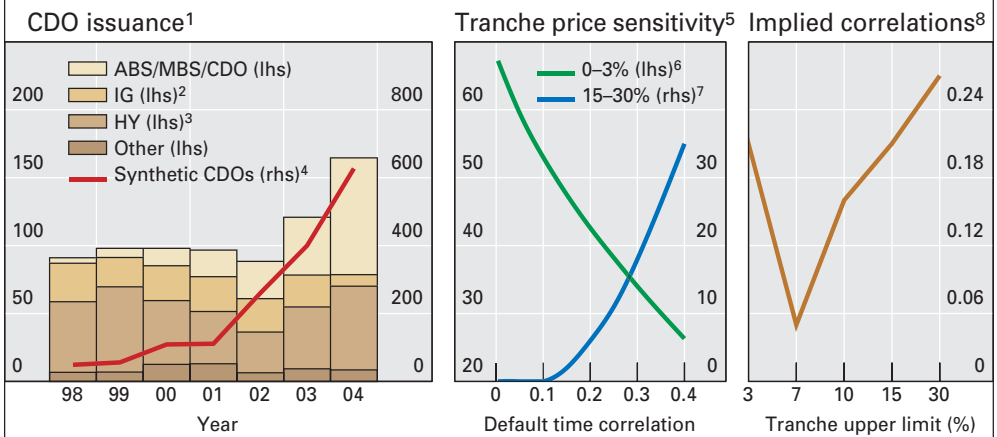
... the emergence of standardised CDS-based securities ...

Exponential growth in the CDS market has been a key element of the transformation in credit, giving investors an accessible outlet for taking on exposure to or hedging the default risk on individual obligors. The notional amount outstanding on CDS contracts globally reached $4.5 trillion at end-June 2004, up sixfold from end-June 2001. The main step forward in the CDS market during the period under review was the establishment of benchmark indices for single-name CDS spreads. Contracts linked to these indices are now widely traded, something that has not yet been achieved with traditional corporate bond indices. In addition, the indices serve as the basis for standardised derivatives, notably CDS index tranches (a type of synthetic CDO) and credit default swaptions.

... and new types of CDOs

The broader CDO market has also developed in new directions, allowing investors to customise their portfolios in increasingly sophisticated ways.

CDOs and default correlation



[1] Categories refer to primary collateral composition of cash CDOs (except for synthetic CDOs); in billions of US dollars. [2] Investment grade. [3] High-yield loans and bonds. [4] Total notional volume of synthetics (ie CDS protection sold to support issuance). [5] Based on the correlation sensitivities for CDX.NA.IG tranches reported in Hull and White, "Valuation of a CDO and an *n*th to default CDS without Monte Carlo simulation", *Journal of Derivatives*, December 2004, pp 8–23. [6] Upfront payment; in per cent. [7] Spread; in basis points. [8] Inferred from the correlation sensitivities reported in Hull and White (2004) and market quotes for on-the-run five-year CDX.NA.IG tranche spreads; averages over the period 13 November 2003–28 September 2004.

Sources: Bloomberg; JPMorgan Chase; BIS calculations. Graph VI.17

Although precise figures are difficult to obtain, one estimate puts issuance in the cash CDO market during 2004 at roughly $165 billion; synthetic issuance was estimated to be even larger, at $673 billion (Graph VI.17). Much of the activity last year was driven by the search for yield, and was concentrated on tailor-made CDO tranches, structures with collateral pools consisting of high-yield loans and structured finance securities, and more highly leveraged products such as CDOs of CDOs ("CDO-squared").

Even though these new credit markets are still relatively small in size, recent innovations have arguably transformed the trading and management of credit risk on a permanent basis.

Economic benefits of credit market innovations

Benefits of recent innovations:

Innovations in credit derivatives and structured credit have brought many benefits to the financial system. These include: improved opportunities for diversification and position-taking in specific types of credit risk, notably credit correlations; expansion of the investor base across the credit landscape and the associated integration of markets; and increased depth of trading ("market liquidity") in credit markets. Each of these is considered in turn below.

better diversification opportunities ...

First, markets are becoming more complete, giving investors greater diversification opportunities. Market participants can now take on long or short credit exposures more easily through single-name or index swaps in the major economies and even in some smaller regions, across sectors and across the spectrum of credit quality. Leveraged credit instruments such as CDOs allow investors to assume exposures to different segments of a default loss distribution through the purchase of tranches referencing a pool of securities. Moreover, the range of collateral in CDOs has expanded significantly during the past two years. The emergence of structured credit instruments means that different tiers of a portfolio capital structure are now actively marketed.

In particular, CDO tranches offer a more direct means of managing credit risk correlations. By trading securities that are highly sensitive to correlations, investors can more easily alter their exposure to systematic default and recovery risk. The high degree of liquidity of CDS index tranches, in part stemming from their standardised format, means that these risks are now traded more efficiently. To show how investors can gain exposure to correlation, Graph VI.17 illustrates how the shape of the portfolio loss distribution and the value of different tranches can change with respect to default correlation. In general, higher default correlation tends to decrease the riskiness (increase the value) of a first-loss ("equity") tranche, whereas highly rated ("super-senior") tranches become more risky. Thus, investors can manage correlation risk by taking long or short positions in different tranches.

... greater market integration ...

Second, credit markets are becoming more integrated, both in terms of the investor base and with other asset classes. A broader array of investors are implicitly taking on exposures across the credit spectrum through structured credit products. Activity by hedge funds, which face few portfolio allocation constraints, has risen substantially. Moreover, alongside banks, insurance companies and hedge funds, other asset managers are increasingly seeking mandates to invest in CDS-based products and CDOs. Investors have also

started to employ more comprehensive strategies that bridge interest rate, credit and equity markets, and many trading desks have been reorganised to reflect this greater integration.

... and increased liquidity ...

Third, these new instruments have increased liquidity in credit markets, including through the emergence of genuine two-way markets. Volumes have grown considerably and bid-offer spreads on CDS indices and index tranches have narrowed to very low levels. They are now under 1 basis point on the broad European investment grade index, and roughly 4 and 2 basis points on the junior mezzanine (3–6%) and super-senior (12–22%) tranches, respectively (Graph VI.15, right-hand panel). By contrast, the corporate bond market remains relatively illiquid, and supply has been particularly scarce during the past few years as a result of corporate deleveraging.

... leading to lower risk in the long run

Taken together, these beneficial effects on the credit market should lead to a general reduction in financial risk in the long run, and in particular to lower average credit spreads. Better diversification of portfolios should reduce single-name risk premia, and the increased depth and breadth of the market should lower liquidity premia. To be sure, the extent to which these effects have contributed to the recent low level of credit spreads is an open question. Even so, there is some evidence to suggest that the so-called structured credit bid, coming from the high demand for collateral by CDO arrangers, has indeed lowered spreads.

Despite the many recent innovations, there remains ample room for further development of the markets. For instance, a futures market in credit remains elusive and trading in credit default swaptions – options to enter a CDS contract – has been relatively thin. The introduction of market fixings on CDS index swaps in March 2005 should help foster growth in these and other CDS-based derivatives markets.

Key areas of uncertainty

Despite progress, uncertainties remain, as ...

Along with the many benefits deriving from recent innovations come potential risks, particularly given the early stage of market development. Two areas of concern stand out: product complexity and market functioning under stress.

... structured products are highly complex and may contain hidden risks ...

First, structured credit products are very complex securities and the risks involved might not be fully appreciated by all market participants. The covenants of many CDO contracts can be difficult to comprehend and deal complexity has posed many modelling challenges. Although efforts have been made to develop more realistic pricing models and risk management systems, many market participants are still building up their analytical capacity. One consequence is that rating agencies have played a key role in the development of the market. However, there is relatively little experience with the performance of ratings on CDOs, and rules of thumb employed by investors in using ratings on corporate bonds may be misleading when applied to highly leveraged structured instruments. Even at a more basic level, progress still needs to be made in understanding the nature of portfolio loss distributions, the risk profile of CDO tranches and their sensitivity to credit risk correlations. For instance, the "correlation smile" observed in the prices of CDS index tranches (Graph VI.17) suggests that standard portfolio risk models may be inadequate. These models

assume that the links between all entities in the index are captured by a single correlation parameter, but in fact the spreads on different tranches imply different estimates of the correlation.

... and the robustness of these new markets has not been fully tested

Second, it remains to be seen how the CDS and CDO markets would handle a string of credit blow-ups or a sharp turn in the credit cycle. The strong credit conditions that have fostered the development of these markets may not continue into the future. One concern is the impact of highly leveraged positions on the balance sheets of financial institutions when markets turn. Another is the nature of the systemic role played by highly leveraged institutions such as hedge funds in affecting market liquidity; two-way markets could conceivably disappear as protection sellers exit at precisely those times when default insurance is needed most. In this regard, despite some indications of turmoil, the CDS and index tranche markets appeared to adjust in a mostly orderly fashion in response to recent events surrounding General Motors and Ford. Granted, the rating downgrades of these firms had been anticipated in credit markets for some time. Thus the events of spring 2005 might not be a true reflection of how these markets would function under stress.

VII. The financial sector

Highlights

Against a favourable general economic background, financial companies across the industrialised world registered another year of stronger overall performance. Banking and insurance sector balance sheets strengthened on the back of continuing profitability, access to cheap funding and lower credit losses. A number of structural improvements also contributed to a better outlook in jurisdictions that had experienced strains.

While the financial sector generally proved resilient to the slowdown that followed the bursting of the technology bubble, the legacy of the late 1990s had a lingering influence on the condition and behaviour of financial firms. On the one hand, with the memory of outsize rates of return partly shaping expectations, investors' search for yield drove an aggressive pricing of risk. On the other hand, intensified official scrutiny of business practices confronted a number of firms with the consequences of their earlier actions, often dating back to the boom years.

The main challenges ahead remain macroeconomic in nature. Healthy capital positions provide comfort that financial systems are well cushioned against immediate risks to their profits. However, longer-term challenges could come in the form of higher interest rates, posing risks to profitable strategies that exploit low funding costs and are premised on strong consumption growth. Increased exposure to real estate could also become a potential source of strains further down the road, especially if a price correction were to be associated with a general slowdown in household spending.

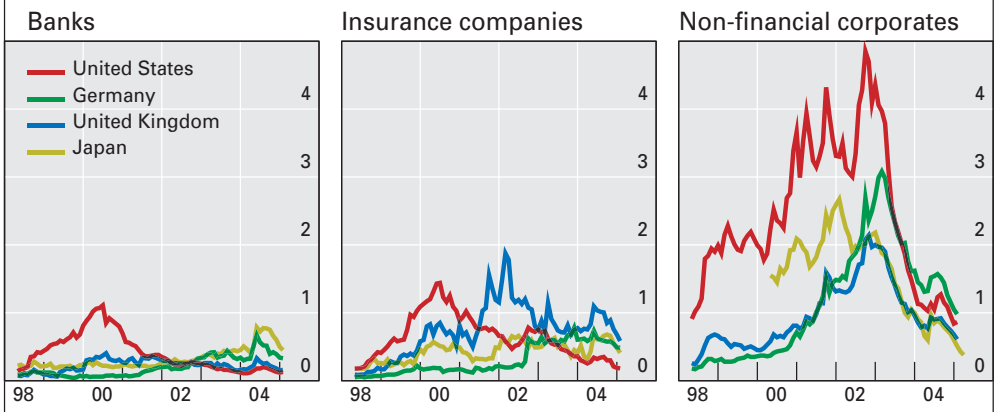
These general economic trends highlight the relevance of a macroprudential approach to financial stability. Arguably, as firms' ability to manage risk at the micro level improves and as low and stable inflation expectations become more firmly established, the main risks to the financial sector could stem from financial excesses linked to a generalised complacency towards risk reinforced by a benign short-term outlook. The identification of such risks and the calibration of prudential responses to them are central to current efforts by policymakers responsible for financial stability.

Performance of the financial sector

Continuing strength in the financial sector

The performance of the financial sector has been a bright spot in the economic landscape over the past several years. In most countries, positive results posted by financial firms, especially banks, provided an unexpected counterpoint to the general economic slowdown, the surge in corporate

Market-based measures of default risk[1]



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

Source: KMV. Graph VII.1

defaults and the decline in equity prices early in the current decade (Graph VII.1). Current profitability levels are less surprising against the background of an improved macroeconomic outlook and abundant liquidity. A resilient financial sector remains a key source of strength at the current juncture.

Profits improved for US and European banks due to ...

Commercial banking

The period under review saw a continuation of recent positive trends in the performance of commercial banks in North America and Europe. Profitability

Profitability of major banks[1]

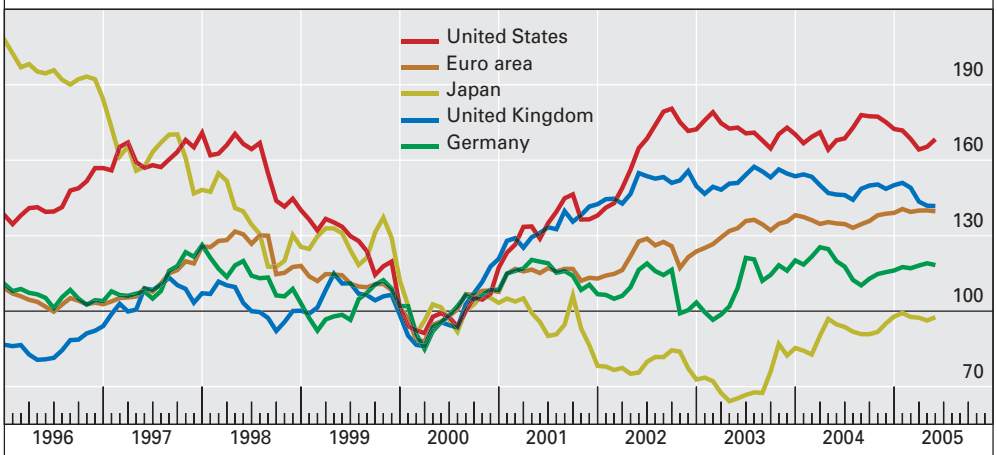
As a percentage of total average assets

	Pre-tax profits			Provisioning expenses			Net interest margin			Operating costs		
	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
United States[2] (12)	1.89	2.10	1.99	0.84	0.47	0.36	3.45	3.21	3.12	3.28	3.16	3.48
Canada (5)	0.61	1.00	1.19	0.58	0.23	0.06	2.07	1.99	1.92	2.75	2.78	2.77
Japan (11)	–0.55	–0.47	0.29	1.14	0.75	0.56	1.13	1.21	1.11	1.20	1.35	1.12
Australia (4)	1.49	1.49	1.46	0.26	0.21	0.17	2.16	2.13	2.05	2.04	2.30	2.55
United Kingdom[3] (9)	1.06	1.22	1.15	0.37	0.33	0.23	2.15	1.96	1.56	2.26	2.04	2.07
Switzerland[4] (5)	0.12	0.59	0.68	0.15	0.03	–0.01	1.02	0.97	0.82	2.55	1.96	1.65
Sweden (4)	0.69	0.77	0.98	0.09	0.10	0.03	1.48	1.44	1.35	1.44	1.37	1.24
Austria (2)	0.46	0.53	0.69	0.39	0.36	0.31	1.80	1.71	1.80	1.92	1.85	1.84
Germany[5] (9)	–0.01	–0.12	0.09	0.48	0.30	0.15	0.80	0.81	0.71	1.37	1.26	1.35
France[6] (7)	0.45	0.59	0.67	0.15	0.17	0.08	0.62	0.80	0.72	1.49	1.50	1.41
Italy (6)	0.67	1.03	1.03	0.91	0.68	0.49	3.07	2.82	2.24	3.33	3.22	2.73
Netherlands (3)	0.46	0.65	0.72	0.26	0.20	0.10	1.62	1.62	1.53	1.98	1.85	1.82
Spain (5)	1.01	1.29	1.17	0.50	0.44	0.35	2.73	2.45	2.17	2.36	2.13	1.79

[1] The figures in parentheses indicate the number of banks included. [2] 2004 figures relate to 11 banks only. [3] 2004 figures relate to seven banks only. [4] 2004 figures relate to three banks only. [5] 2004 figures relate to six banks only. [6] 2004 figures relate to three banks only.

Source: Fitch Ratings. Table VII.1

Relative bank equity prices[1]



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

Sources: Datastream; national data. Graph VII.2

improved, albeit at a somewhat more moderate pace (Table VII.1). Bank share prices, which had outperformed broad equity market indices in previous years, preserved their gains even as the market recovered (Graph VII.2).

... buoyant household financing ...

The buoyancy of revenues varied across business lines. Household financing continued to represent a stable source of interest and fee income for banks. By contrast, business lending remained subdued, as companies made further efforts to rebuild their balance sheets and to absorb the capital stock overhang dating back to the period of the technology bubble.

... lower costs ...

Lower costs remained an important driver of profitability. A more favourable credit environment translated into a decline in provisions, while write-offs in many countries fell to the lowest levels in recent memory. Rationalisation of cost structures, more flexible strategies and the use of technology continued to produce efficiencies. Many banks announced plans for further reductions in their workforces through outsourcing and the merging of business lines.

... and consolidation

Consolidation activity picked up, motivated by the strategic objectives of improving cost efficiencies and strengthening retail franchises. The majority of transactions involved small and medium-sized institutions seeking an increase in scale that would allow a more efficient deployment of technology and cut costs by eliminating overlaps. Scepticism has grown among industry observers about the functionality of the conglomerate model, which had sought to create cross-sectoral synergies and opportunities for cross-selling products. The managements of such firms formed in the late 1990s often found the task of blending diverse corporate cultures and overseeing a sprawling institution more challenging than they had anticipated. European banks' interest in cross-border transactions intensified. Cross-border deals took place primarily on the periphery of the euro area, involving banks in the Nordic countries, the United Kingdom and Ireland. More recently, a number of announced transactions have involved banks within the single currency area and are expected to trigger a new wave of consolidation in the area.

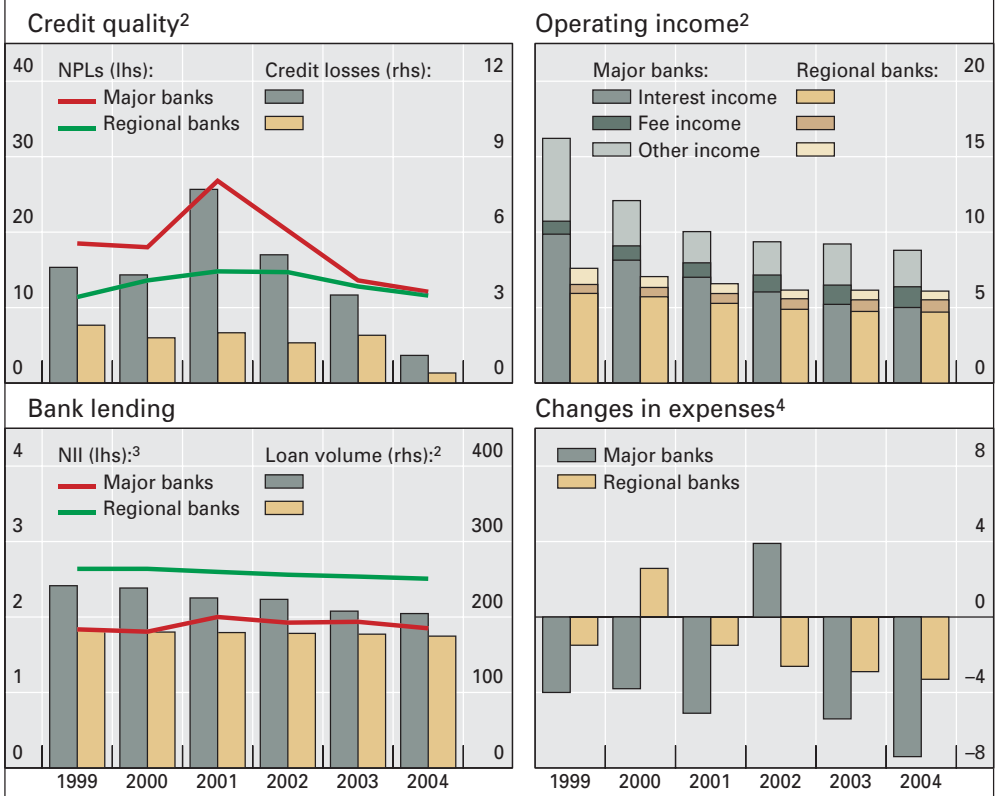
In Japan, systemic risks receded …

The Japanese banking sector made encouraging progress last year. For the first time since 1993, Japanese banks were able to post positive net income. Their efforts to remove non-performing loans (NPLs) from their balance sheets through write-offs and sales were also helped by the improved condition of corporates and the resulting upward migrations of doubtful loans. By March 2005, the ratio of NPLs to total assets for major banks had fallen to 2.9%, bettering the regulator's target of 4.2%. This, allied with stronger operating results, allowed major banks to strengthen their capital base by paying back public funds and writing back deferred tax assets, which have fallen to below 30% of Tier 1 capital compared with 55% in 2003.

… but profits have remained low …

Despite these encouraging developments, the Japanese banking sector still faces a number of important challenges. The restructuring progress has so far been uneven, with regional banks lagging behind major banks in reducing their NPL burden and strengthening their capital ratios (Graph VII.3). While this might reflect in part weaker incentives, given their relatively more stable revenues and higher margins, it has prompted the attention of regulators. More generally, the biggest challenge for the banking sector as a whole remains long-term profitability, which is low by international standards. Even major banks, so far the most aggressive in cost cutting, have made little progress in shoring up income. Since the main wave of consolidation in 2000, Japanese

The banking industry in Japan[1]



[1] Data refer to fiscal years (ending in March of the following year). The latest observation is for September 2004. [2] In trillions of yen. [3] Net interest income as a percentage of total loans. [4] In per cent.

Source: Japanese Bankers Association.

Graph VII.3

banks have managed to cut the number of branches by about 10% and the headcount by over 20%. Yet bank lending has continued to decline in the face of weak demand from the corporate sector. In addition, intensified competition among financial institutions has caused net interest margins to narrow further.

... leading to changes in business strategies

To offset the continuing weakness in traditional lines of business, major Japanese banks have started to seek new opportunities by increasing fee-based activity, retail business and lending to small firms. Recent acquisitions of leading consumer credit and securities firms by major banks are likely harbingers of a trend towards financial superconglomerates. Similarly, the desire of two of the largest banks to merge with a third was primarily motivated by its large retail customer base. However, it remains to be seen whether this trend will achieve synergies and improve operating results.

Reduced public sector support

A number of recent developments confirmed the general trend of reduced public sector influence on the corporate governance of financial institutions. Legislative and regulatory developments in Japan, Germany and the United States pointed to receding levels of government support, which had hitherto helped boost balance sheet growth of sponsored institutions and frustrated competition.

Privatisation of Japan Post

In September 2004, the Japanese government decided on a plan to phase in the privatisation of Japan Post, the banking and insurance business of the postal system, over a 10-year period starting in 2007. Japan Post is the largest financial institution in the world, with ¥400 trillion in assets, and has a dominant share of retail deposits, owing in part to its public sector status. Generous concessions, in the form of corporate tax and deposit insurance premium waivers, have allowed it to compete favourably in the credit markets, contributing to the compressed lending margins in the country. The institution plays an important role in state financing, with more than ¥160 trillion of deposits with the fiscal loan fund and holdings of about one quarter of total outstanding Japanese government bonds (more than twice the combined JGB holdings of the private banking sector). While privatisation will be an important step towards improving competitiveness in the Japanese financial system, some uncertainty remains as to how the structure of the balance sheet might be affected by the transition to private ownership.

Removal of state guarantees for German Landesbanken

Liabilities of German Landesbanken issued after July 2005 will no longer carry the credit guarantee of the government. As a result, these institutions will play their role as wholesale lenders and central clearing institutions for the country's savings banks on the basis of funding costs that better reflect their intrinsic financial strength. In anticipation of the preannounced measure, some smaller institutions have merged, and others have moved to strengthen their balance sheets. Admittedly, the withdrawal of the guarantees does not by itself alter the ownership structure of these institutions. In fact, in many cases the strengthening of their balance sheets will take the form of a capital injection by their public sector owners, and markets are likely to continue to price in implicit state support. It does, however, call into question the viability

of their business model predicated on low financing costs, as the ratings for the non-guaranteed obligations are lower than those that are still covered by the public guarantee.

Increased scrutiny of US GSEs

Government-sponsored enterprises (GSEs) in the United States attracted increased regulatory scrutiny last year. Fannie Mae had to restate profits and scale down the growth of its balance sheet as a result of an investigation into its accounting practices. In addition, there was renewed discussion regarding changes in the overall framework for GSEs aimed at increasing the level of public oversight. The proposals contemplate a new regulatory agency with the authority to liquidate a GSE, raise capital standards and approve new products. Moreover, under the new framework, GSEs would be required to adhere more closely to their statutory role in providing liquidity to the market for securitised mortgages and avoid creating distortions in the primary mortgage market through their activities. A limit on the mortgage holdings of GSEs could, if implemented, encourage the entry of other market participants.

Insurance companies

Developments in the insurance sector during the period under review were more mixed. In general, the non-life sector had a less easy year than the life sector, but both sectors demonstrated an enhanced capacity to deal with risks.

Life insurance in a healthier position

The financial strength of life insurers improved. On the premiums side, underwriting income picked up substantially. Profitability was also boosted by better investment results as equity markets recovered, by successful efforts to reduce costs and by lower guaranteed returns on new policies. Even so, a low interest rate environment implied that solvency pressures did not disappear. A longer-term challenge for life insurers is rising life expectancy. Firms increasingly sought to effectively hedge this risk by purchasing securities such as long-term bonds and longevity bonds.

Higher competitiveness in the sector has spurred consolidation. In particular, acquisitions were widespread in the US life insurance and health care sectors in 2004. In Canada, ongoing consolidation among life insurers in the last decade has resulted in the three largest companies' market share rising to more than 70%.

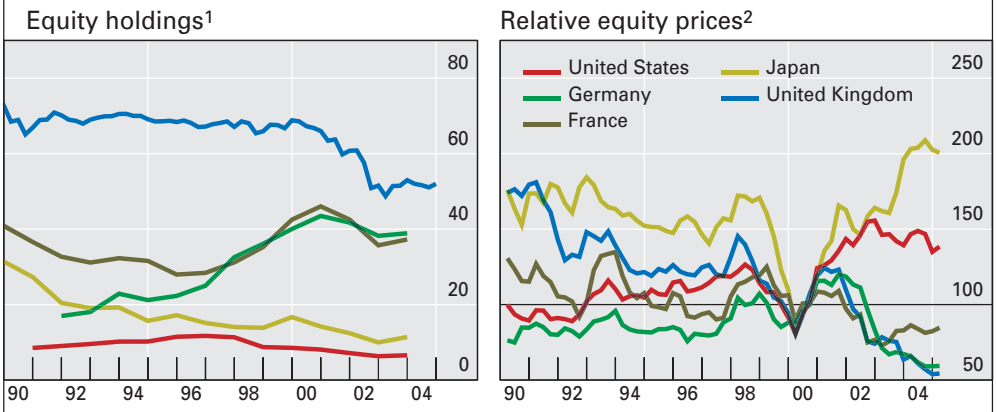
Non-life companies showed resilience

The non-life insurance sector had to deal with record claims related to a number of natural catastrophes in 2004. In particular, four Caribbean hurricanes accounted for the majority of claims to US property and casualty insurers. Yet the sector still managed to post modestly improved underwriting performance in 2004 relative to 2003, in part because cost sharing with two government funds in Florida reduced the claims burden. Moreover, the firming of premiums over the past few years provided a partial offset in the form of higher income. Similarly, the reinsurance industry in general experienced a slight deterioration in the underwriting profitability of the property and casualty reinsurance business in 2004. However, higher investment income and stronger performance in life reinsurance resulted in slightly improved profits overall.

Challenges from regulatory scrutiny ...

Recent investigations into insurance broking have called into question many established practices. As a result, a number of brokers posted losses and

Insurance companies: equity holdings and performance



[1] As a percentage of total financial assets. For Japan, including pension funds. [2] Ratio to broad equity index; quarterly averages, 2000 = 100.

Sources: Datastream; National Association of Insurance Commissioners; national data. Graph VII.4

others embarked on a revision of their business model. Likewise, investigations into insurance accounting practices have spurred a review of whether reinsurance contracts of limited risk transfer value have been inappropriately used to smooth insurers' earnings. The potential damage to the insurers' franchise value arising from these investigations is, however, likely to be limited, as evidenced by their stock prices (Graph VII.4).

... new accounting rules ...

The potential impact of changes in the accounting and regulatory framework presents some challenges to the insurance sector. Phase I of the implementation of the International Accounting Standards Board's (IASB) standards will apply fair value to insurance assets, while liabilities will continue to be recorded at historical cost. The mismatch may in certain cases increase the volatility of financial statements. Phase II will extend the use of fair value accounting to insurance liabilities. For life insurers, this implies that the recognition of embedded options and guarantees attached to long-term policies might also significantly affect the value of liabilities. The Solvency II framework to be adopted for EU insurers emphasises risk-based capital requirements. The new framework is likely to induce European insurers to hold more capital, focus more on capital-efficient business lines and purchase more reinsurance. In terms of implementation, a clear link needs to be established between financial accounting, based on the IASB standards, and regulatory accounting under the Solvency II framework, as is also the case for banking regulation.

... and a new capital framework

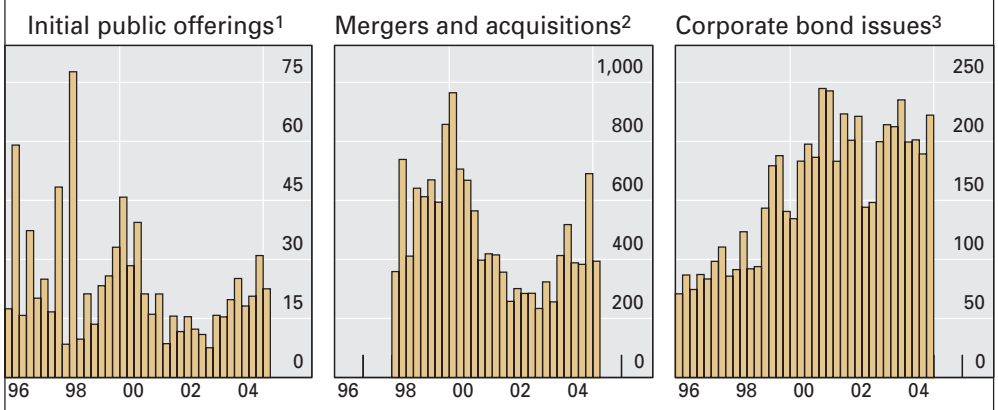
Investment banking

Record profits

Top-tier investment banks continued to turn in record profits during the period under review. Trading revenue was a strong contributor to earnings growth in the earlier part of the period. However, reduced market activity and lower price volatility in subsequent months translated into lower earnings from trading, in particular from fixed income markets. In recent quarters, a pickup in other types of capital market activity, such as securities underwriting and merger and

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] Completed international debt securities issuance, based on the business sector of the issuer's parent company.

Sources: Bloomberg; Dealogic; Euroclear; Thomson Financial Securities Data; BIS. Graph VII.5

acquisition advisory business, provided an offsetting boost to income. The rise in M&A activity, which was especially pronounced in the United States, is expected to continue as corporations seek to put their increased cash holdings to work (Graph VII.5).

Competition

An increasingly international marketplace favours players with a strong international presence offering a broad portfolio of wholesale services, ranging from funding to the provision of advice on capital structure to larger corporate customers. In response, smaller houses have renewed their efforts to solidify their presence in specific areas such as capital markets and broking services. Primary broking services to a booming hedge fund sector have been one such area of growth (see below). Market observers estimate that, given their active investment style, hedge funds have accounted for more than one eighth of capital market earnings for the major institutions that provide primary broking services.

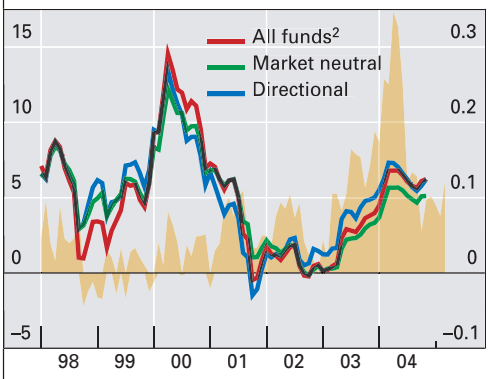
Hedge funds

Large inflows into hedge funds ...

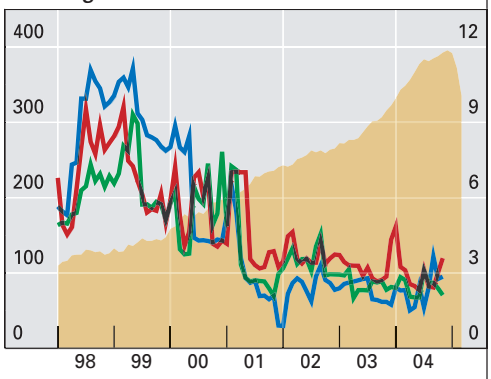
Hedge funds were well placed to benefit from the environment of high market liquidity and low yields in a number of traditional asset classes that emerged following the equity market declines of 2000. Marketing nimble investment tactics that can potentially generate positive returns even in bear market conditions, the sector attracted record inflows. High net worth individuals, pension funds and endowments increased allocations to so-called "alternative investment vehicles" in an effort to stem the decline in the value of their portfolios and enhance diversification. The resulting proliferation of hedge funds continued during much of the period under review. This growth attracted significant talent away from more established financial companies and traditional asset managers, drawn by the promise of greater independence and rich rewards for market acumen. Some traditional investment houses also saw hedge funds as an opportunity to maintain an arm's length relationship

Hedge fund size, performance and leverage

Returns[1] and inflows



Leverage measures[3] and assets



Note: The shaded areas represent hedge fund flows and stocks respectively, indicated by the left-hand scales, in billions of US dollars.

[1] Average annualised excess return across hedge funds; relative to three-month US Treasury bill yields. [2] Includes equity, market neutral and directional style families. [3] Based on the regression methodology described in P McGuire, E Remolona and K Tsatsaronis, "Time-varying exposures and leverage in hedge funds", *BIS Quarterly Review*, March 2005.

Sources: Hedge Fund Research, Inc; BIS calculations. Graph VII.6

with talented traders while simultaneously benefiting from higher returns and expanding their palette of wealth management products.

... but lower returns

While hedge funds performed better than the market in the years that immediately followed the equity market bust, they have failed to do so consistently more recently (Graph VII.6). In addition, the remarkable similarity in the performance of funds with purportedly distinct investment strategies implies that, in practice, the diversification benefits to the investor might be considerably smaller than fund managers claim. Weaker performance is in part responsible for the marked slowdown in inflows to the sector during more recent months. A side effect of the growth in assets under management has been the disappearance of exploitable investment opportunities in more traditional areas of hedge fund activity, such as equity and government bond markets. This has motivated managers to venture into new, less crowded asset classes, such as corporate bonds, credit derivatives and structured finance, contributing to their enhanced overall liquidity. Improved counterparty risk management practices have resulted in a more closely controlled exposure of prime brokers and lower leverage ratios for funds compared to the situation around the near collapse of LTCM in 1998. However, given the rapid growth in assets under management and the intensifying competition for prime broking business, the overall exposure of banks to the sector is arguably higher and the information flow less transparent.

Potential sources of vulnerability

The financial sector is resilient to short-term risks ...

The current robust condition of financial institutions augurs well for their being able to continue to support the macroeconomy going forward. The immediate risks for the global financial sector appear low, since financial institutions have

sufficient buffers to weather most risks that are likely to materialise in the near term. Moreover, restructuring efforts in many countries are likely to further strengthen domestic systems in the medium term.

... but is it also robust to longer-term challenges?

Longer-term vulnerabilities are harder to assess. The cyclical challenges are linked to the risk that the rebalancing of the world economy might entail protracted adjustments in interest rates and asset prices. Associated with weaker economic growth, increased market and credit risks could alter the currently favourable situation of financial institutions. Other challenges derive from structural pressures on bank profits. In addition, the longer-term implications of the transfer of risk to households might become more apparent in the event of a slowdown in economic expansion.

Pressure on bank profits

Greater reliance on fees ...

The banking sector has benefited from restructuring efforts and an expansion into new business lines; nevertheless, the pressure on bank profits from a more competitive environment remains. The substitution of fee income for more traditional interest margin revenue has been a general international trend (see also Chapter III). This earnings diversification has taken the form of increased net fees and dealing profits, as in the United Kingdom, greater reliance on consumer loans with higher margins, as in France and Japan, and a boom in mortgage lending in many countries. However, interest margin income has been declining in a number of countries and is likely to weaken further in an environment of higher short-term interest rates and flatter yield curves. Margins are particularly low in Germany and Japan, owing in part to sluggish demand for loans, but also because of competition from publicly owned intermediaries (see above).

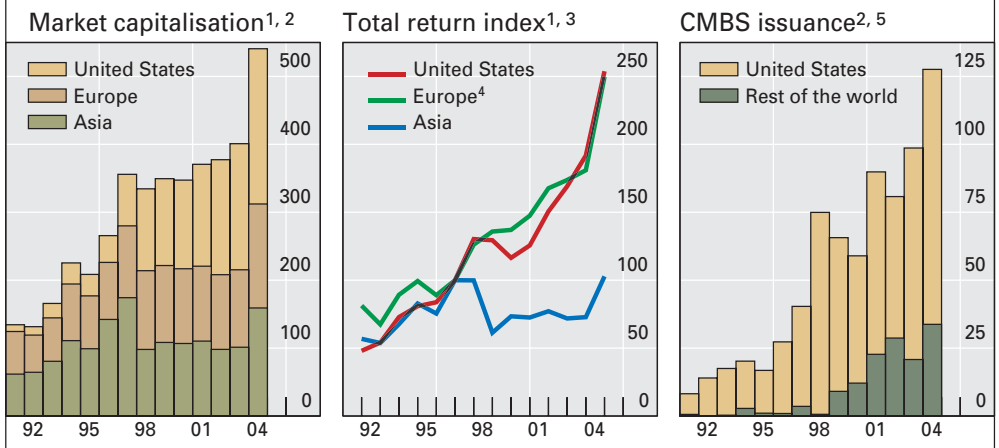
... at the cost of higher volatility?

The sustainability and properties of this emerging blend of income sources are important factors that will determine the longer-term stability of banking systems. A key aspect of this revenue mix is the greater exposure of banks to broader market risk, taking them beyond interest rate risk, with which they are more familiar. Broking fees and dealing profits have been notoriously volatile sources of income for investment banks, but these institutions have more flexible cost structures compared to commercial banks. Similarly, while the growth in consumer finance in many jurisdictions has a large structural component related to a more liberalised environment and lower inflation, it has also been partly linked to the exceptionally low levels of short-term interest rates. Moreover, a booming housing market has already shown signs of reversal in some countries (see below). It appears that success in maintaining the current level of bank profitability will be determined just as much by developments in risk management and mitigation as by the outcome of efforts to further diversify income sources.

Property markets

The resilience of the banking sector has owed much to the solid performance of real estate markets. Nevertheless, increased direct and indirect exposure of banks to property raises some longer-term concerns, especially in the light of historical experience.

Public real estate equity and debt markets



[1] Based on the universe of traded property companies. [2] In billions of US dollars. [3] 1996 = 100. [4] Weighted average of the United Kingdom and continental Europe by corresponding market capitalisation. [5] Commercial mortgage-backed securities.

Sources: Bloomberg; Commercial Mortgage Alert; Global Property Research; Morgan Stanley Dean Witter.

Graph VII.7

Increased commercial real estate lending ...

Investors' interest in commercial property has intensified in the past several years. Low interest rates, disappointing stock market returns and the greater accessibility of commercial real estate markets due to the further deepening of publicly tradable instruments (Graph VII.7) have all played a role. Interest has been further stimulated by the lower amplitude of recent commercial property cycles (Table VII.2) and very low delinquency rates on commercial property loans. As a result, banks' exposure to the commercial real estate sector has grown substantially. For instance, in the United States commercial real estate lending has increased by about 70% over the past five years and now accounts for about one eighth of commercial banks' total assets; for medium-sized banks, the share is 30%. Similarly, in the United Kingdom one third of banks' lending to non-financial firms goes to real estate companies, up from about 20% four years ago.

... may pose micro risks

The greater exposure to the commercial real estate sector does not appear to pose an immediate risk to the banking industry, but it could represent a potential vulnerability in the longer term. Historically, commercial real estate loans have been one of the most volatile components of bank portfolios. Although a sharp deterioration in loan quality, as witnessed in the early 1990s in many industrialised countries, is unlikely to occur in the near future, even a return of delinquency rates to levels more comparable to their historical average could generate strains. In addition, given that recent activity has been largely driven by investment interest, rather than business demand, there are some concerns about the sustainability of the high investment returns. Persistently high vacancy rates suggest that market fundamentals may be vulnerable (Table VII.2), and prime office yields have already shown signs of weakness.

Residential property exposure ...

On the residential side, the rapid growth of bank exposure to housing markets has been one of the main drivers of bank profits in recent years.

Commercial property prices and office vacancy rates

	Commercial property prices[1]				Office vacancy rates[4]		
	Nominal change[2]			Level[3]			
	1995–2003	2003	2004	2004	2002	2003	2004
United States	2.5	–2.5	4.0	35.7	15.6	16.7	16.0
Japan	–8.9	–10.2	–9.6	31.2	8.0	8.5	7.2
Germany	1.0	–18.4	–13.2	43.2	7.1	9.8	11.4
United Kingdom	1.9	–4.0	7.6	34.0	8.0	11.3	9.8
France	1.0	0.0	1.5	60.3	5.9	6.0	6.6
Italy	9.4	–5.1	–3.2	73.8	4.7	5.4	7.5
Canada	3.0	–2.7	2.2	46.8	13.7	15.6	14.4
Spain	9.2	–10.9	13.5	46.5	4.8	7.7	8.4
Netherlands	6.1	–3.0	6.2	85.9	7.4	9.7	12.0
Australia	4.2	4.0	1.0	50.5	8.3	10.3	11.5
Switzerland	–0.1	–2.2	–2.3	56.9	8.0	10.8	9.0
Belgium	4.8	10.9	15.0	94.9	8.8	9.5	10.7
Sweden	3.2	–8.0	5.6	49.7	12.5	18.3	17.6
Norway	5.6	–2.1	1.5	56.3	8.3	11.0	11.0
Denmark	6.1	–1.2	4.9	85.4	2.5[5]	9.0	10.3
Finland	2.9	0.0	–2.3	57.2	1.7[5]	7.0	9.5
Ireland	13.4	0.2	1.3	82.5	18.4	17.5	16.7

[1] For Australia, Belgium, Italy and Spain, prime property in major cities; for Japan, land prices. [2] Annual changes, in per cent. [3] Peak period of real commercial property prices = 100. [4] Immediately vacant office floor space (including sublettings) in all completed buildings within a market, as a percentage of the total stock. For Switzerland and the United States, nationwide; for Australia, France, Germany, Italy, the Netherlands and Spain, average of major cities; for other countries, capital city. [5] 2001.

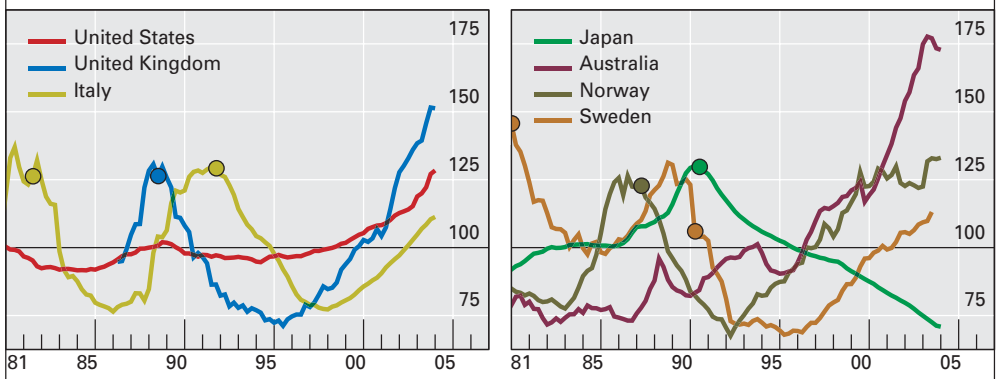
Sources: Catella Property Consultants; CB Richard Ellis; Investment Property Databank Ltd; Japan Real Estate Institute; Jones Lang LaSalle; National Council of Real Estate Investment Fiduciaries; Sadolin & Albæk; Wüest & Partner; national data. Table VII.2

Mortgage lending has surged in the last five years in most economies, including the United Kingdom (a cumulative increase of 160%), Australia (100%), the United States (75%), the euro area (50%) and Japan (30%).

... implies a macro vulnerability

However, uncertainties concerning the housing market could also imply some direct and indirect risks to the financial system. In many countries, including the United Kingdom, the United States, Australia, Norway and Spain, house prices have risen much faster than rents, and rental yields are historically low (Graph VII.8). This might signal either a downward correction in house prices or an upward movement of rents, which tend to be rather sticky. Should the house price growth flatten or reverse direction, mortgage activity could shrink substantially (as observed in Australia and the United Kingdom recently), with concomitant declines in fee income for banks. In addition, losses on property-related loans could increase, especially in those markets with high household indebtedness and high loan-to-value ratios. More broadly, a fall in household wealth could presage a more general economic downturn reflecting consumer retrenchment. Were these risks to materialise, the challenges to the banking sector from this indirect, but broader and more persistent, macro effect could be significant.

House price/rent ratios[1]



[1] Average for whole sample period = 100. The dots denote the start of a house price bust: a period in which inflation-adjusted residential property prices declined by more than 5% over the next four quarters and by more than 10% over the next three years.

Sources: Datastream; national data; BIS calculations. Graph VII.8

Further development of the "search for yield" phenomenon

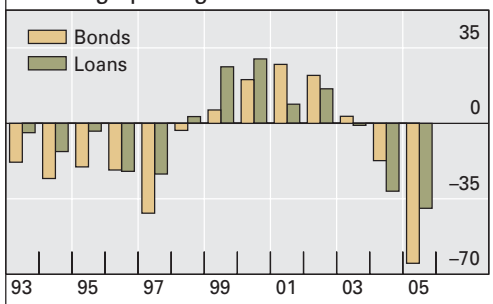
Persistently low interest rates and abundant liquidity have encouraged investors to seek higher yields in riskier investments. This "search for yield" gained momentum during much of the period under review (see Chapter VI).

Potential underpricing of credit risk

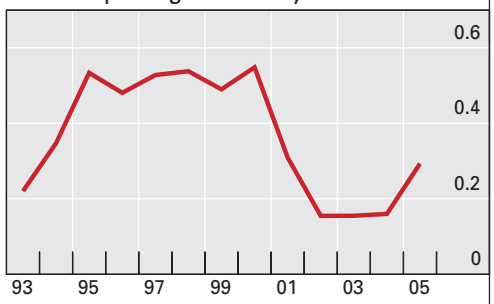
There is evidence of continued aggressive pricing of risk in both syndicated loan and bond markets. In 2004, signings in the US syndicated loan market surged to a historical high of $1.3 trillion, of which 46% went to non-investment grade companies. In the same year, spreads in bond and syndicated loan markets appeared to reflect a lower compensation for credit risk than implied by historical relationships (Graph VII.9, left-hand panel). More recently, this underpricing of credit risk seems to have become

Pricing of risk in syndicated loan and bond markets

Average pricing errors[1]



Relative pricing sensitivity[2]

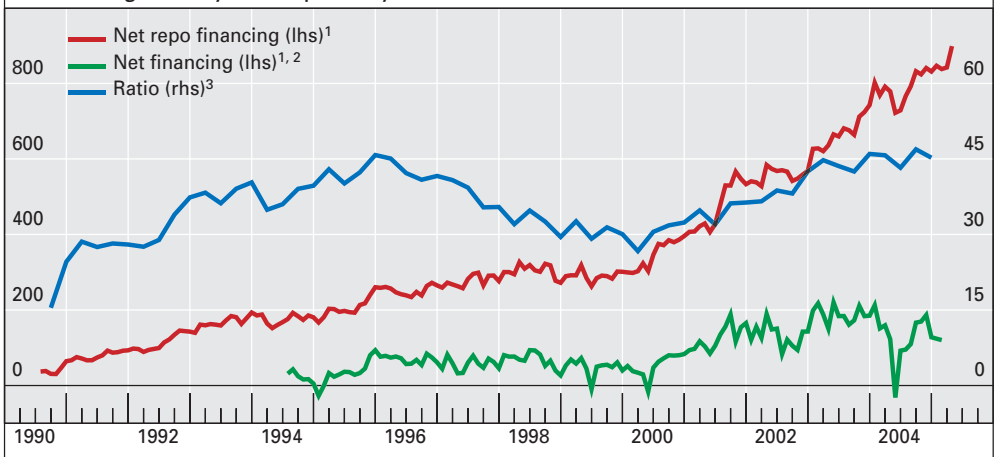


[1] Facility size-weighted averages of discrepancies (in basis points) between actual (bond or loan) spreads and those implied by a model incorporating short-term interest rates, rating, time to maturity, guarantees, collateral, currency risk and size of facility. A negative number indicates that market spreads are lower than model-implied spreads. [2] Time-varying relative sensitivity of loan and bond prices to credit risk, estimated as the regression coefficient of loan rates on the yield index for corporate bonds of the same rating. Other variables include the size and maturity of the loan facility. A value of 0.5 implies that the difference in spreads between two facilities, one with a lower rating than the other, is half as great for loans as it is for bonds.

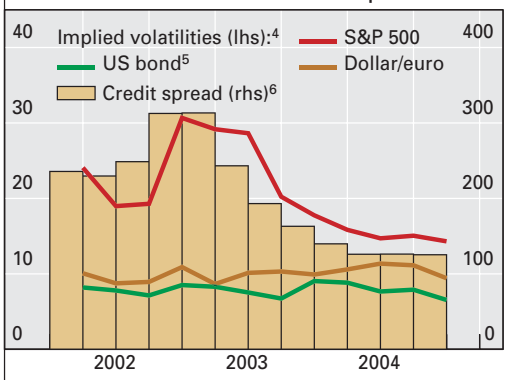
Sources: Dealogic; national data; BIS calculations. Graph VII.9

Major investment banks' risk-taking

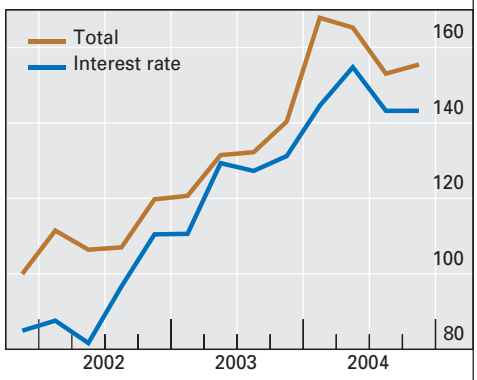
Financing activity of US primary dealers



Market volatilities and credit spreads



Value-at-risk[7]



[1] In billions of US dollars. [2] Net financing ("securities out" minus "securities in") as defined in T Adrian and M Fleming, "What financing data reveal about dealer leverage", *Federal Reserve Bank of New York Current Issues*, March 2005. [3] Net repo financing as a percentage of total assets of securities dealers. [4] At-the-money call implied volatility; in per cent. [5] Ten-year. [6] Lehman Brothers Corporate Index, based on Moody's Baa ratings; in basis points. [7] Market capitalisation-weighted averages of eight large institutions' total and interest rate VaR relative to their total VaR in the fourth quarter of 2001; quarterly data, in per cent.

Sources: Federal Reserve Bank of New York; Lehman Brothers; Merrill Lynch. Graph VII.10

more pronounced in the bond market, as the sensitivity of syndicated loan spreads to default risk has increased slightly (Graph VII.9, right-hand panel).

High market risk exposure

The trend towards greater risk-taking is also visible in the investment banking sector. The total value-at-risk (VaR) rose by over 50% in the three years to end-December 2004. Given the declines in the volatility of equity and credit markets over the same period, this suggests a notable increase in position-taking (Graph VII.10, bottom panels). The slight decline in overall risk exposures in 2004 could be related to a delayed adjustment of risk-taking by these firms, or to a tightening in market liquidity (Graph VII.10, top panel).

Shift of risk to the household sector

Higher risk linked to mortgages ...

Recent structural trends point to a shift of risk-bearing away from financial institutions and markets and towards the household sector. Some of this shift is voluntary. Greater access to diverse financing tools has increased household debt relative to income (see Chapter II). In particular, the growth rates of

mortgage and consumer loans provided by banks surpassed that of corporate loans in the United States, Europe and Japan in 2004 (Graph VII.11). Households have also shifted their financial investments to more market-sensitive instruments. Variable rate mortgages, traditionally prevalent in Australia, Ireland, Spain, the United Kingdom and most Nordic countries, have recently gained more popularity in the United States. The expansion of unit-linked products in the life insurance sector also reflects a greater willingness on the part of households to take on risk.

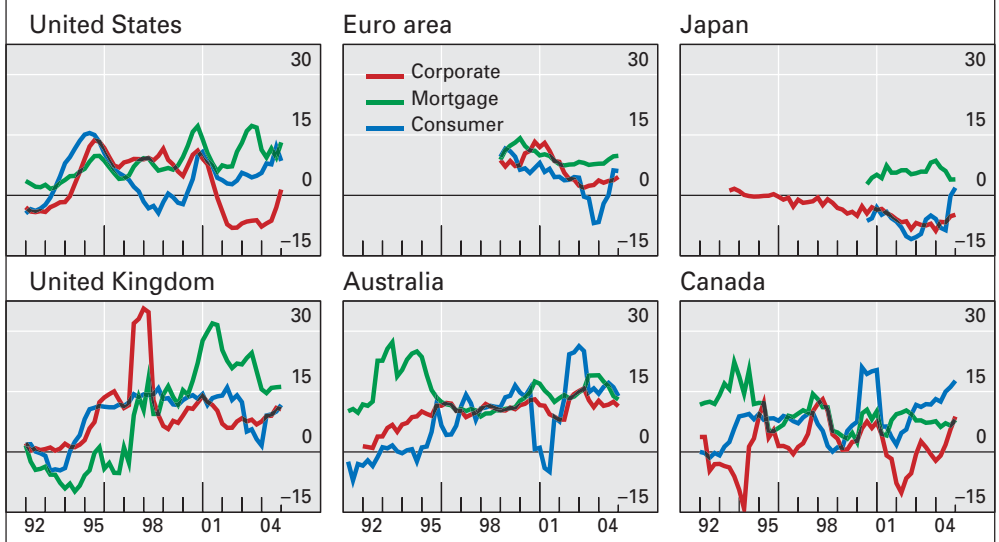
... and old-age pension income ...

Institutional changes are also exposing households to greater financial risk. First, pension reform proposals in the United States and the United Kingdom are underpinning a shift from defined benefit to defined contribution schemes, which increases households' exposure to market risk. The trend towards defined contribution occupational plans has gathered pace under the funding pressures on firms from increased longevity, weak equity markets and low interest rates. Second, the introduction of fair value accounting is likely to make the presence of minimum return guarantees in insurance contracts more visible. Thus, insurers will be under pressure to make partial cuts in the guarantees. Finally, reduced job security in many developed countries has increased the uncertainty in individual household income flow, adding to the risks faced by households.

... can affect the risk-bearing capacity of the economy

These trends raise the question of whether this shift might affect the risk-bearing capacity of the economy. Households are the ultimate bearers of all risks by virtue of being the ultimate stakeholders in all economic enterprises. Nonetheless, the overall level of financial risk is not independent of the financial structure, institutional features or the distribution of risk-bearing. Typically, households are liquid, given their regular employment income and relatively large holdings of liquid assets. Moreover, idiosyncratic losses on

Sectoral composition of bank credit[1]



[1] Annual growth; in per cent.

Sources: Datastream; national data.

Graph VII.11

household balance sheets have limited negative externalities. However, the household sector is characterised by a more restricted capacity to understand, manage and diversify risks, greater dependence on collateralised credit, and higher transaction costs than financial institutions. These limitations suggest that greater direct exposure of the household sector to risk might not necessarily be efficient.

Improved access to financial products has made it easier for households to own houses and offered greater flexibility in managing consumption over their lifetime. However, as discussed earlier, a fall in house prices can pose risks to the financial sector and the macroeconomy. Moreover, when interest rates rise, households with variable rate liabilities will face higher borrowing costs. If consumption and default rates on home loans are affected, the resilience of the macroeconomy and the financial system could be reduced.

Towards a more operational macroprudential framework

Macro risks call for ...

The preceding discussion of the outlook for financial stability has highlighted the key role of vulnerabilities arising from the interactions between the financial and real sectors of the economy. The principal challenges derive from the process of redressing imbalances gradually built up during the equity price boom of the late 1990s and the macroeconomic environment that has emerged during the first half of this decade. An effective response to these challenges places a premium on a prudential framework that focuses on those interactions and takes a systemic approach to financial stability. The general trend towards a strengthening of the macro orientation of prudential frameworks is a recognition of this need.

... macroprudential approaches

The macroprudential approach emphasises the importance of interactions between individual financial institutions, as well as between the financial system as a whole and the macroeconomy. Complementing the more traditional micro approach, which focuses on the individual institution as the unit of analysis, it pays particular attention to concentrations of exposures and the common drivers of risk across the different components of the financial system. The analysis of potentially destabilising feedback from the behaviour of these components is central to this approach.

Operationally, a number of different facets of the prudential framework reflect this greater systemic orientation. Arguably, the most visible aspect relates to the institutional architecture and mandates of official bodies in charge of financial stability. A more macro perspective is also concretely manifested in the way these bodies discharge their responsibilities. Examples include improvements to risk measurement technology so as to better identify systemic vulnerabilities, and a calibration of preventive and remedial prudential tools that is more sensitive to systemic concerns.

Institutional architecture

The institutional architecture of policy bodies in charge of financial stability is increasingly influenced by a macroprudential perspective. At both the national and international levels, this architecture increasingly reflects the importance

of monitoring interactions among individual institutions and of developing coherent frameworks that take into account the similarities in the treatment of risk across different sectors of the financial industry.

Unified supervisory authorities

At the national level, the trend towards a single authority with responsibility for the prudential supervision of banks, insurance companies and other types of financial intermediaries has gathered pace since Norway's decision to adopt such a scheme in the late 1980s. Synergies arising from the emergence of financial conglomerates, and the convergence of the business practices of financial firms driven by the development of new markets and technology, have both contributed to this trend.

Financial stability mandates for central banks

This institutional development has often gone hand in hand with the establishment of more explicit financial stability objectives for central banks. Operationally, this has often been reflected in the creation of a dedicated financial stability function in the central bank and the publication of regular reports that communicate its assessment of the financial system's performance and potential vulnerabilities. Frequently, central banks have taken on similar tasks even in the absence of an explicit mandate, building on their expertise in producing more traditional macroeconomic assessments.

International forums

At the international level, a number of forums have been set up to promote communication and cooperation between prudential authorities from different jurisdictions. Monitoring developments in international financial markets and assessing possible weaknesses in the international financial system are among the objectives of the committees working under the aegis of the G10 central banks and various regional groupings. The Financial Stability Forum brings together all relevant national authorities, international financial institutions and other international groupings, fostering dialogue and the coordination of efforts to address systemic vulnerabilities. Indicative of the Forum's efforts has been the set of recommendations it issued on policy responses to the potential threats to systemic stability from the activities of highly leveraged institutions. More recently, it has spearheaded global supervisory efforts to strengthen the oversight of reinsurance companies (see pages 170–171 of this Report).

Identification of vulnerabilities

An accurate diagnosis is a precondition for successful treatment. The deployment of risk measurement technology at the level of system-wide stability is therefore the basis for establishing an operational macroprudential framework.

Systemic risk modelling

Financial risk measurement technology is in general at a relatively early stage of development. Even at the level of individual institutions, the focus was originally on measuring specific aspects of financial risk, and only lately have efforts been made to develop coherent frameworks for enterprise-wide risk measurement. The extension of VaR-type indicators beyond portfolio market risk assessment to include other types of exposures is an example of this. At the macro level, the modelling of interactions between financial sector behaviour and the real economy has a short track record compared to the longer tradition of building macroeconomic models that describe the relationships between aggregate production, expenditure and prices.

Macroprudential indicators

Considerable progress has been made recently in developing systemic risk measurement tools and applying them in a variety of contexts. The efforts of the IMF and the World Bank in drawing up a list of financial stability indicator variables, and encouraging national authorities to systematically collect and publish them, are geared towards providing the raw material for further analysis. The Financial Sector Assessment Program jointly implemented by these two institutions carries out regular analysis on potential systemic vulnerabilities of both a structural and a conjunctural nature.

Macro stress testing

Mirroring the development of stress testing methodology at the level of individual firms, many central banks are now developing the infrastructure to perform robustness tests of the financial sector as a whole, relying on both micro and macro indicators. Such exercises often combine three elements: macroeconomic models, built to guide monetary policy decisions; models of the financial condition of households and the business sector; and surveys of the potential impact of different scenarios on the performance of financial institutions and markets. In some jurisdictions, this infrastructure is used not only to carry out routine assessments of financial sector vulnerabilities for prudential purposes but also to provide input into the monetary policy decision-making process. Once in place, the technology also lends itself to ad hoc exercises that are more focused on the analysis of specific risks, such as those arising from an abrupt decline in asset prices.

Calibration of prudential tools

The policy response to identified risks to financial stability is also increasingly factoring in systemic considerations. This is true both of the design of prudential standards and of the rationale behind actions to address any strains that materialise.

Adoption of a systemic approach ...

The explicit incorporation of systemic objectives into the design of prudential standards is a relatively recent phenomenon, although it has always been recognised that standards that limit the scope for excessive risk-taking at the level of individual institutions will also mitigate systemic risks. The newer elements of macroprudential thinking reflect mostly the notion that behaviour and rules that are individually rational may lead to undesirable aggregate outcomes. For example, retrenchment from risky positions in response to elevated measures of market risk may be a prudent approach from the perspective of an individual institution interested in preserving its capital. A generalised sell-off, however, could trigger a self-reinforcing chain of actions that results in higher market volatility and overshooting of asset prices.

... influences standard setting ...

The new bank capital framework published last year by the Basel Committee on Banking Supervision represents a major step forward. It sets a standard that is particularly supportive of the private sector's desire to develop and use risk management tools. By accepting the output of internal models for the setting of minimum regulatory capital, it recognises the importance of providing incentives for the use of best practice technology by all market participants. Excessive risk sensitivity of capital requirements, however, might raise the possibility of inadvertently amplifying the inherent procyclicality in credit availability. Partly to mitigate this risk, and based on other empirical

studies, the final version of the framework has reduced the rate of increase of required capital in response to a deteriorating credit outlook. In addition, it recognises that stress-testing the portfolio of bank exposures should also condition the required level of capital in order to avoid the latter being unduly influenced by current economic conditions. More importantly, the new framework is helping to embed historical improvements in risk management in the corporate culture of institutions, thus promoting earlier detection and correction of problems and reducing procyclical tendencies.

A similar rationale motivates the system of statistical provisioning implemented in Spain. Under this standard, bank provisioning is anchored to an average estimated over the business cycle. Bank loan reserves are thus built up during the upswing of the business cycle into a statistical provisions buffer that is run down during the downturn when credit conditions worsen. The smoother time pattern in credit costs dampens the tendency to reduce credit excessively in the face of a deteriorating economic outlook, hence mitigating the risk of regulation-induced bank behaviour contributing to macroeconomic volatility.

... discretionary policy decisions ...

As well as having a growing influence on the design of standards, systemic considerations are also increasingly shaping discretionary policy actions by prudential authorities. These have sometimes been taken in response to the manifestation of strains or the build-up of vulnerabilities. A recent example was the reaction of the UK authorities to the strains faced by insurance companies when the drop in the equity market induced severe losses in their asset portfolios. A temporary relaxation of minimum reserve requirements was introduced to help stem stop-loss sales of stocks, thereby preventing a downward spiral in equity prices that would have resulted in further weakness in the balance sheets of regulated firms. Similar rationales have been behind the adjustments made in some jurisdictions to the regulatory parameters that govern mortgage lending (such as maximum loan-to-value ratios) in response to concerns that rapid growth of credit would be a risk to the macroeconomic outlook. While these interventions are only imperfect substitutes for a systematic ex ante accumulation of reserves to deal with strains, such ex post supervisory actions can facilitate the system's response to specific circumstances with little adverse effect on incentives if calibrated judiciously and used sparingly.

... and the treatment of large institutions

Finally, systemic stability concerns are very much in evidence in the attitude of prudential authorities towards large and complex financial institutions. In many jurisdictions there are explicit provisions governing the regulatory treatment of these institutions, stipulating a course of action in the event of strains coupled with closer supervisory monitoring and review. In particular, systemic concerns feature high on the list of factors that are examined in the approval of mergers. Beyond the preservation of an appropriate degree of contestability in the market, authorities are also increasingly concerned about the potential risks from a higher concentration of the financial system's exposure to a small number of interconnected institutions. Moreover, contingency plans are in place for responding to the failure of such a firm. These plans focus on the orderly transfer of control from

the shareholders and management of the failed firm while maintaining its functionality and value as a going concern and minimising systemic disruption.

Challenges ahead

Challenges include:

The preceding analysis suggests that considerable progress has been made in strengthening the systemic orientation of prudential frameworks, in terms of both awareness and implementation. At the same time, a number of major challenges remain.

more accurate measurement ...

A first challenge relates to the improvement of risk measurement technology. Despite the recent advances, current methodologies are still more successful at measuring relative risks at a given point in time, such as across borrowers or asset classes, than at assessing the evolution of risk over time, especially system-wide risk. In particular, rather than providing truly forward-looking risk indicators over longer horizons relevant for policy, many such measures tend to function more like coincidental indicators of materialised risk. Moreover, when drawing on market prices, they may fail to distinguish changing appetite for risk from changing risk assessments (see Chapter VI). Through both of these channels, they may inadvertently introduce excessive procyclicality in risk assessments and actions.

... supervisory incentives ...

A second challenge relates to ensuring that the prudential authorities have the wherewithal and incentives to use the instruments at their disposal from a macroprudential perspective. Understandably, despite the exceptions noted above, there is still considerable reluctance to do so when the problems are perceived to have a macroeconomic origin. In part, this may reflect a lack of relevant expertise, which may be more likely when supervision is not entrusted to the central bank. In addition, it may stem from a conception of the supervisory mandate dominated by objectives of consumer protection, rather than systemic crisis prevention.

... and coordinated policies

A third challenge relates to strengthening the coordination of the official sector's approach to macrofinancial stability. A more coordinated approach would recognise the strong interdependencies between the roles of a broader set of authorities, also including monetary policymakers, ministries of finance and even accounting standard setters. Obvious complementarities exist between the expertise of these different bodies and the instruments at their disposal. For example, accounting standards can have a first-order effect on the ability to assess financial strength, on the incentives to take on risk and on the stabilising or destabilising properties of individual behaviour. Likewise, sometimes financial strains with first-order macroeconomic costs may not have their roots in failed financial firms. They may originate in market dynamics or in disruptions to the balance sheets of households and corporations, even if regulated financial institutions remain sufficiently insulated; the current risks associated with mortgage finance are a case in point. This puts a premium on close cooperation among the various authorities, based on an agreed diagnosis of the problem.

VIII. Conclusion: how might imbalances be fixed?

Last year was an exceptional one for the global economy. There was strong growth in most of the world, particularly the emerging market economies, yet still moderate inflation in spite of substantial increases in commodity prices. Financial institutions across the globe recorded excellent profits and prices in most financial markets rose substantially. Nevertheless, this exceptional performance was accompanied by a growing sense of unease that it might not last. One source of concern was that today's global economy increasingly seemed to exhibit similarities with that of the late 1960s – a disturbing thought, since it was during this period that the foundations were laid in the major industrial countries for the Great Inflation of the 1970s. In turn, this led to the debt crises of the 1980s which affected many emerging market economies.

Now, as in the late 1960s, real interest rates in the industrial countries have been low for an extended period and credit aggregates have been expanding rapidly. Similar to problems which emerged under the Bretton Woods system, there has also been downward pressure on the dollar related to the US external balance. This has, in recent years, led many other countries both to ease their monetary policies and to accumulate foreign exchange reserves in order to resist currency appreciation. The result has been a massive global expansion of liquidity. Fiscal policy has also been eased recently in many countries, recalling the joint impact of the Vietnam War and the Great Society programmes of that earlier era. Commodity prices, and oil prices in particular, have also moved up sharply and the effects are beginning to be seen further downstream, as well as in the external accounts of both consumers and producers.

Do these similarities mean that industrial countries are likely to experience a repeat of the high inflation and cyclical perturbations of the 1970s and 1980s? And that emerging markets face a recurrence of the debt problems of the 1980s? Simply put, the answer is: perhaps, but not necessarily. Perhaps, because forecasting is difficult and policy mistakes can by no means be ruled out. Not necessarily, because policymakers have clearly learned from their past errors. In the late 1960s and early 1970s, the costs of high inflation in the industrial countries were not well recognised. Nor was it adequately appreciated how quickly shifts in inflation expectations could lead to a vicious wage-price spiral. The success of central banks in reducing inflation, in spite of the costs involved in tackling it, gives credibility to central bankers when they say "never again". Moreover, policymakers worldwide have also learned something about coping with commodity price shocks. Those now confronted with higher-priced imports know that resisting adjustment through external borrowing, as was done in the 1970s, can eventually prove extremely costly. Those benefiting today from higher prices remember how easily they became overextended by borrowing against the collateral that higher prices provided.

It is now obvious, sadly only with hindsight, that commodity prices are no different from the prices of houses and financial assets. All of these prices can fall as well as rise, but the nominal value of debts stays fixed throughout.

We can take solace from these lessons learned from the past. Nevertheless, we must also be aware of the dangers of fighting the last war all over again. As noted in the Introduction to this Annual Report, the world has changed in three fundamental and welcome ways since the 1960s. By suggesting a non-inflationary outcome, these structural changes further support the conclusion "perhaps, but not necessarily".

First, the liberalisation and globalisation of the real economy have massively boosted supply potential, substantially changed relative prices, and given a downward tilt to inflation as demand has lagged behind. Second, a combination of deregulation and technological progress has had profound effects on financial systems. They are increasingly market- rather than bank-based, global in scope, and populated by ever larger and more complex firms whose activities span many sectors. And third, there has been a shift in the monetary regime towards the overriding objective of keeping inflation low. These individual changes, and perhaps more importantly their interactions, point to new lessons as well as new uncertainties.

One lesson is based on the interaction of ongoing positive supply shocks and the new monetary regime. This implies that deflationary pressures may, in the future, be almost as frequently observed as inflationary pressures. It also raises the question of whether the source of the deflation ought not to condition the policy response. Just as first-round price increases associated with negative supply shocks are now commonly tolerated by policymakers, why should the same not hold true for positive supply shocks? Another lesson can be drawn from the interaction of positive supply shocks and the behaviour of the financial system. These shocks can more easily generate optimism in the system, and create a perception that investment risks are lower than they really are. As a result, the supply of credit and debt becomes inherently more elastic. A third lesson relates to the interaction of the modern financial system and the pursuit of price stability. Reactions within the financial system to policy tightening are becoming an ever more significant part of the transmission mechanism and must increasingly condition the pace of tightening.

A final, and perhaps most important, lesson arises from the interaction of all three systemic changes. If positive supply shocks push down inflation, such that policymakers have no reason to tighten credit conditions, then the greater capacity of financial systems to supply credit and debt will be matched by greater demand. Such circumstances could create a boom and bust cycle in the financial system which would, in turn, generate headwinds that could feed back and weaken the real economy in various ways. And if the starting point for this process were already low inflation, the outcome might be an unwelcome disinflationary process that would be more malign than one generated by positive supply shocks alone.

These observations do not demand a radical reorientation of policy. Rather, they only suggest further steps down a path already chosen. Public policies have already assumed a more medium- to long-term orientation. On

the supply side, this is evident in the increased emphasis on structural reforms in recent years. In particular, the need for measures to promote financial stability has been widely accepted. On the demand side, recall that in the 1960s both monetary and fiscal policies were "fine-tuned" to stabilise the business cycle and reduce unemployment. Subsequently, recognition of the costly longer-term effects of such policies led to monetary targeting, inflation targeting and suggestions for longer-term frameworks for fiscal policies as well.

Without fundamentally altering these longer-term frameworks, policymakers should now consider how they might be adapted to take account of a further complication. The build-up of debt levels over time, both domestically and internationally, can eventually also lead to economic problems with attendant and often substantial costs. Consider how long it took for Japan and East Asia to recover from their respective financial crises. Recent policy actions by a number of central banks, partly in response to credit-fuelled increases in house prices, indicate a growing recognition of this problem. True, formalising a policy response will be difficult since there is no clear benchmark to indicate when credit growth, debt levels or asset prices are "too high". Nevertheless, the stakes are certainly such as to warrant a significant analytical effort in this regard.

This Conclusion addresses two issues. First, it examines current risks to the global economic outlook, in particular the implications of internal and external imbalances, and the policies that might help reduce those risks. Second, it considers whether we need longer-term frameworks that might help avoid the build-up of financial imbalances in the first place. At the domestic level, the question is whether it is worth implementing a macrofinancial stability framework. At the international level, the question is whether improvements to the international monetary system are required to complement the simple pursuit of national self-interest.

Do current exposures warrant a policy response?

While it would be very difficult to get people to agree that the global economy has imminent "problems", there is more of a consensus that it has certain "exposures". One simply cannot ignore the number of indicators that are now simultaneously exhibiting marked deviations from historical norms. Among the internal imbalances that compel attention, real policy rates in many industrial countries and in emerging Asia continue to hover around zero. Nominal rates on long bonds, as well as credit spreads and measures of market volatility, are remarkably low. The household saving rate in many industrial countries has been trending sharply downwards, and debt levels are at record highs. House prices in many countries have never been higher. And in China, the investment ratio has risen to a startling 50% of GDP. Finally, external imbalances have never been larger in the postwar period. Any or all of these numbers might well revert to the mean, with associated implications for global economic growth. Such an unwinding might be gradual, and possibly benign, but it could also be rapid and disruptive. In large part, what happens will be determined by real-financial interactions that we should not pretend to fully understand.

What can policy do about these internal and external imbalances? With respect to internal imbalances, one obvious answer is to increase interest rates to induce reductions in long-term exposures. But this immediately raises the prospect of conflict with more traditional short-term objectives of policy, namely low unemployment and the avoidance of excessive disinflation. As for external imbalances, here too many conflicts arise. For example, fiscal tightening might help remedy external imbalance problems for deficit countries, but could also lead to uncomfortable levels of unemployment. In such circumstances, perhaps the best that can be hoped for is "opportunistic" progress. That is, look for opportunities to cut these longer-term exposures, but only as other priorities allow.

In the United States, against the background of an expanding economy, monetary policy has already begun to tighten in a measured way. While this has been primarily a response to rising capacity utilisation rates and concerns about future inflation, the influence of higher rates in reducing internal imbalances is a welcome by-product. The US economy has arguably become overdependent on consumer spending, borrowing and the extraction of equity from housing wealth. This is particularly so because, in aggregate, an increase in house prices does not boost national wealth in the same way as investment based on saving from income and increases in productivity. Owners gain from higher house prices, but everyone must now pay higher prices for housing services. From this perspective, the US economy is significantly more exposed than it might appear.

Even given the currently robust state of the US economy, however, this tightening will have to be conducted with some delicacy. One uncertainty surrounds the heightened role in the transmission mechanism likely to be played by asset prices, especially house prices. Some indication of this might be given by the experience of the United Kingdom and Australia. There, as in the Netherlands a few years ago, house prices have begun to stabilise under the influence of higher policy rates, and the growth of consumer spending has already begun to slow. A further complication has been the possibility that higher policy rates might also restrain corporate investment. Fortunately, corporations have been quite successful in reducing their debt burden in recent years and have both high profits and high liquidity. Yet it must also be said that the recent rebound in investment remains far less robust than that seen in earlier cycles.

Another concern has been that tightening might lead to disruption in financial markets, if positions taken on in the "search for yield" were suddenly reversed. This has not happened to date, probably reflecting the clear communication by the Federal Reserve of its future intentions. Nevertheless, uncertainties remain. Should inflationary pressures prove stronger than currently anticipated, policy rates might have to rise more rapidly. This could still surprise market participants. Another possibility is that assumptions about the Federal Reserve's future intentions, albeit stated in a conditional way, might have led some speculators to respond to the narrowing of carry trade margins by further leveraging their positions to maintain rates of return. This would imply that further unwinding, perhaps significant, might still be to come.

In a number of other major economies, returning interest rates to more normal levels would involve even greater conflicts. In continental Europe and Japan, continued subdued economic growth provides no support for higher rates. In Japan, the failure to break definitively out of deflation also militates against such action, while in Europe the disinflationary effects of the increase in the value of the euro point in the same direction. In any event, it bears noting that private sector debt exposures in Japan continue to fall, not rise, while exposures in continental Europe have not risen as fast, nor been as widespread, as those in the United States. That said, the ECB has repeatedly expressed its disquiet regarding the rate of expansion of monetary and credit aggregates and the sharp increases in house prices in many parts of the euro area.

Raising policy rates elsewhere in Asia might be easier. Inflationary pressures have been somewhat more in evidence, and growth has been rapid. Moreover, concerns have been expressed about both rising property prices in a number of countries and the increasing reliance of banks on consumer lending. Higher rates in the United States also imply that tightening in Asia would have less of an impact on the region's exchange rates against the dollar. Nevertheless, in spite of recent healthy growth, many in Asia still worry about its robustness and the capacity of the corporate and banking sectors to handle higher rates. In China, rates were allowed to rise only slightly last year, given the desire to encourage greater consumer spending and to avoid more capital inflows. While there was evident overheating with respect to fixed capital investment, the Chinese authorities are likely to continue to try to deal with it through administrative means. Unfortunately, it is not clear whether such measures will work. As in the United States, the concern in Asia must then be that an inadequate degree of monetary tightening will lead to either inflation or growing internal imbalances, or both.

Turning to external imbalances, the widening current account deficit of the United States is a serious longer-term problem. That is, it could eventually lead to a disorderly decline of the dollar, associated turmoil in other financial markets, and even recession. Equally of concern, and perhaps closer at hand, it could lead to a resurgence of protectionist pressure. The unprecedented size of the deficit, the speed with which external debts are growing, the increasing reliance on the official sector for deficit financing, and the fact that US borrowing has primarily financed consumption (rather than investment) all suggest an eventual problem. Moreover, given the interdependency of modern financial markets, it is likely that problems would not be confined to the dollar alone. A higher risk premium on US dollar-denominated assets could raise long rates and spreads, with implications for asset prices of all kinds.

Yet to say such an outcome must be imminent would be wrong. While its net external debt has been growing for years, the United States still earns more on its assets abroad than it pays out to foreigners. Moreover, since the debts of US nationals are denominated almost exclusively in dollars, and the assets are in foreign currency, declines in the dollar automatically cut the recorded net debt significantly. And foreign officials who support the US dollar through intervention have many valid reasons to continue to do so. There should

therefore be time for policies designed to reduce existing exposures to have their desired effect. However, time might well be running out.

What could policy do at this juncture? The textbook answer, against the backdrop of declining levels of excess capacity, is that deficit countries should reduce the rate of growth of domestic spending below that of domestic production. Allowing their currencies to depreciate in real terms would make their products more competitive, and also provide an incentive for production to shift out of non-tradables into tradables. The opposite should occur in surplus countries: that is, higher real exchange rates and more domestic spending. However, it is also important to set these prescriptions for macroeconomic and structural policies against the constraints and trade-offs that apply in the real world.

The United States probably faces the least conflict in its macroeconomic policy settings. Concerns about potential inflation, internal imbalances and the external deficit all call for restraint in domestic spending. Given the size of the government deficit, the obvious first step would be to cut expenditures and raise taxes. While the administration has set a deficit reduction objective, the specific policies required to implement this remain to be put in place. That is a pity, since, without early fiscal action, the burden will fall more heavily on tighter monetary policy. While higher interest rates would help reverse the decade-long slide in household saving – the real key to reducing the external deficit – a disproportionate reliance on monetary policy raises the risk of all the disruptive transitional problems discussed above.

The surplus countries of continental Europe and Asia face deeper conflicts as they contemplate the use of macroeconomic instruments to encourage domestic demand. In both regions, though arguably more reasonably in the latter, concerns remain about fostering inflationary pressures stemming from higher commodity prices. Moreover, there also seems to be a clash between short-term exigencies and longer-term considerations. For example, in Europe the use of fiscal policy immediately runs foul of high debt levels, demographic pressures and the Stability and Growth Pact. In effect, Europe used up its fiscal room for manoeuvre some years ago. In Asia, with Japan an obvious exception, the overt fiscal positions generally seem healthier. Yet in many of these countries, and certainly in China, concerns about the ultimate costs to the taxpayer of restructuring financial systems are a further constraint that cannot be prudently ignored. As for easier monetary policies, in addition to lingering concerns about inflation, this recommendation is in direct conflict with the general tightening needed to reduce the longer-run internal imbalances described above. Conflicts of this nature explain why, for the first time in decades, central bank watchers in some countries are even disputing the direction of policy moves rather than their timing and magnitude.

Exchange rate changes also cut several ways. So far, the dollar has declined in an orderly manner, but mostly against currencies that are truly free-floating. The upshot is that the dollar, in real effective terms, is no lower now than its average of the last 30 years. Given how little the US trade deficit seems to have been affected to date by dollar depreciation, in part because of the limited impact on domestic prices, some further movement seems almost

inevitable. Obvious candidates for revaluation would be the Chinese renminbi and other Asian currencies that take their cue from it. While the Chinese authorities have legitimate reasons for concern about revaluation – the health of the financial system and the income stream of domestic farmers – these concerns would be better dealt with through domestic policies. In addition, greater exchange rate flexibility would help curb the massive capital inflows that are contributing to the growing internal imbalances that threaten the sustainability of China's long expansion. Moreover, increased exchange rate flexibility would give more scope for monetary policy to resist domestic inflation.

Changes in real exchange rates provide an incentive for resources to shift appropriately between the tradable and non-tradable sectors. Constraints that impede such a shift should be removed. Regardless of the trade situation, structural changes in appreciating countries would also be in their domestic interests. In Japan, the principal requirements are the freeing of service industries from stifling regulation that squeezes profits, and an increased willingness to close down insolvent companies in the traded goods sector. Continental Europe presents perhaps the biggest adjustment challenge since the prices of many services are constrained by regulation, relative wages are inflexible, and non-wage labour costs are high. These impediments should be removed. In China, the share of services in GDP is around 30%. Given that the comparable figure in Brazil is around 50%, it is clear that the legacy of central planning needs to be further swept away to encourage the production of non-tradables.

Finally, the United States has a particularly flexible domestic production structure, but it also has a lot of adjustment to undertake. Rejuvenating the manufacturing sector will not be easy, given that it has shrunk to only 10% of GDP, and that profits in manufacturing remain lacklustre. The fact that the traded goods sector has, so far, hardly shared in the recent upturn of investment in the United States is also a discouraging sign. Perhaps the greatest impediment to an expansion in the production of traded goods and services in the United States is the perceived competitive threat arising from China, India and other emerging market countries. It must be admitted that this is not a propitious moment to be seeking to regain international market share.

If what needs to be done to resolve external imbalances is reasonably clear, it also seems clear that much of it is simply not going to happen in the near term. One reason for this is domestic policy conflicts of the sort noted above. Indeed, even such policies as a reduction in the US fiscal deficit, desirable for both domestic and international reasons, could easily fall prey to political wrangling and entrenched interests. Worse, policymakers who blame the policies of others for causing external imbalances, while denying their own culpability, risk destabilising financial markets in the meantime and exacerbating the problems that policymakers should be seeking to resolve. But there are broader reasons as well. Not enough attention is being paid to systemic issues, nor is there adequate recognition of the possibility that acting in self-interest may be far from optimal. What is needed now is a real dialogue among all those affected by these external imbalances. Everyone needs to

commit to some unpleasant compromises now, in order to avoid even more unpleasant alternatives in the future.

Longer-term frameworks for macrofinancial stability

It is one thing to deal with problems as they arise. It is quite another to design frameworks to prevent them occurring in the first place. The fundamental changes to the global economic, financial and monetary system identified in the Introduction to this Annual Report have clearly brought many economic benefits. The policy challenge is to reconcile these secular gains in economic "efficiency" with the steps that might be taken to reduce the costs of periodic disruptions resulting from the interaction of these changes.

Towards a domestic macrofinancial stabilisation framework?

A guiding principle, should one wish to introduce a macrofinancial stabilisation framework, would be that both regulatory and monetary policies should be applied more symmetrically over the cycle. This suggestion parallels prescriptions for fiscal policy that emphasise running surpluses in upswings to "preserve some room for manoeuvre". In the case of regulatory policy, more symmetry would imply that more capital should be built up in good times. Not only would this help restrain credit excesses, but it would also allow capital to be run down in bad times, up to a point, to cushion the economy from associated credit constraints. Tightening monetary policy in the face of excessive credit growth would also attenuate the worst excesses, and could obviate the need for radical easing later that might result in policy rates facing the constraint of the zero lower bound. This would be of considerable advantage should an unwelcome degree of disinflation emerge in such an environment.

In practice, a more symmetrical regulatory policy might be implemented in various ways. Were the regulators to be convinced that systemic risks were rising to dangerous levels, they could have recourse to discretionary action. Liquidity ratios, loan-to-value ratios, collateral requirements, margin requirements and repayment periods could all be tightened. Indeed, such actions were commonly used by central banks in industrial countries a number of years ago, and have been used to good effect more recently in Hong Kong SAR and elsewhere. In contrast, were the authorities to be less certain about their capacity to predict stressful events, they might rely more on some simple indicators to encourage more prudent behaviour. Prudential norms pertaining to the rate of growth of credit or asset prices could in principle be used to influence the pricing of risk, provisions for losses (for expected losses) or the accumulation of capital (for unexpected losses). In Spain, a system of "dynamic provisioning for loan losses" has already been introduced: provisions must now rise with loan levels on the assumption that losses in the future will be similar to those experienced in the past, measured over the full economic cycle.

Regarding a more symmetrical monetary policy, this too might rely on either discretion or simple normative indicators. As to the former, both the Bank

of England and the Reserve Bank of Australia have, in the last year, indicated that concerns about rising house prices and debt played a role, along with strong demand growth, in explaining their respective interest rate increases. Sveriges Riksbank, for similar reasons, did not lower interest rates as much as might have been expected given that it was actually undershooting its inflation target. As for the use of normative indicators, the two-pillar approach of the ECB could be noted. However, the suggestion here would be somewhat different: namely, to use monetary and credit data as a basis for resisting financial excesses in general, rather than inflationary pressures in particular.

Identifying when financial imbalances are building up, to a point likely to involve substantial macroeconomic costs, is a serious practical problem. Yet a macrofinancial orientation should at least ensure that policymakers are looking in the right direction. Those concerned with weaknesses in the financial sector would thus focus more carefully on areas where stresses were more likely to have knock-on effects elsewhere. One implication is that banks, as providers of liquidity, should rightly receive more attention than some other institutions, and that bigger institutions need closer monitoring than small ones. Indeed, to reflect these externalities, prudential standards for such institutions might justifiably be tougher, all else equal. Another implication, given the growing importance of markets for both providing financing and transferring risks, is that market monitoring and the evaluation of structural developments would have to be further enhanced. Finally, because payment and settlement systems are by definition systemic, monitoring how effectively they function would take on even greater importance.

Moreover, quantitative identification of systemic imbalances has also been improving. With respect to data, the IMF has suggested a list of Financial Soundness Indicators for individual countries, and is now experimenting with their use in conducting its Financial Sector Assessment Program. With regard to monitoring, many central banks are now beginning to evaluate the soundness of their own financial sectors, as well as vulnerabilities arising from the financial condition of the corporate and household sectors. Increasingly, the results are being published in financial stability reviews. Moreover, in recent years there has been a clear improvement in the capacity to make judgments about the risks of banking and currency crises using quantitative models. Measures of internal and external imbalances, generally defined as substantial and sustained deviations of financial variables from previously established norms, do seem to have some predictive power.

At the same time, while progress has been made in strengthening our assessment powers, significant shortcomings remain. Improvements in financial intermediation make higher debt/income ratios more sustainable than in the past, complicating the quantitative assessment of just when these ratios become excessive. In addition, some basic data tend to be flawed. External ratings, internal ratings and market-based measures of credit risk are all likely, at times, to be affected by waves of optimism or pessimism. They may then give misleading indications of the dangers faced by individual components of the system looking forward. Moreover, the use of aggregated data for prediction purposes fails to capture interactions that can be both complex and non-linear.

We need to know more about the distribution of risks within the system, as well as the likelihood that different market participants might react to similar shocks in the same way. In effect, we need better means to stress-test the financial system as a whole, as well as to test the manner in which stresses might then feed back on the real economy, leading in turn to another set of shocks to the financial system and so on. None of this will be easy.

How might policymakers react, assuming that there was agreement among the relevant agencies that an imbalance problem was emerging? The likely first step would be orchestrated statements of concern. The threat of a policy response might induce both creditors and debtors to review their investment strategies. Should it then be deemed necessary to act, in a discretionary way, recourse to prudential regulation might come first if it were thought that the health of the financial system was in any way being impaired. Here, an important new insight for the regulators, based on concerns about the functioning of the system as a whole, is that they would have to give due emphasis to the problem of "fallacy of composition". What might be an appropriate recommendation for a single institution might not necessarily make sense for the system as a whole. Conversely, monetary policy might be used first if concerns related primarily to the growing exposures of debtors, while the financial system itself was still thought to be in a good state of health.

As to institutional arrangements, the most important problem to emerge from the separation of regulatory supervision and central banking is that macrofinancial stability issues could fall between the cracks. That is, the agencies involved see problems building up, but assume that somebody else will do whatever needs to be done. One way to avoid this would be to have senior representatives of central banks, regulatory agencies and treasuries come together regularly to monitor events and identify problems. Interestingly, such an arrangement already exists at the international level, in the form of the Financial Stability Forum, but there is no domestic counterpart in many countries. In countries where similar inter-agency groupings have been set up to facilitate crisis management and resolution, the simplest approach would be to widen their mandate to encompass crisis prevention as well.

What would be the practical impediments to implementing such a framework, and could they be removed? Perhaps the most important impediment would be a simple lack of conviction that internal imbalances were likely to raise risks for either the economy or the financial system, allied with a doubt that they could ever be identified in advance – in sum, a new framework would be neither needed nor workable. Yet the first of these arguments could be turned on its head given acceptance of a minimax optimising strategy that put greater weight on avoiding "truly bad outcomes" in an environment of great uncertainty. In effect, the burden of justification would then fall on those willing to accept the longer-term risks attendant on policies that deviated sharply from historical norms. And the identification issue would clearly benefit from more research on what seems, unfortunately, to be a steadily expanding historical data set of financial crises.

What specific impediments would prevent regulators from operating as the new framework would suggest? One problem is that, after decades of

focusing on individual institutions, some might not share the belief that financial instability can emerge even if individual institutions seem healthy. A second is that they generally do not have the powers ascribed to them above. Concerning the former, the culture of regulators has already changed dramatically, and could change further given more regular interaction with other parties involved with these systemic questions. And as to the latter, powers could be obtained if legislators became convinced of the desirability of granting them. While this might seem unlikely, recall that during the 1960s and 1970s there was very little public support for fighting inflation. Yet today, the desirability of such policies is almost universally acknowledged.

What are the specific impediments that would prevent central bankers from operating as the new framework would suggest? The first and most important one is that it could be seen to conflict with the desire to stabilise inflation at a low positive level, as would be the case if inflation were under control but the new framework suggested that policy should be tightened. Perhaps the first question to ask is whether maintaining low positive inflation really is desirable in the face of ongoing positive supply shocks. This analytical issue was debated vigorously in the interwar period and deserves to be readdressed. But even assuming this objective is maintained, it would not seem so difficult to adapt current inflation-oriented regimes to reflect concerns about internal financial imbalances. Leaning against financial excesses, at initially low inflation levels, is equivalent to leaning against deflation over the longer horizon needed for the excesses to unwind. In practice, a central bank might normally conduct policy as it does today. However, it would also make clear, through its public monitoring of financial vulnerability indicators, that policy would occasionally have to be conducted in a way that reflected these longer-term concerns about price stability.

Towards an international macrofinancial stabilisation framework?

In a sense, it is odd that domestic financial imbalances are not higher on policymakers' list of priorities since international imbalances have been a source of concern for centuries. Indeed, earlier versions of the international monetary system were all designed to prevent such imbalances from getting dangerously out of hand. For example, the gold standard incorporated a process (not always smooth) of automatic adjustment of trade imbalances. Against the backdrop of the so-called "impossible trinity", countries retained a fixed exchange rate and free capital flows but had to give up monetary independence in the interests of systemic discipline. Under the Bretton Woods system, they kept fixed exchange rates and independent monetary policies but gave up free capital flows. The IMF essentially played the role of referee, disciplining in particular countries running large external deficits. Subsequently, after increasingly free capital flows brought an end to the Bretton Woods system, floating exchange rates were assumed to be the mechanism through which trade imbalances would be reduced before they attained disorderly proportions. Given the size of recent current account imbalances, dominated by the current account deficit of the United States, this last supposition is being increasingly challenged. As noted above, the principal concerns are that a sharp

decline in the demand for dollar-denominated assets might generate instability in global financial markets, or that protectionist pressures might multiply.

This raises the question of which characteristics of the current international monetary and financial system have contributed to this outcome, and how they might be changed to avoid future problems. The underlying issue seems to be that we no longer have a system that somehow forces countries to alter their relative degrees of domestic absorption, and associated exchange rates, so as to reduce external imbalances in an orderly way. A number of important creditor countries, particularly in Asia, have taken significant steps to hold down the value of their currencies against the dollar, thus impeding the needed downward adjustment of the dollar in effective terms. In sum, we do not really have a floating rate system. But, by the same token, we are far removed from the Bretton Woods system as well. IMF adjustment principles have never held much sway over creditor countries, and this is arguably even more the case today. While it is logically possible that policy measures consistent with resolving domestic imbalances in both creditor and debtor countries might resolve external imbalances as well, this should not be assumed. In any event, it is not likely to happen. This leads on to the question of whether there are institutional changes that might be recommended to strengthen the international adjustment process. Three possibilities might be considered.

First, one might contemplate going back to a more rule-based system. Several academics have suggested the establishment of a single international currency. In the context of the impossible trinity, this would imply national authorities relinquishing domestic monetary control and moving away from still existing capital controls. A more realistic recommendation might be to have a small number of more formal currency blocs (say, based on the dollar, euro and renminbi/yen), but clearly they would have to float more freely against each other. Nor would such a system avoid the possibility of excessive capital flows, based on misguided optimism about one currency bloc or another, leading to disruptive exchange rate changes and associated international resource misallocations. At the practical level, Asian economies seem to be establishing more formal contacts and procedures for regional monetary cooperation. However, they are still far from anything like the exchange rate arrangement which preceded the euro, much less a single currency.

A second possibility could be to revert to a system more like that of Bretton Woods. History teaches that this would only work smoothly if there were more controls on capital flows than is currently the case, which would entail its own costs. Moreover, the IMF would have to be given substantially more power to force both creditors and debtors to play their role in the international adjustment process. This might, in turn, reduce the incentives for countries to build up massive reserve holdings as a form of self-insurance. Needless to say, persuading countries, particularly large ones, to voluntarily give up sovereignty in this fashion would not be easy.

Third, and most promising in the real world, consideration could be given to informal cooperative solutions, recognising interdependencies and the need to avoid circumstances that could lead to systemic disruptions. At the very least, this would require large creditor countries to share views with debtors

on an ongoing basis as to whether problems were emerging and, if so, what policies might help resolve them. In the framework of the impossible trinity, this would imply that, at various times, national policymakers would have to agree to constraints on certain aspects of their behaviour. However, similar to dealing with internal imbalances, the impediments to action arising from different perceptions of systemic risk, different cultures and analytical models, and simple national interest ("turf wars") should not be underestimated.

To sum up, all policy choices involve trade-offs and judgment, and policy in the area of macrofinancial stability is no exception. On the one hand, the more stable macroeconomic environment we have experienced over the last 20 years and the policy framework that has nurtured it have yielded unquestionable benefits. On the other hand, evidence of emerging strains is not difficult to find and future problems cannot be ruled out. What is being suggested here is that financial imbalances, both domestic and international, need more systematic attention, and that this might be accomplished through an evolutionary adaptation of the current policy framework. While there are clearly impediments to this happening, those who believe that there is a problem that needs fixing would not consider them insuperable.

Contents

Organisation, governance and activities

This chapter provides an overview of the internal organisation and governance of the Bank for International Settlements (BIS). It also reviews the activities of the Bank, and of 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 on the provision of financial services to central bank customers.

Organisation and governance of the Bank

The Bank, its management and shareholders

The BIS is an international organisation that fosters international monetary and financial cooperation and serves as a bank for central banks. Its head office is in Basel, Switzerland, and it has two representative offices, one in the Hong Kong Special Administrative Region of the People's Republic of China and one in Mexico City. The Bank currently employs 560 staff from 49 countries.

The BIS fulfils its mandate by acting as:

- a forum to promote discussion and facilitate decision-making among central banks and to support dialogue with other authorities with responsibility for financial stability;
- a centre for economic and monetary research;
- a prime counterparty for central banks in their financial transactions; and
- an agent or trustee in connection with international financial operations.

The Bank also hosts the secretariats of a number of committees and organisations that seek to promote financial stability:

- The Basel Committee on Banking Supervision, the Committee on the Global Financial System, the Committee on Payment and Settlement Systems and the Markets Committee were established by the Governors of the G10 central banks over the past 40 years. They enjoy a significant degree of autonomy in setting their agendas and structuring their activities.
- The Financial Stability Forum, the International Association of Insurance Supervisors and the International Association of Deposit Insurers are independent organisations that do not directly report to the BIS or its member central banks.

Details of the role and recent activities of these committees and organisations are provided below.

The Bank has three main departments: the Monetary and Economic Department, the Banking Department and the General Secretariat. These are supplemented by the Legal Service, the Compliance, Internal Audit and Risk

Control units, and the Financial Stability Institute, which fosters the dissemination of standards and best practices to financial system supervisors worldwide.

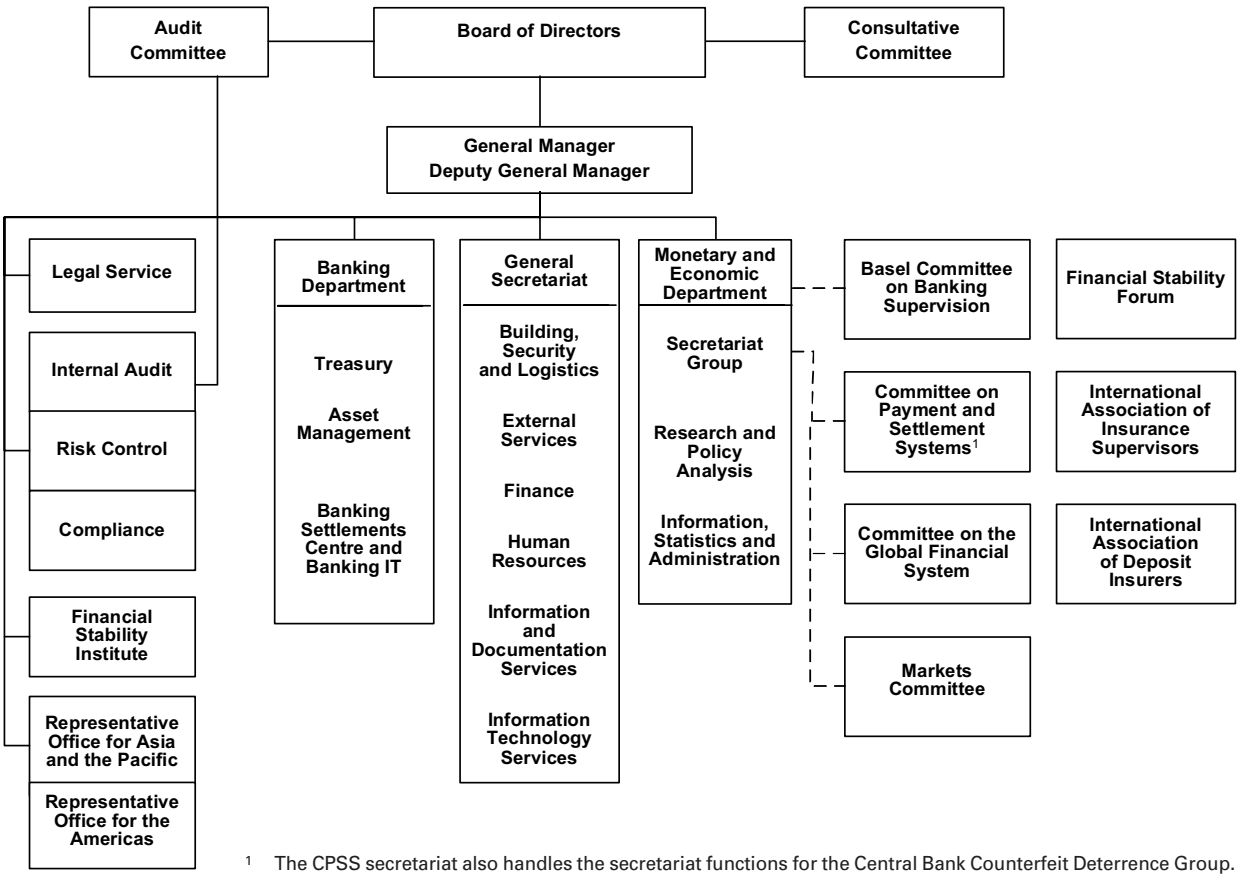
There are three main bodies for governing and administering the Bank:

- the General Meeting of member central banks. Fifty-five central banks or monetary authorities currently have rights of voting and representation at General Meetings. The Annual General Meeting is held within four months of the end of the Bank's financial year, 31 March. In 2004, 113 central banks took part, including 93 at Governor level. Delegates from 19 international institutions also attended;
- the Board of Directors, currently comprising 17 members. Its main tasks include determining the strategic and policy direction of the Bank and supervising the Bank's Management. The Board is assisted by the Audit Committee and the Consultative Committee, composed of selected Directors;
- the Executive Committee, chaired by the General Manager and comprising the Deputy General Manager, the Heads of Department and other officers of similar rank appointed by the Board. The Executive Committee advises the General Manager on all important matters affecting the Bank as a whole.

In the past year, the Bank undertook a review of its governance to determine how far it is consistent with current principles of sound corporate governance, taking due account of the specific features and missions of the BIS as an international organisation. The review identified some divergences between the Bank's Statutes and its current governance practice, resulting in a lack of transparency as to the allocation of responsibility for decision-making at the Bank. Subsequently, a committee consisting of selected Board members was set up by the Board to make concrete proposals. The committee recommended a number of amendments to the Bank's Statutes, which the Board endorsed. The amendments are principally intended to make the Bank's governance more transparent by bringing the Statutes into line with existing governance practice. On the proposal of the Board, these amendments will be submitted for approval by the member central banks at an Extraordinary General Meeting to be held on the same date as the Bank's 2005 Annual General Meeting.

Member central banks, Directors and senior officials, and recent changes in the composition of the Board and Management are listed at the end of this chapter.

Organisation of the BIS as of 31 March 2005



[1] The CPSS secretariat also handles the secretariat functions for the Central Bank Counterfeit Deterrence Group.

Promotion of international financial and monetary cooperation: direct contributions of the BIS during 2004/05

75 years of central bank cooperation

2005 sees the 75th anniversary of the founding of the BIS. The Bank was established pursuant to the Second Hague Conference on 20 January 1930 and officially commenced operations in Basel on 17 May 1930. The BIS is marking the occasion with a number of special events. In May the Cambridge University Press published *Central bank cooperation at the Bank for International Settlements, 1930–1973*, an independent study commissioned by the BIS in 1999 from Gianni Toniolo (Professor of Economics at the Università di Roma Tor Vergata, Italy), assisted by Piet Clement (Historian at the BIS). In connection with the publication of this book, the Bank is organising a private academic conference, *Past and future of central bank cooperation*.

The Bank is also mounting its first ever public exhibition, entitled "this is the biz" (a play on the German abbreviation for BIS). The two-week exhibition in the Bank's Tower premises in Basel explores the origins of the BIS, traces its development from a largely European to a global institution and illustrates

its role today in fostering cooperation among central banks and other official bodies responsible for monetary and financial stability.

Regular consultations on monetary and financial matters

Every two months, the Governors and other senior officials of the BIS member central banks convene for a series of meetings to discuss current economic and financial developments and the outlook for the world economy and financial markets. They also exchange views and experiences on issues of special and topical interest to central banks. These bimonthly meetings are one of the most important ways in which the Bank promotes cooperation within the central banking community. In addition, the Bank organises various other meetings, on a regular or an ad hoc basis, for senior central bank officials. In a number of these meetings, other financial authorities, the private financial sector and the academic community are invited to contribute to the dialogue.

The Global Economy Meeting, which brings together the Governors of key industrial and emerging market economies, monitors economic and financial developments and assesses the risks and opportunities in the world economy and financial markets. The meetings of Governors of the G10 countries and those of Governors of key emerging market economies – the latter initiated in March 2005 and expected to convene three times a year – often explore conjunctural themes that are of special relevance to the respective groups of economies. The G10 Governors also discuss issues pertaining to the work of the permanent central bank committees hosted by the Bank.

Because not all central banks are directly involved in the work of the committees and other organisations hosted by the Bank, a periodic Review Meeting for Governors was initiated in January 2004 to brief them on the activities of these specialised groupings. On occasion, the Review Meeting also explores a topic of direct importance to this group of central banks. In 2004/05 Governors discussed:

- The changing interest rate environment in emerging market economies
- Central banks and the insurance industry
- Basel II implementation issues
- Detecting vulnerabilities in the emerging market economies
- Central banks and the prevention of banknote counterfeiting
- The BIS international financial statistics

Finally, issues of a more structural nature and of general interest to all BIS member central banks were discussed in the All Governors Meetings:

- The evolving role of credit rating agencies in financial markets
- "Excess" global liquidity: a problem with policy implications?
- How much capital do central banks need?
- The design and operation of monetary policy decision-making bodies
- Is a new order for the global monetary system emerging?

In analysing issues related to financial stability, Governors attach importance to dialogue with heads of supervisory agencies, other financial authorities and senior executives from the private financial sector. The Bank regularly organises

informal discussions among public and private sector representatives that focus on their shared interests in promoting and maintaining a sound and well functioning financial system. Particular highlights last year were discussions of the implications of the growth of hedge funds for the financial industry and the shift in commercial banks' focus towards retail business.

Other meetings organised for senior central bankers on a less frequent basis include:

- the biannual central bank economists meeting, which in October 2004 examined the relationship between exchange rates and monetary policy;
- the meetings of the working parties on domestic monetary policy, which are not only held in Basel but are also hosted by a number of central banks in Asia, central and eastern Europe, and Latin America; and
- the meeting of Deputy Governors of emerging market economies, for which this year's theme was foreign exchange market intervention.

Other areas of central bank cooperation promoted by the BIS

Research activities

In addition to providing background material for meetings of senior central bankers and secretariat services to committees, the BIS contributes to international monetary and financial cooperation by carrying out its own research and analysis of issues of interest to central banks and, increasingly, financial supervisory authorities. This work finds its way into the Bank's regular publications, such as the *Annual Report*, the *Quarterly Review* and the *BIS Papers* and *Working Papers* series, as well as external professional publications. Most of the Bank's research is published on its website (www.bis.org). Themes addressed during the past year included:

- the measurement and pricing of credit risk as it relates to individual borrowers, the financial sector and countries as a whole ("country risk"), and as reflected in the decisions of individual financial firms and markets more generally;
- the behaviour of property prices, especially residential real estate prices, and their implications for the macroeconomy and the financial sector; and
- the need for coordination between monetary and prudential policies.

The BIS again organised special events to strengthen contacts with the academic community. In June 2004, it hosted a conference on "Understanding low inflation and deflation", highlighting the economic forces behind these developments and their policy implications. In September, it held a workshop on "The pricing of credit risk", taking stock of the latest developments in this area.

A new international initiative during the year was the creation of a new economic publication, the *International Journal of Central Banking*, sponsored widely within the central banking community, including by the BIS. The primary goal of the journal is to enhance the dissemination of high-quality, policy-relevant research on central banking subjects by both central bank researchers and other scholars. The inaugural issue was published in May 2005.

Cooperation in the statistical area

Last year, the BIS coordinated the fifth triennial survey of foreign exchange and derivatives market activity, with a total of 52 central banks participating. The survey provides extensive location-based data on turnover in these markets in April 2004, as well as data on consolidated amounts outstanding at end-June 2004. The final detailed report was released in March 2005.

The BIS also worked with the G10 central banks, whose banks are active players in the over-the-counter (OTC) derivatives markets, to improve the semiannual collection, compilation and publication of aggregate data on these markets. Data collection on credit default swaps began at the end of 2004. The BIS also began to report data on the concentration of trading activities in the various segments of the OTC markets as from the end of 2004.

Discussions took place with a number of additional central banks and monetary authorities, including from offshore centres, on joining the 38 that currently report aggregate national data on the international lending and borrowing activities of the internationally active banks in their jurisdictions. These statistics are reported on a balance of payments basis as well as on a worldwide consolidated basis, in the latter case providing more detailed information on ultimate risk exposure, including off-balance sheet data, as from the end of 2004.

The geographical coverage of domestic securities issuance now includes five new reporting countries, bringing the total to 47. Moreover, the BIS has agreed to participate in the ECB's Centralised Securities Database, the information in which will complement the data on the 700,000 individual international securities already included in the BIS database.

The BIS banking and securities data form part of the Joint External Debt Statistics, which bring together data on individual countries' external debt available from creditor sources. Last year, the Inter-Agency Task Force on Finance Statistics, in which the BIS participates, worked on the creation of a new Joint External Debt Hub that combines improved creditor-based external debt statistics with external debt data from debtor countries.

Detailed data from the BIS international statistics are made available to the participating central banks in electronic form through the BIS Data Bank, which also includes comprehensive national data on other economic, monetary and financial variables. Last year, two more central banks became active members of the Data Bank, which now covers 34 BIS member central banks in all major regions of the world. The topical coverage of the Data Bank also continued to expand, with additional focus on financial accounts data, macroprudential indicators and real estate prices. In early 2005 all other BIS member central banks were invited to report on a limited number of key statistical indicators for their country through the BIS Data Bank.

The second conference of the Irving Fisher Committee on Central-Bank Statistics (IFC) was held at the BIS in September 2004. The conference focused on price indices; output, output gaps and productivity; and financial accounts. The proceedings were published in various IFC Bulletins. The proceedings of a joint BIS/IMF conference on real estate indicators for financial stability analysis were published in April 2005 in the *BIS Papers* series.

Significant progress was made in international cooperation on electronic standards for statistical information exchange. The Statistical Data and Metadata Exchange (SDMX) initiative, in which the BIS works together with the ECB, Eurostat, IMF, OECD, UN and World Bank, reached agreement on the first version of a set of standards for the web-based exchange of statistical information. The standards were published in September 2004 on the SDMX website (www.sdmx.org) and were approved in April 2005 as a technical specification by the International Organization for Standardization (ISO), thereby anchoring them within the international standards community. Discussions were started with XBRL International, which has developed similar standards for accounting information, in order to ensure that the emerging frameworks for exchanging statistical and accounting data are as compatible as possible.

Central bank governance

The Bank's activities in this area are aimed at enhancing the institutional design and operation of central banks as public policy institutions. In carrying out this work, it is recognised that each country's arrangements need to reflect its economic, institutional and historical context. These activities are under the aegis of the Central Bank Governance Group, which discusses related issues at a senior level and oversees the data collection undertaken through the Network on Central Bank Governance.

The Governance Group is a representative group of Governors from a broad range of central banks. Other central bank Governors are invited from time to time to discuss matters of specific interest to them. During the past year, the Group considered inter alia the services central banks provide to government, the nature of the financial risks that central banks face and how they manage them, and the legal protection central banks need to fulfil their mandates. As advocated by the Governance Group, the Bank prioritises governance questions that are critical for the effective operation of independent and accountable monetary authorities.

The Governance Network now spans more than 45 major central banks and monetary authorities around the world. Members contribute actively to efforts to bring together information on central bank mandates, powers, operations and accountability arrangements that can be used by central banks to strengthen their institutions.

Group of Computer Experts of the G10 central banks

In June 2004, the 12th triennial "Automation Days" conference of the Group of Computer Experts was held, hosted by the Swiss National Bank. Presentations and discussions at the conference centred on information technology (IT) management and organisation, security issues, software sourcing and information management. A number of trends are evident:

- There is an increasing focus on identifying and implementing more effective IT governance mechanisms.
- Despite the significant risks involved, central banks are making growing use of the internet to provide information to external customers and other organisations.

- Outsourced solutions are increasingly being chosen to meet greater demand for systems and services while respecting headcount constraints.
- Many central banks are adopting information management systems, with a particular technical and organisational challenge being the implementation of document management technology.

Other topics dealt with at the Group's semiannual meetings included business continuity planning, IT strategy (and its consequences for IT organisation) and mayor ongoing or planned infrastructure and application projects.

With its focus on IT security, the work of the Working Party on Security Issues makes an important contribution to the overall activity of the Group of Computer Experts. During the past year, for example, the Working Party prepared an in-depth report on security concerns raised by the rapid increase in the use of mobile equipment such as laptops and handheld devices by central bank staff.

Internal Audit

Since 1986, G10 central bank auditors have met regularly to exchange professional experience and knowledge, and to address new issues and challenges. Discussions are generally related to international internal auditing standards and the ongoing need to enhance central banks' risk control. Twice a year, the BIS's Internal Audit unit hosts and organises the meetings of the G10 Working Party on IT Audit Methodologies.

In June 2004, the BIS participated in the 18th Annual Conference of G10 Heads of Internal Audit, hosted by the Bank of Italy and covering in particular the role of internal audit in fostering ethics and ethical awareness in an organisation; the implications of the Sarbanes-Oxley Act; the consulting role of internal audit; the role of internal audit for IT governance; and the auditing of business continuity management.

Following several meetings of internal audit heads from Asia-Pacific central banks and monetary authorities, BIS Internal Audit has established a network of contact and information sharing with these institutions.

Cooperation with regional central bank groupings

Cooperation with various regional central bank groupings offers a useful platform for disseminating information and for developing relations with central banks that do not otherwise participate directly in BIS activities. Accordingly, the Bank organised a variety of joint events with regional groups including:

- a number of meetings with South East Asian Central Banks (SEACEN), in which several BIS speakers participated;
- a joint meeting with the central banks of the Southern African Development Community (SADC) in early 2005; and
- occasional joint events with the Centro de Estudios Monetarios Latinoamericanos (CEMLA); the BIS also provided speakers for CEMLA seminars and workshops.

The BIS continued to support the Centre Africain d'Études Supérieures en Gestion (CESAG), as part of a programme sponsored by, amongst others,

the Bank of France, the Central Bank of West African States (BCEAO) and the Bank of Central African States (BEAC). A number of BIS experts were also delegated to training events run by the Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI). In line with the original agreement, the BIS ceased to be a formal member of the Joint Vienna Institute (JVI) as from August 2004. However, the Bank continues to organise occasional seminars at the JVI for central banks from transition economies.

In addition to their regular annual meeting, the Group of Coordinators of Technical Cooperation and Training organised a one-off meeting of global providers of training to central banks. This meeting took place in Basel in November 2004 and attracted representatives from over 40 institutions providing such support.

Central Bank Research Hub

The BIS website has for many years carried a list of central banks, with links to their websites. In 2004, the BIS introduced the Central Bank Research Hub, a facility that enables internet users to access research published by central banks via the BIS website. These papers can be retrieved using multiple search criteria and automatically delivered through an e-mail notification service. All BIS member central banks have been invited to share their research efforts via the Hub, and thus far central banks from 25 countries have become participants.

Representative Offices

The Representative Office for Asia and the Pacific (Asian Office) and that for the Americas (Americas Office) serve as centres for BIS activities in their respective regions. The Offices aim to strengthen relations and promote cooperation between the BIS and regional central banks and supervisory authorities. To that end, the Offices foster the exchange of information and data, facilitate the organisation of meetings and seminars, and contribute to the Bank's financial and economic research on Asia and the Americas. Research topics last year included trends in regional capital flows, regional currency and non-deliverable forwards markets, the domestic implications of large foreign exchange reserves, and the micro structure of Asian financial markets.

The Offices also support BIS banking services in the Asia-Pacific region and the Americas, and provide assistance through regular visits to reserve managers of central banks. The regional treasury dealing room established in the Asian Office in 2000 further enhances the level and scope of banking services to regional customers through its daily trading activities.

In December 2004, the BIS was appointed as the administrator for the investments of the 11 Executives' Meeting of East Asia-Pacific Central Banks (EMEAP) members in a second Asian Bond Fund, ABF2. The fund will pool international reserves from the central banks and invest in domestic currency bonds issued by sovereign and quasi-sovereign borrowers in eight EMEAP economies. The Bank had already been selected in June 2003 to manage a

first Asian Bond Fund, which has similarly pooled reserves from the EMEAP central banks but has limited its investments to bonds denominated in US dollars. To handle the work involved, Bank staffing in Hong Kong has been strengthened significantly. The Asian Office has also supported the effort by providing analytical work on bond markets in the region.

The Asian Consultative Council (ACC), a forum for communication between shareholding central banks in the region and the Board and Management of the BIS, met once in Basel (in June 2004) and again in Hong Kong (in February 2005). Immediately following the ACC meeting in Hong Kong, the seventh Special Meeting of Asian central bank Governors, with the participation of some central bank Governors from outside the region, reviewed the current economic situation and discussed issues related to increasing household indebtedness in the region.

The Asian Office hosted or supported several meetings on specific topics pertaining to monetary policy and financial stability:

- the third meeting of central bank experts on monetary policy operating procedures (April 2004);
- the eighth and ninth meetings of the EMEAP Forum on foreign exchange markets (June and December 2004);
- two meetings on financial stability co-hosted with the Financial Stability Institute and the Basel Committee respectively (July and September 2004);
- two meetings in Beijing, on China's opening of its financial sector and on effective exchange rates (March 2005).

The Americas Office focused its activity during its second year of operation on expanding its contacts with central banks in the region and cooperating more closely with regional central banking groups and supervisory authorities. The Office also hosted or supported a series of high-level meetings in Mexico City and elsewhere, sometimes jointly with regional central banks and other institutions:

- an outreach meeting of the Committee on the Global Financial System on foreign direct investment in the Latin American financial sector (June 2004);
- a meeting of the Working Party on Monetary Policy in Latin America (October 2004);
- a discussion forum on the implementation of Basel II, with regional heads of banking supervision and representatives of the private sector and international financial institutions (December 2004);
- a meeting of regional reserve managers (November 2004);
- a meeting of central bank lawyers from the region (February 2005);
- a meeting on financial integration and monetary policy for open economies (March 2005).

Financial Stability Institute

The Financial Stability Institute (FSI) assists banking and insurance sector supervisors worldwide in improving prudential supervision. To that end, it works to disseminate standards and sound practices, and provides support on a wide range of supervisory topics.

Much of the FSI's outreach is achieved through a programme of high-level meetings, seminars and conferences, both in Basel and at locations around the world. These events offer an opportunity for information sharing, as well as fostering cross-border supervisory contacts and cooperation. In recognition of the continued growth of financial conglomerates and issues related to risk transfer, the Institute also brings together banking and insurance sector supervisors to address topics of mutual concern. During 2004, the FSI organised 56 events on a variety of supervisory topics. Close to 2,000 representatives of central banks and banking and insurance supervisory agencies from all regions of the world participated. In view of the ongoing efforts in many jurisdictions to implement the new Basel II capital adequacy framework, the FSI initiated a series of high-level meetings to promote information exchange among the relevant supervisory authorities on implementation issues and plans.

July 2004 saw the launch of FSI Connect, an online information and learning resource tool for banking supervisors. FSI Connect currently includes more than 80 tutorials covering a wide range of topics for supervisors of all levels of experience and expertise. Further topics will be added and existing tutorials updated periodically. FSI Connect complements the FSI's other activities and will enable the Institute to reach a wider audience of financial sector supervisors. More than 85 central banks and supervisory authorities from approximately 75 jurisdictions currently subscribe to FSI Connect.

Promotion of financial stability through the permanent committees

Basel Committee on Banking Supervision

The Basel Committee on Banking Supervision, under the chairmanship of Governor Jaime Caruana of the Bank of Spain, works to strengthen banking supervisory frameworks, to promote the advancement of risk management in the banking industry and to help improve financial reporting standards.

Implementation of the new international capital standard

The new international framework for regulatory capital standards (commonly referred to as "Basel II") was published in June 2004. Basel II sets out the details of the agreed framework for measuring capital adequacy and the minimum standard to be achieved, which the national supervisory authorities represented on the Committee will propose for adoption in their respective countries starting from 1 January 2007.

When releasing Basel II, the Committee emphasised its intention to maintain its active dialogue with the industry to ensure that the new framework keeps pace with, and can be applied to, ongoing developments in the financial services sector. Given that securities firms as well as banks are interested in the treatment of certain trading activities under Basel II, the Committee has worked with representatives of the International Organization of Securities Commissions (IOSCO) to design proposals that address the issues identified in a prudent and risk-sensitive way. These proposals were released in April 2005 for a seven-week consultation period.

Consistent implementation of Basel II across borders through enhanced supervisory cooperation will become a critical and challenging task in the years ahead. To encourage collaboration and shared approaches, the Committee's Accord Implementation Group (AIG) serves as a forum on implementation matters. One of the main tools that the AIG has used to promote more effective cross-border implementation of Basel II is the development of "real case studies", which have in most instances become actual implementation plans. The primary role of these case studies is to help home and host supervisors gain experience in implementing Basel II on a practical, case by case basis. The AIG is also working on other relevant areas of Basel II implementation, including validation, operational risk and Pillar 2.

Many national supervisors who are not represented in the Committee have already begun to evaluate the suitability of the new framework for banks in their jurisdiction and to plan for the transition to Basel II. In order to further this process, a paper entitled *Implementation of Basel II: practical considerations* was published in July 2004.

Work on accounting, auditing and compliance

Over the past year, the Basel Committee's accounting-related activities have been dominated by efforts to resolve differences of view on the International Accounting Standards Board's (IASB) fair value option. Agreement was reached in early 2005, and the IASB has now approved and issued a final standard which addresses the Committee's essential concerns. The Committee has also taken an active interest in the IASB's project to enhance financial instrument disclosures. Financial reporting transparency will include greatly enhanced disclosures of financial risks and related risk management practices, broadly similar to the principles and requirements under Pillar 3 of Basel II.

For several years the Committee has been actively engaged in the development of a Public Interest Oversight Board (PIOB) to oversee international standard-setting activities undertaken by the International Federation of Accountants (IFAC). The PIOB held its first formal meeting on 1 March 2005. The Committee will monitor and assess the PIOB's performance over the near term.

In response to a rapidly growing need for guidance in the area of compliance, the Committee published, in April 2005, a guidance paper on principles and sound practices for compliance within a regulated banking environment. This paper focuses on maintaining an effective compliance function and underlines the importance of adopting structures, procedures and controls that are appropriate to the organisation and its particular risk profile.

Other issues in banking supervision

As part of its efforts to enhance risk management in banks, the Committee issued *Principles for the management and supervision of interest rate risk*. It also published *Consolidated KYC* (*know your customer*) *risk management*, aimed at providing guidance for banking groups on how to implement an effective group-wide KYC risk management process. The Committee, in collaboration with the principal non-G10 countries, the IMF and the World

Bank, is currently revising the *Basel Core Principles for Effective Banking Supervision* first published in 1997 and the accompanying *Core Principles Methodology* published in 1999. In addition, a working group has been established to review the Committee's guidance on corporate governance. Finally, the Committee, jointly with the Bank of Spain, sponsored the International Conference of Banking Supervisors (ICBS) in September 2004, which was attended by bank supervisors from over 120 countries.

Committee on the Global Financial System

The Committee on the Global Financial System (CGFS), which is chaired by Roger W Ferguson Jr, Vice Chairman of the Board of Governors of the Federal Reserve System, monitors developments in global financial markets for the central bank Governors of the G10 countries. The Committee has a mandate to identify and assess potential sources of stress in global financial markets, to further the understanding of the structural underpinnings of financial markets, and to promote improvements to the functioning and stability of these markets. It fulfils this mandate by way of quarterly monitoring discussions among CGFS members and through coordinated longer-term efforts, including working groups involving central bank staff.

In addition to senior officials from the G10 central banks and the ECB, representatives of a number of central banks from major economies and financial centres regularly attend Committee meetings. In 2005, the People's Bank of China and the Reserve Bank of India began attending.

Monitoring discussions

The Committee's monitoring discussions focused on the broad patterns of macroeconomic and financial market developments over the year. Recurring, interrelated themes were:

- the impact on financial markets of current international imbalances and how possible adjustments might affect the global financial system;
- central bank "exit strategies" from low and stable policy rates or fixed and quasi-fixed exchange rate commitments, including challenges for communication policy and implications for financial markets;
- developments in oil trading and the consequences of elevated medium-term oil prices for growth and inflation;
- forces driving position-taking and pricing in financial markets in a context of ample global liquidity;
- reasons for and implications of historically low levels of forward-looking volatility measures across markets, even in the presence of heightened macroeconomic and financial uncertainties.

Working groups and similar exercises

In January 2005, the CGFS published two working group reports. The first of these, on the role of ratings in structured finance, explores the rapidly evolving markets for structured finance instruments, the central role played by the rating agencies, and the implications for market participants and policymakers.

With its focus on structured finance, the report complements earlier CGFS work in the area of credit risk transfer. The other report, summarising stress testing practice at major financial institutions, includes a survey of stress tests conducted in May 2004. This survey also builds on earlier work by the Committee and furthers its understanding of the vital role played by stress tests in risk management operations.

Further to its March 2004 working group report on foreign direct investment in the financial sector of emerging market economies, the Committee conducted regional follow-up workshops in Korea, Mexico and Poland with central bank officials and market practitioners from these three regions. The CGFS also continued its discussions of the characteristics of various national mortgage markets. A working group on this topic, established in November 2004, is expected to report back to the Committee later this year. Inter alia, the group will explore the significance for housing finance of the introduction of new financial technologies and their implications for national and international financial markets.

In the area of hedge funds, a study group reported on the suitability of commercial hedge fund databases for use in central banks' research and surveillance efforts. In addition, using a reporting template designed by the CGFS, the BIS semiannual OTC derivatives survey has recently been extended to include information on reporters' activities related to credit default swaps.

Committee on Payment and Settlement Systems

The Committee on Payment and Settlement Systems (CPSS) contributes to strengthening the financial market infrastructure through promoting sound and efficient payment and settlement systems. The Committee has further enhanced its cooperation with other international institutions and groupings, and has involved an increasingly wide group of central banks in its activities. Tommaso Padoa-Schioppa, Member of the Executive Board of the ECB, was chairman of the Committee until his retirement on 31 May 2005. He is succeeded as CPSS chairman by Timothy F Geithner, President and Chief Executive Officer of the Federal Reserve Bank of New York.

In November 2004, the CPSS and the IOSCO Technical Committee released a report on *Recommendations for Central Counterparties*. It sets out comprehensive standards for risk management of a central counterparty (CCP) in 15 headline recommendations with accompanying explanations. The report also includes a methodology for assessing the implementation of the recommendations, which identifies key issues and questions and provides guidance on assigning an assessment category. A consultative version of the report was issued in March 2004 and the final publication benefited from substantial input from central banks and securities regulators, as well as operators of and participants in CCPs.

A CCP interposes itself between counterparties in financial transactions, becoming the buyer to the seller and the seller to the buyer. A well designed CCP with appropriate risk management arrangements reduces the risks faced by its participants and contributes to the goal of financial stability. A CCP,

however, also concentrates risks and responsibilities for risk management. Therefore, the effectiveness of a CCP's risk control and the adequacy of its financial resources are critical aspects of the infrastructure of the markets it serves.

The Committee also worked during the period under review on the preparation of three other reports – *Central bank oversight of payment and settlement systems*, *General guidance for payment system development* and *New developments in large-value payment systems* – which were published in May this year.

Another part of the Committee's activity relates to the implementation of its strategy, endorsed by the G10 Governors in 1996, to mitigate foreign exchange settlement risk. To this end, it monitors and encourages private sector initiatives in this area.

Finally, the Committee also provides 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 Markets Committee, chaired by Sheryl Kennedy, Deputy Governor of the Bank of Canada, groups senior officials from the G10 central banks responsible for market operations. Its bimonthly meetings provide an opportunity for participants to exchange views on recent developments and structural changes in foreign exchange and related financial markets as well as to consider the short-run implications of particular current events for the functioning of these markets. From time to time, the Committee invites representatives from major countries to join the discussions; in the second half of 2004 the People's Bank of China participated for the first time.

Issues covered in the meetings included:

- reasons for recent large movements in the major bilateral exchange rates;
- the low level of both nominal yields and implied volatility in the major bond markets and the impact of the "search for yield" on credit spreads;
- the financial market impact of foreign exchange reserve accumulation; and
- information sharing among central banks.

Other topics discussed over the year included the effect of the increased presence of hedge funds in financial markets, the financial market impact of changes in pension fund regulations, monetary policy implementation issues and the influence on market functioning of the growth of electronic trading platforms.

Central Bank Counterfeit Deterrence Group

The Central Bank Counterfeit Deterrence Group (CBCDG) is mandated by the Governors of the G10 central banks to investigate emerging threats to the security of banknotes and to propose solutions for issuing authorities. The CBCDG has developed anti-counterfeiting features to prevent banknote images from being replicated by colour copiers and digital technology

(personal computers, printers and scanners). The BIS supports the work of the CBCDG by hosting its secretariat and acting as its agent in contractual arrangements.

BIS contributions to broader international financial cooperation

Group of Ten

The Bank contributes actively to the work of the G10 Finance Ministers and central bank Governors, their Deputies and the activities taking place under their auspices both by participating in meetings as observer and by providing secretariat support together with the IMF and OECD.

In their communiqué issued in October 2004, G10 Ministers and Governors noted that it was important for the IMF to have a strong financial position in order for it to fulfil its responsibilities. Surveillance, conditionality, programme monitoring, debt sustainability analysis in lending decisions, and adherence to the recently agreed exceptional access framework were seen as key elements in this respect.

Another focus of the work of the G10 was on the use of collective action clauses by sovereign bond issuers. The growing tendency of sovereign issuers to include majority action provisions in their bond contracts helps provide an effective means for creditors and debtors to recontract in the event of need. However, debt contracts generally do not yet include provisions that foster early dialogue and communication among creditors and sovereigns or effectively block litigation by individuals.

Finally, in its ongoing work on pensions finance, the G10 is examining the implications of ageing and pensions reform for financial markets.

Financial Stability Forum

The Financial Stability Forum (FSF), established in 1999, promotes international financial stability through enhanced information exchange and cooperation in financial supervision and surveillance. Its principal remit is to assess conjunctural and structural vulnerabilities affecting the international financial system and to encourage and coordinate action to address them. The FSF comprises senior officials from ministries of finance, central banks and financial regulators in key financial centres, as well as representatives of international financial institutions, international supervisory and regulatory standard-setting bodies and central bank expert groupings. More information on the FSF is available at www.fsforum.org.

The FSF meets twice yearly in plenary form, most recently in September 2004 in Washington DC and March 2005 in Tokyo. At these meetings, members discussed macroeconomic and financial developments, the resilience of financial institutions and potential risks to financial stability. They also reviewed international efforts to strengthen financial systems and considered ways to promote these efforts. Specific topics addressed during the year under review were the exposure of the financial system to unexpected shifts in risk

appetite and risk-taking, credit risk transfer activity, household risk exposures, the growth of the hedge fund industry and the transparency of the reinsurance sector.

Recently, the FSF has been seeking ways to improve the implementation of regulatory standards in the banking, securities and insurance sectors. In April 2005, the FSF secretariat convened a meeting of standard setters, assessors and national authorities to prepare a review of progress in the implementation of standards and codes, including setting priorities in standards assessments and the availability of resources to assist implementation.

The FSF has also continued to launch and support initiatives to strengthen accounting and auditing standards and practices. With respect to audits, in September 2004 the Forum convened a first meeting of the heads of the newly established independent national auditor oversight bodies in a number of countries. The meeting discussed experiences in setting up new oversight structures, common challenges such as approaches to audit quality inspection and enforcement, and the need for and scope of cooperation and mutual recognition among national oversight bodies. The FSF also worked to support the establishment in March 2005 of the Public Interest Oversight Board to oversee the standard-setting activities of the International Federation of Accountants (IFAC) relating to auditing and assurance practices. In October 2004, the Forum organised with the International Accounting Standards Board and the IFAC a major roundtable to review the challenges and issues associated with the implementation of international accounting and auditing standards.

The FSF has remained engaged in work to improve information sharing and cross-border cooperation between on- and offshore authorities on supervisory and regulatory matters. In March 2005, the FSF initiated a new process to promote further improvements in offshore financial centres, drawing on a set of initiatives by Forum members at both international and national levels, and on earlier relevant steps by the FSF itself.

A further area of interest for the FSF has been the enhancement of international cooperation in business continuity planning for the financial sector. Together with the Bank of England, the Forum organised a workshop on business continuity in July 2004 and assessed various business continuity standards currently in place, in particular with regard to cross-border arrangements. Taking this task forward, the Joint Forum of the Basel Committee, IOSCO and the IAIS is considering developing a set of high-level business continuity principles for financial authorities and industries.

Looking ahead, an important focus of the FSF will be to assess the preparedness of financial institutions, and the wider financial system, to withstand a possible re-emergence of turbulence and increased risk aversion among financial market participants.

Throughout the year, the FSF kept G7 Finance Ministers and central bank Governors and the IMF's International Monetary and Financial Committee informed about financial vulnerabilities and other issues. The Forum also held further regional meetings to foster wider awareness of financial vulnerabilities and the work under way to address them.

International Association of Insurance Supervisors

The International Association of Insurance Supervisors (IAIS) contributes to global financial stability through improved supervision of the insurance industry, the development of standards for supervision, international cooperation based on exchange of information and the provision of mutual assistance. In collaboration with other international regulatory bodies, the IAIS has also helped develop principles for the supervision of financial conglomerates. The IAIS also actively participates in the Financial Stability Forum. The steady increase in members and observers reflects a growing recognition of the IAIS mission. More information on the IAIS is available at www.iaisweb.org.

During the past year, the IAIS undertook several key initiatives in the development of insurance standards, in the priority areas of solvency, accounting and reinsurance.

Regarding solvency, a major step was to define a framework for insurance supervision. The framework proposes the development of a common structure and standards for the assessment of insurer solvency with the aim of enhancing transparency and comparability across regulatory regimes.

As regards insurance accounting, the IAIS is in continuous dialogue with the International Accounting Standards Board (IASB). An important part of its work is the preparation of an issues paper examining which methods for evaluating insurance liabilities, consistent with the likely outcome of the IASB Insurance Contracts Phase II, would be acceptable for prudential supervision. In collaboration with other international regulators, the IAIS has also supported the establishment of the Public Interest Oversight Board to oversee the public interest activities of the International Federation of Accountants.

In response to concerns expressed by the FSF that a lack of adequate transparency and public disclosure in the reinsurance industry makes it difficult to assess its potential impact on the insurance sector and on other parts of the financial services industry, the IAIS issued its first global reinsurance market report. Regarding enhanced disclosure by insurers and reinsurers, a standard on disclosure of technical performance in non-life insurance was adopted in 2004, and two further disclosure standards are being prepared on investment performance and on technical performance in life insurance.

The IAIS has also focused on anti-money laundering and combating the financing of terrorism; an insurance core principles self-assessment programme to identify the strengths and weaknesses of insurance industry regulation and supervision in various jurisdictions; and training through seminars, conferences and workshops, often in collaboration with the Financial Stability Institute.

International Association of Deposit Insurers

The International Association of Deposit Insurers (IADI) was established in May 2002 and opened its Head Office at the BIS in October that year. IADI's key objectives are to enhance the understanding of common interests and issues related to deposit insurance, and to set out guidance to increase the

effectiveness of deposit insurance systems. Currently, 56 organisations (of which 39 are members) from around the world are involved in the activities of IADI, including a number of central banks that have an interest in promoting the adoption or operation of effective deposit insurance systems. The Chair of the Executive Council and President of IADI is Jean Pierre Sabourin.

During its third year, IADI continued to provide a forum to facilitate wide international contacts among deposit insurers and other interested parties. The third Annual Conference was held in Switzerland in October 2004 and was attended by 145 deposit insurers and policymakers from 47 countries. Regional dissemination was promoted through conferences, seminars, committee meetings and collaborative events in a wide range of countries.

Work is continuing on guidance to improve the effectiveness of deposit insurance systems. The Association published a paper on the establishment and design of deposit insurance systems and another on the development of differential premium systems. IADI has also begun work with the international financial community, on ways to assist policymakers in evaluating the effectiveness of deposit insurance systems. IADI endorsed the conclusions of the APEC Policy Dialogue on Deposit Insurance held in February 2004 and will be developing relevant guidance.

IADI contributed to a new publication by the International Association of Restructuring, Insolvency and Bankruptcy Professionals entitled *Bank Insolvency, an International Guide for Deposit Insurers*, based on survey results from 48 countries. The purpose of the book is to promote discussion between insolvency practitioners and deposit insurers.

The IADI website (www.iadi.org) and a monthly newsletter provide information on activities to members and participants. Quarterly training guides are widely circulated among deposit insurers.

Financial services of the Bank

Banking services

The BIS offers a wide range of financial services to assist central banks and other official monetary authorities in the management of their foreign reserves. Some 130 such authorities, as well as a number of international institutions, currently make use of these services.

Safety and liquidity are the key features of the Bank's credit intermediation services, which are supported by a rigorous internal risk management framework. In accordance with best practice, a separate risk control unit reporting directly to the Deputy General Manager – and through him to the General Manager – monitors the Bank's credit exposure, liquidity, and market and operational risks.

In response to the diverse and constantly evolving needs of central banks, the BIS offers a broad range of financial products in terms of currency denomination and maturity. In addition to traditional money market placements such as sight/notice accounts and fixed-term deposits, there are two instruments that can be traded (bought and sold back) directly with the Bank:

the Fixed-Rate Investment at the BIS (FIXBIS), with maturities from one week to one year, and the BIS Medium-Term Instrument (MTI), with maturities from one to 10 years. A series of callable MTI structures is also part of the standard product range.

The Bank also transacts foreign exchange and gold on behalf of its customers. From time to time, it extends short-term credits to central banks, usually on a collateralised basis. The BIS also acts as trustee and collateral agent (see below).

The BIS provides asset management services in sovereign securities or high-grade assets. These take the form of either a specific portfolio mandate negotiated between the BIS and a central bank or an open-end fund structure allowing two or more customers to invest in a common pool of assets. Following the creation of the first Asian Bond Fund (ABF1) in July 2003, the 11 members of the EMEAP group of central banks and monetary authorities launched the second stage (ABF2) in December 2004. The BIS acts as manager for ABF1 and as administrator for ABF2.

BIS financial services are provided out of two linked trading rooms: one at its Basel headquarters and one at its Asian Office in Hong Kong SAR.

Operations of the Banking Department in 2004/05

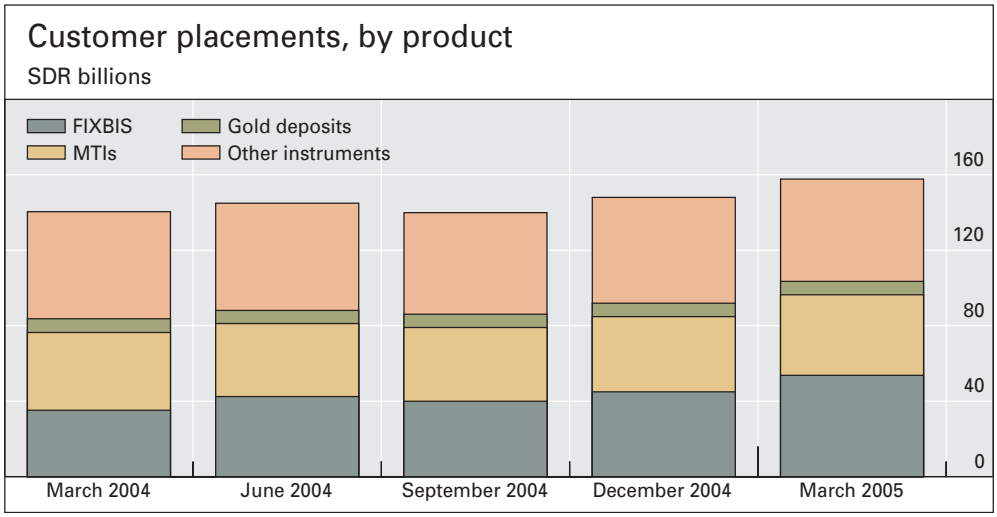
A continued expansion of the BIS balance sheet led to a fifth consecutive record for the end of a financial year. On 31 March 2005, the balance sheet totalled SDR 180.5 billion, representing a year-on-year increase of SDR 12.6 billion or 7.5%. Had exchange rates remained constant throughout the year, the balance sheet would have increased by an additional SDR 0.4 billion.

Liabilities

The size of the BIS balance sheet is mainly determined by placements from customers, which constitute the lion's share of total liabilities. On 31 March 2005, customer placements (excluding repurchase agreements) totalled SDR 157.7 billion, compared with SDR 140.4 billion at the end of the previous financial year.

Most of the customer placements are denominated in various currencies, with the remainder in gold. While gold deposits were largely unchanged at SDR 7.1 billion, customer currency deposits rose from SDR 133.2 billion a year earlier to a total of SDR 150.6 billion at end-March 2005, representing 6% of the world's total foreign currency reserves. Over the year, there was a shift in the currency composition of customer currency deposits, as funds denominated in US dollars rose from 62% to 65% of the total, whereas the share denominated in euros fell from 21% to 18%.

The increase in customer placements was driven by money market investments. Subscriptions to FIXBIS rose by more than 50% to make them the single largest instrument held by BIS customers, representing more than one third of total customer currency deposits. Another substantial increase, of 30%, was recorded in fixed-term deposits. In contrast, balances on sight/notice accounts decreased by more than one third, almost reversing the expansion



observed in the previous financial year. Subscriptions to MTIs, the second largest instrument held by BIS customers, remained relatively stable throughout the financial year (see the graph).

A geographical analysis of currency placements with the BIS shows continued strong demand from Asian customers.

Assets

Most of the BIS assets consist of investments with top-quality commercial banks of international standing and in government and quasi-government securities, including reverse repurchase agreements. The Bank also owns 180 tonnes of fine gold, having disposed of 12 tonnes in the course of the last financial year. The credit exposure is managed in a conservative manner, with over 99% of the Bank's holdings rated A– or higher as at 31 March 2005 (see note 37E to the financial statements).

The Bank's holdings of currency deposits and securities, including reverse repurchase agreements, totalled SDR 165.4 billion on 31 March 2005, up from SDR 153.7 billion at the end of the previous financial year. The additional funds were mainly invested in time deposits with banks, G10 government bonds and, to a lesser extent, Treasury bills. In contrast, there was a SDR 7.8 billion reduction in securities purchased under reverse repurchase agreements.

The Bank uses various derivative instruments in order to manage its assets and liabilities efficiently (see note 7 to the financial statements).

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 (for details, see the *63rd Annual Report* of June 1993). The Deutsche Bundesbank as paying agent notified the Bank that in 2004 the Bundeswertpapierverwaltung (BWV – German Federal Securities Administration) had arranged for payment of

approximately €5.0 million for redemption of funding bonds 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.

Escrow agent functions

The BIS acted as escrow agent in connection with the settlement of litigation related to the Pan Am Flight 103 disaster over Lockerbie, Scotland, on 21 December 1988 (see 74th Annual Report of June 2004). This function expired on 17 February 2005.

Collateral agent functions

Under a number of agreements, the BIS acts as 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).

Institutional and administrative matters

Withdrawal and redistribution of BIS shares

An Extraordinary General Meeting (EGM) of the Bank held on 8 January 2001 decided to amend the Bank's Statutes to restrict the right to hold shares in the BIS exclusively to central banks, thereby effecting a mandatory repurchase of the 72,648 BIS shares of the Belgian, French and American issues that were then held by private shareholders (described in detail in the *71st Annual Report* of June 2001). The withdrawn shares were subsequently held by the Bank in treasury, together with 2,304 shares of the three share issues repurchased from central banks at the time of the withdrawal operation.

The amount of compensation payable to registered former private shareholders was established initially by the EGM at 16,000 Swiss francs per share. Certain former private shareholders contested this amount 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 concluded that the compensation should be increased. In its Final Award of 19 September 2003, the Arbitral Tribunal determined the amount of additional compensation due to the claimants (see the *74th Annual Report* of June 2004). In accordance with the Bank's earlier declaration that it would voluntarily

apply the decision of the Arbitral Tribunal to all registered former private shareholders in final settlement of all claims, as of 31 March 2005 the additional compensation determined by the Arbitral Tribunal had been paid in respect of more than 99% of the withdrawn shares.

In a legal proceeding in France brought by a separate group of former private shareholders, a decision is pending from the Cour de Cassation (the highest French private-law court) on whether to confirm an earlier ruling that the French courts have no jurisdiction over such claims (see the *74th Annual Report* of June 2004).

The Board of Directors decided during the past financial year to redistribute all 74,952 repurchased shares by offering them for sale to BIS member central banks. In addition, this offer covered 1,100 shares of the American issue also held by the Bank in treasury, which had previously been registered in the name of a consortium of central banks. Consistent with the provisions of the BIS Statutes as amended on 8 January 2001, the sale price for these 76,052 shares was 23,977.56 Swiss francs per share – ie the amount of compensation (minus the interest component) paid to the former private shareholders. During the financial year ended 31 March 2005, the Bank redistributed all treasury shares of the Belgian and French issues to the central banks of those countries. The proceeds of this redistribution of 40,119 shares amounted to 962.0 million Swiss francs, equivalent to SDR 536.7 million, at the relevant transaction dates. At the start of the financial year commencing on 1 April 2005, the Bank sold the remaining BIS shares – 35,933 shares of the American issue – through an offer to member central banks. The proceeds amounted to 861.6 million Swiss francs, equivalent to SDR 468.2 million at the transaction date of 31 May 2005.

The Bank's administration

Budget policy

The process of formulating the Bank's expenditure budget for the next financial year starts about six months in advance with the setting by Management of a broad business orientation and financial framework. Within this context, business areas specify their plans and the corresponding resource requirements. The process of reconciling detailed business plans, objectives 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 expenditure. In common with other organisations comparable to the BIS, Management and staff expenditure, including remuneration, pensions and health and accident insurance, amounts to around 70% of administrative costs. The other major expenditure categories, each accounting for around 10% of administrative spending, are IT and telecommunications and building and equipment expenditure. By its nature, capital spending tends to vary significantly from year to year. Most of the Bank's administrative and capital expenditure is incurred in Swiss francs.

Administrative expenses before depreciation during the financial year 2004/05 amounted to 214.1 million Swiss francs, 2.6% below the budget of 219.8 million Swiss francs.[1] Lower than expected IT and travel expenditure, and the write-back of a provision relating to pre-2003 tax reimbursements to Swiss staff members[2] were the main reasons for the underspend. Capital expenditure, at 27.1 million Swiss francs, was 5.6 million below budget. The projects for the enhancement of the Bank's security systems and the redesign of the main Auditorium were completed within their budget allocations at the end of May 2005. Expenditure in 2004/05 was the closest to the budget achieved in the past few years, and reflected a reduction of the "headroom" in individual budget items. In order to reinforce the tighter budgeting, the Bank's Management has introduced a quarterly monitoring system for the achievement of objectives.

In March 2005, the Board approved an increase in the administrative budget for the financial year 2005/06 of 2.9% to 226.3 million Swiss francs. The capital budget foresees a decrease of 5.7 million Swiss francs to 27.0 million. The emphasis in the 2005/06 budget is on strengthening the Bank's risk management, internal audit and compliance functions, and on continuing efforts to improve security arrangements. The budget also includes a limited increase in headcount at the Asian Office.

Remuneration policy

The jobs performed by BIS staff members are assessed on the basis of a number of objective criteria, including qualifications, experience and responsibilities, and are classified into distinct job grades. The job grades are associated with a structure of salary ranges. Regular salary surveys are conducted in which the structure of BIS salaries is assessed against that in comparable institutions or market segments. The analysis takes into account differences in the taxation of salaries of the staff of the surveyed institutions. When applying the market data to BIS salaries, the Bank focuses on the upper half of market salaries in order to attract highly qualified staff.

The salary structure is adjusted annually for the rate of inflation in Switzerland and the average rise in real salaries in the business sector of major industrial countries. In July 2004, the salary structure was accordingly increased by 1.76%. Movements of salaries of individual staff members within the ranges of the salary structure 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. This currently amounts to 14% or 18% of annual salary depending on family status, subject to a ceiling. Expatriate

[1] The Bank's budgetary accounting is cash-based and excludes certain financial accounting adjustments, principally relating to retirement benefit obligations, which take into account financial market and actuarial developments. These additional factors are included under "Operating expense" disclosed in the profit and loss account (see "Net profit and its distribution").

[2] These arrangements related to the previous Headquarters Agreement with the Swiss Federal Council, which expired on 1 January 2003.

staff are also entitled to receive an education allowance.[3] In addition, BIS staff members have access through the Bank to health insurance and a defined benefit contributory pension plan.

With regard to the remuneration of senior officials, it was decided in early 2005 to conduct regular surveys to benchmark their salaries against conditions in comparator institutions. Between surveys, salaries of senior officials are adjusted for Swiss inflation. As of 1 July 2004, the annual remuneration of senior managers before expatriation allowances is based on the following salary structure:

- General Manager 709,849 Swiss francs
- Deputy General Manager 600,641 Swiss francs
- Heads of Department 546,000 Swiss francs

In addition to the above, the General Manager receives an annual representation allowance and enhanced pension rights.

The Annual General Meeting approves the remuneration of members of the Board of Directors, with adjustments taking place every three years. Since 1 July 2002, the overall fixed annual remuneration paid to the Board of Directors has totalled 844,800 Swiss francs. In addition, 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.

Archiving policy

In the interest of openness and to facilitate academic research, the Bank voluntarily granted public access to its historical archive in March 1998. Under the BIS open archive rules, all records relating to the Bank's business and operational activities which are over 30 years old are available for consultation, with the exception of a limited number of records that remain private or confidential even after 30 years. The BIS determines at its discretion which records will not be released for public consultation, to protect personal privacy and/or legitimate third-party interests.

Net profit and its distribution

Net profit

The net profit for the 75th financial year amounted to SDR 370.9 million, compared with SDR 536.1 million for the preceding year. The factors behind this outcome are discussed below.

Total operating income

Total operating income amounted to SDR 458.4 million in the financial year 2004/05, compared with SDR 564.5 million in the previous year. There were three principal reasons for this development:

[3] Certain staff members who joined the Bank before 1997 receive an expatriation allowance of 25%, but are not entitled to receive education allowances.

- Lower interest yields and valuation adjustments on derivatives contracts, taken out to protect the Bank against expected interest rate increases, reduced income from the Bank's own funds investment securities. These factors outweighed the additional income from the increase in the Bank's equity attributable to retained profits and share subscriptions.
- Net income from the Bank's deposit-taking business returned to more normal levels in 2004/05. The previous year's results had been boosted by an exceptional contribution to profits from the narrowing of credit spreads in summer 2003, which gave rise to revaluation gains in the Bank's asset swap investments. This factor outweighed the additional income from the growth in the Bank's deposit base.
- A net foreign exchange loss of SDR 34.5 million was mainly attributable to the Bank's position in Swiss francs prior to the subscription in October and November 2004 by the National Bank of Belgium and the Bank of France for the BIS shares of their national issues that were formerly held in treasury. This foreign exchange loss was fully offset by a corresponding gain which, in accordance with the Bank's accounting policies, was recorded in equity when these shares were redistributed so that the net impact on the Bank's equity was zero.

Operating expense

Operating expense (see note 27 to the financial statements) amounted to SDR 145.0 million, 1.8% above the preceding year's figure of SDR 142.5 million. Administrative expenses before depreciation were SDR 129.3 million, 2.9% above the previous year's figure of SDR 125.6 million. The depreciation charge decreased from SDR 16.9 million to SDR 15.7 million. In terms of Swiss francs, the currency in which most of the Bank's expenditure is incurred, administrative expense before depreciation on the Bank's financial basis of accounting, which includes financial market and actuarial developments, fell by 1.1% from 236.5 million Swiss francs to 234.0 million.

Underlying staff remuneration and pension costs rose broadly in line with the 3.2% increase in average full-time equivalent staff. This increase was partly offset by a write-back of a provision for pre-2003 tax reimbursements to Swiss staff members, under the arrangements in connection with the previous Headquarters Agreement which expired on 1 January 2003. Other personnel-related expense fell as a result of a lower financial accounting charge for health and accident costs.

Operating profit and other profit items

The Bank's operating profit, which reflects the profits of its ongoing business, amounted to SDR 313.4 million, 25.7% lower than the equivalent figure of SDR 422.0 million recorded in 2003/04.

A net gain of SDR 7.0 million was recorded on the sale of investment securities during the year. This reflected the realignment of the portfolio to its underlying benchmark position. The net profit of SDR 154.4 million on the sale of investment securities for the previous financial year had been attributable to the sale of investment securities acquired in a higher interest rate environment.

The realised gain of SDR 50.5 million on sales of gold investment assets during 2004/05 arose from the sale of 12 tonnes from the Bank's total holdings of 192 tonnes at 31 March 2004. There was no change in the Bank's equity as a result of these sales as the gold in the Bank's balance sheet was, in accordance with the Bank's accounting policies, already carried at market value.

The net profit for the previous financial year 2003/04 was arrived at after charges for interest payable and a currency translation loss in connection with the Final Award of the Hague Arbitral Tribunal of 19 September 2003.

Proposed 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 SDR 370.9 million for the financial year 2004/05 be applied by the General Meeting in the following manner:

1. SDR 114.4 million in payment of a dividend of SDR 235 per share;
2. SDR 25.7 million to be transferred to the general reserve fund;[4]
3. SDR 6.0 million to be transferred to the special dividend reserve fund; and
4. SDR 224.8 million, representing the remainder of the available net profit, to be transferred to the free reserve fund. This fund can be used by the Board of Directors for any purpose that is in conformity with the Statutes.

If approved, the dividend will be paid on 1 July 2005 to the shareholders whose names were contained in the bank's share register on 31 March 2005 in any constituent currency of the SDR, or in Swiss francs, according to the shareholders' instructions. The proposed dividend of SDR 235 per share for the financial year 2004/05 represents a 4.4% increase over the dividend for 2003/04.

The full dividend will be paid on 470,073 shares. The dividend payable in respect of the 40,119 treasury shares that were redistributed during the financial year will be settled on a pro rata basis according to the relevant value date of redistribution. The number of issued and paid-up shares before the repurchase of shares is 547,125. Of these shares, 36,933 were held in treasury at 31 March 2005, comprising 34,833 shares repurchased from former private shareholders and central banks, and 2,100 other shares. No dividend will be paid on these treasury shares.

Report of the auditors

The Bank's financial statements have been duly audited by PricewaterhouseCoopers AG, who have confirmed that they give a true and fair view of the Bank's financial position at 31 March 2005 and the results of its operations for the year then ended. Their report is to be found immediately following the financial statements.

[4] Article 51 of the Bank's Statutes requires that 10% of the profit after payment of the dividend shall be paid into the general reserve fund, until its balance equals five times the paid-up capital. At 31 March 2005, the general reserve fund exceeded four times the Bank's paid-up capital.

Board of Directors

Nout H E M Wellink, Amsterdam
Chairman of the Board of Directors,
President of the Bank

Hans Tietmeyer, Frankfurt am Main
Vice-Chairman

Vincenzo Desario, Rome
David Dodge, Ottawa
Antonio Fazio, Rome
Toshihiko Fukui, Tokyo
Timothy F Geithner, New York
Lord George, London
Alan Greenspan, Washington
Hervé Hannoun, Paris
Lars Heikensten, Stockholm
Mervyn King, London
Christian Noyer, Paris
Guy Quaden, Brussels
Jean-Pierre Roth, Zurich
Alfons Vicomte Verplaetse, Brussels
Axel A Weber, Frankfurt am Main

Alternates

Bruno Bianchi or Giovanni Carosio, 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

Committees of the Board of Directors

Consultative Committee
Audit Committee

both chaired by Hans Tietmeyer

Senior officials

Malcolm D Knight	General Manager
André Icard	Deputy General Manager
Peter Dittus	Secretary General, Head of Department
William R White	Economic Adviser, Head of Monetary and Economic Department
Günter Pleines	Head of Banking Department
Mario Giovanoli	General Counsel
Már Gudmundsson	Deputy Head of Monetary and Economic Department
Jim Etherington	Deputy Secretary General
Louis de Montpellier	Deputy Head of Banking Department
Josef Tošovský	Chairman, Financial Stability Institute

Changes among the Board of Directors and senior officials

At its meeting in November 2004, the Board re-elected Nout Wellink, President of the Netherlands Bank, as Chairman of the Board of Directors and President of the Bank for a further period of three years commencing on 1 March 2005 and expiring on 29 February 2008. At its meeting in March 2005, the Board re-elected Lars Heikensten, Governor of Sveriges Riksbank, as a member of the Board of Directors for a further three years, ending on 31 March 2008. At the same meeting, Mervyn King, Governor of the Bank of England, reappointed Lord George as a member of the Board of Directors for a further period of three years, expiring on 6 May 2008.

As regards the senior officials of the Bank, upon the retirement of Gunter Baer, Peter Dittus was appointed as the Bank's Secretary General and Chief Administrative Officer on 1 January 2005. Günter Pleines was appointed Head of Banking Department, upon the retirement of Robert Sleeper, from 1 April 2005. Jim Etherington became Deputy Secretary General on 1 June 2005. Louis de Montpellier was appointed as Deputy Head of Banking Department as from mid-June 2005. All new appointments of senior officials are on a five-year renewable basis.

The Board noted with deep regret the death of Baron Cecil de Strycker, Honorary Governor of the National Bank of Belgium, on 5 September 2004 at the age of 89. Baron de Strycker had served on the Board as an ex officio Director between 1975 and 1982 and from 1982 until 1989 as an appointed Director.

BIS member central banks[5]

Bank of Algeria

Central Bank of Argentina

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

Central Bank of Chile

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

Central Bank of Hungary

Central Bank of Iceland

Reserve Bank of India

Bank Indonesia

Central Bank & Financial Services Authority of Ireland

Bank of Israel

Bank of Italy

Bank of Japan

Bank of Korea

Bank of Latvia

Bank of Lithuania

National Bank of the Republic of Macedonia

Central Bank of Malaysia

Bank of Mexico

Netherlands Bank

Reserve Bank of New Zealand

Central Bank of Norway

Bangko Sentral ng Pilipinas

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

[5] In accordance with Article 15 of its Statutes, the Bank's capital is held by central banks only. The legal status of the Yugoslav issue of the capital of the BIS is currently under review 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.

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Lord George, London
Alan Greenspan, Washington
Hervé Hannoun, Paris
Lars Heikensten, Stockholm
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Christian Noyer, Paris
Guy Quaden, Brussels
Jean-Pierre Roth, Zurich
Alfons Vicomte Verplaetse, Brussels
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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

Central Bank of Hungary

Central Bank of Iceland

Reserve Bank of India

Bank Indonesia

Central Bank & Financial Services Authority of Ireland

Bank of Israel

Bank of Italy

Bank of Japan

Bank of Korea

Bank of Latvia

Bank of Lithuania

National Bank of the Republic of Macedonia

Central Bank of Malaysia

Bank of Mexico

Netherlands Bank

Reserve Bank of New Zealand

Central Bank of Norway

Bangko Sentral ng Pilipinas

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

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Financial statements

as at 31 March 2005

The financial statements on pages 188–215 for the financial year ended 31 March 2005 were approved on 9 May 2005. They are presented in a form approved by the Board of Directors pursuant to Article 49 of the Bank's Statutes and are subject to approval by the shareholders at their Annual General Meeting on 27 June 2005.

Nout H E M Wellink
President

Malcolm D Knight
General Manager

Balance sheet

As at 31 March 2005

SDR millions	Notes	**2005**	2004
Assets			
Cash and sight accounts with banks	4	25.8	18.9
Gold and gold deposits	5	8,617.0	9,073.8
Treasury bills	6	31,307.4	30,240.7
Securities purchased under resale agreements	6	14,034.3	21,835.2
Time deposits and advances to banks	6	80,316.5	68,162.4
Government and other securities	6	39,779.6	33,483.1
Derivative financial instruments	7	2,188.0	3,321.1
Accounts receivable	8	4,028.6	1,609.6
Land, buildings and equipment	9	189.2	190.0
Total assets		**180,486.4**	167,934.8
Liabilities			
Currency deposits	10	150,618.8	133,152.5
Gold deposits	11	7,110.8	7,293.5
Securities sold under repurchase agreements	12	1,159.4	1,225.3
Derivative financial instruments	7	3,440.6	4,339.7
Accounts payable	13	7,752.2	12,169.4
Other liabilities	14	151.3	144.4
Total liabilities		**170,233.1**	158,324.8
Shareholders' equity			
Share capital	15	683.9	683.9
Statutory reserves	16	8,743.2	8,230.8
Profit and loss account		370.9	536.1
Less: shares held in treasury	18	(396.2)	(852.6)
Other equity accounts	20	851.5	1,011.8
Total equity		**10,253.3**	9,610.0
Total liabilities and equity		**180,486.4**	167,934.8

Profit and loss account

For the financial year ended 31 March 2005

SDR millions	Notes	**2005**	2004
Interest income	22	4,058.8	3,493.9
Interest expense	23	(3,384.1)	(2,681.1)
Net valuation movement	24	(183.1)	(258.7)
Net interest income		**491.6**	554.1
Net fee and commission income	25	1.3	1.4
Net foreign exchange (loss) / gain	26	(34.5)	9.0
Total operating income		**458.4**	564.5
Operating expense	27	(145.0)	(142.5)
Operating profit		**313.4**	422.0
Net gain on sales of investment securities	28	7.0	154.4
Net gain on sales of gold investment assets	29	50.5	–
Shares repurchased – impact of arbitral award	17		
Interest expense		–	(32.9)
Currency translation loss		–	(7.4)
Net profit for the financial year		**370.9**	536.1

Statement of cash flows

For the financial year ended 31 March 2005

SDR millions	Notes	**2005**	2004
Cash flow from operating activities			
Operating profit		313.4	422.0
Non-cash flow items included in operating profit			
Depreciation of land, buildings and equipment	9	15.7	16.9
Net change in operating assets and liabilities			
Currency deposits		15,329.4	11,580.7
Currency banking assets		(16,371.2)	(19,669.9)
Gold deposit liabilities		(182.7)	1,270.9
Gold and gold deposit banking assets		322.6	(1,270.2)
Accounts receivable		1.3	19.0
Other liabilities / accounts payable		17.5	(260.1)
Net derivative financial instruments		234.0	1,750.6
Net cash flow from / (used in) operating activities		**(320.0)**	(6,140.1)
Cash flow from / (used in) investing activities			
Net change in currency investment assets	6	207.2	(1,220.6)
Securities sold under repurchase agreements		(65.9)	1,152.1
Net change in gold investment assets	5	110.7	–
Net purchase of land, buildings and equipment	9	(14.9)	(10.5)
Net cash flow from / (used in) investing activities		**237.1**	(79.0)
Cash flow from / (used in) financing activities			
Dividends paid		(104.0)	(97.1)
Issue of shares		–	252.3
Redistribution of shares held in treasury	18	536.7	–
Shares repurchased in 2001 – payments to former shareholders		(10.6)	(348.2)
Net cash flow from / (used in) financing activities		**422.1**	(193.0)
Net effect of exchange rate changes on cash and cash equivalents		(10.1)	61.3
Net movement in cash and cash equivalents		349.3	(6,473.4)
Net increase / (decrease) in cash and cash equivalents		**339.2**	(6,412.1)
Cash and cash equivalents, beginning of the year	30	**2,666.3**	9,078.4
Cash and cash equivalents, end of the year	30	**3,005.5**	2,666.3

Statement of proposed profit allocation

For the financial year ended 31 March 2005

SDR millions	2005
Net profit for the financial year	**370.9**
Transfer to legal reserve fund	–
Proposed dividend:	
SDR 235 per share on 470,073 shares	(110.5)
On 40,119 redistributed treasury shares (pro rata as from the value date of the share subscription)	(3.9)
	(114.4)
Proposed transfers to other reserves:	
General reserve fund	(25.7)
Special dividend reserve fund	(6.0)
Free reserve fund	(224.8)
Balance after allocation to reserves	–

The proposed profit allocation is in accordance with Article 51 of the Bank's Statutes.

Movements in the Bank's statutory reserves

For the financial year ended 31 March 2005

						2005
SDR millions	Notes	Legal reserve fund	General reserve fund	Special dividend reserve fund	Free reserve fund	Total statutory reserves
Balance at 31 March 2004		**68.3**	**2,648.7**	**109.5**	**5,404.3**	**8,230.8**
Allocation of 2003/04 profit		–	86.4	20.5	325.2	432.1
Redistribution of shares held in treasury	18	–	80.3	–	–	80.3
Balance at 31 March 2005 per balance sheet before proposed profit allocation		**68.3**	**2,815.4**	**130.0**	**5,729.5**	**8,743.2**
Proposed transfers to reserves	16	–	25.7	6.0	224.8	256.5
Balance at 31 March 2005 after proposed profit allocation		**68.3**	**2,841.1**	**136.0**	**5,954.3**	**8,999.7**

Movements in the Bank's equity

For the financial year ended 31 March 2005

SDR millions	Notes	Share capital	Statutory reserves	Profit and loss	Shares held in treasury	Other equity accounts	Total equity
Equity at 31 March 2003		**661.4**	**7,522.7**	**575.4**	**(739.1)**	**908.8**	**8,929.2**
Payment of 2002/03 dividend		–	–	(97.1)	–	–	(97.1)
Allocation of 2002/03 profit		–	478.3	(478.3)	–	–	–
New shares issued	15	22.5	229.8	–	–	–	252.3
Shares repurchased – impact of arbitral award	17	–	–	–	(113.5)	–	(113.5)
Net valuation movement on gold investment assets	20	–	–	–	–	261.7	261.7
Net valuation movement on investment securities	20	–	–	–	–	(158.7)	(158.7)
Net profit for 2003/04		–	–	536.1	–	–	536.1
Equity at 31 March 2004		**683.9**	**8,230.8**	**536.1**	**(852.6)**	**1,011.8**	**9,610.0**
Payment of 2003/04 dividend		–	–	(104.0)	–	–	(104.0)
Allocation of 2003/04 profit		–	432.1	(432.1)	–	–	–
Redistribution of shares held in treasury	18	–	80.3	–	456.4	–	536.7
Net valuation movement on gold investment assets	20	–	–	–	–	(74.0)	(74.0)
Net valuation movement on investment securities	20	–	–	–	–	(86.3)	(86.3)
Net profit for 2004/05		–	–	370.9	–	–	370.9
Equity at 31 March 2005 per balance sheet before proposed profit allocation		**683.9**	**8,743.2**	**370.9**	**(396.2)**	**851.5**	**10,253.3**
Proposed dividend		–	–	(114.4)	–	–	(114.4)
Proposed transfers to reserves		–	256.5	(256.5)	–	–	–
Equity at 31 March 2005 after proposed profit allocation		**683.9**	**8,999.7**	**–**	**(396.2)**	**851.5**	**10,138.9**

At 31 March 2005 statutory reserves included share premiums of SDR 811.7 million (31 March 2004: SDR 811.7 million).

Notes to the financial statements

1. Introduction

The Bank for International Settlements (BIS, "the Bank") is an international financial institution which was established pursuant to the Hague Agreements of 20 January 1930, the Bank's Constituent Charter and its Statutes. The headquarters of the Bank are at Centralbahnplatz 2, 4002 Basel, Switzerland. The Bank maintains representative offices in Hong Kong, Special Administrative Region of the People's Republic of China (for Asia and the Pacific) and in Mexico City, Mexico (for the Americas).

The objectives of the BIS, as laid down in Article 3 of its Statutes, are to promote cooperation among central banks, to provide additional facilities for international financial operations and to act as trustee or agent for international financial settlements. Fifty-six central banks are currently members of the Bank. Rights of representation and voting at General Meetings are exercised in proportion to the number of BIS shares issued in the respective countries. The Board of Directors of the Bank is composed of the Governors of and appointed Directors from the Bank's founder central banks, being the central banks of Belgium, France, Germany, Italy, the United Kingdom and the United States of America, as well as the Governors of the central banks of Canada, Japan, the Netherlands, Sweden and Switzerland.

These financial statements incorporate the balance sheet and profit and loss account, as required by Article 49 of the Bank's Statutes.

2. Significant accounting policies

A. Reporting currency

The reporting currency of the Bank is the Special Drawing Right (SDR) as defined by the International Monetary Fund (IMF).

The SDR is calculated from a basket of major trading currencies according to Rule O–1 as adopted by the Executive Board of the IMF on 29 December 2000 and effective 1 January 2001. As currently calculated, one SDR is equivalent to the sum of USD 0.577, EUR 0.426, JPY 21 and GBP 0.0984. The composition of this currency basket is subject to review every five years by the IMF, the next review being in December 2005.

All figures in these financial statements are presented in SDR millions unless otherwise stated.

B. Currency translation

Financial instruments are translated into SDR at the exchange rates ruling at the balance sheet date. Other assets and liabilities are recorded in SDR at the exchange rates ruling at the date of the transaction. Profits and losses are translated into SDR at an average rate. Exchange differences arising from the retranslation of financial instruments and from the settlement of transactions are recognised in the profit and loss account.

C. Valuation methodology

In general, the Bank values its assets, liabilities and derivatives at market value. To derive market value the Bank uses reliable quoted market prices from active markets. Where these are not available (for instruments such as loans, deposits and non-exchange-traded derivatives) the Bank determines market values based on financial models using a discounted cash flow analysis. A discounted cash flow analysis is dependent on estimates of future cash flows, interest rates, exchange rates and prepayment speeds, and upon credit, liquidity and volatility factors.

D. Financial instruments (other than gold and gold deposits)

These financial instruments constitute the majority of the Bank's balance sheet and include cash and sight accounts with banks, treasury bills, securities purchased under resale agreements, time deposits and advances to banks, government and other securities, derivative financial instruments, currency deposits and securities sold under repurchase agreements.

For all these financial instruments, the historical cost profits resulting from the accrual of interest and the amortisation of premiums paid and discounts received are included in "Interest income" (for assets and derivatives) or "Interest expense" (for liabilities). Realised profits on disposal, buyback and early termination are included under the profit and loss account heading "Net valuation movement".

The Bank includes most financial instruments in its balance sheet on a trade date basis at market value. Derivatives are included as either assets or liabilities, depending on whether the contract has a positive or a negative market value for the Bank. Very short-term financial instruments (both assets and liabilities) are an exception to this general rule of accounting using market values. These financial instruments typically have notice periods of three days or less, and they are included in the balance sheet on a settlement date basis at their principal value plus accrued interest. They are included under the balance sheet headings "Cash and sight accounts with banks" and "Currency deposits".

The treatment of unrealised gains or losses on revaluation is dependent on the designation of the financial instrument, as described below:

1. Currency deposit liabilities and related banking assets and derivatives

The Bank acts as a market-maker in certain of its currency deposit instruments. The market risk inherent in this activity is managed on a macro basis and so the Bank accounts for all these financial instruments at market value, with all movements in value included under the profit and loss account heading "Net valuation movement".

2. Assets, liabilities and derivatives relating principally to the investment of the Bank's equity

These assets are held for the long term, but not necessarily to maturity. They are accounted for as investment assets and are initially included in the balance sheet at cost. They are subsequently revalued to market value, with unrealised gains or losses included in the securities revaluation account, which is reported under the balance sheet heading "Other equity accounts".

The liabilities associated with the management of these assets, principally short-term repurchase agreements, are included in the balance sheet at market value with all movements in value included under the profit and loss account heading "Net valuation movement".

The related derivatives are used to manage the Bank's market risk or for trading purposes. They are included in the balance sheet at market value with all movements in value included under the profit and loss account heading "Net valuation movement".

E. Gold and gold deposits

Gold assets and liabilities are included in the balance sheet at their weight in gold (translated at the gold market price and USD exchange rate into SDR) plus accrued interest. Interest on gold deposits is included in interest income (for assets) or interest expense (for liabilities) on an accruals basis.

The Bank's own holdings of gold are classified as investment assets. The excess in value of the Bank's gold investment assets over its cost is taken to the gold revaluation account, which is reported under the balance sheet heading "Other equity accounts". For gold investment assets held on 31 March 2003 (when the Bank changed its reporting currency from the gold franc to the SDR) the deemed cost is approximately SDR 151 per ounce, based on the value of USD 208 that was applied from 1979 to 2003 following a decision by the Bank's Board of Directors, translated at the 31 March 2003 exchange rate.

Gains or losses on revaluation of gold deposit liabilities from third parties and the related gold deposit assets are included under the profit and loss account heading "Net valuation movement".

F. Accounts receivable and accounts payable

Accounts receivable and accounts payable are principally very short-term amounts relating to the settlement of financial transactions. They are included in the balance sheet at cost.

G. Land, buildings and equipment

The cost of the Bank's buildings and equipment is capitalised and depreciated on a straight line basis over the estimated useful lives of the assets concerned, as follows:

Buildings – 50 years

Building installations and machinery – 15 years

Information technology equipment – up to 4 years

Other equipment – 4 to 10 years

The Bank's land is not depreciated. The Bank undertakes an annual review of impairment of land, buildings and equipment. Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down to that amount. Capital expenditure and disposals are translated at the exchange rate prevailing on the date of the transaction.

H. Provisions

Provisions are recognised when the Bank has a present legal or constructive obligation as a result of events arising before the balance sheet date and it is probable that economic resources will be required to settle the obligation, provided that the amount of the obligation can be reasonably estimated.

I. Retirement benefit obligations

The Bank operates a defined benefit pension fund for its staff. It also operates unfunded arrangements for directors' pensions and health and accident insurance for current and former staff members.

Pension fund

The liability in respect of the staff pension fund is based on the present value of the defined benefit obligation at the balance sheet date, less the market value of the fund assets at the balance sheet date, together with adjustments for unrecognised actuarial gains and losses and past service costs. 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 from the estimated future cash outflows, using discount interest rates of highly rated corporate debt securities in Swiss francs which have terms to maturity approximating the terms of the related liability.

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 (where the actual outcome is different from the actuarial assumptions previously made), changes in actuarial assumptions and amendments to the pension fund regulations are charged to the profit and loss account over the service period of staff concerned in accordance with the "Corridor accounting" methodology described below. The resulting assets or liabilities are included under the headings "Accounts receivable" or "Other liabilities" in the balance sheet.

Unfunded arrangements

The liabilities in respect of the unfunded directors' pension arrangement and health and accident insurance scheme are based on the present value of the defined benefit obligation calculated on an identical basis to the staff pension fund. In the case of the health and accident scheme (where the entitlement is based in principle on the employee remaining in service up to 50 years of age and the completion of a minimum service period of 10 years), the expected costs of these benefits are accrued over the period of employment, using the projected unit credit method. These obligations are valued annually by independent actuaries.

Corridor accounting

Where the defined benefit obligation exceeds the higher of the liability or any assets used to fund the obligation in the financial statements by more than a corridor of 10%, the resulting excess outside the corridor is amortised over the expected remaining working life of the staff concerned.

J. Cash and cash equivalents

Cash and cash equivalents consist of cash and sight accounts with banks, and call and notice accounts, which are very short-term financial assets that typically have notice periods of three days or less.

3. Use of estimates

The preparation of the financial statements requires the Bank's Management to make some estimates in arriving at the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of income and expenses during the financial year. To arrive at these estimates the Management uses available information, makes assumptions and exercises judgment. Subsequent actual results could differ materially from those estimates.

4. Cash and sight accounts with banks

Cash and sight accounts with banks consist of cash balances with central and commercial banks that are available to the Bank on demand.

5. Gold and gold deposit assets

A. Total gold holdings

The composition of the Bank's total gold holdings was as follows:

SDR millions	**2005**	2004
Gold bars held at central banks	5,170.2	5,463.9
Total gold time deposits	3,446.8	3,609.9
Total gold and gold deposit assets	**8,617.0**	9,073.8
Comprising:		
Gold investment assets	1,646.5	1,780.7
Gold and gold deposit banking assets	6,970.5	7,293.1

B. Gold investment assets

The Bank's gold investment assets are included in the balance sheet at their weight in gold (translated at the gold market price and USD exchange rate into SDR) plus accrued interest. The excess of this value over the deemed cost value is included in the gold revaluation account (reported under the balance sheet heading "Other equity accounts"), and realised gains or losses on the disposal of gold investment assets are recognised in the profit and loss account.

Note 20 provides further analysis of the gold revaluation account. Note 29 provides further analysis of net gains on sales of gold investment assets.

The table below analyses the movements in the Bank's gold investment assets:

SDR millions	**2005**	2004
Balance at 1 April	1,780.7	1,519.0
Net change in gold investment assets		
Deposits placed	400.5	391.9
Disposals of gold	(108.6)	–
Maturities and other net movements	(402.6)	(391.9)
	(110.7)	–
Gold price movement	(23.5)	261.7
Balance at 31 March	**1,646.5**	1,780.7

At 1 April 2004 the Bank's gold investment assets amounted to 192 tonnes of fine gold. During the financial year ended 31 March 2005 12 tonnes were disposed of. Note 29 provides further analysis of these disposals. The balance at 31 March 2005 amounted to 180 tonnes of fine gold.

6. Currency banking and investment assets

A. Total holdings

Currency banking and investment assets comprise treasury bills, securities purchased under resale agreements, time deposits and advances to banks, and government and other securities. Banking assets comprise those assets that represent the reinvestment of customer deposits. Investment assets comprise the investments funded by the Bank's own equity.

Securities purchased under resale agreements ("reverse repurchase agreements") are transactions under which the Bank places a fixed-term deposit with a counterparty which provides collateral in the form of securities. The rate on the deposit is fixed at the beginning of the transaction, and there is an irrevocable commitment to return the collateral subject to the repayment of the deposit. During the term of the agreement, the market value of collateral is monitored, and additional collateral is obtained where appropriate to protect against credit exposure.

Time deposits and advances to banks are investments made with central banks, international institutions and commercial banks and include fixed-term loans, notice accounts and advances to central banks and international institutions as part of committed and uncommitted standby facilities. Call and notice accounts are very short-term financial assets, typically having a notice period of three days or less. They are included within "cash equivalents" in the Bank's cash flow statement.

Government and other securities are investments made with central banks, international institutions and commercial banks and include fixed and floating rate bonds and asset-backed securities.

The table below analyses the Bank's holdings of currency banking and investment assets:

	2005			2004		
SDR millions	Banking assets	Investment assets	Total	Banking assets	Investment assets	Total
Treasury bills	**31,307.4**	**–**	**31,307.4**	30,240.7	–	30,240.7
Securities purchased under resale agreements	**13,071.5**	**962.8**	**14,034.3**	20,609.7	1,225.5	21,835.2
Time deposits and advances to banks						
Fixed-term	77,336.8	–	77,336.8	65,515.0	–	65,515.0
Call and notice accounts	2,979.7	–	2,979.7	2,640.6	6.8	2,647.4
	80,316.5	**–**	**80,316.5**	68,155.6	6.8	68,162.4
Government and other securities						
Government	7,766.3	5,569.7	13,336.0	3,853.5	4,978.4	8,831.9
Financial institutions	16,629.7	876.4	17,506.1	15,508.2	1,221.8	16,730.0
Other (including public sector securities)	7,934.2	1,003.3	8,937.5	6,584.3	1,336.9	7,921.2
	32,330.2	**7,449.4**	**39,779.6**	25,946.0	7,537.1	33,483.1
Total currency banking and investment assets	**157,025.6**	**8,412.2**	**165,437.8**	144,952.0	8,769.4	153,721.4
Comprising:						
Cash equivalents	**2,979.7**	**–**	**2,979.7**	2,640.6	6.8	2,647.4
Other currency banking and investment assets	**154,045.9**	**8,412.2**	**162,458.1**	142,311.4	8,762.6	151,074.0

B. Currency investment assets

The Bank's investment assets are included in the balance sheet at market value. The excess of this value over the historical cost value is included in the securities revaluation account (reported under the balance sheet heading "Other equity accounts"), and realised gains or losses on the disposal of investment assets are recognised in the profit and loss account.

Note 20 provides further analysis of the securities revaluation account. Note 28 provides further analysis of net gains on sales of investment securities.

The table below analyses the movements in the Bank's currency investment assets:

SDR millions	**2005**	2004
Balance at 1 April	8,769.4	7,494.8
Change in cash equivalents	(6.8)	(3.7)
Net change in currency investment assets		
Additions	14,133.8	16,725.0
Disposals	(3,384.2)	(5,263.7)
Maturities and other net movements	(10,956.8)	(10,240.7)
	(207.2)	1,220.6
Net change in transactions awaiting settlement	(63.9)	62.0
Market value and other movements	(79.3)	(4.3)
Balance at 31 March	**8,412.2**	8,769.4

7. Derivative financial instruments

The Bank uses the following types of derivative instruments for economic hedging and trading purposes.

Interest rate and bond futures are contractual obligations to receive or pay a net amount based on changes in interest rates or bond prices on a future date at a specified price established in an organised market. Futures contracts are collateralised by cash or marketable securities and changes in the futures contract value are settled daily with the exchange.

Foreign currency and bond options are contractual agreements under which the seller grants the purchaser the right, but not the obligation, to either buy (call option) or sell (put option), by or on a set date, a specific amount of a foreign currency, a bond or gold at a predetermined price. In consideration, the seller receives a premium from the purchaser.

Currency and gold swaps, cross-currency interest rate swaps and interest rate swaps are commitments to exchange one set of cash flows for another. Swaps result in an economic exchange of currencies, gold or interest rates (for example, fixed rate for floating rate) or a combination of interest rates and currencies (cross-currency interest rate swaps). Except for certain currency and gold swaps and cross-currency interest rate swaps, no exchange of principal takes place.

Currency and gold forwards represent commitments to purchase foreign currencies or gold at a future date. This includes undelivered spot transactions.

Forward rate agreements are individually negotiated interest rate forward contracts that result in cash settlement at a future date for the difference between a contracted rate of interest and the prevailing market rate.

Swaptions are options under which the seller grants the purchaser the right, but not the obligation, to enter into a currency or interest rate swap at a predetermined price by or on a set date.

The table below analyses the market value of derivative financial instruments:

	2005			2004		
	Notional amounts	Market values		Notional amounts	Market values	
SDR millions		Assets	Liabilities		Assets	Liabilities
Bond futures	721.1	1.0	(1.2)	212.7	–	–
Bond options	82.7	0.7	–	388.4	0.1	–
Cross-currency interest rate swaps	10,619.0	246.7	(2,221.7)	11,388.0	241.4	(2,454.5)
Currency and gold forwards	1,297.6	16.0	(9.0)	2,209.5	17.7	(5.6)
Currency options	2,276.2	0.7	(4.4)	16.6	–	–
Currency and gold swaps	31,993.1	480.6	(145.3)	37,990.0	53.7	(750.1)
Forward rate agreements	45,074.2	5.3	(3.2)	17,623.0	4.7	(5.0)
Interest rate futures	19,195.0	1.4	(0.2)	42,143.9	0.4	(0.4)
Interest rate swaps	202,919.6	1,433.8	(1,038.5)	85,894.0	3,003.1	(1,099.1)
Options on futures	3,306.0	0.9	(0.5)	–	–	–
Swaptions	2,818.0	0.9	(16.6)	1,589.4	–	(25.0)
Total derivative financial instruments at 31 March	**320,302.5**	**2,188.0**	**(3,440.6)**	199,455.5	3,321.1	(4,339.7)
Net derivative financial instruments at 31 March			**(1,252.6)**			(1,018.6)

8. Accounts receivable

SDR millions	**2005**	2004
Financial transactions awaiting settlement	4,018.1	1,598.0
Other assets	10.5	11.6
Total accounts receivable	**4,028.6**	1,609.6

"Financial transactions awaiting settlement" relates to short-term receivables (typically due in three days or less) where transactions have been effected but cash has not yet been transferred. This includes assets that have been sold and liabilities that have been issued.

9. Land, buildings and equipment

SDR millions	Land	Buildings	IT and Other equipment	2005 Total	2004 Total
Historical cost					
Balance at 1 April	**41.2**	**185.1**	**88.1**	**314.4**	305.7
Capital expenditure	–	–	14.9	14.9	10.5
Disposals and retirements	–	–	(16.8)	(16.8)	(1.8)
Balance at 31 March	**41.2**	**185.1**	**86.2**	**312.5**	314.4
Depreciation					
Accumulated depreciation at 1 April	–	**68.3**	**56.1**	**124.4**	109.3
Depreciation	–	4.2	11.5	15.7	16.9
Disposals and retirements	–	–	(16.8)	(16.8)	(1.8)
Balance at 31 March	**–**	**72.5**	**50.8**	**123.3**	124.4
Net book value at 31 March	**41.2**	**112.6**	**35.4**	**189.2**	190.0

The depreciation charge for the financial year ended 31 March 2005 includes an additional charge of SDR 2.4 million following an impairment review (2004: SDR 3.3 million).

Following a review of capitalised costs in the financial year ended 31 March 2005, SDR 16.8 million was derecognised from capitalised yet fully depreciated IT and other equipment costs.

10. Currency deposits

Currency deposits are book entry claims on the Bank and are analysed in the table below:

SDR millions	**2005**	2004
Deposit instruments repayable at one to two days' notice		
Medium-Term Instruments (MTIs)	42,694.7	41,198.8
FIXBIS	53,712.0	35,212.5
	96,406.7	76,411.3
Other currency deposits		
Other deposit instruments (FRIBIS)	3,192.4	6,200.2
Sight and notice accounts and fixed-term deposits	51,019.7	50,541.0
	54,212.1	56,741.2
Total currency deposits	**150,618.8**	133,152.5

The Bank has undertaken to repay at market value certain deposit instruments, in whole or in part, at one to two business days' notice. The resulting gains or losses are included under the profit and loss account heading "Net valuation movement".

Currency deposits (other than sight and notice accounts) are included in the balance sheet at market value. This value differs from the amount that the Bank is contractually required to pay at maturity to the holder of the deposit. For total currency deposits the amount that the Bank is contractually required to pay at maturity to the holder of the deposit, plus accrued interest to 31 March 2005, is SDR 151,115.9 million (2004: SDR 131,482.6 million).

The Bank uses financial models to estimate the market value of its currency deposits. These models value the expected cash flows of financial instruments using discount factors that are derived partly from quoted interest rates (eg Libor and swap rates) and partly from assumptions about spreads. The Bank determines these spreads based on recent market transactions. In the financial year ended 31 March 2005, changes to the assumptions about spreads used for valuing currency deposits decreased the Bank's profit by SDR 7.9 million.

11. Gold deposit liabilities

Gold deposits placed with the Bank originate entirely from central banks.

12. Securities sold under repurchase agreements

Securities sold under repurchase agreements ("repurchase agreements") are transactions under which the Bank receives a fixed-term deposit from a counterparty to which it provides collateral in the form of securities. The rate on the deposit is fixed at the beginning of the transaction, and there is an irrevocable commitment to repay the deposit subject to the return of the securities. They originate entirely from commercial banks.

13. Accounts payable

Accounts payable consist of financial transactions awaiting settlement, relating to short-term payables (typically payable within three days or less) where transactions have been effected but cash has not yet been transferred. This includes assets that have been purchased and liabilities that have been repurchased.

14. Other liabilities

SDR millions	**2005**	2004
Retirement benefit obligations – see note 21		
Directors' pensions	4.2	4.0
Health and accident benefits	127.3	111.2
Payable to former shareholders	3.9	14.5
Other	15.9	14.7
Total other liabilities	**151.3**	144.4

15. Share capital

The Bank's share capital consists of:

SDR millions	**2005**	2004
Authorised capital: 600,000 shares, each of SDR 5,000 par value	3,000.0	3,000.0
Issued capital: 547,125 shares	2,735.6	2,735.6
Paid-up capital (25%)	**683.9**	683.9

The number of shares eligible for dividend is:

	2005	2004
Issued shares	547,125	547,125
Less: shares held in treasury	(36,933)	(77,052)
Outstanding shares eligible for dividend	**510,192**	470,073
Of which:		
Eligible for full dividend	470,073	452,073
Eligible for dividend pro rata from the value date of subscription	40,119	18,000
Dividend per share (in SDR)	**235**	225

The shares eligible for dividend pro rata from the value date of subscription reflect respectively the redistribution of shares held in treasury during the financial year ended 31 March 2005 (see note 18), and the issuance of shares to six new member central banks during the financial year ended 31 March 2004.

16. Statutory reserves

The Bank's Statutes provide for application of the Bank's annual net profit by the Annual General Meeting on the proposal of the Board of Directors to three specific reserve funds: the legal reserve fund, the general reserve fund and the special dividend reserve fund; the remainder of the net profit after payment of any dividend is generally allocated to the free reserve fund.

Legal reserve fund. This fund is currently fully funded at 10% of the Bank's paid-up capital.

General reserve fund. After paying any dividend, 10% of the remainder of the Bank's annual net profit currently must be allocated to the general reserve fund. When the balance of this fund equals five times the Bank's paid-up capital, such annual contribution will decrease to 5% of the remainder of the annual net profit.

Special dividend reserve fund. A portion of the remainder of the annual net profit may be allocated to the special dividend reserve fund, which shall be available, in case of need, for paying the whole or any part of a declared dividend. Dividends are normally paid out of the Bank's net profit.

Free reserve fund. After the above allocations have been made, any remaining unallocated net profit is generally transferred to the free reserve fund.

Receipts from the subscription of BIS shares are allocated to the legal reserve fund as necessary to keep it fully funded, with the remainder being credited to the general reserve fund.

The free reserve fund, general reserve fund and legal reserve fund are available, in that order, to meet any losses incurred by the Bank. In the event of liquidation of the Bank, the balances of the reserve funds (after the discharge of the liabilities of the Bank and the costs of liquidation) would be divided among the Bank's shareholders.

17. Repurchase of shares

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 from private (ie non-central bank) shareholders of 72,648 shares on which the American, Belgian and French central banks exercise voting rights. The compensation paid was CHF 16,000 per share. At the same time the Bank repurchased 2,304 shares of these three issues from other central banks. The Bank held these shares in treasury and redistributed 40,119 of them, corresponding to the shares of the Belgian and French issues held in treasury, during the financial year ended 31 March 2005 to the central banks of those countries (see note 18).

Three former private shareholders expressed dissatisfaction with the amount of compensation paid to them by the Bank in connection with the mandatory repurchase of shares and initiated proceedings with the Arbitral Tribunal in The Hague. These proceedings were completed with the final award of the Arbitral Tribunal on 19 September 2003, remitting an additional compensation of CHF 7,977.56 per share. The Bank applied the award to all former shareholders in final settlement of all claims with respect to the repurchased shares. The cost of repurchasing the total of 74,952 shares above was increased by SDR 153.8 million, as follows:

SDR millions	2004
Charged to shares held in treasury:	
Additional compensation in excess of provision	113.5
Charged to the profit and loss account:	
Additional interest thereon in excess of provision	32.9
Currency translation loss	7.4
Total	153.8

Former shareholders have returned the necessary documentation and claimed payment with respect to more than 99% of the repurchased shares. The compensation not yet paid is included in other liabilities (see note 14) and amounts to SDR 3.9 million (2004: SDR 14.5 million).

18. Shares held in treasury

	2005	2004
Balance at 1 April		
Repurchase of shares in the financial year ended 31 March 2001	74,952	74,952
Others	2,100	2,100
Total at 1 April	**77,052**	77,052
Redistribution to shareholding central banks	(40,119)	–
Balance at 31 March	**36,933**	77,052

In accordance with the Bank's Statutes, the BIS shares repurchased in early 2001 and subsequently held in treasury (see note 17) may be redistributed by the Board of Directors by way of sale to shareholding central banks against payment of an amount equal to that of the compensation paid to the former shareholders (ie CHF 23,977.56 per share). Consistent therewith, during the financial year ended 31 March 2005, the Bank redistributed all treasury shares of the Belgian and French issues to the central banks of those countries. The proceeds of this redistribution of 40,119 shares amounted to CHF 962.0 million, equivalent to SDR 536.7 million at the relevant transaction dates. This was credited to the Bank's equity accounts as follows:

SDR millions	**2005**
Shares held in treasury	456.4
General reserve fund – exchange adjustment	80.3
Total	**536.7**

The figure of SDR 456.4 million represents the SDR equivalent of the cost of the compensation in Swiss francs paid to the former private shareholders of the shares of the Belgian and French issues at the time of the shares repurchase in January 2001 and the final award of the Hague Arbitral Tribunal in September 2003. When the proceeds of redistribution of these shares were received during the year, an exchange gain of SDR 80.3 million was realised. This resulted from the appreciation of the Swiss franc against the SDR during the period from 2001 until these shares were sold.

The remaining shares held in treasury consist of 35,933 shares of the American issue (34,833 repurchased in 2001 and 1,100 previously held by the Bank) and the 1,000 suspended shares of the Albanian issue. Note 40 provides further information on the redistribution of the shares of the American issue.

19. Earnings per share

	2005	2004
Net profit for the financial year (SDR millions)	370.9	536.1
Weighted average number of shares entitled to dividend	486,673	462,114
Earnings per share – (SDR per share)	**762.1**	1,160

The dividend proposed for the financial year ended 31 March 2005 is SDR 235 per share (2004: SDR 225).

20. Other equity accounts

Other equity accounts represent the revaluation accounts of the currency and gold investment assets, which are further described in notes 5 and 6.

Other equity accounts comprise:

SDR millions	**2005**	2004
Securities revaluation account	92.2	178.5
Gold revaluation account	759.3	833.3
Total other equity accounts	**851.5**	1,011.8

A. Securities revaluation account

This account contains the difference between the market value and the amortised cost of the Bank's investment securities.

The movements in the securities revaluation account were as follows:

SDR millions	**2005**	2004
Balance at 1 April	178.5	337.2
Net valuation movement		
Net gain on sales	(7.0)	(154.4)
Market value and other movements	(79.3)	(4.3)
	(86.3)	(158.7)
Balance at 31 March	**92.2**	178.5

The tables below analyse the balance in the securities revaluation account:

As at 31 March 2005 *SDR millions*	Market value of assets	Historical cost	Securities revaluation account	Gross gains	Gross losses
Securities purchased under resale agreements	962.8	962.8	–	–	–
Government and other securities	7,449.4	7,357.2	92.2	137.9	(45.7)
Total	**8,412.2**	**8,320.0**	**92.2**	**137.9**	**(45.7)**

As at 31 March 2004 *SDR millions*	Market value of assets	Historical cost	Securities revaluation account	Gross gains	Gross losses
Securities purchased under resale agreements	1,225.5	1,225.5	–	–	–
Time deposits and advances to banks	6.8	6.8	–	–	–
Government and other securities	7,537.1	7,358.6	178.5	193.0	(14.5)
Total	8,769.4	8,590.9	178.5	193.0	(14.5)

B. Gold revaluation account

This account contains the difference between the book value and the deemed cost of the Bank's gold investment assets. For gold investment assets held on 31 March 2003 (when the Bank changed its reporting currency from the gold franc to the SDR) the deemed cost is approximately SDR 151 per ounce, based on the value of USD 208 that was applied from 1979 to 2003 in accordance with a decision by the Bank's Board of Directors, translated at the 31 March 2003 exchange rate.

The movements in the gold revaluation account were as follows:

SDR millions	**2005**	2004
Balance at 1 April	833.3	571.6
Net valuation movement		
Net gain on sales	(50.5)	–
Gold price movement	(23.5)	261.7
	(74.0)	261.7
Balance at 31 March	**759.3**	833.3

21. 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:

SDR millions	**2005**	2004
Liability at 1 April	4.0	4.0
Contributions paid	(0.3)	(0.3)
Charged to the profit and loss account	0.3	0.4
Exchange differences	0.2	(0.1)
Liability at 31 March – see note 14	**4.2**	4.0
Unrecognised actuarial loss	0.1	0.6
Present value of obligation	4.3	4.6

The actuarial assumptions used in calculating these benefits are comparable to those for staff pensions (see below), except that the estimated salary increase rate is assumed to be 1.5% per annum.

B. Staff pensions

The Bank operates a final salary defined benefit pension system for its staff. The pension 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 arrangement. The fund is valued annually by independent actuaries. The latest actuarial valuation was carried out at 30 September 2004.

SDR millions	**2005**	2004
Present value of funded obligations	596.4	527.8
Market value of fund assets	(566.6)	(525.4)
	29.8	2.4
Unrecognised actuarial losses	(29.8)	(2.4)
Liability at 31 March	**–**	–

The movement in the accounts during the year was as follows:

SDR millions	**2005**	2004
Liability at 1 April	–	–
Contributions paid	(15.1)	(14.5)
Charged to the profit and loss account	15.1	14.5
Liability at 31 March	**–**	–

Amounts recognised in the profit and loss account were as follows:

SDR millions	**2005**	2004
Current service cost	23.3	20.0
Interest cost	18.9	17.4
Expected return on fund assets	(27.3)	(22.9)
Net actuarial losses recognised in year	–	2.9
Unrecognised actuarial loss / (gain)	0.2	(2.9)
Total included in operating expense	**15.1**	14.5

The principal actuarial assumptions used in the calculations above were as follows:

	2005	2004
Discount rate – market rate of highly rated Swiss corporate bonds	3.25%	3.5%
Expected return on fund assets	5.0%	5.0%

The actual return on fund assets in 2005 was 3.2% (2004: 13.9%). The obligation by the Bank towards its employees is the present value of promised retirement benefits. This obligation is calculated taking into account the salaries projected to the date at which benefits are payable for current employees. This salary increase rate is currently assumed to be 4.1% (2004: 4.1%). Furthermore, it incorporates estimated future increases in pensions payable of 1.5% (2004: 1.5%) for current and future pension system participants.

C. Health and accident benefits

The Bank also provides unfunded post-retirement health care 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 arrangement and the actuarial assumptions used in calculating these benefits are comparable to those for staff pensions, except that there is an additional assumption for long-term medical inflation of 5% per annum.

The movement in the accounts during the year was as follows:

SDR millions	**2005**	2004
Liability at 1 April	111.2	97.1
Contributions paid	(1.7)	(1.2)
Charged to the profit and loss account	12.7	16.4
Exchange differences	5.1	(1.1)
Liability at 31 March – see note 14	**127.3**	111.2
Unrecognised actuarial loss	52.5	18.1
Present value of obligation	179.8	129.3

Amounts recognised in the profit and loss account were as follows:

SDR millions	**2005**	2004
Current service cost	7.7	7.0
Interest cost	4.7	4.1
Net actuarial losses recognised in year	0.3	0.4
Additional expense	–	4.9
Total included in operating expense	**12.7**	16.4

22. Interest income

SDR millions	**2005**	2004
Interest on investment assets		
Securities purchased under resale agreements	14.5	9.9
Government and other securities	255.4	269.8
Gold investment assets	23.4	25.4
	293.3	305.1
Interest on banking assets		
Treasury bills	335.5	233.4
Securities purchased under resale agreements	81.6	104.3
Time deposits and advances to banks	1,693.4	1,098.5
Government and other securities	767.5	721.6
Gold banking assets	7.2	8.2
	2,885.2	2,166.0
Interest on derivative financial instruments	**879.5**	1,022.3
Other interest	**0.8**	0.5
Total interest income	**4,058.8**	3,493.9
Of which: Interest received during the financial year	3,981.1	3,830.2

23. Interest expense

SDR millions	**2005**	2004
Interest on gold deposits	5.8	7.0
Interest on currency deposits	3,364.2	2,665.7
Interest on securities sold under repurchase agreements	14.1	8.4
Total interest expense	**3,384.1**	2,681.1
Of which: Interest paid during the financial year	3,320.7	2,676.6

24. Net valuation movement

SDR millions	**2005**	2004
Unrealised valuation movements on banking financial assets	(247.9)	(98.9)
Realised gains on banking financial assets	20.9	32.1
Unrealised valuation movements on financial liabilities	1,478.0	583.8
Realised losses on financial liabilities	(16.7)	(327.1)
Valuation movements on derivative financial instruments	(1,417.4)	(448.6)
Net valuation movement	**(183.1)**	(258.7)

25. Net fees and commissions income

SDR millions	**2005**	2004
Fees and commissions income	4.3	5.8
Fees and commissions expense	(3.0)	(4.4)
Net fees and commissions income	**1.3**	1.4

26. Net foreign exchange loss / gain

SDR millions	**2005**	2004
Net transaction gain	11.9	25.8
Net translation loss	(46.4)	(16.8)
Net foreign exchange (loss) / gain	**(34.5)**	9.0

The net translation loss in the financial year ended 31 March 2005 is attributable principally to the impact of the appreciation of the Swiss franc against the SDR on the Bank's short Swiss franc position (see note 37F) which existed prior to the subscription by the central banks of Belgium and France for the shares of their national issues which were formerly held in treasury. On the date of subscription, this loss (and the related translation losses in prior years since these shares were repurchased from private shareholders in 2001) was offset in the Bank's equity by a realised exchange gain of SDR 80.3 million (see note 18).

27. Operating expense

The following table analyses the Bank's operating expense in Swiss francs (CHF), the currency in which most expenditure is incurred:

CHF millions	**2005**	2004
Board of Directors		
Directors' fees	1.6	1.6
Pensions	0.6	0.6
Travel, external Board meetings and other costs	1.0	1.5
	3.2	3.7
Management and staff		
Remuneration	97.1	96.1
Pensions	30.9	30.2
Other personnel-related expense	38.3	44.4
	166.3	170.7
Office and other expense	**64.5**	62.1
Administrative expense in CHF millions	**234.0**	236.5
Administrative expense in SDR millions	129.3	125.6
Depreciation in SDR millions	15.7	16.9
Operating expense in SDR millions	**145.0**	142.5

The average number of full-time equivalent employees during the financial year ended 31 March 2005 was 526 (2004: 509).

28. Net gain on sales of investment securities

SDR millions	**2005**	2004
Disposal proceeds	3,384.2	5,263.7
Amortised cost	(3,377.2)	(5,109.3)
Net gains	**7.0**	154.4
Comprising:		
Gross realised gains	32.9	172.5
Gross realised losses	(25.9)	(18.1)

29. Net gain on sales of gold investment assets

The profits on the sales of gold investment assets for the financial year ended 31 March 2005 were as follows:

SDR millions	**2005**
Disposal proceeds	108.6
Deemed cost – see note 20B	(58.1)
Gross realised gains	**50.5**

There were no disposals of gold investment assets during the financial year ended 31 March 2004.

30. Cash and cash equivalents

For the purposes of the cash flow statement, cash and cash equivalents comprise:

SDR millions	**2005**	2004
Cash and sight accounts with banks	25.8	18.9
Call / notice accounts	2,979.7	2,647.4
Total cash and cash equivalents	**3,005.5**	2,666.3

31. Taxes

The Bank's legal status in Switzerland is set out in its Headquarters Agreement with the Swiss Federal Council. Under the terms of this document the Bank is exempted from virtually all direct and indirect taxes at both federal and local government level in Switzerland.

Similar agreements exist with the government of the People's Republic of China for the Asian Office in Hong Kong SAR and with the Mexican government for the Office of the Americas.

32. Exchange rates

The following table shows the principal rates and prices used to translate balances in foreign currency and gold into SDR:

	Spot rate as at 31 March		Average rate financial year ended	
	2005	2004	**2005**	2004
USD	0.661	0.675	0.671	0.700
EUR	0.859	0.827	0.845	0.821
JPY	0.00619	0.00649	0.00625	0.00620
GBP	1.248	1.239	1.238	1.183
CHF	0.554	0.530	0.549	0.531
Gold	282.7	286.5	277.9	263.8

33. Off-balance sheet items

Fiduciary transactions are effected in the Bank's name on behalf of, and at the risk of, the Bank's customers without recourse to the Bank.

They are not included in the Bank's balance sheet and comprise:

SDR millions	**2005**	2004
Nominal value of securities held under:		
Safe custody arrangements	10,009.2	9,153.5
Collateral pledge agreements	2,275.2	2,346.2
Portfolio management mandates	3,769.4	2,903.3
Total	**16,053.8**	14,403.0

The financial instruments held under the above arrangements are deposited with external custodians, either central banks or commercial institutions.

34. Commitments

The Bank provides a number of committed standby facilities for its central bank and international institution customers. As at 31 March 2005 the outstanding commitments to extend credit under these committed standby facilities were SDR 5,480.4 million (2004:SDR 3,677.3 million), of which SDR 315.0 million was uncollateralised (2004: SDR 118.2 million).

35. Effective interest rates

The effective interest rate is the rate that discounts the expected future cash flows of a financial instrument to the current book value.

The table below summarises the effective interest rate by major currencies for applicable financial instruments:

As at 31 March 2005 *Percentages*	USD	EUR	GBP	JPY	Other currencies
Assets					
Gold deposits	–	–	–	–	0.82
Treasury bills	2.70	2.13	–	–	–
Securities purchased under resale agreements	2.71	2.12	4.79	–	–
Time deposits and advances to banks	2.77	2.24	4.93	–	4.15
Government and other securities	3.63	3.14	4.96	0.45	3.94
Liabilities					
Currency deposits	3.00	2.29	4.73	–	3.29
Gold deposits	–	–	–	–	0.46
Securities sold under repurchase agreements	2.43	–	–	–	–

36. Concentration analysis

A. Total liabilities

SDR millions	**2005**	2004
Africa	14,024.8	9,771.6
Asia-Pacific	80,642.4	70,611.0
Europe	41,772.5	47,577.3
North and South America	28,910.3	25,287.6
International organisations	4,883.1	5,077.3
Total	**170,233.1**	158,324.8

The Bank's currency and gold deposits, principally from central banks and international institutions, comprise 92.7% of its total liabilities. At 31 March 2005 currency and gold deposits originated from 159 depositors (2004: 155). Within these deposits there are significant individual customer concentrations, with three customers each contributing in excess of 5% of the total on a settlement date basis (2004: five customers). Note 37 provides details of how the Bank manages the concentration risk in its funding base.

B. Credit commitments

SDR millions	**2005**	2004
Asia-Pacific	5,259.1	3,461.3
Europe	221.3	216.0
Total	**5,480.4**	3,677.3

Note 34 provides further analysis of the Bank's credit commitments.

C. Off-balance sheet items

SDR millions	**2005**	2004
Africa	594.6	527.4
Asia-Pacific	12,144.1	10,552.9
Europe	556.8	534.0
North and South America	2,758.3	2,788.7
Total	**16,053.8**	14,403.0

Note 33 provides further analysis of the Bank's off-balance sheet items.

D. Total assets

The Bank invests the majority of its funds in the interbank market (with G10-based global financial institutions) and in G10 sovereign debt. A geographical analysis of the Bank's total assets is not provided because the Bank's Management believes that this would not present a fair impression of the economic effect of the Bank's investments.

37. Capital and risk management

A. The risks that the Bank faces

The Bank is exposed to the following categories of risk:

Credit risk. The risk of a financial loss arising from a counterparty's failure to service its debt in a timely manner. This is the largest risk that the Bank faces.

Market risk. The risk of a decline in the total value of the Bank's assets and liabilities due to adverse changes in such market variables as interest rates, exchange rates and gold prices.

Liquidity risk. The risk of being unable to meet its obligations to pay as they fall due without incurring unacceptable losses.

Operational risk. The risk of financial losses, damage to the Bank's reputation, or both, caused by people, failed or inadequate processes or systems, or external events.

B. How the Bank manages these risks

Organisation structure

The Bank is operated to serve the central banking community whilst earning an adequate return to maintain its capital strength. Assets and liabilities are organised into two books:

Currency and gold deposit liabilities and related banking assets and derivatives.

In this book the Bank takes limited interest rate, gold price and foreign currency risk.

Assets, liabilities and derivatives relating principally to the investment of the Bank's equity.

The Bank holds most of its equity in financial instruments denominated in the constituent currencies of the SDR, which are managed using a benchmark of bonds with a fixed duration target. The remainder of the Bank's equity is held in gold.

The Bank manages risk through a framework including an independent risk control function and regular reporting of risk positions to appropriate management committees. The Bank's risk methodologies and risk policies are documented in a detailed risk manual, which is reviewed on a regular basis. The Bank's credit limits are documented in a counterparty manual. All changes to credit limits require management approval.

The finance function and legal service augment the risk control function. The role of the finance function is to produce the Bank's financial statements and to control its expenditure through setting and monitoring the annual budget. The legal service provides legal advice and support covering a wide range of issues relating to the Bank's activities.

The purpose of the Bank's compliance function is to provide reasonable assurance that the activities of the Bank and its staff conform with applicable laws and regulations, the BIS Statutes, the Bank's Code of Conduct and other internal rules, policies and relevant standards of sound practice. The compliance function identifies and assesses compliance risks and guides and educates staff on compliance issues. It also performs a monitoring, reporting and, in cooperation with the legal service, advisory role.

The internal audit function reviews internal control procedures and reports on how they comply with internal standards and industry best practices. The scope of internal audit work includes the review of risk management procedures, internal control systems, information systems and governance processes.

The Deputy General Manager is responsible for the Bank's risk control, compliance and internal audit functions. The head of compliance and head of internal audit also report to the Audit Committee of the Board of Directors.

C. Risk methodologies

The Bank uses a comprehensive range of quantitative methodologies for valuing financial instruments and for measuring risk to the Bank's net profit and its equity. The Bank reassesses its quantitative methodologies in the light of its changing risk environment and evolving best practice.

Economic capital is a key quantitative risk methodology used by the Bank. Economic capital is a measure designed to estimate the amount of equity needed to absorb the potential losses arising from exposures on any given date, to a statistical level of confidence determined by the Bank's aim to remain of the highest creditworthiness. Many of the Bank's internal limits and reports are expressed in terms of the economic capital usage. The Bank calculates economic capital covering credit risk, market risk and operational risk.

To calculate economic capital for credit risk the Bank uses an internal model for credit portfolio value-at-risk that is based on the Bank's assessment of:

- The probability of default of individual counterparties;
- The correlations of losses associated with individual counterparties; and
- The loss that the Bank would incur as a result of the default.

The market risk economic capital measure is derived from the Bank's value-at-risk (VaR) methodology. This is discussed in more detail in section F below.

The Bank's operational risk economic capital measure is based on a model that incorporates the Bank's experience of operational losses and external loss data.

In computing its credit, market and operational risk economic capital measures the Bank uses as key assumptions a one-year time horizon and a 99.995% level of confidence.

D. Capital adequacy

The Bank maintains a very strong capital position, which is measured using its economic capital model and the framework proposed by the Basel Capital Accord of July 1988 (the Basel Accord). The table below shows the Bank's capital as at 31 March 2005:

SDR millions	**2005**	2004
Share capital	683.9	683.9
Statutory reserves	8,743.2	8,230.8
Less: shares held in treasury	(396.2)	(852.6)
Tier 1 capital	**9,030.9**	8,062.1
Profit and loss account	370.9	536.1
Other equity accounts	851.5	1,011.8
Total capital	**10,253.3**	9,610.0

The Basel Accord ratios measure capital adequacy by comparing the Bank's eligible capital with its risk-weighted assets. The risk-weighted assets are derived by applying a series of risk weightings to the Bank's assets and derivatives, based on the Basel Accord. The Bank's capital ratios are high due to the proportion of sovereign debt (which is zero risk-weighted) within the Bank's assets. The Bank's Tier 1 ratio was 35.8% as at 31 March 2005 (2004: 34.7%).

E. Credit risk

Credit risk includes:

Default risk – the risk that a counterparty will not fulfil its obligations in accordance with the agreed terms of a transaction. Default risk arises on financial assets and derivatives, as well as committed facilities that the Bank provides for central banks and international organisations.

Settlement risk – the risk of failure of the settlement or clearing of financial transactions where the exchange of cash, securities or other assets is not simultaneous.

Transfer risk – the risk that a counterparty is unable to meet its foreign currency obligations due to restricted access to foreign currency.

The Bank manages its exposure to credit risk by placing limits on the amount of risk accepted in relation to one borrower or a group of borrowers. Such risks are monitored on a regular basis and are subject to at least an annual review and will be adjusted as deemed appropriate. The main criterion for these reviews is the ability of borrowers and potential borrowers to meet interest and capital repayment obligations. Limits on the level of credit risk are approved by the Board of Directors. Actual exposures are monitored daily against limits.

The Bank also obtains collateral, in addition to reverse repurchase agreements, to mitigate credit risk on derivative financial instruments, and has established bilateral setoff agreements with certain of its counterparties.

1. Default risk

The Bank controls its default risk on both a counterparty and a portfolio level. Credit exposures are restricted using a series of credit limits covering individual counterparties and countries of risk. The Bank conducts its own detailed independent credit analysis resulting in the assignment of internal credit grades. Based on this analysis the Bank sets its credit limits.

Default risk on the Bank's holdings of securities is reduced by the highly liquid nature of most of the assets. Securities are sold when the Bank's management considers that a counterparty has an unacceptable risk of default. Default risk on over-the-counter (OTC) derivatives is mitigated using collateral management agreements.

The Bank's credit policies ensure that the vast majority of its assets are invested with sovereigns or with financial institutions rated A or above. Because of the limited number of potential investments, the Bank has significant individual counterparty concentrations within these risk sectors.

The following tables show credit exposure by sector and credit rating:

Sector of risk *Percentages*	**2005**	2004
Sovereign	32.5	29.0
Financial institution	61.7	65.0
Other	5.8	6.0
	100.0	100.0

BIS internal credit grade (expressed as equivalent long-term rating) *Percentages*	**2005**	2004
AAA	26.3	25.1
AA	57.0	54.9
A	16.1	19.6
BBB+ and below (including unrated risks)	0.6	0.4
	100.0	100.0

2. Settlement risk

The Bank minimises settlement risk by:

- Using established clearing centres;
- Where possible settling transactions only once both parties have fulfilled their obligations (the delivery versus payment settlement mechanism);
- Where possible requiring net settlement of payments on derivative financial instruments;
- Using cash correspondent banks with the ability to stop payments at short notice;
- In respect of foreign exchange transactions, ensuring where possible that these take place subject to setoff arrangements that would apply should a counterparty fail to deliver the counter-currency to such a transaction; and
- Calculating and limiting the settlement risk on a counterparty basis.

3. Transfer risk

The Bank calculates and sets limits for transfer risk on a per country basis.

F. Market risk

The main components of the Bank's market risk are gold price risk, currency risk and interest rate risk. The Bank incurs market risk primarily through the assets relating to the management of its equity. The Bank measures market risk using the value-at-risk (VaR) methodology, and by computing sensitivities to certain market risk factors. VaR expresses the statistical estimate of the maximum potential loss on the current portfolio assuming a specified time horizon and measured to a specified level of confidence.

Market risk economic capital is measured and managed on a combined basis across all components of market risk. Management limits the Bank's market risk economic capital usage.

All VaR models, while forward-looking, are based on past events and dependent on the quality of available market data. VaR limits are supplemented with a framework of other limits and reporting, including specific stress tests and detailed monitoring of the largest market risk positions.

1. Gold price risk

Gold price risk is the potential impact on the market value of assets and liabilities from changes in the SDR price of gold. The Bank is exposed to gold price risk principally through its holdings of gold investment assets, which comprise 180 tonnes (2004: 192 tonnes). This is held in custody or placed on deposit with commercial banks. At 31 March 2005 approximately 16% of its equity comprised gold holdings (31 March 2004: 18%). The Bank can also have small exposures to gold price risk through its banking activities with central and commercial banks. Gold price risk is measured within the Bank's aggregate market risk economic capital framework.

2. Currency risk

Currency risk is the potential impact on the market value of assets and liabilities from changes in exchange rates. The Bank is exposed to currency risk principally through the assets relating to the management of its equity. The Bank is also exposed to currency risk through managing its customer deposits and through acting as an intermediary in foreign exchange transactions between central and commercial banks. The Bank reduces its currency exposures by matching the assets relating to the management of its equity to the constituent currencies of the SDR on a regular basis, and by allowing only small currency exposures relating to customer deposits and foreign exchange transaction intermediation.

The following table shows the Bank's currency positions after adjusting for its holdings of gold investment assets:

Net assets as at 31 March

SDR millions	**2005**	2004
Swiss franc	(137.0)	(655.6)
US dollar	21.3	297.9
Euro	4.3	111.3
Japanese yen	36.7	130.9
Pound sterling	12.7	57.7
Swedish krona	58.1	54.3
Other currencies	3.9	3.5

The short Swiss franc position at 31 March 2005 is attributable principally to the Bank's retirement benefit obligations (see note 21). The short Swiss franc position at 31 March 2004 was attributable principally to the repurchase of BIS shares during 2001 (see note 17) and to a lesser extent to the Bank's retirement benefit obligations. The reduction in the short Swiss franc position during 2005 arose from the subscription (the price of which was fixed in Swiss francs) by the central banks of Belgium and France for the shares of their national issues which were formerly held in treasury.

3. Interest rate risk

Interest rate risk is the potential impact on the market value of assets and liabilities from changes in interest rates. The Bank is exposed to interest rate risk principally through the interest-bearing assets relating to the management of its equity. These assets are managed using a benchmark of bonds with a fixed duration target. The Bank is also exposed to limited interest rate risk through its activities in accepting and reinvesting customer deposits.

The Bank closely monitors interest rate risk including the sensitivity of market values to movements in interest rates. Market risk is restricted using economic capital, VaR and stress test-based limits.

The table below shows the impact on the Bank's equity of a 1% upward shift in the relevant yield curve:

As at 31 March 2005

SDR millions	Up to 6 months	7 to 12 months	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	Over 5 years
Euro	(4.6)	(4.5)	(11.6)	(11.1)	(11.2)	(17.8)	(67.8)
Japanese yen	2.0	(1.0)	(2.5)	(2.0)	(2.6)	(3.0)	(8.1)
Pound sterling	(0.8)	1.6	(9.8)	(6.1)	(5.4)	(9.9)	(12.1)
Swiss franc	(0.3)	0.3	0.1	–	–	–	–
US dollar	16.2	21.0	(46.4)	(7.4)	(9.0)	(17.4)	(56.6)
Other currencies	(0.3)	0.1	(0.1)	–	–	–	–
Total	**12.2**	**17.5**	**(70.3)**	**(26.6)**	**(28.2)**	**(48.1)**	**(144.6)**

G. Liquidity risk

Net movements in the currency and gold deposits from central banks, international organisations and other public institutions are the key determinants of the size of the Bank's balance sheet. The Bank has undertaken to repurchase at market value certain of its currency deposit instruments at one or two business days' notice. The Bank is managed to preserve a high degree of liquidity to ensure that it is able to meet the requirements of its customers at all times.

The Bank has developed a liquidity management framework based on a statistical model using prudent assumptions with regard to cash inflows and the liquidity of liabilities. Within this framework, the Board of Directors has set a limit for the Bank's liquidity ratio which requires liquid assets to be equal to at least 100% of the potential liquidity requirement faced by the Bank. In addition, liquidity stress tests are performed which assume extreme withdrawal scenarios considerably beyond the estimated potential liquidity requirement. These stress tests define additional liquidity requirements which must also be met by holdings of liquid assets. The Bank's liquidity has consistently been materially above its minimum liquidity ratio limit.

The following tables (including derivatives on a net basis) show assets and liabilities at carrying amounts based on the remaining period at the balance sheet date to the contractual maturity date:

As at 31 March 2005 *SDR millions*	Up to 1 month	1 to 3 months	4 to 6 months	6 to 9 months	9 to 12 months	1 to 5 years	Over 5 years	Maturity undefined	Total
Assets									
Cash and sight accounts with banks	25.8	–	–	–	–	–	–	–	25.8
Gold and gold deposits	5,305.2	188.3	514.2	440.9	531.6	1,564.2	72.6	–	8,617.0
Treasury bills	5,908.1	12,716.2	6,718.6	3,044.3	2,920.2	–	–	–	31,307.4
Securities purchased under resale agreements	14,034.3	–	–	–	–	–	–	–	14,034.3
Time deposits and advances to banks	31,823.2	18,716.8	13,981.0	9,830.4	5,926.9	5.1	33.1	–	80,316.5
Government and other securities	3,454.0	4,086.4	3,014.8	2,795.1	5,110.3	16,167.4	5,151.6	–	39,779.6
Accounts receivable	4,021.5	–	–	–	–	3.5	–	3.6	4,028.6
Land, buildings and equipment	–	–	–	–	–	–	–	189.2	189.2
Total	**64,572.1**	**35,707.7**	**24,228.6**	**16,110.7**	**14,489.0**	**17,740.2**	**5,257.3**	**192.8**	**178,298.4**
Liabilities									
Currency deposits									
Deposit instruments repayable at 1–2 days' notice	(8,204.1)	(14,081.1)	(14,153.1)	(16,175.8)	(10,937.5)	(30,176.3)	(2,678.8)	–	(96,406.7)
Other currency deposits	(33,081.0)	(6,591.3)	(7,088.4)	(3,439.2)	(4,010.9)	(1.3)	–	–	(54,212.1)
Gold deposits	(5,423.1)	(133.7)	(487.5)	(331.2)	(287.7)	(375.0)	(72.6)	–	(7,110.8)
Securities sold under repurchase agreements	(1,159.4)	–	–	–	–	–	–	–	(1,159.4)
Accounts payable	(7,752.2)	–	–	–	–	–	–	–	(7,752.2)
Other liabilities	(17.3)	–	–	–	–	–	–	(134.0)	(151.3)
Total	**(55,637.1)**	**(20,806.1)**	**(21,729.0)**	**(19,946.2)**	**(15,236.1)**	**(30,552.6)**	**(2,751.4)**	**(134.0)**	**(166,792.5)**
Net derivative financial instruments	67.3	172.8	(152.1)	(43.6)	(236.8)	(823.8)	(236.4)	–	(1,252.6)
Maturity gap	**9,002.3**	**15,074.4**	**2,347.5**	**(3,879.1)**	**(983.9)**	**(13,636.2)**	**2,269.5**	**58.8**	**10,253.3**

As at 31 March 2004 *SDR millions*	Up to 1 month	1 to 3 months	4 to 6 months	6 to 9 months	9 to 12 months	1 to 5 years	Over 5 years	Maturity undefined	Total
Assets									
Cash and sight accounts with banks	18.9	–	–	–	–	–	–	–	18.9
Gold and gold deposits	5,711.4	315.8	603.0	514.2	532.2	1,397.2	–	–	9,073.8
Treasury bills	5,903.4	15,450.9	6,615.6	908.9	1,361.9	–	–	–	30,240.7
Securities purchased under resale agreements	21,771.1	64.1	–	–	–	–	–	–	21,835.2
Time deposits and advances to banks	31,589.7	16,640.8	15,138.2	3,814.4	979.3	–	–	–	68,162.4
Government and other securities	1,785.5	2,948.1	3,085.9	2,164.1	1,533.6	17,661.3	4,304.6	–	33,483.1
Accounts receivable	1,602.2	–	–	–	–	3.9	–	3.5	1,609.6
Land, buildings and equipment	–	–	–	–	–	–	–	190.0	190.0
Total	**68,382.2**	**35,419.7**	**25,442.7**	**7,401.6**	**4,407.0**	**19,062.4**	**4,304.6**	**193.5**	**164,613.7**
Liabilities									
Currency deposits									
Deposit instruments repayable at 1–2 days' notice	(4,798.2)	(12,072.9)	(14,572.6)	(5,828.5)	(4,015.2)	(31,727.3)	(3,396.6)	–	(76,411.3)
Other currency deposits	(42,269.9)	(7,438.1)	(6,374.4)	(560.3)	(98.3)	(0.2)	–	–	(56,741.2)
Gold deposits	(5,625.0)	(250.5)	(510.1)	(347.5)	(291.7)	(268.7)	–	–	(7,293.5)
Securities sold under repurchase agreements	(1,161.2)	(64.1)	–	–	–	–	–	–	(1,225.3)
Accounts payable	(12,169.4)	–	–	–	–	–	–	–	(12,169.4)
Other liabilities	(26.6)	–	–	–	–	–	–	(117.8)	(144.4)
Total	**(66,050.3)**	**(19,825.6)**	**(21,457.1)**	**(6,736.3)**	**(4,405.2)**	**(31,996.2)**	**(3,396.6)**	**(117.8)**	**(153,985.1)**
Net derivative financial instruments	(102.9)	(485.8)	(144.6)	3.2	(100.4)	(109.8)	(78.3)	–	(1,018.6)
Maturity gap	**2,229.0**	**15,108.3**	**3,841.0**	**668.5**	**(98.6)**	**(13,043.6)**	**829.7**	**75.7**	**9,610.0**

H. Operational risk

Operational risk is defined by the Bank as the risk of financial loss, or damage to the Bank's reputation, or both, resulting from one or more of the following:

- People (eg insufficient personnel, lack of requisite knowledge, inadequate training, inadequate supervision, loss of key personnel, inadequate succession planning and lack of integrity or ethical standards);
- Failed or inadequate processes (eg an internal policy or process is inadequate, poorly designed or unsuitable, or is not properly documented, understood, implemented, followed or enforced);
- Failed or inadequate systems (eg hardware, software applications, operating systems or infrastructure necessary to support the activities of the Bank are poorly designed, unsuitable, inadequate, unavailable, fail, or do not operate as intended); and
- External events (ie the occurrence of an event having an adverse impact on the Bank but outside its control).

The Bank manages operational risk through internal controls, including policies, procedures, practices and organisational structures, designed to reduce the likelihood of an operational risk event occurring or that mitigate the adverse consequences of such an event if it does occur. The Bank allocates economic capital for operational risk on the basis of a statistical model that incorporates the Bank's experience of operational losses as well as external loss data. The Bank is currently working on identifying and assessing operational risks and evaluating the effectiveness of existing controls through a Bank-wide Control Self-Assessment (CSA) programme. The outcomes of the CSA processes will be used to refine the quantification of operational risk at the Bank.

38. Related parties

The Bank considers the following to be its related parties:

- The members of the Board of Directors;
- The Senior Officials of the Bank;
- Close family members of the above individuals;
- Enterprises which could exert significant influence over a member of the Board of Directors or Senior Official and enterprises over which one of these individuals could exert significant influence;
- The Bank's post-employment benefit plans; and
- Central banks whose governor is a member of the Board of Directors and institutions that are connected with these central banks.

A listing of the members of the Board of Directors and Senior Officials is shown in the section of this Annual Report entitled "Board of Directors and senior officials". Note 21 provides details of the Bank's post-employment benefit plans.

A. Related party individuals

The Bank offers personal deposit accounts for all staff members and its Directors. These accounts bear interest at a rate determined by the Bank's President. At 31 March 2005, the total balance on these accounts relating to members of the Board of Directors and Senior Officials of the Bank amounted to SDR 8.1 million (2004: SDR 7.4 million). Details of the Bank's remuneration policy are provided in the section of this Annual Report entitled "The Bank's administration".

B. Related party central banks and connected institutions

The BIS provides banking services to central banks, international organisations and other public institutions. In fulfilling this role, the Bank in the normal course of business enters into transactions with related party central banks and connected institutions. These transactions include making advances, and taking currency and gold deposits.

It is the Bank's policy to enter into transactions with related party central banks and connected institutions on similar terms and conditions to transactions with other, non-related party customers.

Currency deposits from related party central banks and connected institutions

SDR millions	**2005**	2004
Balance at 1 April	34,030.3	33,475.3
Deposits taken	104,844.2	101,407.8
Maturities, repayments and market value movements	(101,906.6)	(103,202.0)
Net movement on call / notice accounts	2,839.0	2,349.2
Balance at 31 March	**39,806.9**	34,030.3
Percentage of total currency deposits at 31 March	26.4%	25.6%

Gold deposits from related party central banks and connected institutions

SDR millions	**2005**	2004
Balance at 1 April	5,049.1	4,208.8
Deposits taken	154.3	224.5
Net withdrawals and gold price movements	(394.8)	615.8
Balance at 31 March	**4,808.6**	5,049.1
Percentage of total gold deposits at 31 March	67.6%	69.2%

Securities purchased under resale transactions with related party central banks and connected institutions

SDR millions	**2005**	2004
Balance at 1 April	4,448.0	218.5
Deposits taken	1,200,762.4	294,192.5
Maturities and market value movements	(1,200,293.1)	(289,963.0)
Balance at 31 March	**4,917.3**	4,448.0
Percentage of total securities purchased under resale agreements at 31 March	35.0%	20.4%

Other balances with related party central banks and connected institutions

The Bank maintains sight accounts in currencies with related party central banks and connected institutions, the total balance of which was SDR 7.4 million as at 31 March 2005 (2004: SDR 10.4 million). Gold held in sight accounts with related party central banks and connected institutions totalled SDR 5,170.3 million as at 31 March 2005 (2004: SDR 5,463.9 million).

Derivative transactions with related party central banks and connected institutions

The BIS enters into derivative transactions with its related party central banks and connected institutions, including foreign exchange deals and interest rate swaps. The total nominal value of these transactions with related party central banks and connected institutions during the year ended 31 March 2005 was SDR 4,184.5 million (2004: SDR 2,846.4 million).

39. Contingent liabilities

The Bank is involved in two separate legal proceedings (in addition to the proceedings before the Hague Arbitral Tribunal that were completed in 2003) arising out of the decision of 8 January 2001 to repurchase all BIS shares then held by private shareholders (see note 17).

A group of former private shareholders initiated a legal proceeding in December 2001 before the Commercial Court in Paris. That Court made a preliminary determination (without addressing the substance of the matter) in March 2003 that it has jurisdiction over claims seeking to increase the amount of compensation. The Bank subsequently requested review of this procedural decision by the Paris Court of Appeals, arguing that the Hague Arbitral Tribunal has exclusive jurisdiction over the matter. In a decision rendered on 25 February 2004, the Paris Court of Appeals ruled in favour of the Bank by concluding that the Paris Commercial Court had no jurisdiction over such claims. In April 2004, a small group of former private shareholders petitioned the French Cour de Cassation to quash the ruling of the appeals court on the jurisdiction issue. Written arguments regarding the jurisdiction issue were filed by both the claimants and the Bank in late 2004, and a decision of the court is pending. The Bank considers this action to be without merit. Accordingly, no separate provision has been made for these claims.

A separate proceeding was filed by a group of claimants who purport to have sold BIS shares on the markets during the period between the announcement of the share withdrawal proposal on 11 September 2000 and the 8 January 2001 Extraordinary General Meeting decision effectuating such withdrawal. The claim was brought not against the BIS, but rather against JP Morgan & Cie SA and Barbier Frinault, the Bank's financial advisers for determining the original compensation for the transaction. That notwithstanding, the Bank faces indirect liability through an indemnification clause in the contract with JP Morgan & Cie SA with respect to litigation and costs that might arise in connection with the financial advisory services performed. No provision has been made for this claim.

Aside from the foregoing, no litigation or arbitration procedure involving the BIS is currently under way.

40. Subsequent event

On 10 January 2005, the Board of Directors decided to offer for sale to shareholder central banks the 35,933 shares of the American issue held in treasury by the Bank at the price of CHF 23,977.56 per share (see note 18). The closing date for responses to this offer was 15 April 2005, by which date bids had been received from shareholding central banks to purchase all 35,933 shares of the American issue held in treasury. The sale of these shares will be completed on 31 May 2005, and the Bank's equity will be increased by CHF 861.6 million (equivalent to SDR 477.5 million at the exchange rate on 31 March 2005).

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 financial statements (pages 188 to 215) of the Bank for International Settlements. These financial statements incorporate the balance sheet and profit and loss account, as required by the Bank's Statutes, and the notes thereto. The financial statements 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 financial statements, 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 2005 and the results of its operations for the year then ended so as to comply with the Statutes of the Bank.

PricewaterhouseCoopers AG

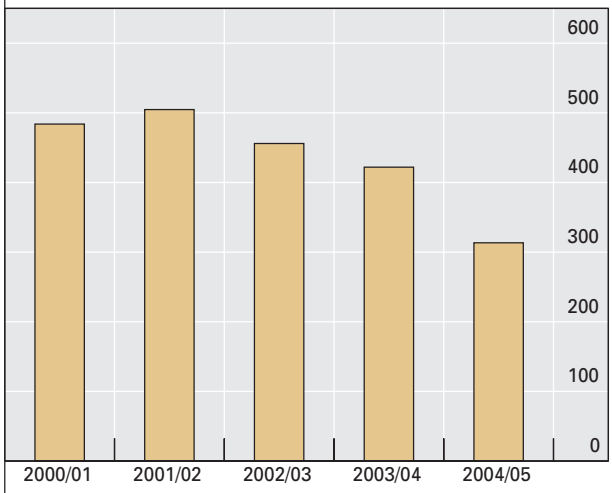
Anthony W Travis Albert Schönenberger

Basel, 9 May 2005

Five-year graphical summary

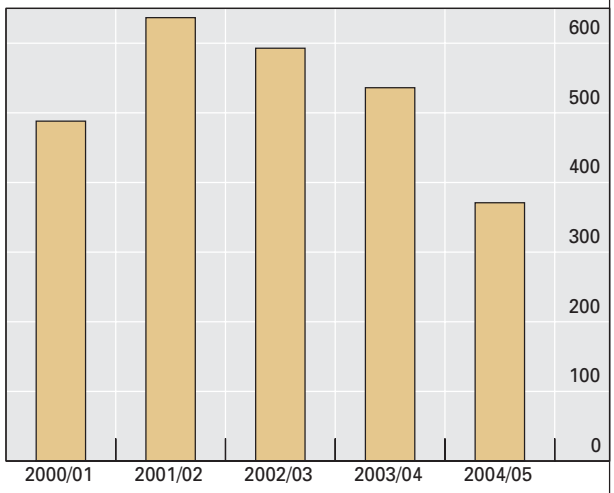
Operating profit

SDR millions



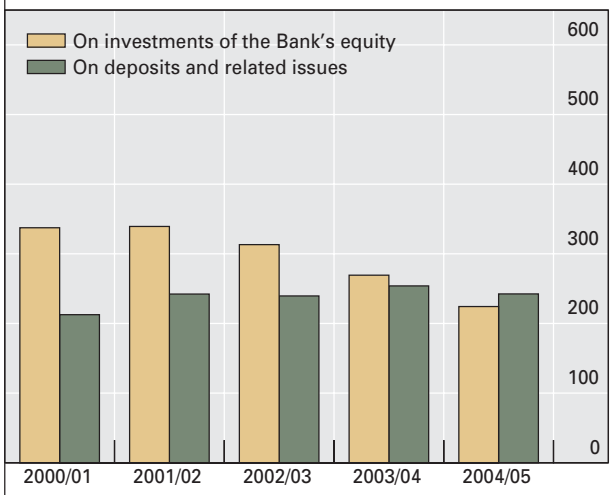
Net profit

SDR millions



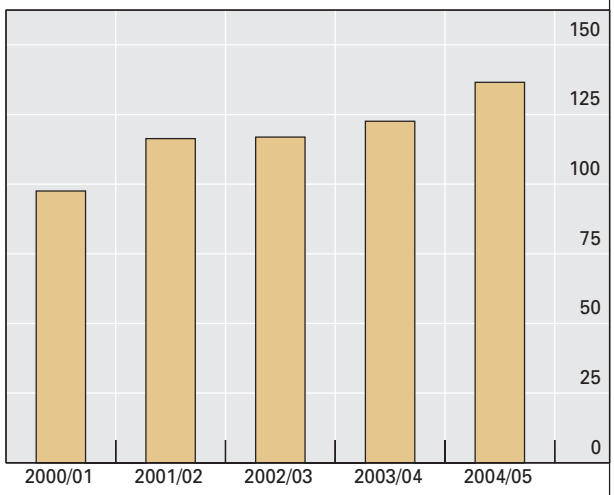
Net interest earned on currency investments

SDR millions



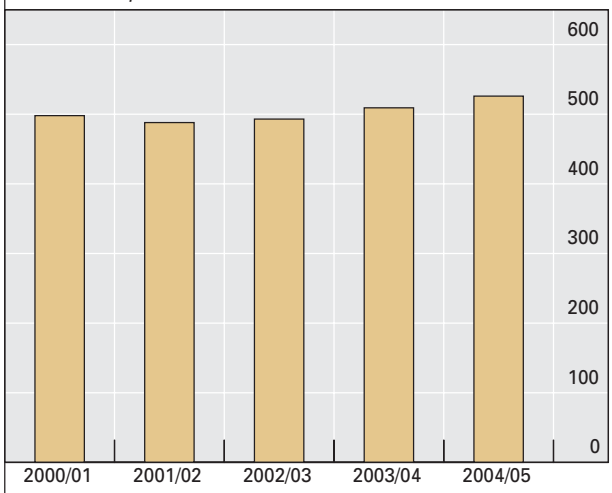
Average currency deposits (value date accruals basis)

SDR billions



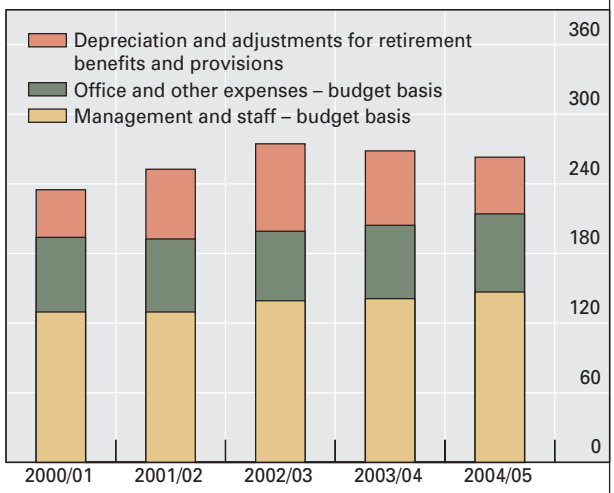
Average number of employees

Full-time equivalent



Operating expense

CHF millions



Note: The financial information for the years prior to 2002/03 is based on best estimates.

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