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The following symbols have been used throughout this volume:

. . . to indicate that data are not available;

— to indicate that the figure is zero or less than half the final digit shown, or that the item does not exist;

– between years or months (for example, 1997–99 or January–June) to indicate the years or months covered, including the beginning and ending years or months;

/ between years (for example, 1998/99) to indicate a fiscal or financial year.

"Billion" means a thousand million; "trillion" means a thousand billion.

"Basis points" refer to hundredths of 1 percentage point (for example, 25 basis points are equivalent to ¼ of 1 percentage point).

"n.a." means not applicable.

Minor discrepancies between constituent figures and totals are due to rounding.

As used in this volume the term "country" does not in all cases refer to a territorial entity that is a state as understood by international law and practice. As used here, the term also covers some territorial entities that are not states but for which statistical data are maintained on a separate and independent basis.

PREFACE

The *Global Financial Stability Report* (GFSR) assesses global financial market developments with the view to identifying potential systemic weaknesses. By calling attention to potential fault lines in the global financial system, the report seeks to play a role in preventing crises, thereby contributing to global financial stability and to sustained economic growth of the IMF's member countries.

The report was prepared by the International Capital Markets Department (ICM), under the direction of the Counsellor and Director, Gerd Häusler. It is managed by an Editorial Committee comprising Hung Q. Tran (Chairman), W. Todd Groome, Jorge Roldos, and David J. Ordoobadi, and benefits from comments and suggestions from Axel Bertuch-Samuels. Other ICM staff contributing to this issue include Renzo Avesani, Geoffrey Bannister, Nicolas Blancher, Elie Canetti, Jorge Chan-Lau, Peter Dattels, Michael Gapen, Toni Gravelle, François Haas, Anna Ilyina, William Lee, Pipat Luengnaruemitchai, Chris Morris, Shinobu Nakagawa, Li Lian Ong, Hiroko Oura, Lars Pedersen, Rupert Thorne, Laura Valderrama, Christopher Walker, Mark Walsh, and Luisa Zanforlin. Other contributors included a staff team of the Monetary and Financial Systems Department (MFD) that included Robert Corker, S. Kal Wajid, Daniel Hardy, Alexander Tieman, Kalin Tintchev, and a number of other contributors on individual countries. Martin Edmonds, Ivan Guerra, Silvia Iorgova, Herman Kamil, Oksana Khadarina, Yoon Sook Kim, Ned Rumpeltin, and Peter Tran provided analytical support. Caroline Bagworth, Norma Cayo, Rosemarie Edwards, Vera Jasenovec, Elsa Portaro, and Ramanjeet Singh provided expert word processing assistance. Archana Kumar of the External Relations Department edited the manuscript and coordinated production of the publication.

This particular issue draws, in part, on a series of informal discussions with commercial and investment banks, securities firms, asset management companies, hedge funds, insurance companies, pension funds, stock and futures exchanges, and credit rating agencies, as well as regulatory authorities and academic researchers in many major financial centers and countries. The report reflects information available up to February 16, 2005.

The report has benefited from comments and suggestions from staff in other IMF departments, as well as from Executive Directors following their discussions of the *Global Financial Stability Report* on March 18, 2005. However, the analysis and policy considerations are those of the contributing staff and should not be attributed to the Executive Directors, their national authorities, or the IMF.

CHAPTER I OVERVIEW

Assessment of Global Financial Stability

The resilience of the global financial system has further improved in the past six months, largely because of solid global economic growth, buoyant financial markets, and continued improvement in the balance sheets of the corporate, financial, and household sectors in many countries. The ongoing improvement in the economic fundamentals of many emerging market countries—including efforts to enhance the credibility of their policy framework and the quality of their debt structure—has led to a string of upgrades of sovereign credit ratings, contributing to the benign financial market conditions. (See Chapter II for a detailed analysis of these and other market developments.)

In particular, the overall excellent profitability of the corporate and financial sectors over the past few years has been an important factor in strengthening their balance sheets. The ratio of liquid assets to debt in their balance sheets has risen and stayed at a relatively high level for some time now. So far, the preference for liquidity reflects the caution exercised by corporate executives in making investments—also mergers and acquisitions have picked up only quite recently. This cautious approach has contributed to the slow growth in employment in many countries. By the same token, it has helped to contain the risk of creating investment excesses that in the past have helped trigger sharp market corrections.

At the same time, financial institutions have improved their profitability and strengthened their capital base as well as their risk management systems. In particular, the insurance sector in many countries has improved its solvency ratio. These developments have made financial institutions better prepared to cope with potential future shocks, and have significantly improved the health of the financial system up to the early part of 2005.

Our positive assessment of financial stability is underpinned by the favorable prospect for the world economy. The April 2005 issue of the IMF's *World Economic Outlook* forecasts that the global economy is likely to enjoy solid growth in the foreseeable future, with inflation under control. Such an environment will allow financial institutions, and other market participants, to further improve their financial conditions. This assessment obviously refers to the financial system as a whole and does not exclude the possibility that individual financial intermediaries or sovereign borrowers may encounter serious difficulties.

Looking ahead, while there is no particular reason to believe that this benign scenario might come to an end any time soon, we see a number of risks that could test the resiliency of the financial system. At a time when the financial sector is in solid shape, the risks are—by definition—more on the downside.

Risks in the Period Ahead

If history is any guide, the single most important risk factor for financial markets in good times is complacency. As discussed below and more extensively in Chapter II, current risk premiums for inflation and credit risks leave little or no margin for error in terms of financial asset valuations. The combination of low risk premiums, complacency, and untested elements of risk management systems dealing with complex financial instruments could ultimately become hazardous to financial markets.

At present, it is not easy to see which single event, short of a "major devastating geopolitical incident or a terrorist attack" as highlighted in the September 2004 issue of the

Global Financial Stability Report (GFSR), could possibly trigger a sharp and abrupt reversal of this positive assessment. However, because we are more advanced in the economic, profit, and credit cycles, disappointments or negative surprises are more likely to occur. Possibly, a combination or correlation of several less spectacular events might cause markets to reverse their course, and create a less hospitable environment for investors and borrowers who have become accustomed to low rates. Such risks include disappointing developments as to the narrowing of the U.S. current account deficit, continuing rises in commodity and oil prices feeding through to inflation, larger-than-expected rises in interest rates, as well as negative surprises for corporate earnings and credit quality.

Currency adjustments to address the growing global imbalances have taken place in an orderly fashion in the past two years. So far, there is no visible sign of a sustained decline in capital flows into the United States. There is an emerging view among market participants that currency adjustments on their own are insufficient to reduce the global imbalances and that some reduction in growth differentials between the United States and several of its major trading partners is needed. However, market participants are also acutely aware that the financing of the U.S. current account deficit—at least for the time being—hinges, to a certain degree, on the willingness of central banks, especially in Asia, to accumulate further dollar assets. Undue delays in addressing the global imbalances through adjustments in domestic policies or any serious doubts about the willingness of central banks to accumulate dollars could spark strong incentives for investors, private and possibly even public, to reduce future dollar purchases or even reduce their existing dollar holdings. This could trigger a further significant decline of the dollar and an increase in U.S. interest rates that might reduce U.S. domestic demand. The sharp dollar depreciation could also have a negative effect on European and Japanese growth. These developments could lead to weaker economic growth worldwide.

While financial markets have largely priced in a moderate and gradual monetary tightening, they might be less prepared if market interest rates—especially long-term rates—were to go up more abruptly, either because of a sharp decline of the dollar or worse-than-expected inflation data. This would lead to the unwinding of many investment positions predicated on low or gently rising rates, leading to corrections in many asset markets.

After growing strongly in the past two years, corporate earnings growth is likely to decelerate in the future. In a similar vein, banks may not be able to count on a reduction in credit provisions to increase their reported profit. Earnings disappointments relative to market expectations are likely to occur and may cause equity markets to decline, perhaps together with rising volatility. Such corrections in major equity markets could weaken a stabilizing factor that has helped improve the solvency of many financial institutions, such as insurance companies in several countries.

Another possible source of concern could be a confluence of credit events, such as a downgrading of a major global company to subinvestment grade for reasons that may not be linked to negative events in the global economy. Such a credit event could burden the high-yield market investor base, leading to a widening of high-yield credit spreads.

The growing sophistication of financial market participants over the past years has largely reduced the risk of "knee-jerk contagion" that characterized previous crises. Despite low credit spreads, markets have demonstrated their ability to restrict their pricing reactions to several specific credit events of last year, without spillover effects on the credit markets at large. However, it is also clear that a general reassessment of risk appetite of large investors and intermediaries, due to a worsening of the general economic and financial situation, could have knock-on effects for related asset classes due to relative value considerations.

Developments such as those described above would not be entirely unexpected: similar scenarios have been used in stress tests conducted by many financial institutions and their supervisors. However, the resulting market corrections could be amplified by interactions between these risks in unanticipated ways that could change the general perception of risk.

Moreover, otherwise normal market fluctuations could be amplified through liquidity problems. An increasingly relevant contributor to this liquidity risk is the recent proliferation of complex and leveraged financial instruments, including credit derivatives and structured products such as collateralized debt obligations (CDOs). While secondary trading for these products exists, these instruments still rely on quantitative models for relative value assessment, investment decisions, and pricing. Therefore, there is a risk that models that are overly similar in their construction could cause investors to rush to exit at the same time, leading to market liquidity shortages.

While risk management at many financial institutions has been strengthened and become more sophisticated in recent years, the risk management process still hinges, to a crucial extent, on the ability of market participants, in times of market stresses, to execute trades quickly without having prices move too much against them. However, most recent risk management models dealing with the new and complex credit instruments have not yet been put to a live test, that is, whether in time of need, the anticipated counterparties will stand ready to absorb the additional market and credit risks from those who would like to shed it. This issue is becoming more relevant given the recent trend of concentration in the financial sector that reduces the number of large intermediaries in various markets.

The question of a liquidity shortage as a potential amplifier for market price shocks is still one of the major "blind spots" in our financial market landscape. The interactions of liquidity risk and other potential amplifiers of market shocks with changes in global capital flows will have to be at the forefront of all future effort to further improve the global financial architecture.

Policy Measures to Mitigate Risks

The financial strength of major private international financial institutions is the first line of defense against financial risks. As mentioned earlier, strong capital positions and balance sheets of key financial institutions put them in a good position to deal with and absorb the risks described above. Nevertheless, senior management of these institutions and their supervisors should ensure that risk management practices are robustly implemented and that prudential counterparty standards are not being relaxed due to competitive pressure. In particular, liquidity risks and precautionary measures that need to be put in place to address potential liquidity shortages should receive heightened attention from market participants and supervisors alike.

Authorities can contribute to mitigate the above-mentioned risks in several ways. On a macroeconomic level, the authorities need to minimize risks by maintaining market confidence through taking credible policy measures to facilitate an orderly adjustment of global imbalances. According to recent issues of the IMF's *World Economic Outlook*, such measures include increasing national savings in the United States, implementing structural reforms and fostering stronger growth in the euro area and Japan, and allowing more currency flexibility in many Asian countries.

By the same token, central banks should continue to gradually raise policy rates to a neutral level. This will make it less compelling for financial intermediaries and investors to engage in carry trades and various aspects of leveraging. Although the prime responsibility for risk management lies with individual firms and investors, it is apparent that they perceive the generous supply of liquidity as a "collective action problem": cheap liquidity is too tempting not to exploit, especially if everyone else engages in doing so. It should be in the public interest to help avoid sudden reversals of risk appetite among financial intermediaries and investors, which have at times proven to be destabilizing. The policies of gradually raising policy rates in a way that is well anticipated by markets could buy some insurance against potentially volatile and destabilizing developments.

On a microeconomic level, supervisors and regulators must be particularly vigilant about the risk profile of financial intermediaries—particularly concentration risk—and their vulnerability to abrupt market price shocks.

All in all, there is merit in reminding investors publicly about the risks they are engaging in and the consequences they face without the expectations of being bailed out.

Risk Transfer to the Household Sector

The importance of risk management has motivated us to analyze the flow of risk through various sectors of the financial system, their changing risk profiles, and their ability to manage risk. The April and September 2004 issues of the GFSR examined the reallocation of risk from the banking sector to the insurance and pension sectors. Chapter III of this GFSR concludes the series with a study of the allocation of risk to the household sector, by examining the changes in the balance sheets and risk profiles of households, and their ability to manage risk. This chapter examines the transfer of market risk to the household sector arising from changes in the behavior of financial institutions and from pension reform. It does not evaluate either existing pension systems or ongoing pension reforms in different countries.

Households, as stakeholders in the financial system, have always been exposed to financial risks, but usually indirectly. In the past, the household sector held financial assets with intermediaries such as banks that absorbed investment risks and provided households with fixed nominal returns through simple products such as bank deposits and savings accounts. Households were exposed to the credit risk of the banks, but this risk was mitigated by deposit insurance programs and sometimes eventual government support. Households held life insurance contracts, mainly of the guaranteed return variety where the insurance companies bore the investment risk. Pension provisions were mainly through defined benefit plans, where the investment and longevity risks stayed with the pension plan sponsors. In other words, the household sector was largely insulated from financial market and investment risk as well as longevity risk. Households may have eventually paid a price for this protection as taxpayers, when public resources were used to support failed financial institutions or to provide pension benefits; however, taxes were broadly diffused throughout the population—present and/or future generations—and not directly targeted to those exposed to financial risks.

As the populations of major industrialized countries age and their life expectancy rises, the cost of providing defined pension benefits has become more difficult to sustain. This has led both corporate and government pension plan sponsors to switch—at a different pace in different countries—from defined benefit to defined contribution plans, and from pay-as-you-go to funded plans. Such changes have brought benefits and reduced some risks, including the credit risk of plan sponsors. At the same time, the household sector has taken on more responsibility for ensuring sufficient contributions to their defined contribution plans, for generating adequate investment return from those plans, and for coping with the longevity risk as well as the risk of rising costs of health care and long-term care.

At the same time, the emphasis on risk management has led banks to shed many market and credit risks to other market participants. Life insurance companies and pension funds have also begun to de-risk their portfolios by offering products that share or return market risk to their retail customers. Finally, growing use of mutual funds and direct holdings of stocks and bonds by retail investors have exposed the household sector to marked-to-market fluctuations, made transparent in their monthly account statements. This transparency will sensitize households to the investment risks to which they are exposed and eventually will influence household behavior. In short, the household sector has increasingly and more directly become the "shock absorber of last resort" in the financial system.

Given the growing relevance of the household sector in assessing financial stability and the incomplete and fragmented data on household balance sheets that is currently available, national authorities and the financial services industry should try to improve the collection and dissemination of such data. International organizations, such as the IMF or the OECD, can also play a role in supporting these efforts.

Overall, the transfer of risk from the banking sector to nonbanking sectors, including the household sector, appears to have enhanced the resiliency and stability of the financial system—mainly by widely dispersing financial risks, including throughout the household sector. Policymakers may now need to take the next logical step by helping households to improve on their financial education and to obtain quality advice and products necessary to manage their financial affairs. In fact, there is a growing consensus, in both the public sector and the financial services industry, on the importance of promoting the financial education of households. Clearly, households will remain responsible for their investment decisions.

Specifically, households need to understand the financial responsibility they have to shoulder and have ready access to information—including unbiased and quality financial advice—about investment and saving options, as well as available products to manage their risks. As the improvement of the financial sophistication of households is likely to require a long-term effort, encouraging and coordinating activities in this field are likely to become public policy issues.

In case of widespread failure of the household sector to manage complex investment risks, or if households suffer severe losses across the board on their retirement investments due to sustained market downturns, there could be a political backlash demanding government support as an "insurer of last resort." There could also be a demand for the re-regulation of the financial industry or, at the very least, more litigation would ensue. Thus, the legal and reputation risks facing the financial services industry would increase.

In addition to promoting financial education of households, governments can consider the use of tax and other regulatory incentives (such as IRA and 401(k) plans in the United States) to encourage saving for retirement and stable, long-term investment behavior by households. They can also play a role in facilitating the development of appropriate financial products, designed to fulfill the need of households to manage their risks, including longevity risk. For example, some governments are studying the possibility of issuing long-term or inflation-indexed bonds and longevity bonds to help the financial sector better manage the risks involved in supplying some of the retail products, such as annuities.

The series of GFSR chapters on the flow of risk through different sectors of the financial system has highlighted the importance of gaining a more thorough and complete understanding of all the factors that drive the global asset allocation process. Important factors include changes in regulatory and accounting standards, as well as efforts by institutions, such as pension funds and insurance companies, to better match their assets with their liabilities. Consequently, the global asset allocation process will continue to shift risk between different actors in the financial system, not only between various sectors of the economy but also across borders, and trigger global capital flows that ultimately will have important implications for financial stability. These issues will be further explored in forthcoming issues of the GFSR.

Financing Prospects and Risks Facing Emerging Market Countries

Emerging market sovereign borrowers have enjoyed much-improved financing conditions in the past two years. The favorable environment can be attributed to improvements in economic fundamentals in emerging markets, a reduction in external borrowing requirements, the abundant global liquidity that has allowed many sovereigns to prefinance their 2005 external financing needs, and more reliance on domestic capital markets. International investors' acceptance of local currency bonds, either issued internationally (Colombia) or domestically,[1] is an important and positive development in helping emerging market countries better manage their debt. Sovereign borrowers, except for some countries still burdened by a large debt overhang, are thus in a better position than in the past to cope with the potential market corrections discussed above. Nevertheless, they should not be complacent and should use the currently favorable financial conditions to implement strong economic policies and deepen reforms, so as to enhance their resiliency to future shocks.

Despite an overall improvement in their credit quality since 2000, corporate sectors in many emerging markets continue to face considerable maturity and currency mismatches on their balance sheets. Chapter IV documents this trend, using a new comprehensive database, which combines balance sheet data for emerging market companies and financing flow data. Emerging market corporates, therefore, remain vulnerable to interest rate and foreign exchange risks, which so far have tended to materialize together: when the exchange rate is under pressure, local interest rates also rise sharply.

Another salient fact is that corporate borrowers in 2004 accounted for 60 percent of international bond issuance by emerging market borrowers—the third year in a row that corporate issuance exceeded sovereign issuance. This phenomenon has reflected a strengthening of the balance sheets of emerging market corporates, and their desire to borrow at lower rates (compared with domestic rates), as well as international investors' search for yield.

Taken together, these developments suggest that there is a need to closely monitor emerging market corporate sector vulnerabilities in order to achieve a more fully informed assessment of overall financial stability. To be effective, such monitoring should follow an integrated approach, which takes into account the interaction between interest rate, foreign exchange, and credit risks. Even though international bond investors may have held more credit risk recently, emerging market corporate insolvencies that could be triggered by a major devaluation of the local currency still present significant credit risks and costs to the domestic banking sector. The fact that some international investors may be new to the emerging market corporate sector could also amplify the volatility of such a potential sell-off.

The authorities in emerging market countries can address the potential vulnerabilities of the corporate sector, as well as help to develop more balanced and efficient financing of their corporates, in several ways:

[1]Local currency bonds of selected investment-grade emerging market countries (Chile, the Czech Republic, Hungary, Mexico, Poland, Slovenia, and South Africa) were recently included in the Lehman Global Aggregate Index.

- They should continue to reform and improve their legal and regulatory framework, emphasizing corporate governance and risk management. In particular, disclosure requirements should be upgraded and more vigorously enforced. This will enable the supervisors to better monitor risks and vulnerabilities in the corporate sector. Equally important, more transparency through better disclosure would allow market participants—mainly institutional investors, both domestic and international—to exercise market discipline via the appropriate pricing of corporate credit risks. While this seems to have happened to some extent in some countries, there is still room for improvement.
- They should also continue efforts to develop domestic capital markets, including markets for interest rate and exchange rate hedging instruments. This will allow emerging market companies to have access to more balanced sources of financing and to be able to hedge their balance sheet mismatches. In recent years, a few countries have made good progress in this direction, mainly by further developing local institutional investors such as pension funds, insurance companies, and mutual funds. These countries have also adopted and implemented international best practices in many institutional underpinnings, which are needed to improve the functioning of capital markets. These steps include adopting international accounting standards and implementing modern market infrastructures such as clearing and settlement platforms. These recent experiences offer rich lessons to many emerging market countries and will be analyzed in more detail in forthcoming issues of the GFSR.