Recent developments in the international financial system

The international financial system has witnessed far-reaching changes over the past few years. This has been mainly characterised by a securitisation boom in the industrialised countries and a rapid expansion of traditional bank lending business in the emerging market economies (EMEs). As a result, the global financial system has recorded significantly faster growth than the world economy; at the same time, financial globalisation has accelerated. This article outlines these developments and discusses their impact on the functioning and performance of the financial system. It comes to the conclusion that the increasing division of labour in the financial markets and their greater global integration should, in principle, be viewed as positives, but do not *per se* guarantee economic progress. This has been underscored by the recent turmoil on the international financial markets. For the efficiency gains that the financial system has achieved over the past few years to be permanently translated into positive real economic effects, market discipline needs to be enhanced and disincentives corrected; moreover, the institutional foundations of the financial sector have to be strengthened and the regulatory framework reviewed and, where necessary, adapted.

Overview

Far-reaching changes in the global financial system characterised by ...

The structure of financial markets and their functioning have changed fundamentally in recent years. The range of traditional banking services and financial products has been complemented by innovative and in some cases complex financing and risk transfer techniques. As a result, the differences between bank-based and more capital market-based financial systems have increasingly moved backstage. These developments were made possible by the liberalisation and deregulation of the financial markets and boosted by the progress made in data transmission and processing. However, they also reflect an intensified search for profitable portfolio diversification in a global environment which has, for years, been characterised not only by a high degree of macroeconomic stability but also by abundant liquidity and low interest rates.

... increasing prevalence of capital market-oriented business models in the industrialised countries ...

In the industrialised countries, the growth and integration of the financial markets have been characterised, in particular, by the increasing prevalence of capital market-oriented business models. Securitisation has enhanced the productivity of financial intermediation and therefore the availability of credit. However, recently weaknesses have emerged in connection with the greater market dependence of financial intermediation, resulting in considerable tensions within the financial system and pushing individual institutions to the brink of collapse.

... and strong expansion of traditional bank lending in EMEs

By contrast, the development of financial systems in emerging market economies has been driven largely by a marked increase in traditional bank lending business, which in some regions is based on the growing presence of foreign banks. Strong credit growth frequently entails a risk to macroeconomic stability. In some emerging market economies and commodity-exporting countries, the accumulation of large foreign exchange reserves and other foreign assets means that central banks and sovereign wealth funds play an important role in the financial globalisation process.

Dynamic growth and increasing global integration of financial markets

Rapid growth of the global financial system ...

The financial markets have recorded rapid growth over the past few years. According to the International Monetary Fund (IMF), outstanding financial assets worldwide (bank assets, debt securities and equities) totalled US$194 trillion at the end of 2006, compared with US$106 trillion four years earlier.[1] Data on equities and debt securities that are already available for the end of 2007 indicate that the US$200 trillion mark has been exceeded. In addition, the share of global financial assets in global GDP has risen by more than 75 percentage points since 2002 and topped 400% at the end of 2006. The global financial system has therefore grown considerably faster than the world economy.

... reflects mainly increased division of labour in the financial sector ...

This dynamic development has been interpreted by some observers as an indication that the financial sector has, to a certain degree, delinked from the real economy. How-

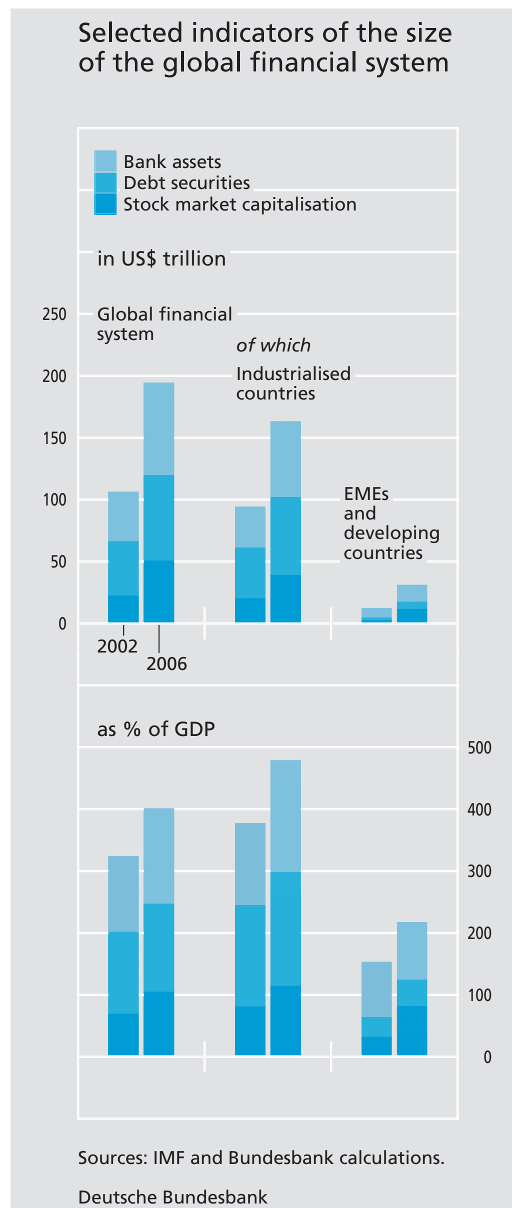
1 See IMF, Global Financial Stability Report, various issues, Washington, DC.

ever, it has to be borne in mind that growth of the financial markets in industrialised countries mainly reflects an increased division of labour within the financial system; in the emerging market economies, it is also a result of improved access by households and companies to financial services.[2] Globally, commercial banks' assets almost doubled to around US$75 trillion between 2002 and 2006. The fact that global stock market capitalisation doubled to more than US$50 trillion over the same period can be attributed in part to surging share prices. Overall, the financial markets in the emerging market economies experienced particularly dynamic growth – albeit from a low base. However, the industrialised countries still dominate the international financial system, where they account for more than four-fifths of global financial assets.

... accompanied by increasing global integration of national financial markets

Growth of the global financial markets has been accompanied and amplified by the increasing worldwide integration of the national financial systems. Data available for the period up to the end of 2004 show that the total outstanding cross-border assets and liabilities of 145 countries amounted to some 280% of global GDP, compared with approximately 130% ten years earlier.[3] Meanwhile, the ratio of aggregate global exports and imports to world GDP rose from just under 40% to 54%. Financial globalisation has therefore significantly outpaced real economic integration over the past few years.

This trend is likely to have continued in the recent past. This is suggested by the development of cross-border portfolio and direct in-



Sources: IMF and Bundesbank calculations.

Deutsche Bundesbank

2 Of the emerging market economies and the developing countries, the former are of particular interest in terms of the development of the international financial system given their growing significance for the global economy. However, data on this group of countries are sketchy, and the two groups are frequently treated as one for statistical purposes. This article uses the International Monetary Fund's classification of industrialised countries on the one hand and emerging market economies and developing countries on the other.
3 See P R Lane and G M Milesi-Ferretti (2006), The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970-2004, IMF Working Paper 06/69, Washington, DC.

Financial globalisation particularly pronounced in industrialised countries

vestment, for which data are available up to end-2006. However, it also becomes apparent that, by this measure, the industrialised countries have displayed far greater financial openness than emerging market economies, particularly in recent years. Consequently, the ongoing integration of the national financial systems has – like the growth of the global financial system – largely emanated from the industrialised countries. According to an IMF survey (Coordinated Portfolio Investment Survey), the industrialised countries accounted for around two-thirds of cross-border portfolio investment holdings at the end of 2006. Euro-area countries represented 39.2% of global cross-border portfolio investment in 2006, up from 37.5% in 2001. Here, the exchange of assets and liabilities within the euro area played a large and growing role.[4]

Drivers of financial globalisation

Financial integration promoted by liberalisation and deregulation, ...

The surge in cross-border financial transactions was made possible by the liberalisation and deregulation of national financial systems which many countries have pursued forcefully over the past decades. However, it is difficult to gauge capital account liberalisation, as the associated measures are qualitative in nature and difficult to compare, being heterogeneous phenomena. Since the mid-1990s, the Chinn-Ito index, which is frequently referred to in the debate on the liberalisation of cross-border financial transactions, has risen significantly in the industrialised countries, signalling that financial transactions are now subject to virtually no restrictions there.[5] This trend reflects, not least, the liberalisation and integration of Europe's financial markets.[6] Within the emerging market economies, by contrast, progress on the liberalisation of cross-border capital flows has been fairly sluggish. Though these countries had eliminated many hurdles by the mid-1990s, overall progress on capital account liberalisation has since been comparatively slow as measured by the Chinn-Ito index. The fact that the financial and currency crises that affected many emerging market economies in the 1990s were partly attributed to the preceding, in some cases overhasty, capital account liberalisation was doubtless a contributory factor. This group of countries consequently even saw a temporary reversal of the liberalisation trend in the mid-1990s.

... progress in data transmission and processing as well as ...

The dynamic financial globalisation process would be inconceivable without the progress made in data transmission and processing. The IT revolution has not only simplified the efficient and cost-effective settlement of major financial transactions across national borders, it has also facilitated the rapid practical application of state-of-the-art research findings in the theory of finance. This development has led to the range of conventional

4 On the process of European financial market integration, see European Central Bank, Financial Integration in Europe, April 2008, Frankfurt am Main.
5 Besides the index developed by Chinn and Ito, the literature also includes other approaches to measuring capital account liberalisation. However, the results are virtually identical in terms of the trends in industrialised countries and emerging market economies. See M D Chinn and H Ito (2008), A New Measure of Financial Openness, Journal of Comparative Policy Analysis, forthcoming.
6 Germany has played a pioneering role in capital account liberalisation; it has, for almost 50 years now, had no restrictions in place on the main areas of international capital transactions. See Deutsche Bundesbank, Freedom of Germany's capital transactions with foreign countries, Monthly Report, July 1985, pp 13-23.

banking services and financial products being expanded to include innovative and in some cases complex financing and risk transfer techniques.

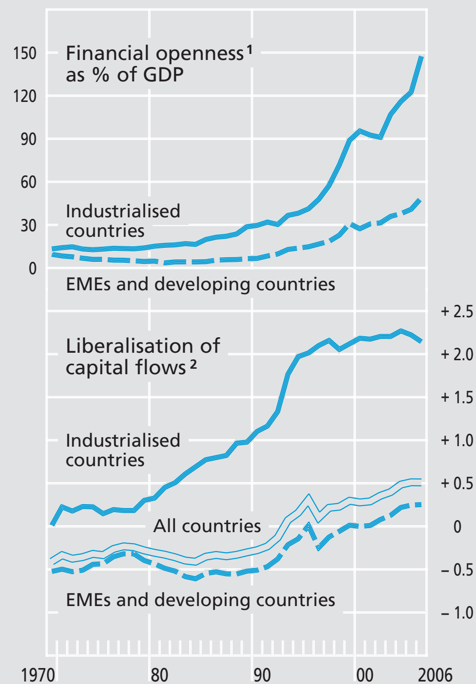
... portfolio diversification in an environment of strong economic growth and abundant liquidity

Financial globalisation is evident mainly in increased cross-border portfolio diversification and borrowing. This process has been promoted by dynamic global economic growth, especially in recent years, coupled with low inflation. It was also driven by abundant global liquidity, which resulted in low capital market rates and therefore intensified the search for yield. However, this environment also nurtured tendencies towards excessively low risk premiums, the neglect of liquidity risk and the pursuit of aggressive business practices in the face of shrinking margins.

Financial integration favours reduction in home bias

Financial globalisation implies that investors will increasingly include foreign assets in their portfolios. As a consequence, one would expect a decline in home bias – investors' traditionally observed preference for domestic financial assets. There is indeed some supporting evidence for this supposition. In the industrialised countries, for example, the domestic share of total equity holdings has fallen significantly since the mid-1990s.[7] This fall in home bias was far more pronounced in the member states of the euro area than in the United States and Japan, which suggests that, besides information and transaction costs, exchange rate risk – which has been eliminated within the euro area – plays an important role in investment in foreign securities.[8]

Financial openness and liberalisation of capital flows



1 Sum of assets and liabilities relating to foreign direct investment and portfolio investment, stocks. Source: IMF. — **2** The index is based on IMF data on exchange rate restrictions and takes into account the existence of multiple exchange rates, restrictions on current account and capital account transactions as well as requirements on the surrender of export proceeds. The higher the index value, the higher the openness to cross-border capital transactions. By definition the series for all countries has a mean of zero. Source: M D Chinn and H Ito (2008), A New Measure of Financial Openness, Journal of Comparative Policy Analysis (forthcoming) and Bundesbank calculations.

Deutsche Bundesbank

New products for retail investors to tap into foreign financial markets

However, there is also evidence to suggest that, unlike among institutional investors, home bias is still comparatively entrenched

7 It should be noted that purchases of shares in multinational companies also counteract home bias. On the other hand, institutional investors are, like pension funds for example, generally subject to particular investment guidelines which often set a specific upper limit on exposures to foreign securities.
8 See also M Fidora, M Fratzscher and C Thimann (2007), Home Bias in Global Bond and Equity Markets: The Role of Real Exchange Rate Volatility, Journal of International Money and Finance, 26(4), pp 631-655.

Home bias in selected countries/ currency areas

Share of domestic equities in total equity holdings (%) 1

Country/currency area	1995	1999	2003	2006
USA	87.8	86.7	82.3	73.9
Japan	95.4	92.2	89.1	86.0
Euro area	–	68.7	39.2	34.9
of which Germany	77.7	69.8	45.8	45.2

Sources: BIS, ECB, IMF, Thomson Financial Datastream and Bundesbank calculations. — **1** Adjusted for differences in the share of the respective equity market in global stock market capitalisation; see also R De Santis and B Gérard (2006), Financial Integration, International Portfolio Choice and the European Monetary Union, ECB Working Paper No 626.

Deutsche Bundesbank

among retail investors.[9] This is presumably linked to the fact that the above-mentioned risk and cost factors have a greater bearing on households' investment decisions. In addition, retail investors might prefer to invest in domestic companies as they think they can better assess, and therefore manage, the associated risks than they could in the case of foreign firms (illusion of control). Increasingly, retail investors are being offered new financial products such as investment certificates (*Zertifikate*) that allow an indirect exposure to foreign capital markets (see box on page 21). However, for some retail investors, valuing such products, some of which are complex, might be too demanding at times. To some extent these products may be seen as epitomising some of the characteristics and problems that typify the development of the financial markets in industrialised countries.

Innovations in the financial systems of the industrialised countries

Financial systems of the industrialised countries characterised by increased transfer of credit and credit risks

In recent years, the development of the financial systems in the industrialised countries has been characterised in particular by the increasing availability of products and techniques allowing trade in illiquid assets and/or specific risks. As a general rule, the transfer of credit and credit risks can help broaden markets and thus render them "more complete", potentially boosting the productivity of financial intermediation. Three effects are at work here. First, separating credit risk from the underlying credit relationship makes it easier to diversify credit portfolios. Second, the transfer of credit risks can help spread risks more widely within the financial system and also allow them to be better tailored to the investors' specific preferences. Third, the transfer of credit risks allows financial investors to pursue pure trading strategies, which enhances price discovery on the risk transfer markets. However, the transfer of credit risks does not *per se* guarantee optimal risk allocation. The danger of suboptimal allocation is most likely to occur if the credit risk transfer is accompanied by reduced incentives to assess and monitor credit quality and by inadequate risk management.

9 Studies show that a pronounced home bias results in suboptimal risk/return profiles in retail investors' portfolios. See also R von Nitzsch and O Stotz (2006), Zu welchen Renditeeinbussen führt der Home Bias?, Finanz Betrieb, Vol 8, pp 106-113.

Investment certificates as an instrument of international portfolio diversification for retail investors

Especially German retail investors have increasingly been using investment certificates (*Zertifikate*) in addition to long established mutual fund shares to tap into foreign markets for securities investments. Having recorded annual growth rates of around 40% in recent years, the German market for investment certificates reached an estimated volume of €135 billion at the end of 2007, according to data provided by the German Derivatives Association (*Deutscher Derivate Verband*). By comparison, these financial instruments are less important in the Anglo-Saxon countries.

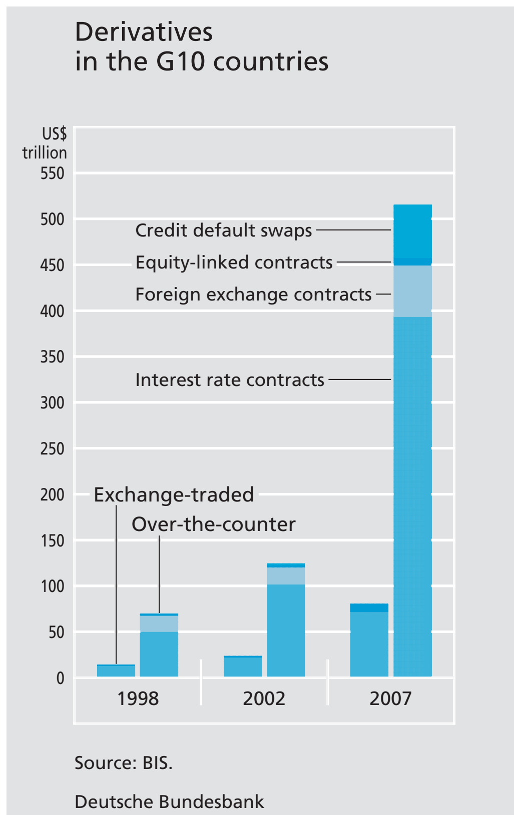
While mutual fund shares confer co-ownership of separate assets, investment certificates are derivatives. They represent a securitised claim against the issuer and their price is based on the performance of specified assets. They confer no ownership rights in these assets. Issuers tend to use derivatives to hedge the risks they incur in issuing investment certificates.

The broad range of investment certificates now on offer caters to retail investors' different investment preferences. This could be a preference for certain regions or industries, but also particular investment strategies (eg growth, value) or investment themes (eg climate change, water supply). A prominent role is played by index certificates, which mirror the performance of equity indices. Investment certificates also cover a wide spectrum in terms of investors' risk appetite. For example, the price risks involved in commodity or equity index certificates can be separated from the associated currency risks.

More recently, the investment certificate market has increasingly been criticised for its lack of transparency. This is the result of the rapid growth in product variety witnessed over the past few years, but is also inherent in the investment certificates' structure. It is often difficult for investors to determine what specific costs an investment in a certificate involves. In addition, the transparency of the investment certificate market may be impaired if liquidity in individual certificates is low, entailing the risk of price distortions. However, a number of providers are now taking action to remedy this situation.

Overall, the availability of global (and sometimes exotic) investment vehicles in the shape of investment certificates helps to counter the home bias in retail portfolio investment. Whether this also improves portfolio risk/return profiles depends *inter alia* on the extent to which investors are able to identify potential investment risks when taking investment decisions (eg illiquidity, speculative exaggerations).

Deutsche Bundesbank



Source: BIS.
Deutsche Bundesbank

Strong growth of derivatives ...

The strong expansion of the financial markets in the industrialised countries primarily reflects the intensive use of innovative instruments and techniques for transferring risks. These chiefly constitute derivatives that are either traded in standardised form on exchanges (exchange-traded instruments) or are concluded individually (over-the-counter or OTC instruments). According to the Bank for International Settlements (BIS), the nominal value of outstanding exchange-traded derivatives totalled more than US$80 trillion at the end of 2007, a tenfold increase since 1993. In the G10 countries alone, in which data are regularly collected, the nominal value of outstanding OTC derivatives has risen approximately eightfold since 1998 and stood at US$525 trillion at the end of 2007. Interest rate contracts are by far the most commonly traded product on the derivatives market, followed by foreign exchange contracts and credit derivatives. Credit default swaps (CDS) are the main instrument in the market for credit derivatives in the G10 countries, with a nominal value of US$58 trillion at end-2007, up from less than US$1 trillion in 2001.[10]

... and structured financial products

So-called structured products represent a section of the credit risk transfer market that had, up until recently, witnessed particularly dynamic growth.[11] They are complex financial instruments where claims to cash flows from a pool of assets are divided into tranches with different risk/return profiles. The principal products in this market segment are asset-backed securities (ABSs) and, within this category, collateralised debt obligations (CDOs) in particular. Over the past few years, the importance of synthetic CDOs, where the underlying assets are made up of CDS, has risen significantly. According to the IMF, the value of structured products issued in the United States and Europe totalled US$2.6 trillion in 2007, compared with US$500 billion in 2000. Over the same period, the value of newly issued CDOs rose from US$150 billion to US$1.2 trillion.[12] These products feature prominently in connection with so-called originate-to-distribute business models, which are geared to originating and bundling

10 See Deutsche Bundesbank, Credit default swaps – Functions, importance and information content, Monthly Report, December 2004, pp 43-56.
11 See also Deutsche Bundesbank, Financial Stability Review 2005, pp 34-35 and Deutsche Bundesbank, Credit risk transfer instruments: their use by German banks and aspects of financial stability, Monthly Report, April 2004, pp 27-44.
12 See IMF, Global Financial Stability Report, April 2008, Washington, DC, p 56.

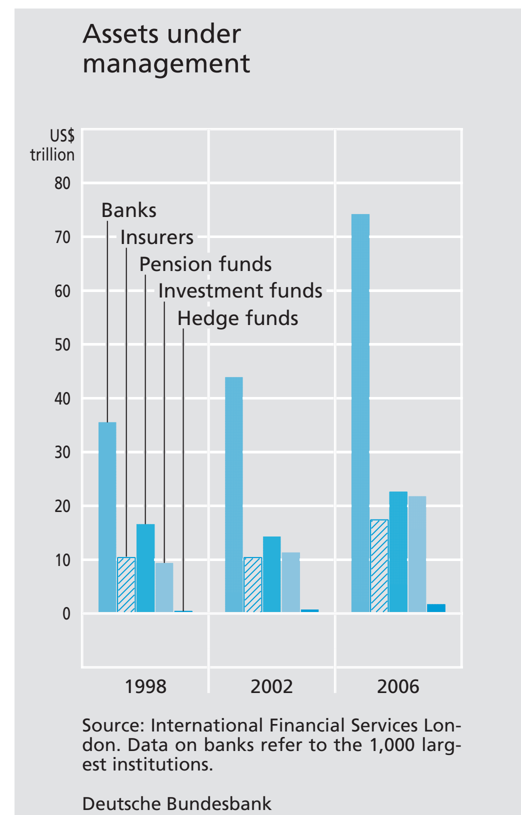
loans and using these credit portfolios to issue asset-backed securities which are subsequently sold on the market. The growing use of such business models has helped ease banks' refinancing restrictions. This in turn has increased the availability of credit for the economy and extended the credit cycle. However, the recent turmoil on the international financial markets has highlighted weaknesses and risks inherent in this development.

Complexity of structured products a challenge for risk management ...

Valuing structured products requires in-depth knowledge and great care on the part of market players. The use of ratings, which are generally used to evaluate the credit default risk of traditional financial products, may prove insufficient for a structured product. A rating reflects a rating agency's view of the credit default risk. However, no account is taken of other relevant risks, notably market and liquidity risk.[13] In addition, the link between lending and credit risk monitoring, which is typical of banks' traditional lending business, disappears with credit pooling and – frequently multistage – securitisation.

... and identification of systemic risks

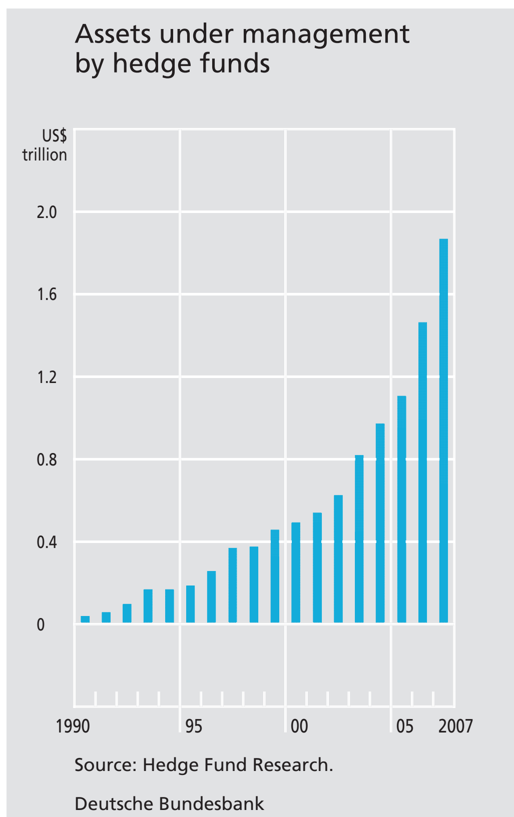
At the same time, structured products make it more difficult to localise risks within the financial system. Key factors in this context are the extension of the intermediation chain and the closer links between markets and market players arising from the securitisation-oriented business model. The recent dislocations on the financial market, which have pushed some individual institutions to the brink of collapse, have demonstrated that a lack of transparency with regard to risk dispersion and concentration within the financial sector can rapidly result in a crisis of confidence of systemic dimensions.



Intensive use of novel financial instruments by large and complex international financial institutions

Innovative financing and credit risk transfer techniques are used particularly intensively by large and complex financial institutions[14] that operate internationally. These financial conglomerates offer a broad range of financial services. In their proprietary trading activities they act both as buyers and sellers of credit risk transfer products. By contrast, traditional lending banks are generally interested in

13 See Deutsche Bundesbank, Financial Stability Review 2007, p 22.
14 The salient features of such large and complex financial institutions are that they have significant on and off-balance sheet risk exposures, offer a broad range of financial products and services at home and abroad, are subject to multiple supervisors and play a prominent role in large-value payment and settlement systems; see also Group of Ten (2001), Report on the Consolidation in the Financial Sector (Ferguson Report).



Assets under management by hedge funds

Source: Hedge Fund Research.

Deutsche Bundesbank

hedging credit risk and are more likely to buy the relevant protection, while insurance companies and hedge funds are generally protection sellers.

Banks' strong position in the financial system unchanged

The fact that the major financial intermediaries have witnessed a largely parallel increase in assets and liabilities indicates that the securitisation boom has hardly changed banks' position within the financial system – regardless of their respective business focus. Over the past few years, their proportion of assets under management has even risen slightly; at the end of 2006 it amounted to 54%, compared with 51% at the end of 1998. The greater focus on the capital markets and the more intense competition in the financial sector therefore impacts banks' balance sheets less through a balance sheet contraction than through a change in the composition of assets, with loans being replaced by securitised claims. At the same time, refinancing via the markets has become more important for credit institutions, and the strong growth of the derivatives markets is partly a reflection of their active management of balance sheet risks.[15]

Growing significance of hedge funds ...

Hedge funds, as a largely unregulated investment vehicle, have attracted particular attention in financial globalisation not least because they pursue trading strategies that differ significantly from those of other market players such as banks, insurers or investment funds.[16] They frequently employ derivatives and large amounts of debt to achieve leverage. Hedge funds consequently typically incur larger risks than other financial market players. In principle, these funds make an important contribution to the smooth functioning of the financial markets by acting as counterparties in risk transfer transactions. In addition, their activities can help increase market liquidity, particularly as hedge funds are also active in specialised and less liquid market segments.[17] The total number of hedge funds rose from some 600 in 1990 to approximately 10,000 in 2007. Over the same period, the total volume of assets under their management increased from just under US$40 billion

15 Some institutions have also invested in securitised products via legally autonomous and therefore off-balance-sheet special purpose vehicles. This can largely be explained by the fact that, unlike Basel II, Basel I does not require additional capital for such exposures.
16 See Deutsche Bundesbank, Hedge funds and their role in the financial markets, Monthly Report, March 1999, pp 29-42.
17 Hedge funds are estimated to represent some four-fifths of trading in distressed debt and half of trade in structured credit risk products. See Deutsche Bundesbank, Financial Stability Review 2007, pp 34-36.

to around US$1.9 trillion. However, this actually understates hedge funds' actual significance for the global financial system; their influence is in fact considerably greater owing to their intensive trading activities, extensive leveraging and their relationships with numerous, often systemically relevant counterparties.[18]

... and private equity funds

Private equity funds are another new player on the international financial markets. These funds allow enterprises to raise equity privately, ie not on a stock exchange. Some of these funds acquire enterprises with the aim of restructuring them and then selling them on as a whole or in parts.[19] According to market data, the volume of investment by private equity funds rose from US$70 billion in 1998 to US$364 billion in 2006.[20] Leveraged buyouts, which have predominated in recent years, are largely debt-financed. The finance is generally provided by banks or other intermediaries who in turn securitise these credits and pass them on to other market players. This investor group is therefore closely integrated with other financial market players. Private equity funds' activities consequently also reflect the increased division of labour within the financial system of industrialised countries.

Special features of financial market development in emerging market economies

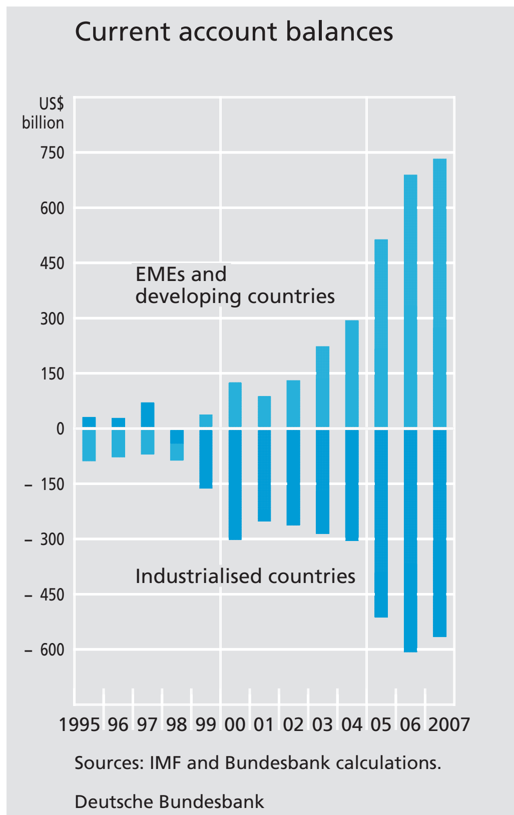
In the emerging market economies, the development of the financial markets and their integration into the international financial system has been less closely associated with a move towards a capital market-oriented system. Rather, the development of the domestic financial systems has been driven by a strong expansion in traditional bank lending business, which is often based on the growing presence of foreign banks. Between 2002 and 2006, the total volume of outstanding bank assets in the emerging market economies almost doubled to US$13.2 trillion. The financial system in these countries is therefore still dominated by commercial banks, although several regions have seen rapid growth of their local bond markets.[21]

Differences between industrialised countries and EMEs

EMEs on balance net capital exporters ...

The liberalisation and deregulation of the financial systems has been accompanied by strong growth in gross capital flows in recent years. The substantial capital flow from industrialised countries to emerging market economies, particularly in the form of foreign direct investment, conforms to the expectation that, given greater financial openness and an adequate institutional framework, capital will increasingly flow into emerging markets. Owing to their comparatively low capital endowment, emerging market economies offer a higher return on investment than developed economies. However, in recent years financial globalisation has, on balance, been

18 See A Weber (2007), Hedge funds: a central bank perspective, in Banque de France, Financial Stability Review: Special Issue on Hedge Funds, April 2007, pp 161-168.
19 See Deutsche Bundesbank, Leveraged buyouts: the role of financial intermediaries and aspects of financial stability, Monthly Report, April 2007, pp 15-27.
20 See International Financial Services London, Private Equity 2007.
21 See Deutsche Bundesbank, Bond markets in emerging market economies, Financial Stability Review 2007, pp 113-131.



accompanied by considerable net capital outflows from emerging market economies.

... except central, east and south-east European economies

With regard to net capital flows, the new EU member states as well as the group of candidates for EU membership are an important exception. They have recorded mostly high and in some cases rising current account deficits since the beginning of the decade.[22] Current account deficits are fairly typical during an economic catching-up process, although the associated risks should not be neglected. In particular, such deficits are problematic if they are caused by, say, higher consumption rather than growth-enhancing investment.

Export-based growth strategies and high commodity prices have improved current account balances

In other emerging market economies, by contrast, an export-based growth strategy – partly as a consequence of the financial and currency crises of the 1990s – and persistently rising commodity prices during recent years have led to improved current account balances or even surpluses. As monetary policy in many of these countries has been focused on stabilising exchange rates, financial globalisation has, in the last few years, been characterised in part by the accumulation of large foreign exchange reserves. At the end of 2007, emerging market economies (including developing countries) held reserves amounting to almost US$5 trillion, equivalent to more than three-quarters of global foreign exchange reserves.

Reduction in traditional risks associated with financial globalisation ...

In many emerging market economies, the recent period of financial globalisation has therefore been characterised by lower vulnerability to traditional external risks such as a sudden stop or reversal of capital flows. This is indicated both by the rapid growth in foreign exchange reserves and increasing foreign direct investment. By contrast, considerations of risk diversification and the exploitation of yield differences by private investors and financial intermediaries, which featured prominently in the development of the financial systems of the industrialised countries, appear to have played a more limited role to date.[23]

22 Studies indicate that the integration of the European financial markets has promoted net borrowing abroad. On this issue, see also S Herrmann and A Winkler, Financial markets and the current account – emerging Europe versus emerging Asia, Deutsche Bundesbank Research Centre, Discussion Paper, Series 1, No 05/2008.
23 See also M A Kose, E S Prasad and M E Terrones (2007), How Does Financial Globalization Affect Risk Sharing? Patterns and Channels, IMF Working Paper 07/238, Washington, DC.

Credit growth in selected emerging market economies

Nominal percentage growth of credit to the private sector, year-on-year change or average annual rate of growth

Country	2001	2002	2003	2004	2005	2006	2007	2001 to 2003	2004 to 2007
Russia	52.0	30.0	44.8	48.2	35.3	48.4	51.0	41.9	45.6
Turkey	24.6	38.0	30.0	46.0	41.5	44.0	26.4	30.8	39.2
Argentina	– 17.7	– 12.8	– 15.5	15.4	31.7	36.1	37.0	– 15.4	29.7
India	9.3	21.5	9.7	30.6	26.2	27.5	22.1	13.3	26.6
Brazil	2.2	15.7	7.8	14.9	19.3	25.7	37.5	8.4	24.0
Indonesia	10.6	17.9	21.1	33.0	24.8	12.5	24.7	16.4	23.5
Czech Republic	– 11.0	– 21.4	8.6	13.3	21.4	21.9	28.5	– 8.8	21.2
South Africa	22.2	– 12.4	18.1	14.6	17.0	25.4	22.0	8.1	19.7
Poland	7.5	4.3	6.7	9.9	9.3	24.0	31.5	6.2	18.3
Hungary	18.3	19.2	33.4	18.7	18.9	16.7	18.8	23.4	18.3
China	9.4	17.2	20.8	11.2	9.2	14.3	19.3	15.7	13.4

Sources: IMF and Bundesbank calculations.

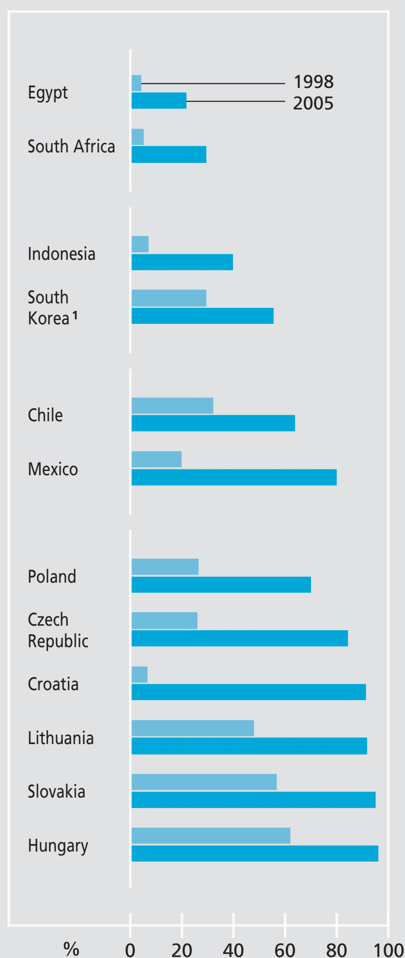
Deutsche Bundesbank

... accompanied by rapid credit growth in domestic financial systems ...

On the other hand, the development of financial systems in the emerging market economies in recent years has been characterised by strong credit growth. Though there are considerable differences between individual countries, credit to the private sector has increased at annual rates of, at times, more than 20% in virtually all major emerging market economies. Central banks have not always been able to sterilise the strong increase in foreign currency reserves effectively. In addition, interest rates in the emerging market economies have remained comparatively low in many cases – partly to deter capital inflows. As a consequence, banks' refinancing and therefore their lending opportunities have increased noticeably both from a volume and a cost perspective.

... based largely on the traditional buy-and-hold approach in the retail and household credit business ...

Unlike the industrialised countries, where credit growth has been boosted mainly by securitisation and structured products, the strong credit growth in the emerging market economies can largely be attributed to conventional bank lending (buy-and-hold approach). In Latin America as well as central and eastern Europe, growth has been particularly pronounced in the retail and household credit business, with the percentage of foreign currency loans high in some cases – partly aided by fixed exchange rate regimes. This trend represents a major challenge for banks' credit risk management given that, in several emerging market economies, the credit boom is increasingly being accompanied by macroeconomic distortions. These include high and rising inflation as well as – particularly in central and eastern Europe –



Sources: World Bank and Bundesbank calculations. — 1 Data for 2001 und 2005.

Deutsche Bundesbank

high current account deficits, though these are frequently financed to a considerable degree by direct investment.

... and in several regions based on the increasing presence of foreign banks

At the same time, the institutional framework of the financial systems in emerging market economies has changed. This can be seen in a noticeable increase in the presence and importance of foreign banks. However, there are considerable regional and country-specific differences. In Asia and the Middle East, the role of foreign banks is comparatively small. By contrast, their importance in Latin America and central and eastern Europe has risen considerably in recent years. In many countries – particularly in eastern Europe – foreign banks now account for well over 50% and in some cases even close to 100% of total bank assets. This is likely to have enhanced the competitiveness and stability of the banking systems in general through the transfer of capital, technology and modern business and management methods. On the other hand, this process has created new channels of contagion and risks. For example, stronger competition for market share contributed to the high credit growth. In addition, the – in some cases large – weight of individual foreign banks in host countries means that possible problems experienced by the foreign-based parent bank might have a significant knock-on effect on the financial sector of the host countries.

Growing importance of central banks and sovereign wealth funds in the financial globalisation process

In some important emerging market economies and commodity-exporting countries, the accumulation of large foreign exchange reserves and other foreign assets mean that central banks and sovereign wealth funds (SWFs) play an important role in these countries' international financial integration process. SWFs are state-controlled entities that invest public financial assets separately from the traditional management of foreign currency reserves by the monetary authorities.[24] Unlike government pension funds, SWFs invest most of their resources abroad. In add-

24 See Deutsche Bundesbank, Annual Report 2007, pp 74-75.

ition, they are – unlike hedge funds and private equity funds – considered to be conservative investors with a long-term investment horizon that largely abstain from raising debt to achieve a leverage effect. According to IMF estimates, SWFs have between US$1.9 trillion and US$2.9 trillion in assets under management;[25] some recent market estimates even give figures of up to US$3.5 trillion or more. SWFs are therefore roughly as large as hedge funds and private equity funds combined. While their holdings are still relatively small compared with the over US$50 trillion worth of assets under management by institutional investors worldwide, the importance of sovereign wealth funds is likely to increase significantly going forward, with the IMF expecting their assets to increase to US$12 trillion by 2012. Overall, public entities' direct and indirect control of parts of global financial wealth is therefore likely to increase further, particularly as large, internationally operating enterprises with substantial financial resources are also subject to state influence in many countries.

Debate on the role of SWFs

In this context, concern has been expressed that the motives underlying sovereign wealth funds' investment abroad could be political rather than economic. To date, there is virtually no evidence to support such concerns, however. Individual SWFs have actually had a stabilising effect since August 2007, as they have provided ailing financial institutions in industrialised countries with capital.[26] Some of the reservations about SWFs are probably based on the fact that – with a few exceptions – little is known about their structure and mandate or their targets and investment strategies. This favours protectionist sentiment to ward off unwanted investment by SWFs in the recipient countries. Ultimately, such financial protectionism could jeopardise the progress made in liberalising capital flows in recent decades.

Conclusions

Growth and integration of financial markets per se no guarantee of economic progress ...

Overall, the growth of the global financial system, the concomitant greater width and depth of the markets and their global integration should be regarded as positives. Economic growth should benefit from an opening of the financial markets as a result of greater competition and better global capital and risk allocation. However, empirical studies on the link between financial openness and economic growth show that the expected positive effects of financial market integration depend on a number of factors. Besides the degree of maturity of the domestic financial sector, these include, first and foremost, the stability of the macroeconomic environment and the quality and effectiveness of domestic institutions.[27]

... but efficient financial system essential for smooth functioning of the economy

The importance of the central functions of the financial system, such as allocation of capital and risks and settlement of payments and securities transactions, for the real economy is demonstrated vividly whenever disruptions occur. This is evident, for example, in

25 See IMF, Global Financial Stability Report, October 2007, Washington, DC, p 45.
26 See IMF, World Economic Outlook, April 2008, Washington, DC, p 26.
27 See also M A Kose, E S Prasad, S-J Wei and K Rogoff (2006), Financial Globalization: A Reappraisal, IMF Working Paper 06/189, Washington, DC.

the severe impact that past financial and currency crises have repeatedly had on the real economy. The recent tensions on the international financial markets have highlighted this once more. The smooth functioning of a market economy relies on an efficient and stable financial system, particularly in an increasingly integrated global economy.

Recent financial market turmoil revealed weaknesses in the financial system ...

While it is probably too early to draw final lessons from the current turmoil on the international financial markets, recent events have demonstrated that the risk of contagion rises with greater integration and interdependence, that problems can spill across borders rapidly and in an unpredictable manner and may quickly lead to systemic instability. The economic advantages of being able to transfer credit and credit risks can only be realised if they are accompanied by sufficient incentives to assess and monitor credit quality and by adequate risk management. This is true whether a transfer is conducted in national or international markets.

... and requires stronger market discipline and correction of disincentives

The measures and recommendations agreed on by central banks, supervisors and ministries of finance in the Forum for Financial Stability in response to the recent financial market turmoil are therefore necessary and appropriate.[28] In particular, the aim is to improve risk management, increase the transparency of institutions and products and strengthen the quality and role of ratings. However, these measures must be further developed and specified by the market players themselves. A number of initiatives have already been launched with this in mind.[29] The envisaged measures must now be implemented rapidly and in full.

Macroeconomic stability a key prerequisite for functioning financial markets

Macroeconomic stability remains an important prerequisite for the smooth functioning of the financial markets. Against the backdrop of rising inflation rates worldwide, monetary policy makers around the world, in particular, will have to take action. A lot of emerging market economies must also contain the macroeconomic risks associated with high credit growth as well as further expanding and strengthening the financial system's institutional foundations. Moreover, a case can be made that, in an increasingly interdependent global financial system, flexible exchange rates will have a larger role to play as an adjustment instrument for external imbalances.

Free capital flows promote ongoing global economic growth

The free flow of capital across national borders contributes to its most productive use. Thus, global economic growth can benefit from the dynamic development of the global financial system and, in particular, from improved capital and risk allocation. Moreover, it is important that sovereign entities' control over increasing parts of global financial wealth be exercised transparently and according to economic considerations. This will help to avoid financial protectionism, which could jeopardise the advantages of free cross-border capital flows.

28 See Financial Stability Forum, Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience, April 2008.
29 On this issue, see for instance Institute of International Finance, Final Report of the IIF Committee on Market Best Practices: Principles of Conduct and Best Practice Recommendations, Financial Services Industry Response to the Market Turmoil of 2007-2008, July 2008.