Report on the stability of the German financial system

Overview

Stability culture in Germany

For decades the German financial system has proved to be efficient and stable. Since the Second World War Germany has not witnessed the financial crises and systemic misalignments – entailing, in some cases enormous macroeconomic costs – that have been experienced in many of the world's other industrial countries. Supported by a high degree of price stability, a culture in which financial relationships are long-term has evolved. This has been of particular benefit to enterprises, although general government and households have also gained, and has strengthened the sustainability of the financial system.

Underlying factors deteriorated at times but financial stability not at risk

At the beginning of the new millennium, however, a number of underlying factors essential to financial stability deteriorated. Until the middle of 2000 the German stock market participated in the global cycle of exaggerated price movements and the ensuing painful corrections. It is true that, owing to the limited role played by shareholding in the accumulation of financial assets in Germany, German households sustained relatively small losses when the equity price bubble burst. Nevertheless, the stock market slump resulted in a severe decline in the value of bank and insurance company investment portfolios as well as reductions in turnover in and earnings from products and services associated with the capital market. Some of these reductions were dramatic and occurred primarily in the field of investment banking, on which a number of big banks had previously been concentrating. In addition, the gradual deterioration in the banks' profitability as a result of constantly shrinking interest rate margins and the need for large value adjustments in the light of the persistent macroeconomic stagnation in Germany were contributory factors in the plunge of large sections of the German banking system into a profitability crisis. This development became so entrenched that the international financial markets and rating agencies also viewed the profitability of some large banks with increasing scepticism. However, at no time did these pressures jeopardise the stability of the German financial system as a whole. In the context of its Financial Sector Assessment Program the International Monetary Fund, too, verified the resilience of the German financial system. Even so, it became clear that there was a significant need for adjustment in the German banking industry and for careful monitoring of developments that are relevant to stability.

Outlook for financial stability again brighter

During 2003 the conditions affecting the stability of the German financial system again brightened considerably, even though further adjustments are still necessary on the part of financial intermediaries. The two factors giving rise to the improvement are the better prospects for overall economic growth and the determination with which the German banks are tackling their profitability crisis. The more favourable growth prospects in Germany are due, first, to the faster expansion of the world economy, including a recovery in the euro area, and, second, the improvement that has now emerged in the economic environment within Germany itself. In particular, enterprises have made progress in creating leaner production and cost structures and in alleviating their debt positions. However, the number of corporate insolvencies in 2003 will probably exceed the prior-year record of some 37,600. The large internationally operating banks have responded to their structurally deteriorated earnings situation by extensively altering their strategies with a view to lowering costs, reducing risks and improving profitability. Additionally, all three pillars of the banking industry (private commercial banks, savings banks and credit cooperatives) are putting in place instruments and structures to manage credit risk and other operational risks more efficiently and to make better use of returns to scale when processing operations that can be standardised.

The reduced tension on the financial markets is also reinforcing the generally more positive picture that is now emerging. Whereas a strong pre-occupation with security had been determining market sentiment well into the second quarter of 2003, investors have now regained confidence and are displaying greater willingness to run risks. The improved outlook is being reflected in a marked recovery on the stock markets and a favourable financing environment for enterprises operating in the capital market.

Remaining risk factors

However, any disruption of the cyclical recovery process will pose a downside risk to the improvement in the underlying conditions necessary for a stable financial system. Such disruptions could be triggered by, for example, external geopolitical shocks or sharp fluctuations in the global financial markets. The pronounced external imbalances, especially in the case of the United States, which require gradual correction, represent a latent risk that abrupt movements will occur in foreign exchange rates and that a possible overshooting may follow. This risk could be increased if the worldwide provision of liquidity were too accommodating as that could encourage excessive rises in asset prices and the transfer of unrealistic valuations from one market to another. Such exaggerated prices may jeopardise the stability of real economic expansion and of financial flows if, in the course of growing cyclical momentum or increasing risks for consumer prices, there is a turnaround in interest rate movements. An upward movement in interest rates could have considerable negative repercussions, especially in economies where signs of an overheated real estate market are concomitant with a large level of private sector debt. The currently favourable financing conditions for emerging economies might in some cases be ahead of the improvement in fundamentals. Any slowdown in the cyclical recovery process might have a further detrimental effect on corporate credit quality worldwide. This would set off a process of correction in the corporate bond market, where the narrower spreads of the past few months indicate a more optimistic assessment of the credit risks of large enterprises; it would also undermine the efforts of the banks to reduce the need for value adjustments in their banking book.

Challenges

Maintaining financial stability is posing a challenge for all market participants. The banks and insurance companies must continue to redefine their business strategies, make lasting improvements to their profitability and, where necessary, clean up their balance sheets. Further structural improvements are necessary in this area so that the German banking system can regain a sustainable level of profitability. In the light of this the banking industry and the policy-making bodies should also carefully consider the reform proposals put forward by the experts of the International Monetary Fund.

Role of the central banks

The Bundesbank has a particular interest in the stability of the financial system. Sound financial and banking systems are a necessity in modern economies with their inherent divisions of labour. There are many reasons why the Bundesbank shares responsibility for maintaining financial stability. As an integral part of the Eurosystem it is responsible for monetary stability, ie for the maintenance of price stability and for an efficient refinancing process between the central bank and the banking system. Safeguarding monetary stability is a necessary but not sufficient condition for ensuring financial stability. As one of the bodies responsible for banking supervision the Bundesbank monitors the banks' observance of the regulatory framework and analyses the banks' economic performance. However, the entrepreneurial responsibility for the success of each bank remains unaffected by this. As an operator of payment systems the Bundesbank is directly involved in the efficient channelling of payment flows. At the same time, it carries out a supervisory function in the field of payments. Finally, the Bundesbank is itself an active participant in the financial markets. This accumulation of areas of responsibility also implies that the Bundesbank is involved in international bodies concerned with financial stability.

The importance which the central banks attach to the stability of the financial systems has increased substantially over the past few years. Several factors have helped to bring this about. The internationalisation of the financial flows has increased the degree of integration of the national financial systems and therefore also the risks of contagion. The rapidly improving efficiency of the financial systems has seen a massive increase in the volumes and speed of transactions and therefore probably also the degree of sensitivity in the event of sharp changes in data and assessments. In particular, the interactions between financial and real economic stability have without doubt become more complex and pronounced.

Definition of financial stability

The term financial stability broadly describes a steady state in which the financial system efficiently performs its key economic functions, such as allocating resources and spreading risk as well as settling payments, and is able to do so even in the event of shocks, stress situations and periods of profound structural change. The central banks require a broad analytical spectrum if they are to be able to identify potential risks as early as possible and to recognise the emergence of any undesirable developments. First, the analyses must take account of the relevant developments in the real economy, on the international financial markets and at the systemically relevant intermediaries or groups of intermediaries. Second, a critical assessment of the quality of the regulatory framework governing markets and intermediaries as well as of the soundness of the technical systems serving, for example, payment transactions and securities settlement is necessary.

This is the first report that the Bundesbank has published on the stability of the German financial system. In future it will report regularly on its assessment of financial stability and the potential risks.

Macroeconomic outlook and risk factors

The stability of the financial system is variously influenced by the macroeconomic environment. This applies both to the nature and scale of the operations handled by financial intermediaries and to the risks incurred, especially in the case of lending business and trading activities. Given the high degree of openness of the German economy, not only national developments but also global economic conditions are highly important.

World economy

Global economic situation and outlook more favourable

World economic growth has picked up noticeably since the second quarter of 2003. Consequently, the risks to the stability of the financial system arising from global economic developments have declined. According to estimates published in the IMF’s *World Economic Outlook* of September 2003, however, global output will probably increase in 2003 by 3¼% on an annual average and therefore not much faster than in 2002. The reason for this is the weak momentum in the first few months of 2003. Now, the outlook for 2004 is also being assessed much more favourably; the IMF forecasts that the world economy will grow by just over 4% and therefore faster than at any time since 2000. The expansion in real world trade will likewise accelerate sharply.

World economic recovery during 2003 is due to a large extent to the declining effect of negative global factors. In addition, producing enterprises used these difficult times to restructure and consolidate in the real and financial sectors. Sentiment both in business and in households has improved significantly. Expectations of a marked recovery in the world economy have also been underpinned by the expansionary monetary and fiscal policies in most industrial countries.

Regional variations in global recovery and risk

The cyclical recovery in the world economy, however, is not yet broadly based across all regions but, instead, is concentrated in the United States and east Asia as well as in the central and east European countries in transition. The euro area is still catching up. Although the situation has eased somewhat in Latin America, potential setbacks are still considerable. Given the likelihood that external imbalances will continue to grow worldwide, such a constellation appears to be pregnant with disruptive possibilities and scarcely sustainable in the long run. The risk of abrupt exchange rate movements has increased as a result. The persistent threat of terrorism and the prolonged tension in the Middle East continue to be a source of considerable uncertainty for the world economy. The high international crude oil prices at present reflect this. By contrast, concerns about deflation, which were still widespread in the second quarter, especially on the financial markets, have now largely dissipated. Instead, the recovery process is being assisted by the steady price climate in the industrial countries.

United States

Sharp recovery in US economy

In the third quarter of the year the US economy grew faster than it had done at any time since the beginning of 1984. A rapid rate of growth is likewise emerging in the fourth quarter of the year. Fiscal stimuli are the main reason for this, although these will weaken in the course of 2004. Nevertheless, the chances of a lasting upturn have improved substantially during the past few months, primarily because the recovery is now increasingly having an impact on the labour market. The fear that a period of jobless growth could ensue and that the cyclical improvement might therefore be short-lived has now diminished discernibly as a result.

Financing circumstances of households…

The financial position of US consumers is still not unproblematical. US household debt has increased markedly during the past few years, reaching a record of approximately 110% in terms of disposable income in 2002. It is true that the burden of debt servicing has grown much more slowly owing to the decline in borrowing costs as a result of lower market interest rates and extensive mortgage restructuring. However, the situation could change if interest rates, especially for consumer credit, were to rise again in the course of the upswing. The low saving ratio is another reason why the financial vulnerability of households is not to be underrated.

... and non-financial enterprises

The financial situation of non-financial enterprises in the United States has improved, by contrast. The financial markets have already recognised this by reducing the spreads of corporate bonds. First, the increase in debt has slowed down appreciably. Second, enterprises have increasingly shifted from short-term to longer-term liabilities over the past few years and are now therefore more financially sound. All in all, the imbalances in US corporate balance sheets are apparently becoming less pronounced. In the medium term, however, a number of US enterprises will have to replenish their company pension funds in order to remedy the lack of cover that has arisen owing to the stock market slump since 2000 and the low interest rate level.

Risks from large twin deficits

The potential rate of disruption for US enterprises and individuals is closely related to what is known as the twin deficits, ie the sharply increased public sector deficit and the chronically large current account deficit which is expected to amount to 5% of gross domestic product (GDP) in 2003. This is accompanied by the danger that, if there were a decline in the willingness of international creditors to provide funds, the relationship between interest rates and exchange rates in the United States would be severely disturbed. The private sector would be particularly badly affected if there were a sharp rise in interest rates at the long end of the market because the heavy demand from the government for credit is to be seen as largely inelastic vis-à-vis interest rates. Such a risk analysis must also take account of the fact that for quite some time a significant proportion of US capital imports has not been driven by private investors' expectations of high yields. Instead, it has been based on the intervention operations of Asian central banks on the foreign exchange market.

Japan

Remarkable cyclical upturn in Japan

The Japanese economy returned to a growth path early in 2002. For 2003 an increase of just over 2% is expected in real GDP; this is the highest growth rate since the upswing in 2000. The greatest stimulus to the Japanese economy is currently coming from the rapid growth in neighbouring countries and in North America; these two regions absorb about 70% of Japan's exports of goods. Buoyant domestic demand has also been stimulating the high rate of expansion. One possible reason for the sharp rise in business investment is the fact that the major enterprises have now made considerable progress in their real and financial restructuring. Even so, much consolidation work is still necessary in the case of the small to medium-sized enterprises. This appears to be one reason why the rapid rate of expansion in business investment in 2003 will probably not be sustainable and the increase in overall economic output – according to the OECD's autumn forecast – will be less in 2004, at 1¾%, than in 2003. In the event of a sharp appreciation in the yen, which (as is usual in forecasts) is not part of the assumptions made in the OECD forecast, further growth losses would result. It is true that the deflationary tendencies have now receded markedly and no longer constitute an appreciable impediment to economic recovery. Yet the OECD estimates that the decline in consumer prices will accelerate somewhat next year.

Euro area

Still catching up

The first signs of a recovery emerged in the euro area during the second half of 2003. Nevertheless, the Eurosystem's business cycle experts expect the annual rise in real GDP to be no more than between 0.2% and 0.6%. A growth rate of between 1.1% and 2.1% after working-day adjustment is forecast for 2004 as the expansionary forces are expected to strengthen discernibly. Foreign demand is expected to provide considerable impetus, and this will have a knock-on effect on the domestic economy, particularly investment. But the risk of a marked depreciation of the US dollar and of a resultant adjustment burden is a significant potential handicap.

Basis for upturn at macro-economic and microeconomic level good

Generally speaking, however, the conditions in the euro area for a self-perpetuating upturn appear to be fairly favourable. For example, the current account is running a slight surplus, and the financial situation of enterprises and households has stabilised. New borrowing by non-financial enterprises in the euro area has fallen significantly since 2000. The consolidation efforts of the telecommunication companies have played a key role in this. The level of corporate debt – measured in terms of GDP – has been virtually unchanged since 2001, whereas in the second half of the 1990s it had risen sharply. Another factor is that lending to households has increased much more slowly since 2000. If the relatively high saving ratio is also taken into account, the financial vulnerability of households in the euro area may be considered low. Public finances are in a somewhat different situation, however. The aggregate government budget deficit in the euro area is likely to decrease somewhat during the cyclical upturn; according to the autumn forecast of the European Commission, however, it will amount to 2.7% of GDP in each of the next two years and will therefore still be fairly large in historical terms.

Germany

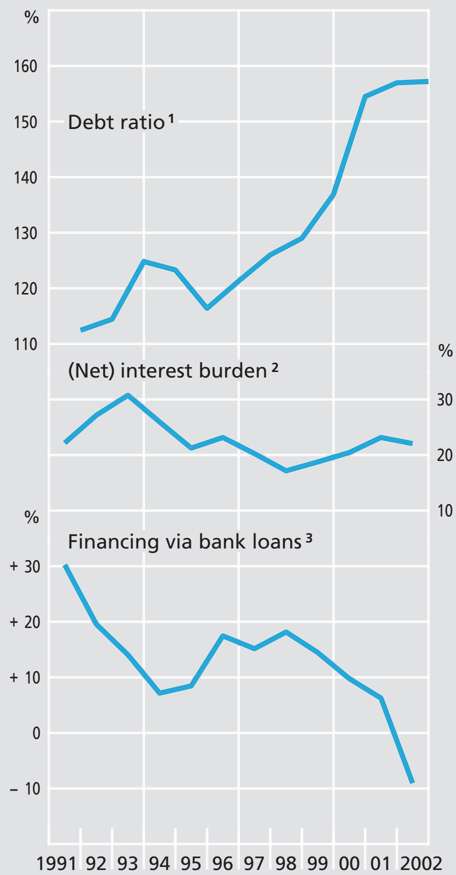
Real GDP stagnated in 2003 ...

In 2003 the German economy was again unable to leave the path of stagnation. Real GDP for the year as a whole is expected to be no greater than in 2002. The labour market has felt the pressure to cut jobs even further; the number of employed persons in September 2003 was 1.2% below the corresponding level in 2002. The seasonally adjusted unemployment rate (as nationally defined) has now declined somewhat since the second quarter; when this report went to press, it amounted to 10.5%. This is primarily a reflection of the numerous legislative initiatives for restructuring the labour market.

... but basis for recovery better

Major preconditions for a cyclical recovery of the German economy have now improved. Particularly the turnaround in the world economy that set in during the second quarter and the now recognisable signs of a cyclical recovery in the euro area have already lifted the mood in manufacturing considerably. The ground is well prepared for more growth from the financing side; again, the cost situation is less tight and is having a stabilising effect on profits. However, significant shifts in

Corporate* financial indicators



* Non-financial corporations, including quasi-corporations pursuant to ESA 95. — 1 As a percentage of gross value added; end-of-year figures. — 2 Net interest expenditure as a percentage of the operating surplus. — 3 Financing via domestic bank loans as a percentage of the total cash flow.

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exchange rate parities would have a detrimental effect on the German economy, especially in the initial phase of the recovery process.

Financing circumstances of producing enterprises

The adjustment processes in the corporate sector have already made considerable progress. This is true of inventories as well as of the capital stock. However, considerable headway has also been made in the financial sector where adjustment usually takes some time (see chart on this page). The capital requirements of non-financial enterprises, which in the period from 1998 to 2000 were also determined by a sharp growth in financial assets (eg participating interests), have since declined substantially. It is likely that, on balance, bank loans were repaid in the first half of 2003. As in the previous year, the financial balance might have been positive again. The stabilisation of the debt ratio, the declining (net) interest rate burden and savings on the cost side have meant that the financing circumstances of enterprises have taken a turn for the better.

Increase in corporate insolvencies

The generally more favourable picture emerging of the overall financing circumstances of German enterprises, however, must not obscure remaining weaknesses. The greatest of these is enterprises' level of capital, which is fairly low by international standards. Then there is the sharp rise in corporate insolvencies. Partly as a result of changes in statutory regulations, there was a 42% increase in these between 1999 and 2002. The extent of creditors' expected outstanding claims doubled to about €59 billion in 2002 compared with the year before. This was primarily the result of an accumulation of major corporate failures. In the first eight months of 2003 – the latest point for which official figures are available – the number of petitions for insolvency was 6½% higher than in the same period the year before. However, the sum total of expected claims was one-quarter lower, partly because there were fewer major corporate collapses than in the corresponding period a year earlier. If the forecast cyclical recovery does occur, it is likely that the number of cases of insolvency will also decline in the next few years.

Households showing little inclination to spend ...

Consumption and investment by households (as defined in ESA 95) were weak in 2003. Despite generally stable consumer prices, disposable income was squeezed as unemployment grew and the burden of levies increased. Furthermore, in view of the growing labour market risks and the continuing debate on reform in Germany, the private saving ratio has risen again. Even so, surveys show that the general mood has now significantly improved, but the propensity to purchase was still muted at the time that this report went to press.

... but some improvement expected in 2004

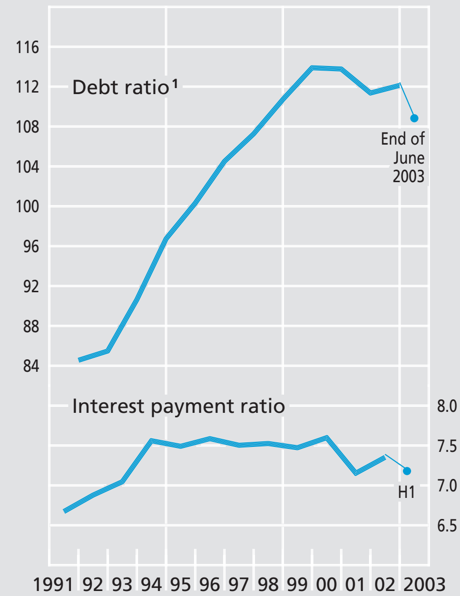
In 2004 private consumption will initially benefit from the cut in income tax and subsequently from the gradual improvement on the labour market. The price climate will probably also remain consumer-friendly in 2004 despite the rise in indirect taxes and administered prices. The construction of private housing, by contrast, will continue to suffer from the high ratios of unoccupied dwellings and the uncertain income prospects in the longer term. Changes here will be no more than piecemeal in 2004 although the financing conditions, building prices and construction times will probably still be attractive.

Financial situation of households ...

The decline in the demand for construction services was also the primary reason for households' limited need for new net borrowing (see chart on this page), especially as borrowing for consumption purposes normally plays no more than a minor role. Another

Household* indebtedness and interest burden

as % of disposable income



* Defined according to ESA 95. — 1 End-of-year figure.

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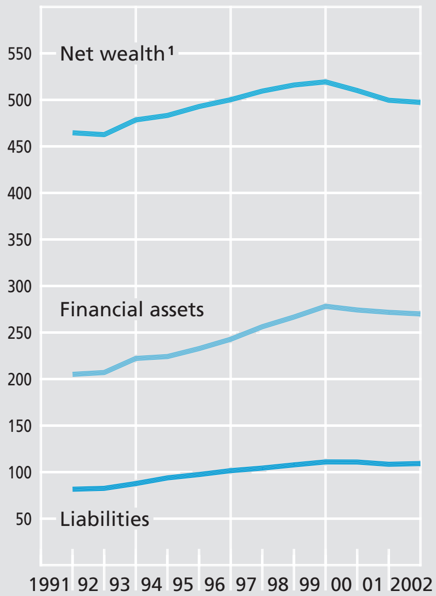
curbing factor might have been the banks' more restrictive credit standards, even if the restrictions in the case of households were much less severe than those applying to the corporate sector. The borrowing ratio, that is to say, new borrowing as a percentage of expenditure on consumption and investment, has fallen to a historical low. In the light of this, it appears that the falling trend that has been observed in households' (gross) debt ratio since 2000 has continued so far; at the end of June households' liabilities amounted to 109% of disposable income compared with 114% at the end of 1999.[1] This, together with the low interest rate level,

1 The debt ratio of households in Germany is not directly comparable with that of the United States because – in accordance with ESA 95 – it also includes the fairly sizeable debt of sole proprietors.

Households' financial position

as % of disposable income, year-end data



1 Including real estate, excluding durable goods.

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has significantly reduced the interest payments ratio of households. At just over 7% of disposable income, it does not constitute, on average, an excessively large item in the household budget.

... and asset and liability position

If the assets held by households are also taken into consideration, the fairly sizeable (gross) liabilities of households by international standards can be seen in quite a different light (see chart on this page). For example, the value of net assets is currently about five times that of disposable income. Although households' net assets position deteriorated somewhat in Germany, too, as a result of the slump on the stock market between 2000 and 2002, the creditworthiness of households probably suffered little overall owing to the comparatively small significance of shareholding in Germany and the largely stable real estate prices.

Rise in consumer insolvencies

There has, however, been a sharp rise in the number of consumer insolvencies, a phenomenon which had not been possible until the introduction of the Insolvency Code of 1999; the number of foreclosure sales is much higher still. From a macroeconomic point of view, however, it should be noted that personal bankruptcies and foreclosures are still very small in relation to the number of households. For example, the market value of the compulsory sales of real estate – which, incidentally, are not due only to insolvency but also to other reasons such as divorce – was an estimated €12 billion in Germany in 2002. This compares with an outstanding credit volume of €1 trillion. Furthermore, the ultimate loss for the banks is limited, not least because of the "conservative" valuation rules which they apply.

International financial system and financial markets

Global financial system

Turnaround in the capital market ...

Developments in the international financial markets were characterised by major changes in the interest rate and equity markets during the year (see chart on page 15). In the bond markets, a marked upward correction of capital market yields kicked in globally in June, these yields having previously fallen to a low which had not been seen for decades. The strongest price slide since 1994, which began in the US and Japanese markets, caused yields on ten-year US government bonds to rise by around 130 basis points to 4.5% by mid-August and was accompanied as time went on by a sharp increase in implied volatility. Yields on euro-area government bonds also followed this interest rate pattern to a more subdued extent and in mid-August, at roughly 4.25%, were some 75 basis points above their June low.

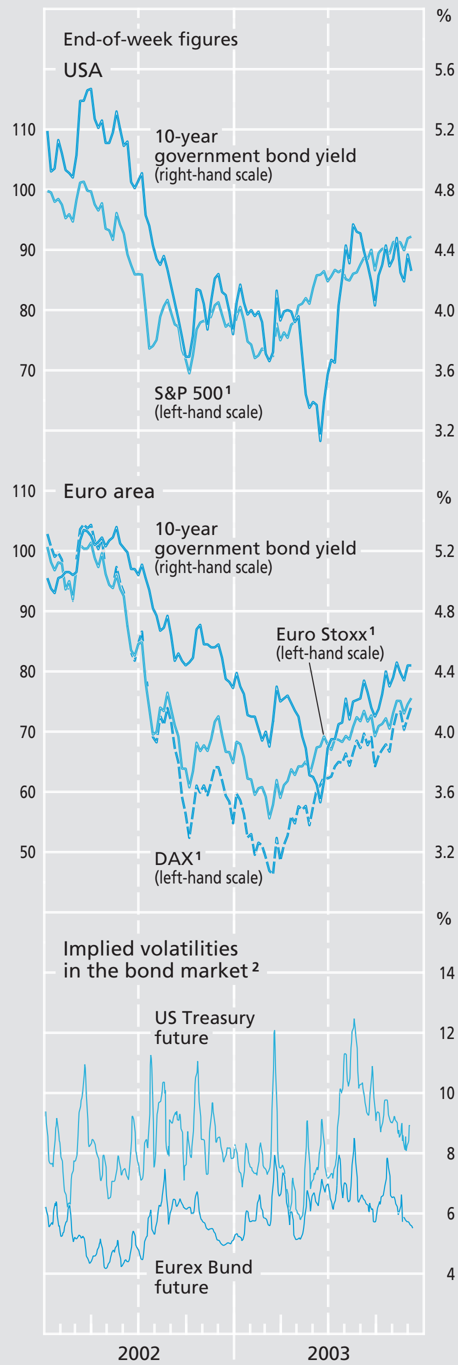
... caused by greater risk propensity ...

A number of factors were responsible for the sharp correction. Declining risk aversion on the part of investors led to a reversal of the previous safe haven flows to the bond markets. A reduction in the geopolitical uncertainties connected with the Iraq war and lessening concern about possible deflationary developments were both instrumental in this regard. After what was for many market players a surprisingly small cut in US official interest rates on 25 June (Federal Funds rate down by 25 basis points to 1%), "unconventional monetary policy measures" such as the Fed purchasing long-term government bonds also seemed less likely. Against this backdrop, speculative positions were liquidated.

... and growing economic optimism

The turnaround in yields, however, also reflected growing economic optimism, particularly in the United States, Japan and other countries in East Asia. The bond markets thus picked up the more optimistic sentiment which had already been affecting the equity markets. The upsurge in yields was additionally driven by technical factors, such as the extensive hedging activities of players in the US mortgage market. The heavy demand for instruments to hedge against exposure to interest rate risk led to temporary tensions,

Swings in the stock and bond markets



Sources: Bloomberg, Thomson Financial Datastream. — 1 Beginning of January 2002 = 100. — 2 Moving five-day averages; calculated from the price of at-the-money options.

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especially in the market for US interest rate swaps. Finally, a further negative factor affecting long-term capital market rates was the increasing supply pressure caused by the enlargement of the budget deficits both in the United States and on this side of the Atlantic.

Persistent uncertainty in the bond market

The upward trend of capital market yields was interrupted by a countermovement in September, when the US dollar rate took a sharp tumble in the foreign exchange markets, increasing global uncertainty about the associated economic outlook. In mid-November renewed concerns about terrorist attacks also put downward pressure on the evolution of yields. In early December the level of long-term yields on US Treasuries was again slightly below that on comparable euro-area government bonds although real US growth and inflation expectations, as derived from expert surveys (Consensus Forecast), were far higher than the corresponding figures for the euro area. Regression analyses indicate that the average yield on euro-area government bonds is in line with growth and inflation expectations in the euro area while, despite the sharp increase in recent months, the actual interest rate level in the United States is still significantly lower than the interest rate level estimated on the basis of these two important explanatory factors.[2] Although the Fed's announcement that the accommodating monetary policy stance could be maintained for a considerable period seems to be having a subduing effect, market players' inflation expectations could change abruptly, given the plentiful supply of liquidity. Measured in terms of the implied volatility of ten-year US government bonds, market players' uncertainty about the further evolution of interest rates is still higher than in the first half of the year.

Turnaround in the equity market after three-year price slide ...

The turnaround in the international equity markets occurred shortly after the start of the Iraq war (see chart on page 15). The initial impetus came less from new economic data than from the fact that the indices had gone through a three-year price slide following the gradual deflation of the equity market bubble. Thus in March 2003 the S&P 500 index was down by around 45% compared with the peak in 2000 and the EuroStoxx by around 65% while the DAX recorded a price fall of as much as 70%. Evaluations had thus again declined to close to or even below long-term averages, such as in relation to the price-earnings ratio. The share price increase since the second quarter probably reflects to some extent a decline in the relatively high risk premiums compared with the stock market boom in the late 1990s. However, empirical analyses for the German market indicate an increase in the volatility of the DAX and, in particular, of its constituent stocks in recent years. Hence a higher risk premium would appear warranted – without an increase in the level of volatility per se necessarily also implying an increase in the risks for financial stability (see box on page 17). Another factor which favoured the equity market turnaround initially was the phase of low interest rates in

2 This was based on an estimation period from January 1998 to November 2003 (for US data) and from January 1999 to November 2003 (for euro-area data). In addition, a variable for the uncertainty in the equity market concerned was introduced into the estimation (implied volatility of stock options), which proved to be significant in all cases.

Change in DAX volatility

Volatility in the German stock market rose considerably in conjunction with the stock market boom in the second half of the 1990s and the subsequent price corrections. Since then, the fluctuation range of daily equity yields has increased markedly, as has its persistence. Much more frequently than in the past, days on which the DAX is highly volatile are followed by days with similarly great fluctuations. The likelihood of extreme price fluctuations has also increased noticeably.

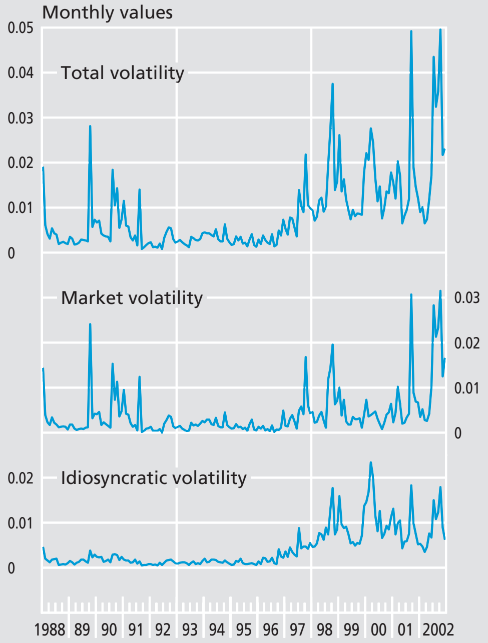
An empirical study[1] of the equity yield fluctuations of the DAX index shows a marked increase in volatility over the past six years. July 1997 has been identified as the turning point. The asymmetric 95% confidence interval for the estimated turning point ranges from March 1997 to August 1998. Not only did the DAX itself become significantly more volatile, there was also a sharp increase in the volatility of the individual stocks on which the index is based. The estimation of a GARCH(1.1) model before and after the turning point shows an unconditional variance more than 2.5 times higher, as well as an increase in the persistence parameters after 1997. The kurtosis, a measure of the incidence of extreme price swings, also increased distinctly.

At the current time it is not possible to say whether this rise in volatility will be permanent. By comparison, the estimation of a Markov switching model with a high and a low volatility regime based on historical data from 1965 onwards shows that although temporary phases of high volatility occurred prior to 1997, they all lasted less than six months. As the current high volatility regime has already persisted for more than five years, this could be taken as an indication of a lasting structural break.

Decomposing the monthly realised volatility of a typical DAX-listed enterprise into a company-specific or idiosyncratic component and a market component clearly shows that, although market volatility has likewise increased over time, the break in the volatility dynamic is essentially due to the far more pronounced increase in idiosyncratic volatility (see adjacent chart). The divergent trends in the volatility of individual stocks and that of the index – which is ultimately composed of weighted prices of individual DAX stocks – can be explained by a declining correlation between the yields on individual DAX stocks. It is true that this improves the possibilities for risk diversification. However, the sharp rise in company-specific volatility means that, particularly in the case of less diversified investments – for example, due to investment constraints or to large corporate (cross) holdings in other enterprises – these portfolios are becoming riskier overall, despite the risk-reducing effect of the declining correlations. German households have adapted to this over the past years by investing a significantly larger proportion of their financial wealth in pre-diversified investments, such as mutual funds, rather than individual stocks.

Decomposition of the volatility

Monthly values



As the stock market in Germany becomes increasingly important – also in connection with the emergence of a funded component of old-age provision – the implications of stock market volatility for the functioning of the markets and the real economy become a more central issue.[2] However, a greater degree of volatility does not endanger the stability of a financial system *per se*; rather, disruptions are usually caused by sudden leaps in volatility.

1 On this and the following comments see J Stapf and T Werner (2003), *How wacky is the DAX? The changing structure of German stock market volatility*, Deutsche Bundesbank discussion paper, series 1: papers from the Economic Research Centre, No 18/2003. — **2** For a current overview see IMF, Global Financial Stability Report, September 2003, Washington, especially chapter 2.

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the bond market. It prompted investors to look for higher yields and thus to switch from security-oriented liquid forms of investment to the equity markets.

... partly reversed the previous year's sharp share price losses

As the year wore on, however, the upturn on the equity market was bolstered increasingly by the more positive profit expectations which accompanied the improved outlook for macroeconomic growth and the implementation of corporate restructuring measures. The sharp movements of prices in the bond market and of rates in the foreign exchange market only temporarily disrupted this trend. As the year progressed, the DAX recorded considerable price gains and was thus able to partly reverse the sharp losses sustained during the previous year.

Evaluation level close to long-term averages

Although from spring onwards the marked price gains caused a further general increase in the evaluation level in the international equity markets (see chart on page 19), Germany and the euro area recently again recorded a slight decline in the price-earnings ratio as year-on-year profit expectations rose more sharply than share prices. In November the price-earnings ratio based on expected 12 months' forward earnings was 15.2 for the enterprises included in the DAX and 14.6 for those in the EuroStoxx. For US equities (S&P 500) the corresponding figure was 17.2 and for UK shares (FTSE 100) 18.4. Overall, there would currently seem to be little risk arising from incorrect evaluations in the equity markets, at least as far as the DAX and the EuroStoxx are concerned. However, this is dependent on there being no interruption in the ongoing economic recovery implicit in the profit estimates.

Considerable potential for abrupt exchange rate movements in the forex market

The downward trend of the US dollar on the foreign exchange market vis-à-vis a number of currencies continued in 2003 following a trend reversal in early 2002. Alongside the US budget deficit, the main problem is the growing US current account deficit, which is more difficult to finance because interest rate differentials in the capital market and particularly in the money market have militated against US dollar investments. After the US dollar recovered somewhat in the summer months as a result of improved growth expectations in the USA, the sentiment in the foreign exchange markets with regard to the US currency then clouded again in September. In the markets this led, in particular, to an appreciation of the yen, which, given the US dollar interventions by the Japanese monetary authorities, had previously been moving sideways for months. The US dollar also fell against the euro, reaching a new low in early December; it has lost just under 30% of its parity value since early 2002. However, the high level of volatility that characterised the foreign exchange markets for a time had no major impact on capital market rates, and so far the financial institutions also seem to have coped well with the weak dollar. In view of the persistently high need for financing to deal with the US current account deficit, however, there is still considerable potential for abrupt swings in exchange rates. The interest rate and exchange rate levels could also be at risk if the Asian central banks were to reduce their large investment in the US bond market associated with dollar interventions.

Favourable financing conditions for enterprises active in the capital market

Given the plentiful supply of liquidity in the financial markets, the financing conditions continued to be favourable for enterprises that are active in the capital markets. The interest rate spread of corporate bonds over government bonds with comparable maturities narrowed perceptibly during the course of the year, which was particularly advantageous for bonds with lower investment grade ratings[3] and those in the speculative grade segment (high yield bonds)[4] (see chart on page 20). Against this background, net issuing activity in the international bond market by enterprises, particularly from western Europe, was buoyant.

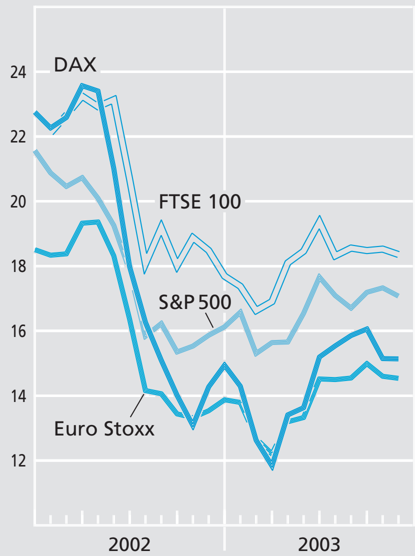
Risks of a reversal for corporate bonds

The narrowing of the credit risk spread presumably owed much to investors' search for higher yields. Another factor is the growing expectation of an improvement in firms' credit quality as the economic recovery progresses. The distinct narrowing of the spread in recent months meanwhile raises the question of whether market developments have perhaps shot too far ahead of the actual situation, which would harbour the risk of a reversal.

Credit quality not yet fully stabilised

This is indicated by globally ambiguous signals as to whether credit quality is stabilising. With regard to corporate bonds in the USA and the rest of the world, there has been a downward trend in the number of defaults (see chart on page 21). In terms of the rating of bond issuers, however, a further slight decline occurred in credit quality in the course of the year, although the scale of the downgrades decreased considerably. In western Europe, insurance corporations, utilities and telecommunications enterprises, which in the past contributed substantially to the wave of downgrading, recorded a certain stabilisation from the middle of the year. Although the outlook of the rating agencies suggests that a further slowing of the downgrading trend can be expected, downgrades will probably continue to outnumber upgrades in the coming months. The persistently high level of corporate debt means that the risks for credit quality will continue if the economic recovery and the development of corporate profits lag

Price-earnings ratio of major stock indices*



Source: Thomson Financial Datastream. — * Based on earnings expectations over the next twelve-month period according to I/B/E/S.

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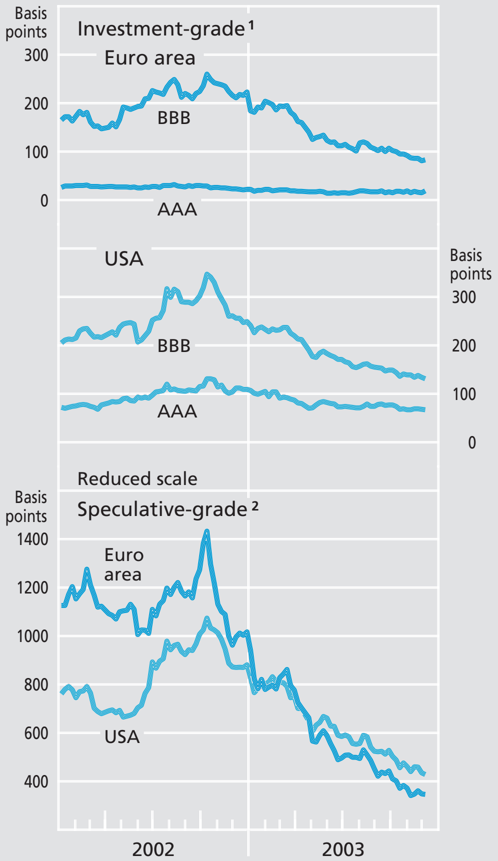
3 Bonds with a Standard & Poor's BBB rating or with a Moody's Baa rating or higher.
4 Bonds with a Standard & Poor's BB rating or with a Moody's Ba rating or lower.

Credit spreads of corporate bonds over government bonds

End-of-week figures



Source: Merrill Lynch. — 1 Seven to ten-year corporate bonds from the relevant rating grade vis-à-vis government bonds with a comparable maturity. — 2 Corporate bonds with a residual maturity of at least one year vis-à-vis government bonds with a comparable maturity.

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behind expectations. The high level of household debt also remains a negative factor; this debt is largely secured by real estate assets (see section on pages 23-27). Therefore, the further development of markets allowing the trading of credit risks from the enterprise and household sectors could improve the financial institutions' robustness provided that certain criteria such as market transparency and professional risk management are met (see box on page 22).

Further slight tightening of credit standards in the euro area

That credit risk spreads may possibly have narrowed too much is also suggested by the fact that higher risk margins compared with bond spreads and the persistently restrictive conditions applied in banks' lending business indicate that markets and credit institutions are estimating default risk differently.[5] In the third quarter the euro-area banks whose credit business is surveyed each quarter again slightly tightened their credit standards in respect of lending to enterprises. Their somewhat more restrictive lending policy affected enterprises of all sizes and was reflected principally in a widening of the margins, especially for riskier loans, which suggests that banks are still pursuing a risk-differentiated lending policy. Furthermore, the banks surveyed set stricter standards with regard to collateral, lending volume, covenants and maturity. However, the somewhat more restrictive lending behaviour coincided with a decline in credit demand on the part of enterprises. The institutions did not expect demand to pick up slightly until the final quarter.

Euro-area money market

Fall in interest rates in 2003

Owing to weak economic developments, 2003 was characterised in the euro-area money market by a sharp decline in interest rates coupled with considerable fluctuations. In addition, geopolitical uncertainties – par-

5 However, other factors such as the different corpus of enterprises in the corporate bond and bank loan markets, varying loan maturities and price setting leeways are also relevant to the interest rate differential.

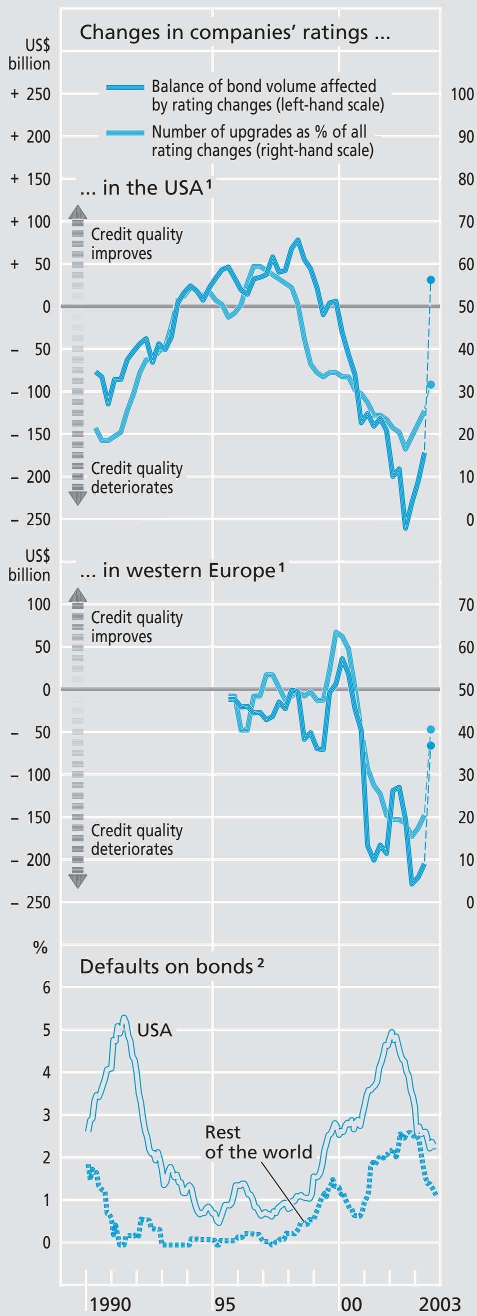
ticularly the Iraq war – had a negative impact on the euro-area money market at times. The Eurosystem responded to the decline in risks to price stability in the euro-area member states in the first half of 2003 by cutting the key interest rates by 25 basis points on 6 March and by a further 50 basis points on 5 June.[6]

Money market rates more volatile in 2003

These perceptible changes in interest rates over the course of the year were accompanied at least in the first half of 2003 by a clear increase in uncertainty among market participants. Up to the middle of the year, for instance, the implied volatility in the euro money market, measured in terms of prices of at-the-money options on three-month Euribor futures contracts, was high. Between January and November 2003 the volatility of the Eonia went up from 8 to 35 basis points year on year. This development was not determined solely by the two cuts in key interest rates made in 2003. The volatility (measured in terms of the standard deviation) of the spread between the Eonia and the minimum bid rate likewise increased from 8 to 14 basis points. The spread was subject to particularly marked fluctuations, especially in the days preceding and following the two key interest rate cuts. However, the average fluctuations in the spread at the end of the minimum reserve periods were also greater than in 2002.

6 The term structure of interest rates in the money market signalled expectations of a further increase in interest rates from the middle of 2003. The yield curve had become inverse during the first half of 2003 but it returned to normal from early August. At the end of November the 12-month Euribor was again some 30 basis points above the one-month rate. That had last occurred in summer 2002.

Credit quality indicators



Source: Moody's, Bundesbank calculations. — 1 Moving average over four quarters. ● = Latest position: 2003 Q3. — 2 As well as insolvencies, this includes default on interest payments and capital repayments. Number of issuers affected as a percentage of all issuers with a rating grade; moving average over twelve months.

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Increasing transfer of credit risks

In the past few years the range of financial markets has developed significantly as a result of the rapid growth of trade in credit risks. Important credit risk transfer instruments are various types of asset-backed securities and credit derivatives, in particular credit default swaps. Although it is difficult to gauge the market volumes precisely because the statistical data are insufficient and not comparable at an international level, the notional amount of credit derivatives outstanding worldwide in December 2002, for example, is estimated at up to US$2 trillion.[1] Significant growth rates have likewise been recorded in Europe in the issuance of asset-backed securities, although the market volumes are still considerably smaller than those of the US market. In Germany this market segment will be additionally boosted by the true-sale initiative launched by the German banking sector.

The transfer of credit risks opens up opportunities to improve the risk management of financial institutions and can contribute to a more efficient allocation of risks within the financial system as well as a better availability of credit. New investment alternatives are being offered to credit risk purchasers.

Available information indicates that much of the credit risk transfer activity is occurring within the banking sector.[2] It would appear that larger, internationally operating banks tend to be net sellers of credit risk (ie protection buyers), whereas regional banks in Europe, for example, tend to be net buyers (ie protection sellers). In addition, a significant amount of credit risk is also being transferred to other market players, in particular to insurance companies.

It is likely that the broader dispersion of credit risks ensuing from risk transfer activities contributed to improving the resilience of the global financial system during the latest global economic slowdown. However, the following weaknesses and potential risks should not be overlooked.

– At the level of individual institutions, trading in credit risk transfer instruments increases the risk management requirements which result, for example, from the more complex assessment of credit risk and legal risks. To this extent, it is difficult to estimate the possible increased risk of losses, particularly in the case of less experienced market players such as in the insurance sector.

– The credit derivatives market – like the other derivatives markets – is characterised by a high concentration of intermediary activities on a small group of global institutions. This is accompanied by a concentration of counterparty risks and makes the market susceptible to spill-over effects or market disruptions, for example if individual institutions withdraw.

– The credit derivatives market is insufficiently transparent since the sparse information provides an inadequate overview of both the redistribution of credit risks and of risk concentrations. An improvement in market players' disclosure practice is therefore urgently required in order to strengthen market discipline. Furthermore, the statistical reporting obligations of the principal market players vis-à-vis central banks/supervisory authorities should be reinforced.

1 Source: British Bankers' Association, see Bank for International Settlements, Committee on the Global Financial System, Credit risk transfer, January 2003. — **2** See Fitch Ratings, *Global Credit Derivatives: Risk Management or Risk?,* 10 March 2003 and Fitch Ratings, *Global Credit Derivatives: A Qualified Success,* 24 September 2003.

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Declining uncertainty in the interbank money market

By contrast, uncertainty with regard to the credit status of counterparties in the interbank money market declined steadily in the first half of 2003. This is clearly shown by the spread between unsecured and secured money market transactions, the "depo-repo spread". After one-year rates went up sharply from 7 or 8 basis points in the second half of 2002 to, at times, more than 12 basis points, between January and July 2003 the spread again narrowed to its initial level, where it has since remained.

High degree of liquidity coupled with growing share of the repo market ...

The liquidity situation in the euro-area money market can be assessed by looking at the trend in daily turnover. The Eurosystem's Money Market Study 2002 had already shown that daily turnover in the euro area money market was increasing slightly; this trend continued in 2003 and, according to initial estimations, will become more pronounced. The importance of the unsecured market has declined in recent years in favour of the repo market. This development shows that, for money market players, professional risk management, especially in the field of credit risk, is gaining in importance. The same conclusion may be inferred from the growing concentration on shorter maturities.

... and greater recourse to derivatives

Another key yardstick for assessing money market liquidity is the volume of derivative instruments which are used, on the one hand, to actively manage risks and, on the other, to build up speculative positions. With Eonia swaps, currency swaps, forward rate agreements and other instruments, the euro-area money market is well developed in this respect, too. With regard to the volume of turnover, a year-on-year two-digit percentage growth in derivative instruments is expected in 2003.

In 2003 the euro-area money market showed that it can also easily ensure a cleared market between the euro-area credit institutions even in economically and geopolitically difficult times. It thus made a decisive contribution to the stability of financial intermediaries in the euro area.

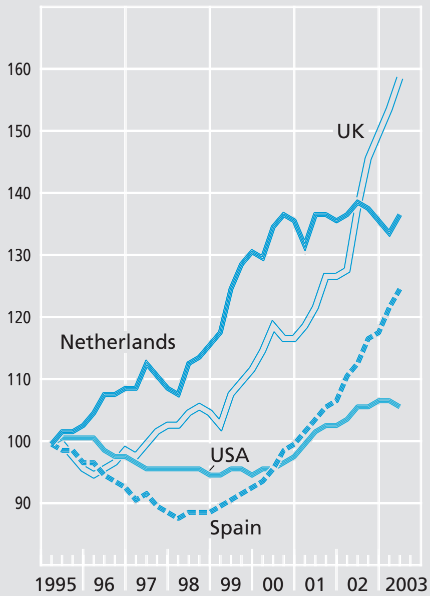
Selected risks in major countries

Key role of real estate markets for financial stability ...

As the multi-year trend towards greater international integration of the German financial system continues, the susceptibility to shocks from abroad has tended to increase. In this respect the close relations between banking systems are of particular importance. In a number of countries, the real estate market boom brought about by favourable financing conditions proved to be an important mainstay of lending business during the economic downturn. Owing to the key position of banks in financing, fairly large fluctuations in the values of real estate used as collateral for loans may have a direct impact on the stability of the financial system. Sizeable price swings on real estate markets resulting from demand or supply shocks are not uncommon in many countries as volume adjustments can be made only with a time lag. However, price increases which persist over years run the risk of being excessive. In Germany's case there is

Real estate prices in relation to nominal GDP

1995 Q1 = 100



Sources: national statistics, Bundesbank calculations.

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currently no indication of the real estate market overheating.[7]

... in the euro area ...

In the euro area, the Netherlands and Spain are two examples of major economies in which real estate prices and mortgage debt have risen far more quickly since the mid-1990s than nominal GDP (see above chart). In the Netherlands, the upward movement of prices nonetheless slowed down at the end of 2000, in line with real economic growth, and has since maintained its high level, while in Spain the price surge continued well into 2003. In addition to the general risk factors of income growth and unemployment, a further risk on the Spanish mortgage market is the prevalence of variable mortgage rates, which could result in unexpected burdens for some borrowers. According to rating agency calculations, however, the leading banks in the mortgage market in the two countries are sufficiently profitable or have enough reserves to withstand a moderate increase in credit defaults.

... and in the United Kingdom

In the United Kingdom real estate prices have recently far outstripped income growth. Especially for first-time buyers, ie households who have no existing real estate assets to trade in, it has become perceptibly more expensive to enter the housing market, which will probably depress demand in this sector considerably. Variable rate mortgage loans or fixed rate agreements with a very short maturity are also traditionally predominant on the UK mortgage market. In conjunction with the dramatic rise in real estate prices and a historically high level of household debt, the vulnerability of the UK financial system to an interest rate shock increased during 2003. So far, however, the default rates on mortgage loans are low, thanks to favourable financing conditions and low unemployment. Moreover, the safety margin between the average mortgage and the market value of the mortgaged property has increased to around 25% in the case of new agreements. This figure should be interpreted with caution as the creditor banks may be unable to realise the full market value in the event of a foreclosure. However, rating agencies, which base their assessments on a broader set of ratios, likewise consider that the leading banks in the UK mortgage market are sufficiently robust to withstand a certain increase in loan de-

7 See Deutsche Bundesbank, Price indicators for the housing market, *Monthly Report*, September 2003, pp 45-58.

faults. In addition to these direct credit risks, a sharp rise in interest rates could have a dampening effect on private consumption demand, as a result of which the business climate would also cool for banks.

Limited risk of the US real estate market overheating

As real estate prices have risen and interest rates gone down, house owners in the United States – like those in the United Kingdom – resorted to substantial equity cash withdrawals for consumption purposes without producing an increase in the direct debt service burden. Owing to fixed interest rate agreements and long maturities, most house owners in the USA are, however, likely to be better protected against rising mortgage rates in the medium term than borrowers in the United Kingdom. Signs of the real estate market overheating are – apart from regional "blips" – also weaker in the United States at present.

US banking system robust

Relations with the US banking system are of considerable importance for internationally operating German banks. Indicators such as credit spreads, ratings and share prices suggest that, despite the preceding economic slowdown, the US financial system is stable. Bolstered by low interest rates and a booming real estate market, many banks made record profits in the first half of 2003. The share of problem loans in the banks' portfolios has decreased and is back at the 2000 level. This was mainly due to mortgage and consumer lending, whereas the frequency of payment defaults on corporate loans is only slowly declining from the cyclical peak reached in mid-2002. The banks are showing corresponding restraint in granting new loans to commercial borrowers.

Number of bad debts still high in Japan

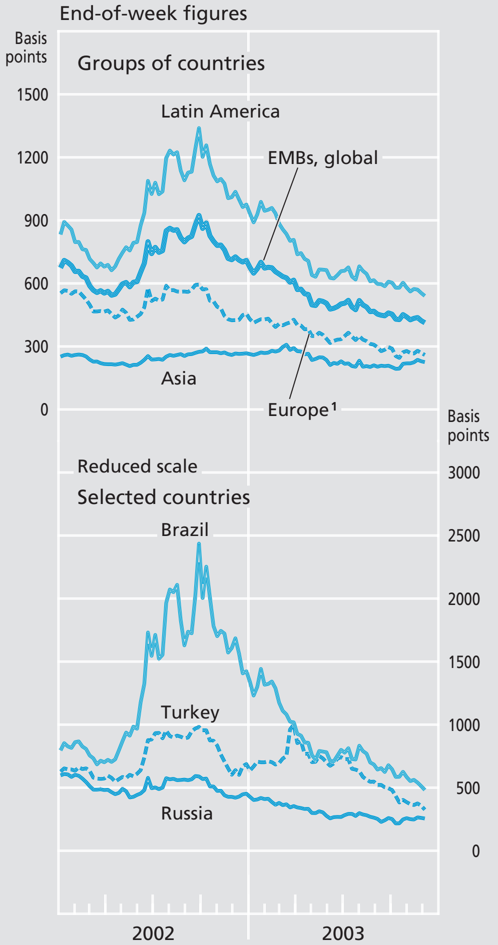
The stability of the Japanese banking sector has been the particular focus of international attention in recent years. The Japanese government has taken various steps to improve the situation in the banking sector. One aim is to reduce the share of bad debts in the overall volume of loans. Given the strained earnings situation of credit institutions – in the previous two financial years Japanese banks recorded huge losses instead of the profits initially announced – the accelerated write-off of problem loans represented a major challenge. This is also evidenced by the first nationalisation of a major regional bank, Ashikaga Bank, at the end of November on grounds of overindebtedness. The Industrial Revitalisation Corporation of Japan (IRCJ), which began operations at the start of May 2003, is to purchase ¥10 trillion worth of bad loans from banks in the next two years and to restructure the borrower enterprises concerned in the three years after that.

Problematic composition of Japanese banks' capital ...

The tense situation at Japanese banks can also be seen from the unfavourable composition of their capital. For example, external auditors now have to assess whether the volume of deferred tax assets (DTA) in the balance sheet is appropriate.[8] Given the difficult earnings situation of the banks, the fact that at the end of March 2003 DTA accounted for half the core capital of the big Japanese banks also put pressure on the banks' creditworthiness.

8 This concerns expected future reductions in tax liability which increase the core capital in the balance sheet already during the current year but can only be actually realised once (taxable) profits are recorded again in the future.

Risk premiums*
on government bonds from
emerging-market countries



Source: JP Morgan. — * Yield on bonds denominated in US dollars less yield on long-term US government bonds. — 1 Including Russia, Turkey, Ukraine.

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... but return to profitability expected

For the first half of the current financial year, which ends in March 2004, the four major banking groups recorded a return to profitability. The economic recovery had a positive effect. In addition, the sharp rise in Japanese share prices since the end of the first quarter has afforded the banks some relief, as it increased the market value of their participating interests. This points to the relatively high dependence of profitability on financial market developments, a situation which is compounded by low operating results, especially in credit business.

Emerging markets still favoured by search for higher yields

As the global economy recovered, the emerging markets' prospects of rising export business improved. Moreover, they continued to benefit from the plentiful supply of liquidity in the international financial markets. As a result of the strong, yield-driven demand for emerging market bonds, risk premiums on government bonds fell below their long-term averages in mid-2003 (see adjacent chart). Major public sector borrowers in the emerging markets took advantage of these favourable conditions to cover a large part of their external financing needs for 2003 at an early stage. Nonetheless, the risks for the emerging-market countries arising from the interest rate cycle in industrial countries – which has been moving upwards since June – are likely to remain as the adjustment process in many countries still has some way to go. A renewed increase in risk premiums for the emerging markets would result in growing debt servicing costs from rollover loans and new debt. In Latin America, particular risks are arising from the negative impact on confidence caused by the high levels of domestic government debt and the relatively small involvement in international trade. In Asia – particularly in China, Indonesia and South Korea – but also in Russia and Hungary, risks to the stability of the domestic banks could come from the strong growth of lending to the private sector.

In the recent past, of the key emerging markets in the global economy, Argentina, Brazil and Turkey, in particular, were affected by serious balance of payments crises. After the crisis which began in 2001, the economic situation in Argentina took a turn for the better. Negotiations with the IMF about refinancing matured Fund loans and about a three-year adjustment programme were concluded at the end of September. At the same time, the Argentine government proposed rescheduling private creditors' loans, the aim being to massively reduce its debt service burden. In Brazil there was a marked decline in financial and economic risks compared with the end of 2002. The month-on-month rise in inflation was eradicated, the current account was in balance in the first ten months of 2003 and the government pursued an ambitious reform course. However, the persistently high level of domestic government debt and its considerable volatility – owing to its pegging to the exchange rate and the central bank's target rate for overnight money – harbour a considerable risk for confidence. In Turkey the financial and economic risks declined considerably after the end of the Iraq war. Future financial and economic prospects depend mainly on whether the government keeps strictly to its consolidation and reform course. The government's target is a comparatively ambitious primary surplus of 6½% of GDP in 2003, which it will use to meet its internal and external payment obligations. Moreover, Turkey is currently benefiting from US$8.5 billion worth of bilateral financial aid from the United States.

Financial intermediaries in Germany

Stability and efficiency

For many decades now, Germany has been home to one of the most stable and efficient banking systems in the world. For a long time, growth in the economy as a whole and a stable currency created a favourable macroeconomic environment for the banking industry. Conversely, the specific structure of the German banking industry played a decisive role in developing the strengths of the German economy. The clear decentralisation of the banking industry supported the creation of a strong *Mittelstand* and offset regional disparities in economic performance. Stable relationship banking and close links between private banks and industry have resulted in a steady provision of corporate financing also in periods of slack economic activity. The long-term nature of such financial relationships provided further stability against self-perpetuating economic downturns.

Change in the macroeconomic environment and technical progress ...

Over the course of the 1990s this environment changed fundamentally. The specific macroeconomic advantages in Germany dwindled. Growth-inhibiting structural problems increasingly took centre stage. However, the changes in banking itself, triggered by advances in information and communication technology as well as the liberalisation of the financial markets, probably had an even greater impact than the developments in the economy as a whole. In particular, technical advances have greatly increased the possibility of exploiting returns to scale in the standardised processing of retail operations. This has created enormous pressure to acquire greater size and larger volume in retail business and consequently has led to consolidation in the banking industry.

... are altering the competitive environment

In this context, the extensive regional reach and structure of the German banking industry, with even large institutions having comparatively low market shares, suddenly turned out to be more of a liability. The quest for size and market share as well as competition with new products and distribution channels led to an even more competitive environment. The profitability of the German banking industry began to erode. For a time, concentrating on capital market products and services appeared to offer a way out of the ongoing earnings crunch. At the end of the 1990s, investment banking, in particular, generated high earnings. But in connection with the developments in the equity markets especially the big banks became increasingly dependent on volatile sources of revenue.

Deterioration in environment at start of decade

From mid-2000 the macroeconomic environment began to deteriorate. Although this was in line with the global trend in the banking industry, the duration, extent and effects were felt particularly hard by German banks. First, the sluggishness of growth was more persistent in Germany than in other industrial countries. The wave of corporate insolvencies in Germany increased accordingly, which resulted in a significant need for risk provisioning in the German banks' loan portfolios. Second, it became apparent that the diversification of the domestic banking market could not prevent the banking system's cyclical vulnerability. Owing to fierce competition, overcapacity and sub-optimal operating size, profitability sank too low under normal economic circumstances. Furthermore, many large banks in the private banking sector as well as several of the public Landesbanken were not able to benefit enough from the stabilising effect originating from the relatively stable earnings flow in retail business. This initiated a fundamental discussion (also within the context of the credit crunch hypothesis[9]) on the earnings and structural situation of the German banking system.

Reaction of the banking industry and initial successes

The German banking industry reacted decisively to the cost problem and since 2002 in particular has been taking vigorous countermeasures. Many institutions, especially the big banks, have introduced drastic cost-cutting programmes. All three pillars (private commercial banks, savings banks and credit cooperatives) launched or intensified initiatives to modernise their banking services, ie to better exploit economies of scale and synergies throughout their affiliated network or to reduce their range of in-house work through outsourcing. There are first signs of success. Increasingly effective retrenchment measures have helped to lower administrative costs.

Galvanising effect of Basel II

The planned revision of the international capital adequacy rules (Basel II) is likewise already having a galvanising effect on efforts to improve risk management in lending business. This has prompted all banks to focus their credit relationships more on risk/return considerations; this approach, which has always been prevalent in the organised capital mar-

9 See Deutsche Bundesbank, The development of bank lending to the private sector, *Monthly Report,* October 2002, pp 31-46, and Deutsche Bundesbank, German results of euro-area bank lending survey, *Monthly Report,* June 2003, pp 67-76.

kets, is thus now being applied to loans, too. Cautiously raising margins in lending business will pave the way for a gradual recovery of income.

The combination of cost reductions and greater risk awareness led to improvements in the earnings situation in all three pillars of the German banking system in the first three quarters of 2003 despite the general economic stagnation. The important thing to note is that the German banking system is now correcting past undesirable trends on its own. The slight recovery should encourage banks to continue their efforts in order to return to the path of sustained earnings.

Current trends at large, internationally operating banks

Strategic reorientation triggered by unsatisfactory earnings result in 2002

After the big internationally operating German banks reported poor results and in some cases even losses in 2002 – owing primarily to high risk provisioning – they responded by embarking on a comprehensive strategic reorientation. The various measures differ in intensity and time horizon. Reductions in staff levels, streamlining the branch network and the sale of participating interests are among the measures which have more of a short-term effect. In addition, the banking industry is putting in place instruments and structures which will tend to have a long-term impact. These include the launch of a true-sale initiative in Germany, which will contribute to enhancing flexibility in the treatment of credit risks. Furthermore, there are promising strategies to slice up the value chain with the result of an "industrialisation" of the processes, eg through the creation of credit factories and securities settlement centres as well as outsourcing. Above and beyond that it will continue to be necessary to scrutinise current business strategies and for institutions to position themselves convincingly vis-à-vis the national and international competition.

Balance sheet trends

The aggregated balance sheet of a selected group of large internationally active banks[10] shows a steep decline of their risk-weighted assets to €1,125 billion (see table on page 30 and chart on page 31)[11]. All of the banks, as was the case with other groups of banks, fulfilled the statutory capital adequacy requirements both in accordance with Principle I and the Basel standards at all times. The core capital ("tier 1") ratio of the aggregate of the large internationally operating banks improved markedly over the course of 2003 to 7.95%, two-thirds of which were a result of the reduction of credit risk. Consequently, these banks made significant progress in comparison with other EU institutions.

10 The aggregate comprises a group of eight German banks from all three sectors, the consolidated balance sheet totals of which all exceed €250 billion (as at 30 June 2003). All of the banks in the group operate not only in Germany but also carry out major operations in the international markets as well. The amount of claims on non-residents, both in absolute terms and as a percentage of the balance sheet total, was used as a measure of defining the term "internationally active". The following analysis is based on the respective consolidated data of the institutions.
11 One point to bear in mind is that in the relatively small aggregate of large internationally operating banks business trends are influenced to a great degree by extraordinary factors which arise at all institutions due to numerous strategic reorientations and restructurings. A case in point is the deconsolidation of the mortgage business of three large banks in the second half of 2002.

Balance sheet trends of large, internationally operating German banks

As at end	Volume of business	*of which* Claims on non-banks	Risk-weighted assets 1	Risk-weighted assets 1/ balance sheet total	Core capital ratio 1
	in € billion			As percentage	
2000 Q4	3,384	1,586	1,397	41	6.49
2001 Q2	3,749	1,739	1,472	39	6.63
Q4	3,817	1,740	1,436	38	6.98
2002 Q2	3,622	1,691	1,407	39	6.91
Q4	3,336	1,440	1,278	38	6.94
2003 Q2	3,506	1,539	1,204	34	7.66
Q3	3,305	1,399	1,125	34	7.95

1 In accordance with Principle 1 consolidation pursuant to sections 10 and 10a of the Banking Act (excluding market risk positions).

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Hidden losses

Hidden losses,[12] the majority of which originated during the price slide in the equity markets between spring 2001 and spring 2003, are likely to have been reduced somewhat as a result of the stock market recovery over the course of 2003. Above and beyond that, the volume of hidden losses has been reduced significantly through write-downs and the realisation of losses in the course of streamlining the portfolios of participating interests, securities and loans. Some institutions, however, need to make further adjustments.

Improved results in 2003

The large internationally operating banks managed to bring their operational business out of the red in 2003. Taken together, general administrative spending and risk provisioning amounted to approximately 90% of the operating profits (net interest income plus net commission income plus the result from trading business) in the first nine months of 2003. The earnings improvement witnessed thus far in 2003 was, however, due mainly to a reduction in the two aforementioned cost items (see chart on page 32). Furthermore, while the recovery in the financial markets in the spring brought about an increase in the trading result, it fell again sharply in the summer. This development, together with the fact that this profit component tends to be highly volatile, means it can hardly be deemed suitable as the sole driver of a fundamental and sustained improvement in earnings.

12 "Hidden losses" originate if the market value of an asset falls below its value as recorded in the balance sheet (book value).

Cost-income ratio

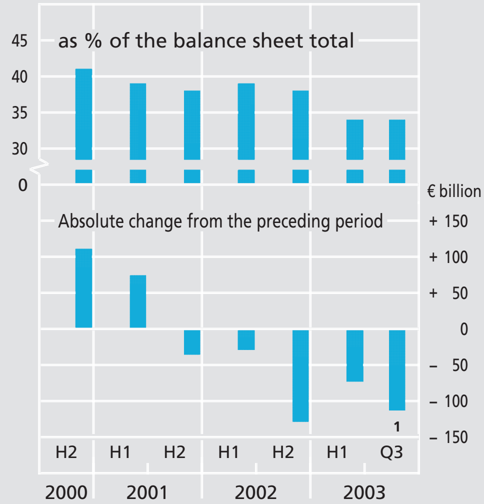
The cost-income ratio (general administrative spending as a percentage of operating profits) improved from 78% in 2002 to 73% in the first nine months of 2003. At the same time, however, it must be mentioned that the more narrowly defined ratio of general administrative spending to gross yield (net interest income plus commission income) remained at the high level of 90%. Thus the effects of cost-cutting measures on general administrative spending approximately offset the losses in net interest and commission income following the reduction of assets and other operations. Hence, the result from trading business made the largest contribution towards improving the cost-income ratio in the first nine months of 2003.

Change of course evident

These figures show that the banks' short-term measures to change course have definitely had an effect. First, the earnings situation has already stabilised, albeit at a low level, thanks in part to a markedly improved trading result. Fears of a downward spiral in the wake of declining business, underutilisation of capacity, an increase in unit costs and a further deterioration of earnings have hitherto not materialised. Second, following persistent restructuring efforts, banks now have more leeway for new lending business. In addition, a greater focus on core business segments, for example by reducing participating interests, creates structures which should facilitate a sustained recovery process in the medium term. In order to achieve this, savings on the cost side, after exhausting the "defensive" potential of staff reductions and branch closures, must be continued by the initiated or pending measures aimed at slicing up the value chain and taking advantage of returns to scale.

Risk-weighted assets*
of large, internationally
operating German banks

Half-year-end data



* Pursuant to the consolidated Principle I in accordance with sections 10 and 10a of the Banking Act (excluding market risks positions). — **1** Third quarter of 2003 vis-à-vis first quarter of 2003.

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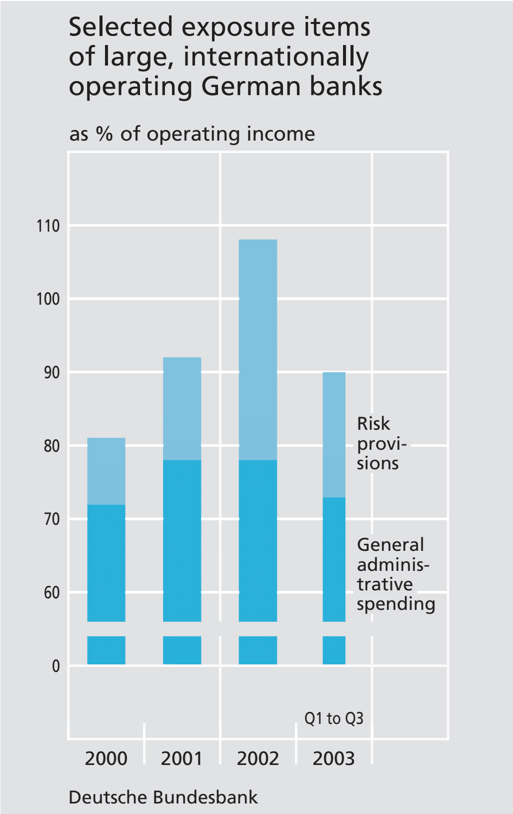
The advances made to date in curbing costs and in risk provisioning need to be complemented by progress on the income side. Convincing business strategies and a clear orientation towards profitable business segments and customer groups are necessary in order to generate new sources of income through product innovations and further improvements in the quality of service in both interest-earning business and commission business. The objective must be to return to a sustained earnings path.

The success stories among smaller commercial banks and foreign banks show that this is possible. By pursuing a consistent strategic



orientation, several of these banks have succeeded in positioning themselves excellently in lucrative market segments and niches.

Changeover to IAS

As from the financial year 2005 all capital market oriented credit institutions are required to switch the accounting method used for their consolidated financial statements to International Accounting Standards or International Financial Reporting Standards (IAS/IFRS). This changeover will have an impact on the financial sector not only with respect to the conversion costs that will be incurred; the wider implications of the new accounting standards, including for the stability of the financial system, are far more significant. Several of the standards that are most relevant to the banking sector (IAS 32 and IAS 39) continue to be at the centre of heated debate. It is to be expected, *inter alia,* that banks' reported earnings will become more volatile. A detailed critique is contained in the box on pages 34-35.

Risk situation in the German banking industry

Resilience of the German financial system

Following a difficult year in 2002, German banks showed signs of improving their risk situation in 2003. The German financial system has at all times possessed a remarkable amount of resilience. This view is supported by the Financial System Stability Assessment conducted by the IMF in November 2003. The stress tests on the market and credit risks carried out by the Bundesbank in this context demonstrate that despite the difficult earnings situation, the short and medium-term stability of the German banking industry was not and is not threatened.[13]

Market risks

As regards market risks, equity price risks, in particular, are of relevance owing to the big banks' significant holdings of participating interests. The interest rate risk, by contrast, is relatively moderate. Given the large share of positions hedged by derivatives, the direct exchange-rate risk plays only a minor role; hence the recent steep slide of the US dollar should likewise have no direct impact.

Credit risk and the level of business activity

The effects of a prolonged weakness of the US dollar on overall business activity would, however, impair the quality of the banks' loan portfolios. Credit risk is the greatest individual risk that banks face. This risk is deter-

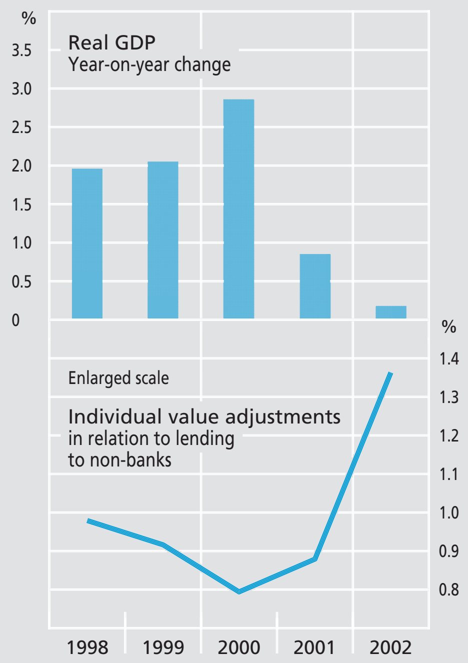
13 See the following article "Stress testing the German banking system", pp 53-61 of this Report.

mined primarily by borrowers' probability of default, which is closely related to cyclical trends. Thus the exceptionally steep rise in write-downs on credit portfolios in 2002 accompanied a phase of economic stagnation (see chart on this page).

Managing credit risk

Even so, this connection should not be viewed mechanically. Banks have a host of control instruments at their disposal to at least partly decouple an overall economic slowdown from the incurrence of losses in credit business. For example, banks can differentiate their prices and lending policies to a greater extent according to risk. They can minimise potential losses through more stringent collateral requirements and loan covenants. And they can use credit derivatives to hedge large credit exposures or, on the income side, to assume risks and take advantage of arbitrage opportunities in the markets. Thus on balance, the markets for credit risk transfers offer banks a way of fine-tuning their own risk profile and of diversifying risks, provide greater flexibility in terms of business policy and result in more efficient pricing through the market. Although the markets in Germany as well as those in other euro-area countries still lag behind the Anglo-American credit risk transfer markets, banks are using the entire range of the aforementioned possibilities, albeit at varying levels of intensity, which implies heightened risk awareness. This should, however, not lead to the delusion that a sound credit business only requires a commercially viable pricing policy and the partial transfer of credit risks. In particular, a careful credit assessment and an informed credit decision at the beginning of the lending process remain of paramount importance.

Individual value adjustments over the business cycle



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Greater risk differentiation

The greater risk differentiation in banks' lending policy is attested by the data obtained from the Bank Lending Survey,[14] which indicate that the spreads between high-risk and average-risk loans have widened. Subsequently, especially in the spring, German banks raised their collateral requirements and tightened the covenants. One indication of greater risk differentiation might also be seen in the fact that the spreads between corporate loans up to €1 million and those with a greater volume, which are generally granted to lower-risk borrowers, have risen.

14 See Deutsche Bundesbank *Monthly Report,* November 2003, pp 30-31.

Fair value accounting and stability of the financial system

The IAS Regulation adopted by the European Commission on 19 July 2002[1] requires that from 2005 all listed companies in the European Union draw up their accounts – at least their consolidated financial statements – according to International Accounting Standards (IAS). The aim is to further harmonise accounting in Europe in order to ensure that the European capital market functions efficiently in the Community and in the single European market. Convergence between IAS and US Generally Accepted Accounting Principles (US GAAP) should achieve an acceptance of European annual financial statements in the United States. IAS is being translated into European law according to a complex formalised procedure so as to enable these standards to be further developed by the independent International Accounting Standards Board (IASB). All IAS standards, with the exception of IAS 32 and IAS 39 which are currently being revised, were translated into European law in an en bloc endorsement.[2]

The IAS has introduced fair value accounting into German accounting practice. Although proposals for full fair value accounting in the IAS have failed in the past owing to massive and broad-based opposition, the IASB's proposal to revise IAS 39 includes the option of valuing all financial instruments at their fair value.[3] The intention of this rule is to avoid problems which arise from presenting risk-compensating hedging relationships between different business transactions (hedge accounting). The IASB is endeavouring to come up with a further proposal to amend IAS 39 which allows hedges to be accounted for at the portfolio level (macro hedge approach[4]) and which corresponds to state-of-the-art risk management approaches of banks in continental Europe. Still unresolved, however, are the issues of properly accounting for premature repayments in the context of the requirements for measuring the effectiveness of the hedging relationships and including core deposits (sight deposits and savings deposits) in the hedged net portfolio position. In the light of these problems, the objective of the fair value option – in which both the underlying transaction and the hedging transaction can be shown at fair value – is still of importance. However, it cannot be ruled out that, on the basis of this option, accounting practice will gradually move towards full fair value accounting over time. Therefore, reservations have been expressed concerning this option or the excessively liberal use of this option. Such reservations have been expressed, *inter alia*, by the Basel Committee on Banking Supervision[5], and the European Central Bank, but also by the Deutsche Bundesbank[6].

1 Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 concerning the use of International Accounting Standards (IAS Regulation) (OJ L243 of 11 September 2002); other relevant Directives in this context are the Fair Value Directive (Council Directive 2001/65/EC of 27 September 2001) and the Modernisation Directive (Directive 2003/51/EC of the European Parliament and of the Council of 18 June 2003 amending Council Directives 78/660/EEC, 83/349/EEC, 86/635/EEC and 91/674/EEC on the annual and consolidated accounts of certain types of companies, banks and other financial institutions and insurance undertakings). — **2** Commission Regulation (EC) No 1725/2003 of 29 September 2003 adopting certain international accounting standards in accordance with Regulation (EC) No 1606/2002 of the European Parliament and of the Council (OJ L261 of 13 October 2003). — **3** Exposure Draft of Proposed Amend-

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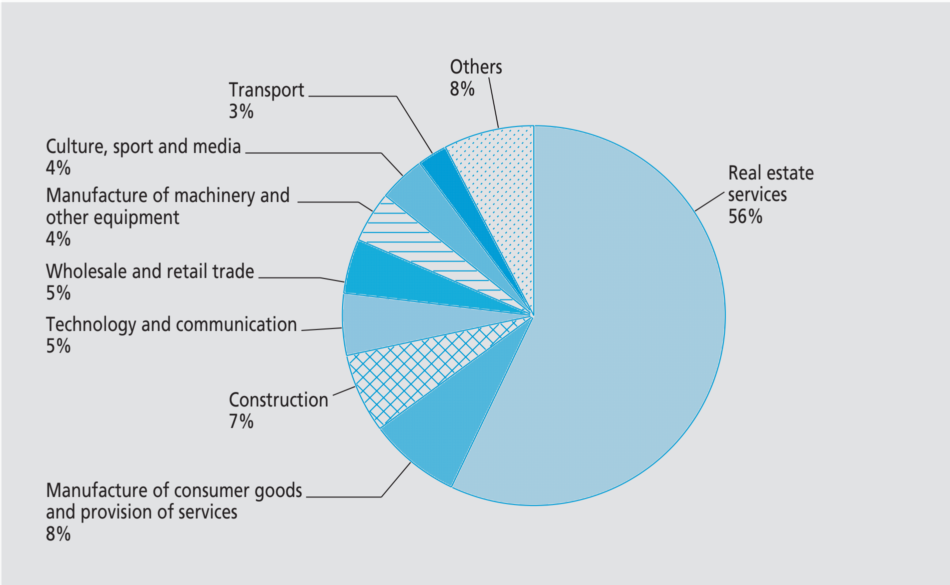
The criticisms of moving towards full fair value accounting focus on questioning the relevance and reliability of fair values. For financial instruments which are held to maturity, shifts in the yield curve are unimportant. Thus the fair value approach merely results in artificial volatility of the results. Objective market values are not available for many financial instruments because they are not traded on liquid markets. This particularly concerns traditional lending business, which in Germany is characterised by long maturities. This generates a wide range of possible subjective fair values, depending on the assessment of the future cash flows and of the risk-adequate discounting factor. An especially questionable feature is the facility to take account of the borrower's own creditworthiness when measuring the fair value of liabilities. A deterioration of the borrower's own creditworthiness would lead to a reduction of its own liabilities and a corresponding increase in recorded income. On the whole, the probable higher volatility is likely to increase market fluctuations in a procyclical direction and to encourage behavioural adjustments that tend to result in shorter maturities, greater recourse to contracts with variable interest rates and, ultimately, greater short-termism in business life. The fair value option allows an individual changeover to this accounting standard at the company level and even at the level of individual transaction categories. This impairs the comparability of company annual accounts, the informative value of business statistics aggregated on this basis and hence, in the end, the ability of the capital markets to function correctly.

Against this background, the spread of fair value-oriented accounting in Germany merits a cautious assessment. The European Commission's Regulation stipulates its use solely for the consolidated financial statements of listed companies. These focus on the information function of the annual accounts. IAS accounting should not be used for other annual accounts, particularly single-entity financial statements, at least for the time being. For the purpose of company law and the resultant function of determining profit from the point of view of capital preservation, the traditional German GAAP based on the Commercial Code – cautiously modernised – should be maintained. Many companies would then be spared the burden of converting to the new accounting standards. Admittedly, this would imply that companies affiliated to a group would then have to apply two different accounting systems in the future.

ments to IAS 32, Financial Instruments: Disclosure and Presentation, and IAS 39, Financial Instruments: Recognition and Measurement, IASB, June 2002. — **4** Exposure Draft of Proposed Amendments to IAS 39 Financial Instruments: Recognition and Measurement: Fair Value Hedge Accounting for a Portfolio Hedge of Interest Rate Risk, IASB August 2003. — **5** The Committee has recently commented in this sense on the Exposure Draft of Proposed Amendments to IAS 39 Financial Instruments: Recognition and Measurement: Fair Value Hedge Accounting for a Portfolio Hedge of Interest Rate Risk, IASB August 2003. — **6** See Deutsche Bundesbank, The evolution of accounting standards for credit institutions, *Monthly Report,* June 2002, pp 39-54.

Exposure at risk by sector*



Source: Moody's KMV, Bundesbank calculations. — * Only lending to enterprises, excluding the financial intermediation sector (as reported to the central credit register for loans of €1.5 million or more). The exposure at risk is the product of the expected default frequency (EDF) and the credit volume.

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Adjustment process

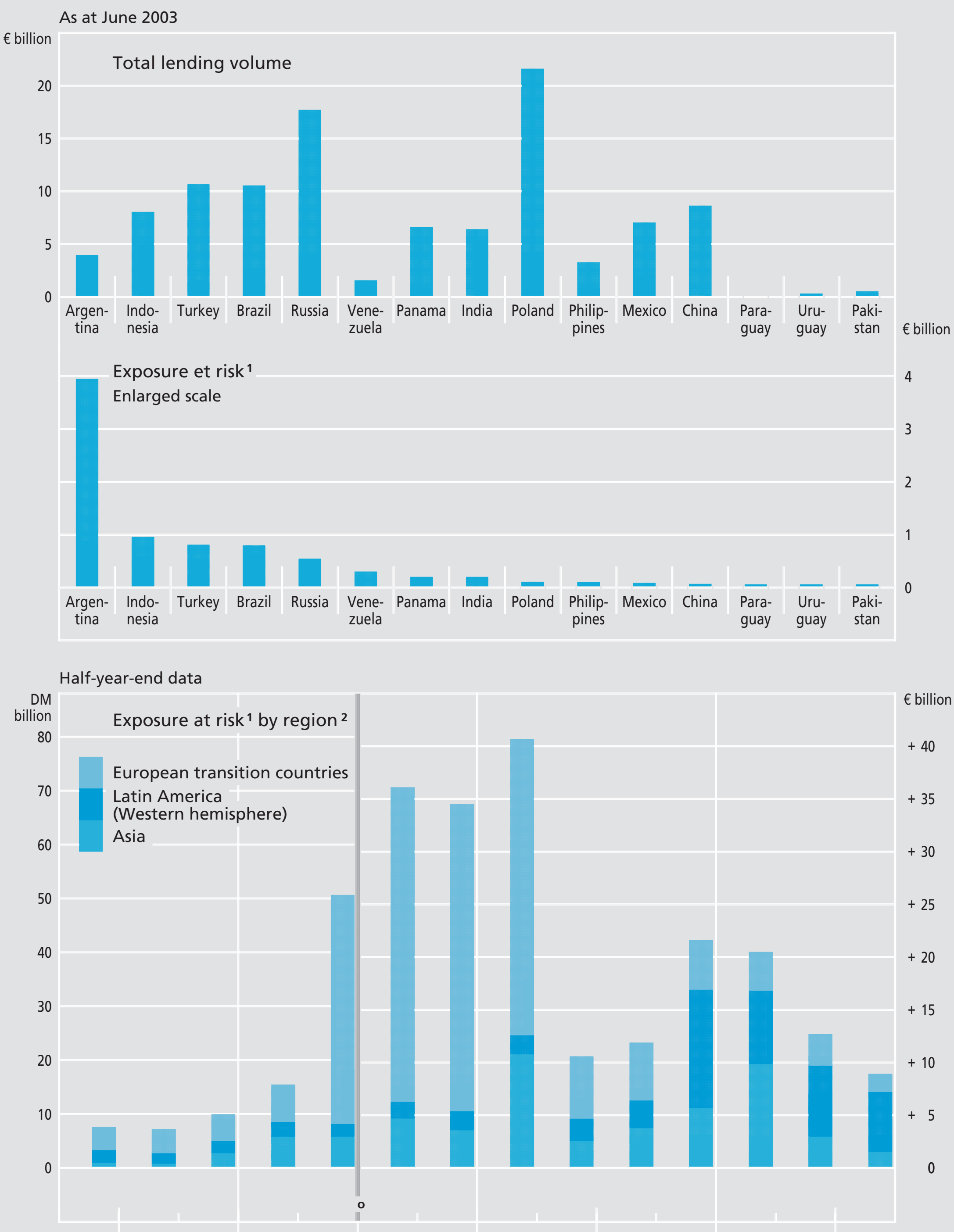
The greater orientation of lending policy to the risk level and increased protection against losses in the event of a default represent an adjustment process of banks to the higher level of corporate insolvencies and is important for financial stability. In this way, even if the overall macroeconomic situation remains difficult, the level of risk provisioning can be lowered. This mechanism seemed to be paying off in 2003, although it is still too early to make a quantitative statement on the basis of the assessments available during the period.

Sectoral risks

The conservative stance currently being taken by German banks with respect to new risks can also be seen in the analysis of sectoral and country risks. Since 2002, the year in which credit risks increased, banks have reacted by reducing risk assets as well as diversifying their risk to a greater extent. However, a considerable share of the credit portfolio restructuring was probably driven by demand. Even so, the credit risk arising from the corporate portfolio, measured in terms of the exposure at risk,[15] increased further compared with 2002, owing to the general deterioration of enterprises' creditworthiness. Above all, the commercial real estate sector (both domestic and international) accounted for a large share of the overall risk (see chart on this page). Excluding this sector, the ex-

15 The exposure at risk is defined here as the product of the credit volume (as reported to the central credit register for loans of €1.5 million or more) and the associated default probability of a given segment (sector, country). For the sector-specific risks Moody's KMV Expected Default Frequencies (EDF) were taken as the default probabilities. For the country-specific risks the corresponding Standard & Poor's ratings were used, after having been transformed into a cardinal scale based on enterprises' two-year default data.

Lending to selected transition and emerging-market countries



Source: Standard and Poor's, Bundesbank calculations. — **1** The exposure at risk is the product of the average default probability and the credit volume (as reported to the central credit register for loans of €1.5 million or more). The default probability was determined on the basis of the average two-year default rates of companies with relevant S&P ratings. — **2** Regions defined according to the IMF classification, International Financial Statistics. — **o** From 1999 onwards amounts are in euro.

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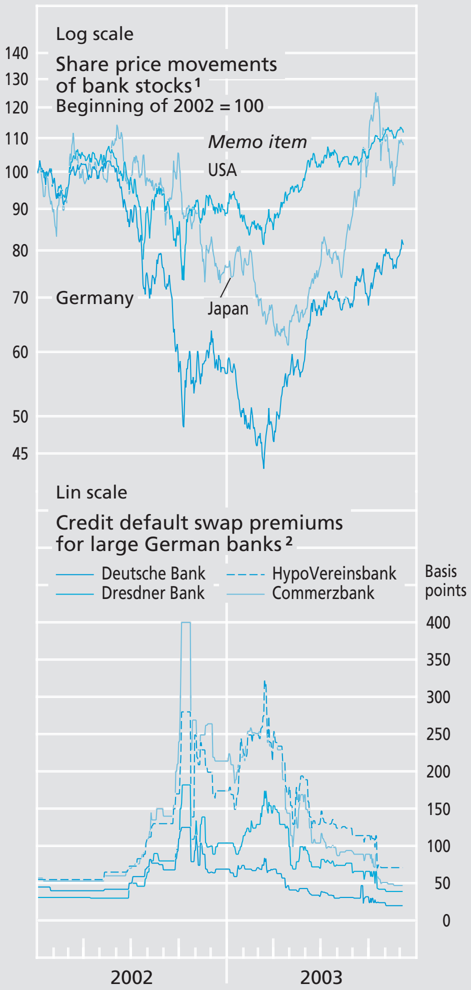
Market indicators for the German banking sector

Daily data



1 Source: Datastream, Bundesbank calculations. — 2 Source: Morgan Stanley.

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posure at risk would have increased only moderately. An improvement has been discernible as from the middle of 2003. Since then the probabilities of default, measured by Moody's KMV[16] Expected Default Frequencies (EDF), have declined.

Country risks

As the German banking system is by far the largest creditor group for cross-border lending in the form of loans or purchases of securities – measured by the volume of asset items according to BIS statistics – country risk is also a major potential risk factor. At the end of June 2003, German banks' foreign credit exposure[17] totalled €2.9 trillion. While less than ten per cent of this total represented exposure to emerging-market and transition countries, this share nonetheless warrants a more detailed analysis. With an outstanding total exposure at risk of currently around €9 billion, the credit risk arising from the aforementioned categories of countries was rather low compared with the trend since 1998 (see chart on page 37). The largest volume of exposure at risk is to Latin America. At almost €4 billion, Argentina (which owing to its recent default is rated at a default probability of 100%) accounts for the largest single credit risk amount,[18] followed by Brazil with €800 million. Furthermore, the volume of exposure at risk to Venezuela, Paraguay and Uruguay has increased following recent rating downgrades. Among the European emerging markets and transition countries, Turkey, in particular, has a considerable exposure at risk (€809 million). Russia, which for years had been rated as a relatively high credit risk country, has benefited of late from rating upgrades to currently BB. In Asia, Indonesia stands out with exposure at risk of €962 million.

16 Expected Default Frequencies represent default probabilities calculated by Moody's KMV Credit Monitor for listed enterprises.
17 As reported to the central credit register for loans of €1.5 million or more.
18 The exposure at risk is not the same as the expected loss given default, which is the loss taking into account the recovery rate. The recovery rate is determined principally by collateral and anticipated repayments.

Market indicators

Assessment of equity markets improves

Indicators are available for the big banks which are active in the capital markets. These indicators contain the financial markets' assessments of the performance and stability of the financial intermediaries (see chart on page 38). According to these assessments, the situation of big banks stabilised in 2003. Equity prices, driven in part by takeover rumours, indicate that doubts about whether the situation would improve diminished in the course of the year. Thus the market capitalisation of the three listed big banks increased from its nadir (€25.7 billion) in March of 2003 to €41.2 billion. However, this is still low by international standards. Apparently the financial markets do not yet have sufficient confidence in the ability of the German banking system to again become highly profitable in future.

Credit default swaps

Credit default swap premiums and ratings do not provide any clear-cut signals concerning default risk. After credit risk swap premiums had in some cases risen to dramatic levels in the late summer of 2002, the trend since the spring of 2003 indicates a marked decline in the default risk. In the meantime, two of the four big banks have actually managed to push their scores below the level which had existed in the summer of 2002.

Ratings

The external ratings assigned by large international agencies and commonly used default risk measures such as the EDF point more towards a stabilisation of, than a significant decline in, the level of default risk (see adjacent table). However, the recent rating record of the German banking industry has not been uniform. Thus whereas the pace of downgrading of big banks, which had accelerated considerably in 2002, came to a halt in 2003 (with one exception), several Landesbanken were downgraded during 2003.

Changes in ratings of German big banks since 1986

	S & P long-term local issuer credit ratings		Moody's issuer ratings	
Bank	Date of change	Rating	Date of change	Rating
Deutsche Bank	Feb 1986	AAA	May 1995	Aaa
	Aug 1998	AA+	Dec 1996	Aa1
	May 1999	AA	May 1999	Aa3
	May 2002	AA–		
Dresdner Bank	Sep 1995	AA+	July 1998	Aa1
	Nov 1997	AA	June 1999	Aa3
	Apr 2000	AA–	July 2001	Aa2
	Oct 2002	A+	Oct 2002	Aa3
	Mar 2003	A	July 2003	A1
Hypo-Vereins-bank	Sep 1998	AA–	June 1998	Aa2
	Oct 1999	A+	Mar 2000	Aa3
	Feb 2002	A	July 2002	A1
	Dec 2002	A–	Jan 2003	A3
Commerz-bank	Nov 1994	AA–	May 1995	Aa2
	Feb 2001	A+	June 1998	Aa3
	Dec 2001	A	July 2001	Aa3
	Oct 2002	A–	Aug 2001	A1
			Dec 2002	A2

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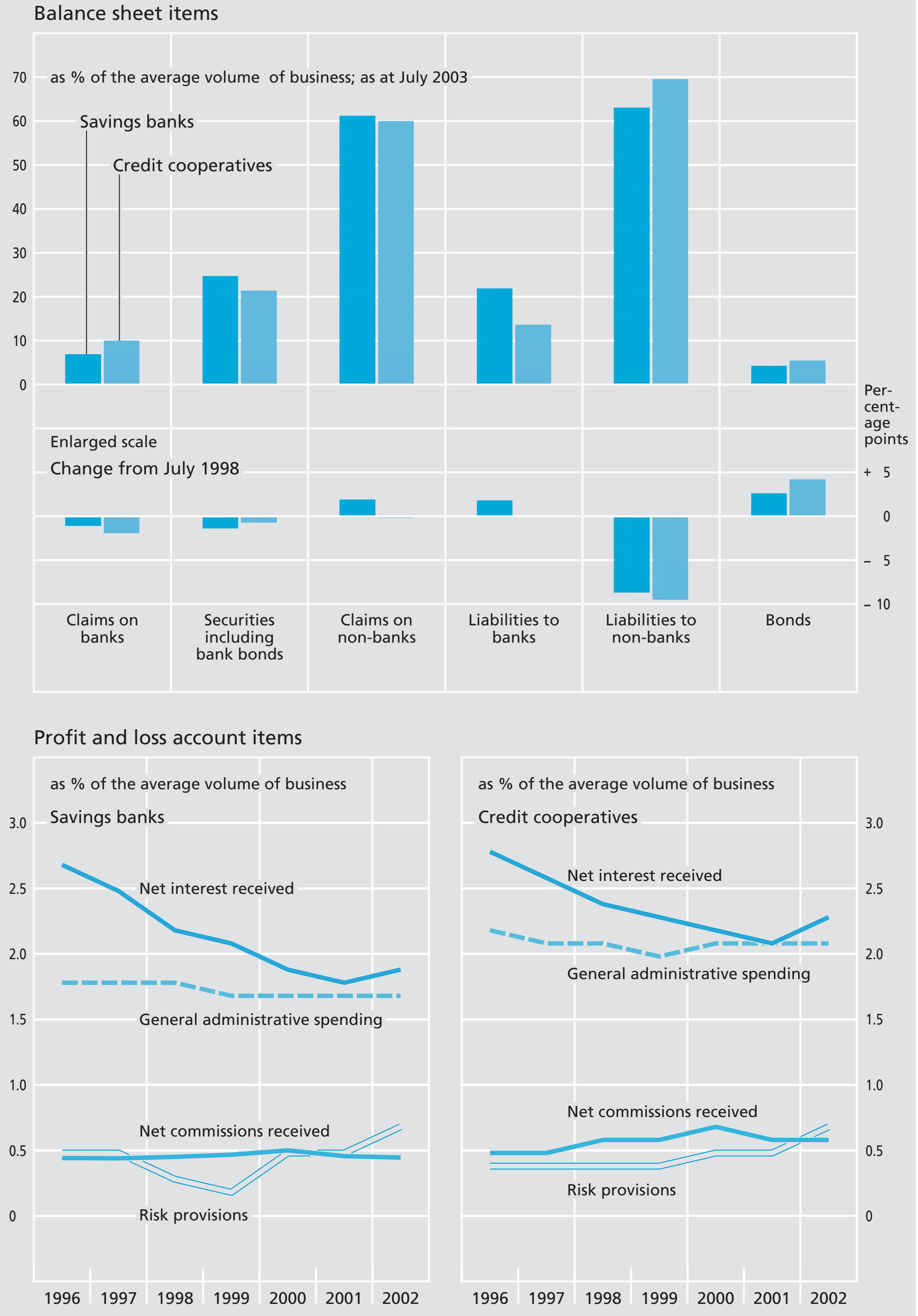
Savings banks and cooperative banks

Retail business a stabilising factor

Savings banks and cooperative banks, with their extensive branch network and product range, are oriented towards retail customers and the *Mittelstand.* Funding is provided primarily through customer deposits, although in the last five years the shares of refinancing through the interbank market and the bond market have risen slightly. Assets comprise primarily loans to domestic enterprises and individuals. Credit to the latter includes a con-

Major components of savings banks' and credit cooperatives' balance sheets and profit and loss accounts



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siderable share of borrowing to finance housing construction (see chart on page 40). Owing to the large share of interest-bearing items in the balance sheet, net interest income determines the medium-term earnings potential of savings banks and cooperative banks to a large extent. Commission business chiefly focuses on income from giro operations and securities business with customers which, although it generates steady income, leaves little room for enhancing profitability.

In Germany, savings banks and cooperative banks, which have a dominant position in retail banking, benefited the most from the trend apparent in many countries in the difficult financial year 2002 according to which retail business was the mainstay of earnings. The ongoing sluggish growth forced them, too, to undertake large write-downs on their loan portfolio. Nonetheless, they were able to improve their operating result and consequently reduce their cost-income ratio (savings banks lowered this ratio by three percentage points to 68% and cooperative banks by four percentage points to 75%). In 2003 the operating result is likely to have improved slightly further and the risk provisioning requirement to have declined.

Earnings ...

In the second half of the 1990s the net interest result was squeezed by higher funding costs and lower income from maturity transformation (see chart on page 40). But in 2003, as in 2002, savings banks and cooperative banks probably managed to prevent a further decline in interest income. They benefited from the continued high liquidity preference as well as the yield curve, which was somewhat steeper than was the case in the preceding year. However, as competition in some retail business segments is actually becoming more intense, the leeway available to these banks to boost their interest income appears limited in the longer term.

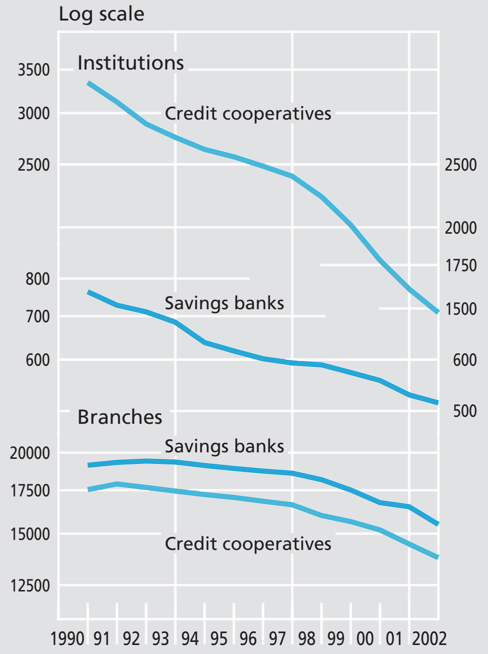
... and costs

On the cost side, by contrast, there would seem to be some additional potential to achieve savings through the pursuit of a more risk-oriented policy in lending business, the exploitation of synergies – particularly in back-office activities – and further consolidation. In this respect, these two banking groups have a somewhat differing profile. Although the savings banks have fewer individual institutions, they are larger and have a denser branch network. The cooperative banking sector, by contrast, has more, but smaller institutions (see chart on page 42). The cooperative bank sector has a greater internal division of labour within its network than the savings bank sector. The cooperative sector is also further ahead in streamlining its multi-tiered network structure.

Risks

At the level of individual institutions, the main risks for both the savings banks and credit cooperatives come from the quality of their exposures to small and medium-sized enterprises. Since both sectors are made up of a large number of small institutions with consequently a small capital base and a business strategy focused on their locality, the risk diversification of their banking book tends to be fairly limited in terms of exposure size and geographical spread. For example, 13% of all savings banks and 21% of all credit cooperatives carry more than 40% of their business

Number of savings banks and credit cooperatives and their branches



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volume in the form of large exposures[19] (see chart on page 43).

Measures to safeguard medium-term stability

Better risk diversification and greater risk sustainability – which ultimately strengthen systemic stability – are the current focus of many measures and initiatives of all parties concerned. In particular, efforts are being undertaken to offer individual institutions possibilities to achieve regional diversification through synthetic means, ie the deployment of credit derivatives. The ongoing consolidation process will ultimately lead to a comparable result – larger, more diversified and more risk-viable units.

Role of the Landesbanken

With the elimination of public guarantees for the solvency (*Anstaltslast*) and liabilities (*Gewährträgerhaftung*) of public-sector institutions from mid-July 2005, the savings bank sector will have to redefine the role of the Landesbank and their future business model. Adjustments are necessary as the end of state guarantees – which will presumably push up refinancing costs – affects the role which the Landesbanken play in risk taking and transformation and consequently their competitive position. The main emphasis of the current adjustments is on greater integration of each Landesbank and its primary institutions into an affiliated network. The individual regional networks have begun to tackle the process of integrating the Landesbank and its affiliated savings banks via various approaches at various speeds. The necessary decisions should be made as soon as possible, not least to achieve a favourable starting point for a rating through rating agencies. In the longer term, in addition to the current debate concerning an efficient division of duties between the Landesbanken and the savings banks, there is also likely to be a discussion on the allocation of tasks between the Landesbanken and the central institution of the savings bank organisation. Another question is the extent to which further consolidation, and thus a decline in capacities, will be needed in order to lastingly improve the earnings of the Landesbanken.

19 Large exposures are defined as loans to an individual borrower or a borrower unit which amount to or exceed at least 10% of the liable capital or own funds.

Appendix: Comments on the IMF's proposals for structural reforms in the German banking sector

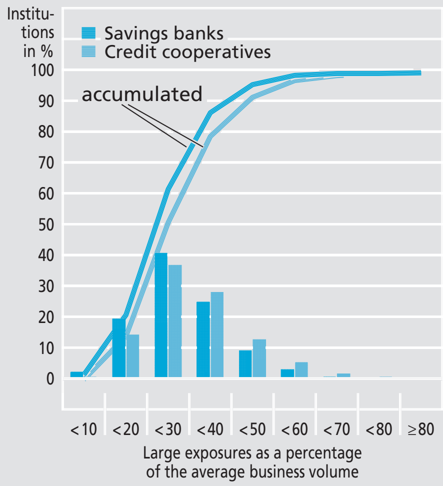
Framework for structural changes

The IMF made various recommendations in its Financial System Stability Assessment. In the savings bank sector, these were as follows: transformation of the status of Landesbanken into private-law corporations so as to enable them to obtain capital on the capital markets; elimination of existing legal and other barriers to consolidation within and across the three pillars of the German banking industry in order to facilitate a market-oriented restructuring process; abolition of regional limitations on banking accompanied by strengthened corporate governance and supervision; modification of the institutional protection schemes in the public and cooperative banking sectors through the introduction of risk-differentiated premiums and a reduction in protection coverage over time; improvements in transparency and corporate governance at public sector banks and a review of the extent of public sector involvement in the banking sector.

The role of public authorities is to define a framework ensuring the stability of the financial system as well as the appropriate and market-oriented provision of financial services within a highly competitive environment. Another requirement is to ensure that the financial system duly transmits monetary policy stimuli to the real economy. Reform considerations must be gauged primarily by their implications for the stability of the banking and financial system as well as the system's ability to function. It should be noted that the German financial system has up to now exhibited a high degree of resilience to crises. One principle that should be acknowledged – and which is also underlined by the IMF – is that an efficient banking system must be open to market-oriented change. In view of the rapid evolution of the financial systems in the wake of internationalisation and capital market orientation, existing structures which hitherto have proved viable must likewise be open to critical review. A fundamental change in the competitive environment in Germany will occur already in July 2005 with the phasing out of public guarantees for the solvency (*Anstaltslast*) and liabilities (*Gewährträgerhaftung*) of public sector institutions.

Share of large exposures* in savings banks' and credit cooperatives' average business volume

As at June 2003



* Pursuant to sections 13, 13a and 13b of the Banking Act. — Example: for approximately 40% of all saving banks, large exposures account for between 20% and 30% of their business volume.

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Competition and profitability

A core thesis of the IMF paper is that the unsatisfactory level of profitability in the German banking system is attributable to the three-pillar structure and, in particular, to the role of the public sector banks. The IMF infers that the savings banks' business policy, which is geared towards public welfare, tends to foster the misallocation of resources and lead to efficiency losses with potentially negative economic consequences, such as welfare and stability losses. With all due respect to the IMF's arguments, however, it is a moot question whether the trend-decline in profitability in the German banking system is essentially attributable to the three-pillar structure or whether this structure is the principal barrier to improving the situation. Unsatisfactory profitability is a common feature of practically all categories of banks. In actual fact, low profitability has been largely attributable – at least in recent years – to the German economy's low growth momentum and the resultant declining earnings as well as high loan defaults. At the same time, the economic stagnation has also highlighted the structural earnings problems.

Furthermore, all of the categories of banks in Germany are undergoing an extensive restructuring process, which is reflected not least in a substantial shedding of staff but also in a marked reduction in the number of independent banks and of branches. Thus, from 1990 to 2002, the number of branches fell by 19% in the case of savings banks, by 21% in the cooperative bank sector and by 33% in the case of big banks. In the same period, the number of institutions in the savings bank sector decreased by 33% and in the cooperative bank sector by 56%. Therefore, structural changes are already being implemented irrespective of the three-pillar discussion.

Changing public mandate

The public-law status of the regional Landesbanken and the municipal savings banks was originally chosen to make it easier for them to fulfil a public mandate. This mandate was defined, in particular, as ensuring a nationwide provision of banking services to the public and to small and medium-sized commercial firms, as well as supporting regional and structural policies.

Today, with their national or global business activities, Landesbanken have moved a long way from those traditional principles. In recent years they have considerably stepped up their foreign and investment banking business. In order to improve their profitability and gain market share, some Landesbanken have incurred substantial risks, which can hardly be justified on the basis of a public mandate. By contrast, the majority of savings banks still have a regional orientation. They continue to play a key role in the financing of small and medium-sized firms. In addition, the mostly long-term orientation of their business relationships merits a positive assessment from a stability perspective. Market trends with potentially procyclical effects were followed only to a more minor extent. The nationwide provision of banking services may be considered to be largely ensured nowadays. This is due not only to the savings banks but also to the branch networks of the cooperative sector and other institutions.

The public mandate is no longer as significant as it was in the past. Moreover, the procurement of equity capital is hampered by the public-law status and, besides, is virtually impossible from public sources. The procurement of new capital is a key requirement given the public sector banks' relatively low level of capital funding by international standards. Most of the savings banks have been able to boost their own funds through profit retention. In addition, equity can also be provided outside the form of a public limited company (AG).

Some Landesbanken have already fulfilled the prerequisites for obtaining authorisation to change their status to that of a private-law corporation. This course could also be pursued by other Landesbanken. The transformation of Landesbanken and savings banks into private-law corporations might provide the basis for a restructuring process, which would need to be carried out prudently and ultimately would be up to the owners and the relevant state legislatures. This is unlikely to involve a complete change from public to private ownership in the foreseeable future, an assumption which is supported by experience in other countries.

Regional principle

The regional principle was introduced with the aim of facilitating a largely uniform course of economic development by making financial resources available in economically weak areas, too. Furthermore, the regional principle limits risks (no acceptance of risks in territories which lie outside the guarantor's geographical area) but also reduces competition by providing the savings banks with a territorial monopoly.

One argument against the strict application of the regional principle is that it restricts competition between the savings banks. This self-imposed decentralisation prevents profitable institutions from capturing new market shares and protects less profitable institutions from competitors. Coupled with the economic benefits of having a public-law status, this can lead to an excessive presence of savings banks in local markets. A relaxation of the regional principle could ultimately strengthen both competition and systemic stability. However, this advantage must be weighed up against a possible loss of geographical proximity. It remains to be seen to what extent the regional principle in its current form will be further developed or diluted at public-law credit institutions.

Institutional protection insurance

Critics object that the institutional protection insurance scheme which safeguards the existence of public-law institutions contains a structure-conserving element. They add that institutional creditors are hardly in need of protection anyway. On the other hand, it should be noted that institutional protection insurance strengthens creditors' confidence in the network of affiliated institutions as a whole, which contributes significantly to the stability of the overall system. In addition, the structure of the institutional protection insurance scheme is fully in keeping with European regulations.

In view of its inherent function of ensuring public confidence, institutional protection insurance within a network of affiliated institutions should be maintained. The criticisms can be taken on board by cautiously modifying the existing scheme, in particular through a risk-based calibration of contributions – following the example set by the private banks and the cooperative banking sector – and by specifically monitoring the individual banks' risk situation without calling into question the instrument of institutional protection insurance – which on the whole has proved beneficial.

Transparency and corporate governance at savings banks

Greater transparency and a better corporate governance structure are generally desirable at public sector institutions, too. Possible approaches include revising the statutory regulations governing the management board (*Verwaltungsrat*) with a view to reducing the scope for political influence, introducing a quota system for board membership according to interest groups – similar to the regulations governing appointments to supervisory boards (*Aufsichtsräte*) – and bringing the detailed regulations regarding the powers and tasks of the management board into line with the provisions of the Stock Corporation Act (*Aktiengesetz*).

Insurance companies

Significance of insurers in the German financial system

In the past five years, the German insurance sector has grown faster than the banking sector. Insurers' aggregate balance sheet total increased by 50.6% (compared with 33.4% in the case of credit institutions). Given the demographic trends and the consequent rising demand for private pension products, this is predominantly attributable to growth in the life insurance sector. Whereas in many other European countries, for example the Netherlands, Belgium or Switzerland, the sectoral boundaries are becoming increasingly blurred through the creation of financial conglomerates, the "bancassurance forms" of cooperation and cross-shareholding still currently predominate in Germany. The ratio of insurance commissions to total commissions received by banks has therefore been rather low up to now, for example 8.7% in the case of credit cooperatives in 2002. By contrast, the fact that, on 30 June 2003, 11.0% of the investment portfolios of life insurance companies was made up of mortgage loan, land charge and annuity charge claims, and 18.8% of borrowers' notes and loans shows that life insurers have an important position as financial intermediaries on the credit markets, too.

Profitability of life insurers marked by falling capital income and high bonus payments

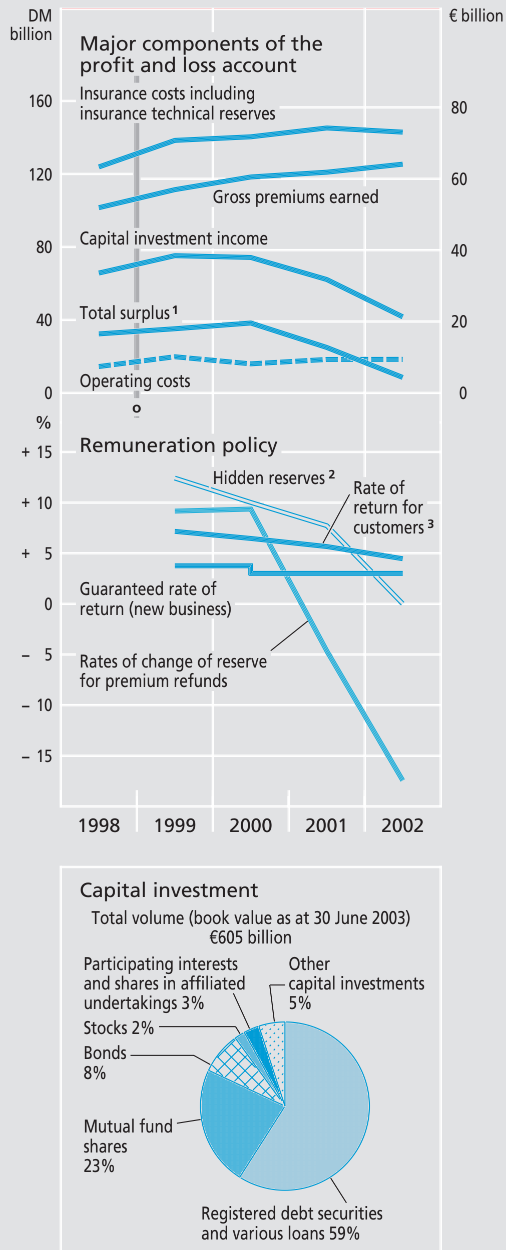
Despite recent negative media coverage, the German life insurance industry has continued to record growing gross premiums over the past five years (see chart on page 47). Whilst the (relatively low) ratio of expenditure on insurance operations to gross premiums changed only slightly throughout the period, expenditure on claims and insurance technical reserves grew more slowly than gross premiums. At the same time, the stock market slumps and the prolonged phase of low interest rates for bonds mean that insurers' capital investment income has declined steeply since 2000. This is problematic from a prudential point of view as around 50% of the life insurance products sold in Germany not only have legally guaranteed minimum rates of return but also pay policyholders bonuses, in particular from capital investments. The keen competition for new customers in recent years has led to what appears to be generous bonus policies (in comparison with the declining capital investment income) being financed by the liquidation of hidden reserves and the reserve for premium refunds,[20] which is actually designed to serve as a safety net. The fact that this policy is unsustainable in the long run can be seen in the insurance companies' increasing efforts to lower the total bonuses allocated to policyholders. The lowering of the guaranteed minimum rate of return from 3.25% to 2.75% on 1 January 2004 is likewise a response to the altered capital market conditions; this is likely to afford the insurance companies only moderate relief in the short term, however, as the lowered interest rate will apply only to new business. Given the strongly fragmented market, high capital market losses and the increasingly complex demands of asset/liability management, it is conceivable that the trend towards consolidation in the life insurance industry may continue.

Losses on equity investments ...

Capital investments, which make up more than 90% of the assets side of an average life insurer's balance sheet, have decreased in value since 2000 not only because of the depletion of hidden reserves in the wake of an excessively generous bonus policy but also owing to a sharp decline in share prices on the stock markets. Thus the collapse of one relatively small German life insurance company was ultimately attributable to its large amount of hidden losses. The assumption of

20 The surplus remaining with a life insurer following the direct credit to policyholders is initially allocated to the reserve for premium refunds; it is credited to the policyholders only after a time lag of two years. Thus, a temporary decrease in the gross result does not necessitate an immediate adjustment of the existing bonus rates.

Data on German life insurance companies



Sources: Federal Financial Supervisory Authority (BaFin), Federal Supervisory Office for Insurance Enterprises (BAV), FitchRatings. — **1** Profit for the year plus transfer to the reserve for premium refunds. — **2** Quotient of the difference between the market value and book value of all capital investments and the market value of the capital investments. — **3** Interest rate on policyholders' credit balances for the following year. — **o** From 1999 onwards all amounts are in euro.

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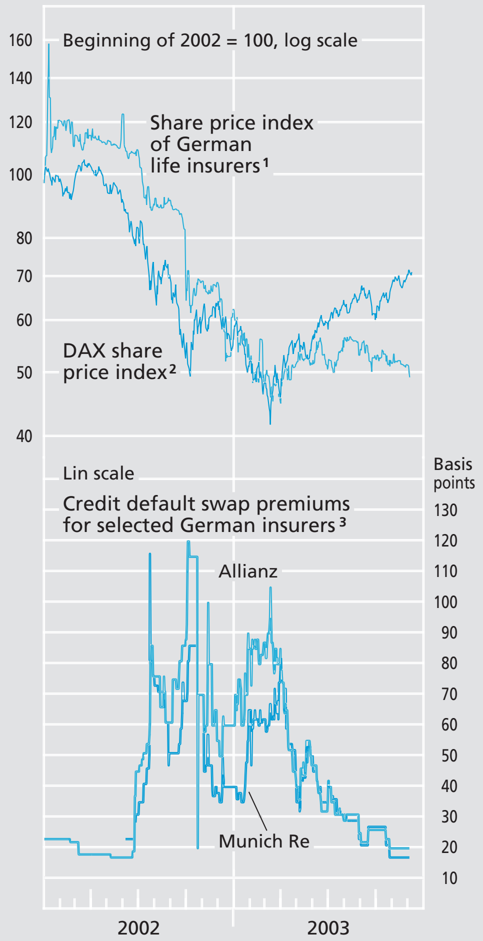
Market indicators for the German insurance sector

Daily data



1 Source: Datastream. — 2 Source: Deutsche Börse AG, Bundesbank calculations. — 3 Source: Morgan Stanley.

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that company's portfolio by the rescue company Protektor AG, which was set up in 2002 as a private sector entity, was the industry's first-ever bailout. The hidden reserves of all insurance companies in direct equity investments and mutual funds (including mixed funds and pure bond-based funds) totalling 29.4% at the end of 1999 changed into hidden losses of 8.6% by the end of 2002. Above all the write-downs to the current value on the reporting date of 31 December 2003 but also the share price recovery will mean that the hidden losses in all equity investments – according to the estimates of the German Insurance Association (*Gesamtverband der deutschen Versicherungswirtschaft*) – will decrease from around €16 billion in 2002 to around €5 billion by the end of 2003.

... accompanied by possible interest gains on bonds

The partial shifting of the dissolved equity portfolios into bonds increases the proportion of fixed-income assets which are likely to suffer a price decline in the event of a persistent rise in interest rates. However, the scenario of higher interest rates could have a positive net impact on the profitability of life insurance companies as the potentially higher depreciation requirement ought, at least in the medium term, to be offset by future higher interest income and more favourable reinvestment opportunities (including for other fixed-income capital investments which show no impairment losses).

Strained profitability situation for reinsurers

The gross premiums of reinsurance companies rose sharply over the past five years in line with the global trend. This was offset by a big rise in insurance costs in 2001 and above all in 2002 as a result of an unexpected surge in major claims and asbestos risks in the USA. This growth was additionally boosted, however, by an incautious approach to new business at the end of the 1990s. All in all, reinsurers had to cope with a steep slide in their insurance technical result,[21] which since 1997

21 The insurance technical result is that part of the overall result due to the production and sale of insurance cover.

had already been negative. Moreover, reinsurers, too, were affected by low capital investment income. However, they were less badly hit than the life insurers, as the equity portfolios of reinsurance companies are more geographically diversified (in accordance with the international orientation of their business) and because reinsurers generally hold smaller equity portfolios than life insurers. Regardless of a possible improvement in the situation on the capital market, the aim must be to return the actual insurance business to profitability.

Some stabilisation of market indicators

The underlying trend shown by the market indicators for the largest German insurance companies is similar to that for the banking industry (see chart on page 48 and adjacent table). After hitting lows in the late spring of 2003, equity prices have meanwhile stabilised at a low level. Nonetheless, insurers have up to now hardly shared in the current recovery in the DAX index, which suggests a "wait and see" approach on the part of the market participants. By contrast, credit default swap premiums, which are a measure of the default risk in the markets' expectations, have since early September fallen back to their far lower level of the summer of 2002 following a period of divergent developments. Moreover, in view of various capitalisation measures, the major international agencies' ratings for key insurance companies have stabilised, albeit at a lower level. The downgrading trend on the part of these agencies ended for the time being in August 2003.

Changes in ratings of German insurance companies since 1991

Insurance company	S&P Insurer Financial Strength Ratings: Date of change	S&P Rating	Moody's Insurance Financial Strength Ratings: Date of change	Moody's Rating
Allianz	Nov 1998	AAA		
	July 2001	AA+		
	Oct 2002	AA		
	Mar 2003	AA–		
Munich Re	Jan 1991	AAA	Aug 1998	Aaa
	Dec 2002	AA+	Sep 2002	Aa1
	Mar 2003	AA–	Apr 2003	Aa3
	Aug 2003	A+		
Hannover Re	Feb 1993	AA+	Oct 1998	Aa2
	Dec 2001	AA	Jan 2001	Aa3
	Apr 2003	AA–	Nov 2001	A2
			Mar 2003	Baa1

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Financial infrastructure

Compliance with internationally agreed core principles and recommendations

Payment and securities settlement systems are key components of a financial market infrastructure. International standards such as the Core Principles for Systemically Important Payment Systems[22] and the Recommendations for Securities Settlement Systems[23] have been agreed in order to strengthen this infrastructure and maintain the stability of the financial system as a whole. As part of its assessment of the German financial sector's stability car-

22 Report by the Committee on Payment and Settlement Systems (CPSS) entitled "Core Principles for Systemically Important Payment Systems", Bank for International Settlements, Basel, January 2001.
23 Report by the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) entitled "Recommendations for Securities Settlement Systems", Bank for International Settlements, Basel, November 2001.

ried out in the spring of 2003, the IMF also reviewed the German systems' compliance with these standards. With regard to the systemically important payment system RTGS^{plus}, which is operated by the Bundesbank, the IMF concluded that all the applicable core principles are being complied with in full and that the Bundesbank fulfils the requirements concerning the transparency of its payment systems policy. The assessment of the securities settlement system operated by the German central securities depository Clearstream Banking AG Frankfurt (Clearstream) was likewise positive, except in one respect.

Changes in the monetary clearing of securities trades

The IMF's only reservation concerned the unwinding risk. The Bundesbank, together with Clearstream and market participants, has for some time been working on eliminating this risk. The first stage of a new settlement model was introduced on 14 November 2003. The unwinding risk, which until now could result from liquidity problems on the part of a participant, has been totally eliminated in night-time processing as the purchasers of securities must provide upfront liquidity (ie credit balances or collateralised credit lines) in their Bundesbank accounts for the transactions to be settled. In a further step, this procedure will be extended to day-time processing in future. The securities settlement system will then be in full compliance with the international Recommendations for Securities Settlement Systems and, therefore, with the IMF's requirements.

Crisis management for payment and clearing systems

The Bundesbank also fulfils its statutory mandate to contribute to the stability of the payment and clearing systems by helping to ensure that appropriate crisis management arrangements are in place. To this end a communication infrastructure for serious crisis and contingency scenarios in individual payment transactions has been created for Germany as a financial centre in consultation with the central associations of the German banking industry represented in the Central Credit Committee and key market participants. In an emergency, information about the current situation can be exchanged quickly and above all precisely via this network and further action can be coordinated. For the sake of efficiency, only the financial system's leading players in payment transactions are involved in the communication network. A default on their part would – measured in terms of the volume or value of the transactions settled in the large-value payment system – represent a systemic risk.

Continuous Linked Settlement (CLS)

In September 2002, the private sector global foreign exchange settlement system Continuous Linked Settlement (CLS) commenced operation. Several German banks are participating directly in CLS as so-called settlement members. In CLS, both legs of a foreign exchange transaction are settled on a payment versus payment basis. CLS largely eliminates the settlement risk which, in the event of asynchronous settlement, often persists for several business days, may be quite extensive and constitutes a major potential risk to the stability of the financial system. However, participation in CLS brings other risks to the fore. Thus the CLS settlement process places greater demands on banks' liquidity management as – sometimes very high-value – funding payments have to be made within a limited time frame and by predetermined deadlines. This challenge does not appear to be causing the banks any problems so far, which is attributable not least to the fact that instruments are available to reduce their time-critical liquidity requirement on the settlement day. The operational complexity and interdependencies of CLS play a major role, as any failure on the part of a component or player in the CLS system can have serious repercussions. Since the introduction of CLS, appropriate security precautions and interaction between all of the participants involved have prevented disruptions in the CLS environment from having far-reaching consequences. All the central banks (including the Bundesbank) whose currencies are eligible to be settled in CLS will continue to closely monitor the liquidity and operational risks in the context of the cooperative oversight of the CLS system and will also keep a close eye on the remaining settlement risks in the market as well as their management.