WORLD ECONOMIC AND FINANCIAL SURVEYS

International Capital Markets

Developments, Prospects, and Key Policy Issues

By a Staff Team
led by
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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, 1997–98 or January–June) to indicate the years or months covered, including the beginning and ending years or months;

/ between years (for example, 1997/98) 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).

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 *International Capital Markets* report is an integral element of the IMF's surveillance of developments in international financial markets. The IMF has published the *International Capital Markets* report annually since 1980. The report draws, in part, on a series of informal discussions with commercial and investment banks, securities firms, stock and futures exchanges, regulatory and monetary authorities, and the staffs of the Bank for International Settlements, and the International Swaps and Derivatives Association. The discussions leading up to the present report took place in Brazil, China, the Czech Republic, France, Germany, Hong Kong SAR, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Switzerland, Thailand, the United Kingdom, the United States, and Venezuela, between February and May 1998. The report reflects information available up to mid-July 1998, and hence does not cover the turbulence in Russia.

The *International Capital Markets* report is prepared by the Research Department. The *International Capital Markets* project is directed by Charles Adams, Assistant Director, together with Donald Mathieson, Chief of the Emerging Markets Studies Division, and Garry Schinasi, Chief of the Capital Markets and Financial Studies Division. Coauthors of the report from the Capital Markets and Financial Studies Division of the Research Department are Laura Kodres, Charles Kramer, Joaquim Levy, Alessandro Prati, Andrei Kirilenko, all Economists; Todd Smith, Visiting Scholar; Subramanian Sriram, Senior Research Officer; and Xuechun Zhang, Research Assistant. Coauthors of the report from the Emerging Markets Studies Division of the Research Department are Barry Eichengreen, Senior Policy Advisor; Bankim Chadha, Deputy Division Chief; Sunil Sharma, Senior Economist; Subir Lall, Anthony Richards, Jorge Roldos, Amadou Sy, Giovanni Dell'Ariccia, all Economists; Anne Jansen, Senior Research Officer; Kenneth Wood, Financial Systems Officer; and Peter Tran, Research Assistant. Shiela Kinsella, Rosalind Oliver, Ramanjeet Singh, and Adriana Vohden provided expert word processing assistance. Esha Ray of the External Relations Department edited the manuscript and coordinated production of the publication.

This study benefited from comments and suggestions from staff in other IMF departments, as well as from Executive Directors following their discussions of the *International Capital Markets* report on July 31, 1998. 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.

List of Abbreviations

ADRs	American Depository Receipts
AFB	Association Française de Banques
AMC	Asset Management Corporation
ASB	Accounting Standards Board
BIBF	Bangkok International Banking Facility
BIS	Bank for International Settlements
BFSR	Bank Financial Strength Ratings
BHCA	Bank Holding Company Act
BMF	Bolsa de Mercadorias e Futuros
BNL	Banca Nazionale del Lavoro
CAD	Capital Adequacy Directive
CBO	collateralized bond obligation
CBOT	Chicago Board of Trade
CBR	Central Bank of Russia
CCPC	Cooperative Credit Purchase Corporation
CD	certificate of deposit
CFTC	Commodity Futures Trading Commission
CLO	collateralized loan obligation
CLS	Continuously Linked Settlement
CMAs	Cash Management Accounts
CME	Chicago Mercantile Exchange
CNBV	National Banking Commission
CSFPs	Credit Suisse Financial Products
DIACs	Discretionary Investment Advisory Companies
DIC	Deposit Insurance Corporation
DJIA	Dow Jones Industrial Average
DTB	Deutsche Terminbörse
DVP	delivery versus payment
EAF2	Euro Access Frankfurt 2
EBA	European Bankers' Association
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
ECS	Euro Clearing System
ECU	European currency unit
EMBI	Emerging Markets Bond Index
EMCC	Emerging Market Clearing Corp.
EMI	European Monetary Institute
EMU	Economic and Monetary Union
ERM	exchange rate mechanism
ESCB	European System of Central Banks
EU	European Union
FASB	Financial Accounting Standards Board
FCDU	Foreign Currency Deposit Unit
FDI	foreign direct investment
FDIC	Federal Deposit Insurance Corporation
FFIEC	Federal Financial Institutions Examination Council
FIDF	Financial Institutions Development Fund
FOBAPROA	Fondo Bancario de Protección al Ahorro

FRANs	floating rate accrual notes
FSA	Financial Supervisory Agency
GDDS	General Data Dissemination System
GDP	gross domestic product
GDRs	Global Depository Receipts
GSA	Glass-Steagall Act
HKMA	Hong Kong Monetary Authority
HLAC	Housing Loans Administration Corporation
HTB	Hokkaido-Takushoku Bank
IAIS	International Association of Insurance Supervisors
IAS	International Accounting Standards
IAPC	International Auditing Practices Committee
IASC	International Accounting Standards Committee
IBRA	Indonesia Bank Restructuring Agency
IFAC	International Federation of Accountants
IFCI	International Finance Corporation Index
IOSCO	International Organization of Securities Commissions
ISDA	International Swaps and Derivatives Association, Inc.
ITMCs	investment trust management companies
JGB	Japanese Government Bond
KDB	Korea Development Bank
KDIC	Korean Deposit Insurance Corporation
KMAC	Korea Asset Management Corporation
LIBOR	London interbank offered rate
LOLR	lender of last resort
LIFFE	London International Financial Futures Exchange
LTCB	Long-Term Credit Bank
MATIF	Marché à Terme International de France
MOU	memorandum of understanding
NCB	Nippon Credit Bank
NDF	nondeliverable forward
NYSE	New York Stock Exchange
OECD	Organization for Economic Cooperation and Development
OTC	over the counter
PBC	People's Bank of China
PCA	Prompt Corrective Action
PIBOR	Paris interbank offered rate
RCB	Resolution and Collection Bank
RTGS	real-time gross settlement
S&P	Standard and Poor's
SBIF	Superintendency of Banks and Financial Institutions
SDDS	Special Data Dissemination Standards
SEC	Securities and Exchange Commission
SIMEX	Singapore International Monetary Exchange
SOEs	state-owned enterprises
SPANs	spread adjustable notes
SPCs	special-purpose corporations
TIBOR	Tokyo interbank offered rate
TROR	total rate of return
TSE	Tokyo Stock Exchange
UNCITRAL	United Nations Commission on International Trade Law
URR	unremunerated reserve requirement
VAR	value at risk

I

Overview

The past year has been a remarkable one in the international capital markets as the Asian emerging markets have experienced turbulence unseen since the debt problems of the heavily indebted emerging markets at the beginning of the 1980s.[1] Even though the financial crisis has been largely confined to Asia, Japan's growing economic weaknesses and banking problems have spilled over outside the region and the crisis has produced a reevaluation of the risks and vulnerabilities in emerging markets outside Asia. The mature financial markets in North America and Europe have not thus far been very adversely affected by the crisis because of their generally relatively small and well-provisioned on-balance-sheet banking sector exposures to the Asian emerging markets in "crisis" (Indonesia, Korea, Malaysia, and Thailand[2]), and the avoidance of widespread defaults as a result, in part, of the prompt response of the international community. Indeed, several mature markets have benefited to some extent from a "flight to quality" and the implications of weaker Asian economic activity and lower commodity prices for inflation. A continued favorable performance is not, however, assured and the outlook could change if Japan's problems are not quickly addressed, the difficulties in emerging markets deepen or spread, or the current very high valuations in the U.S. and many European equity markets are subject to sharp downward revision. The consequences for global capital markets of these risks unfolding could be severe.

In the wake of the Asian crisis, the international community, including the IMF, has been undertaking a far-reaching reassessment of the international architecture for crisis prevention and resolution (Box 1.1). Building upon initiatives taken following the 1994–95 Mexican financial crisis, measures are being considered or implemented to accelerate the dissemination of best practices in financial sector regulation; improve transparency and disclosure in emerging and advanced country financial systems; strengthen the timely availability and provision of data, especially with regard to external debt and reserves; and enhance procedures for dealing with private international debt problems. This year's Capital Markets report focuses on a select set of issues surrounding the behavior of financial markets during the Asian crisis, the similarities and differences with earlier emerging market crises, and the policy lessons to be drawn for dealing with volatility in capital flows. The report also reviews recent financial market and banking sector developments in the advanced and emerging markets, developments and initiatives in banking system supervision and regulation, and the financial infrastructure for managing systemic risk in the European Economic and Monetary Union (EMU).

The Asian Crisis: Capital Market Dynamics and Spillover

The key development since the 1997 Capital Markets report has been the Asian financial crisis, which is notable both for its severity and the virulence with which it has affected not only countries within Asia but also emerging markets in other regions. The crisis followed a period characterized by record private capital inflows into the emerging markets and a relatively sharp compression of spreads across a wide range of emerging market credit instruments. The capital inflows reflected a number of factors, including the search for higher yields on the part of international investors in an environment of low advanced country interest rates, apparent strong macroeconomic and structural policies in many emerging markets, and external financial sector liberalization. Already by early 1997, however, there were growing concerns among some market participants about the extent to which spreads had narrowed for many emerging market borrowers and worries about a reversal of capital flows, especially in the event of a tightening of monetary conditions in the mature markets. Nevertheless, capi-

[1]The term "emerging markets" as used in this report is substantially broader than that used in other contexts and includes the IMF's *World Economic Outlook* classifications of "developing countries," "countries in transition," and the advanced economies of Hong Kong Special Administrative Region (SAR) of China, Israel, Korea, Singapore, and the Taiwan Province of China.

[2]Here, and in what follows, these four countries are characterized as Asian emerging markets in crisis. In view of the large number of Asian countries seriously affected by the regional turmoil, the identification of crisis countries is necessarily somewhat arbitrary. Among the four emerging markets so identified, Malaysia has not had an open banking crisis while Indonesia, Korea, and Thailand have experienced severe banking sector problems.

Box 1.1. Efforts to Improve the International Architecture

Efforts by international organizations to improve the resiliency of the international financial system against systemic events can be viewed as enhancing the understanding of the precursors to crises and the subsequent dynamics of these events, as well as helping to prevent crises before they occur. One of the primary ways in which the architecture of the international monetary system may be improved is by developing and implementing international standards to strengthen the operation of financial markets. These standards or principles attempt to (1) foster effective financial market supervision and regulation; (2) improve the institutional infrastructure; and (3) enhance surveillance, market discipline, and corporate governance. A selected number of initiatives and a brief description of several sets of international standards or good practices in these areas is provided below.

Understanding and Predicting Crises

Capital account liberalization and early warning indicators. Prevention of future crises may be aided by an understanding of role of various factors in previous crises. The IMF is thus studying a number of related topics, including (1) economic policy considerations in capital market liberalization; (2) importance of orderly sequencing of capital account liberalization for financial sector stability; and (3) early warning indicators of balance of payments and currency crises. The OECD is also conducting a study of the structural factors contributing to emergence of financial crises.

Role of private sector and public policy. The potential involvement of the private sector in forestalling and resolving financial crises is being studied by the IMF. It will also evaluate its experience with IMF-supported programs in the Asian crises.

Foster Effective Supervision and Regulation

Banking supervision. The Basle Committee has developed the *Core Principles for Effective Banking Supervision,* which are intended to serve as a basic reference and minimum standard for supervisory and other public authorities. Consistent with these principles, the IMF has developed a framework for financial sector surveillance—*Toward a Framework for Financial Stability*—to guide the analysis of banking system issues by identifying key areas of vulnerability.

Securities regulation. The International Organization of Securities Commissions (IOSCO) is working to establish universal principles for securities market regulation and a draft will be considered for membership endorsement in September 1998. The IOSCO is also working on improving disclosure requirements and has proposed a disclosure standard for international cross-border offerings, which members will consider in September 1998.

Insurance supervision. In September 1997, the International Association of Insurance Supervisors (IAIS) released *Principles, Standards, and Guidance Papers* for insurance supervisors dealing with internationally active insurance companies.

Improve Institutional Infrastructure

Auditing and accounting. The International Accounting Standards Committee (IASC) has published a series of International Accounting Standards (IAS) that aim at achieving uniformity in the accounting principles used by business and other organizations for financial reporting across the world. International standards of auditing have been established by the International Federation of Accountants (IFAC), through its International Auditing Practices Committee (IAPC). The IOSCO has been working

tal inflows to the emerging markets continued at a high level through much of 1997, before collapsing toward the end of the year.

The Southeast Asian currency turmoil has evolved into a full-blown financial crisis affecting much of Asia and necessitating extensive official financial support and assistance, especially from the IMF. Following the July 1997 devaluation of the Thai baht, other Southeast Asian currencies over the next couple of months abandoned their close links to the U.S. dollar and began to depreciate. The most severe pressures in foreign exchange markets in the third quarter of 1997 were experienced by Thailand, Malaysia, the Philippines, and Indonesia, but the currencies of Singapore and a number of other Asian countries also weakened. As the pressures spread to Hong Kong SAR and Korea in late October following the depreciation of the New Taiwan dollar, the scale of the crisis worsened significantly. Several emerging markets outside the region, notably Brazil and Russia, also began to be adversely affected by a shift in sentiment regarding emerging market vulnerabilities, as well as financial and real linkages with Asia.

The extreme turbulence in emerging market currencies during the Asian crisis has been virtually without precedent. When these currencies reached their low points in January 1998, the Indonesian rupiah had fallen (relative to its July 1997 level) by 81 percent, the Malaysian ringgit by 46 percent, and the Thai baht by 55 percent. Between early October 1997 and its low in late December, the Korean won depreciated by 55 percent. Average volatility, as measured by the standard deviation of daily spot exchange rate changes for these currencies, increased by a factor of around 10 in the second half of 1997 compared with the same period the previous year. Accompanying the increase in exchange market volatility, transactions costs in spot, forward, and other derivative markets for these currencies skyrocketed and liquidity dropped, with only modest improvements in the first half of 1998. There was also exchange market pressure in other emerging markets in the second half of 1997, notably

with both IASC and IFAC/IAPC to ensure relevant and comprehensive approaches to the respective standards and their harmonization with securities market regulation.

Bankruptcy. Regional and multilateral initiatives to harmonize domestic bankruptcy laws have not been successful, as domestic bankruptcy systems vary considerably across countries, reflecting in part disparate legal traditions and practices. In contrast, harmonization of the treatment of cross-border bankruptcy problems has been more successful, notably under the auspices of the United Nations Commission on International Trade Law (UNCITRAL) (a model law on Cross-Border Insolvency), the International Bar Association (a Cross-Border Insolvency Concordat), and the European Union (a still unratified Convention on Insolvency Procedures).

Payment systems. Payment system reforms have focused on widespread adoption of real-time gross settlement (RTGS) systems and the use of delivery versus payment (DVP) schemes for securities settlement. These reforms are ongoing with a large number of countries adopting such systems. Foreign exchange settlement risk, given settlement lags in different time zones, holds the highest potential for a systemic disruption. Several private sector efforts are under way to reduce foreign exchange settlement risks, including a potential new derivatives contract, the contract for differences, and a global settlement bank, using the Continuously Linked Settlement (CLS) system.

Enhance Market Discipline, Surveillance, and Corporate Governance

Data dissemination. The IMF has established the Special Data Dissemination Standards (SDDS) to guide its market borrowing members on the provision of economic and financial data to the public. The IMF maintains a Dissemination Standards Bulletin Board on the Internet, which posts information on the statistical practices of subscribers of the SDDS (at end-August 1998 there were 46 subscribers). "Hyperlinks" to country data sites on the Internet have been established for 15 subscribers. The General Data Dissemination System (GDDS), the other tier of the dissemination standards, was established by the IMF in December 1997. It focuses on improving data quality across the spectrum of IMF membership. Both the IMF and the Eurocurrency Standing Committee are reviewing current data collection and dissemination efforts with a view to enhancing them. In particular, the Bank for International Settlements (BIS) is set to collect information about over-the-counter derivatives on a six-month basis for a subset of derivatives dealers.

Fiscal transparency. The IMF has developed a Code of Good Practices on Fiscal Transparency to guide members in enhancing the accountability and credibility of fiscal policy as a key component of good governance. IMF members will be encouraged to implement the code on a voluntary basis with no formal subscription process currently envisaged.

Corporate governance. The OECD, the Basle Committee, the World Bank, and the European Bank for Reconstruction and Development (EBRD) are involved in the development of principles and good practices in the area of corporate governance. For example, an informal advisory group associated with the OECD issued a report in April 1998 entitled *Corporate Governance: Improving Competitiveness and Access to Capital in Global Markets,* recognizing that a formal articulation of the basic elements for sound corporate governance was needed.

in Latin America, Eastern Europe, and Russia; this, however, did not generally lead to sharp exchange rate adjustments as central bank currency defenses were for the most part successful and were supported, in some cases, by a strengthening in economic policies.

The large depreciations of the Asian crisis currencies seriously impaired the balance sheets of already weak and unhedged domestic financial institutions and corporates, and led to sharp increases in credit risk. As a result, 1997 saw the first major reduction in private capital flows to the emerging markets in this decade and a general reevaluation of emerging market risk. After increasing in each of the preceding few years, private capital flows to the four Asian emerging markets in crisis declined by almost $100 billion during 1997, with the bulk of the reduction taking place during the last quarter. Compared with the situation at the time of the 1994–95 Mexican crisis, the reduction in capital flows to the crisis countries was not offset by a reallocation of flows to emerging markets in other regions. Private capital flows to the emerging markets in Africa, Latin America, Europe, and the Middle East held up relatively well through most of 1997 but, with the exception of the Middle East, slowed late in the year as new issues were deferred and lower-rated borrowers withdrew from the market.

The sharp cutbacks in private capital flows to Asia during 1997 were largely in short-term international bank credit and portfolio flows. Foreign direct investment (FDI), which has been becoming an increasingly important source of external financing for the emerging markets, was relatively resilient given the long-term considerations typically guiding such investment. After increasing in the preceding two years, bank lending to the Asian emerging markets began to slow early in 1997 and then collapsed late in the year as interbank credit lines were reduced or withdrawn. The cutback in credit lines was exacerbated by a pullback of Japanese banks from regional emerging markets in response to domestic weaknesses and efforts to meet minimum capital standards. Capital flight from Asia also increased sharply, as suggested by growing

errors and omissions in balance of payments statistics and anecdotal reports of domestic entities moving funds offshore. Bank flows to Latin America also slowed in 1997 as key international banks pulled back from emerging markets. The slowdown was more than offset, however, by a pickup in new bond and equity issues that in recent years have been more important than bank financing. Toward the end of the year, many Latin American borrowers began postponing new securities issues in the face of a more general tightening of external financing conditions, but there was some pickup in early 1998.

The Asian financial crisis and currency turmoil have had far-reaching effects on volatility in emerging equity markets. After falling substantially following the 1994–95 Mexican crisis, volatility in Asian and Latin American equity markets shot up in the aftermath of the depreciation of the Thai baht in July 1997. Volatility continued to increase in Asia over the remainder of the year and reached levels in excess of that in the Latin American markets at the peak of the 1994–95 Mexican crisis. The high volatility in Asian equity markets was closely related to the volatility in exchange markets and to uncertainty generated by large exchange rate depreciations in the face of significant unhedged foreign currency borrowing.

On emerging debt markets, which are dominated by sovereign Latin American credits, spreads remained relatively low through the third quarter of 1997 and then increased sharply in the aftermath of the financial turbulence in Hong Kong SAR in late October. The increases were particularly large for Asian emerging market debt, fueled by the worsening regional situation and outlook and a succession of sharp sovereign downgrades by international credit rating agencies. After maintaining high ratings for Asian sovereigns through the third quarter of 1997, international credit rating agencies sharply downgraded many of the crisis countries in the last quarter of 1997. Korea's fall to below investment-grade status was one of the largest in recent history. Downgrades below investment grade implied that certain institutional investors could no longer hold claims on these countries, and further exacerbated the downward pressure on currencies as these investors sought to reduce their exposures.

Following sizable depreciations and high volatility in the second half of 1997, many Asian currencies began to recover in early 1998 as capital outflows from the region slowed and current account positions turned around sharply. Confidence within the region was also enhanced by the agreement in late 1997 to roll over and restructure Korea's external short-term bank debt. Exchange rate volatility, however, remained high owing to the thinness of markets and was exacerbated early in the year by growing uncertainty about the political and economic situation in Indonesia and the risk of spillover to neighboring countries. Many Asian emerging market currencies came under renewed pressure around midyear as the situation and outlook in Japan worsened significantly and the yen came under downward pressure. Although depreciating somewhat vis-à-vis the U.S. dollar, most Asian currencies (other than the Indonesian rupiah) remained relatively stable in effective terms. Although both the Hong Kong dollar and the Chinese renminbi were reported to have come under pressure in the middle of 1998, both retained their close links to the U.S. dollar. After rebounding strongly in the first quarter, Asian equity markets weakened sharply after April 1998, as it became clear that output in many countries was declining much more sharply than had been earlier expected. The weakening in equity markets might have been exacerbated by concerns about the effects of Japanese yen depreciation and a possible spreading of the crisis to China.

Banking sectors in the emerging markets during 1997–98 were closely influenced by broader macroeconomic and financial developments and showed clear regional patterns related to the Asian financial crisis. Deep-seated weaknesses in many Asian emerging market banking systems and financial sectors contributed to—and were exacerbated by—the financial crisis, sharp currency depreciations, and subsequent sharp slowdowns in economic activity. Accordingly, IMF arrangements with Indonesia, Korea, and Thailand have placed primary emphasis on the restructuring and recapitalization of financial institutions in these countries. In addition, wide-ranging reforms are being introduced to avoid the reemergence of similar problems, through strengthening supervisory and regulatory regimes, reducing connected lending, and scaling back excessively broad national safety nets that have contributed to problems of moral hazard. A number of countries are also implementing reforms to further the development of local capital markets and reduce the role of banks in intermediating international capital flows. The banking sector restructuring currently under way in the crisis countries is closely linked to that in the corporate sector. Banking systems in Latin America have continued a consolidation process facilitated by the entry of foreign banks in the aftermath of the 1994–95 Mexican crisis. Reflecting recent improvements in financial soundness and supervisory systems, these banking systems generally weathered spillovers from Asia relatively well, but sharp interest rate increases to support currencies affected by contagion have contributed to some deterioration in loan portfolios. Although the regulatory and supervisory systems have been strengthened substantially in many Latin American countries, problems remain in a number of areas, especially with regard to the transparency and accuracy of balance sheet information, the strength of a number of smaller financial institutions, and the consolidation of offshore operations.

Strengthening and consolidating banking systems continues to be a priority in the transition economies

in Europe and Russia. In Russia, there has been some consolidation among the larger banks but loan penetration remains low and market risk exposure high, the latter leading to significant vulnerabilities. Russian banks were adversely affected in mid-1998 by the high interest rates required to support the ruble and the sharply deteriorating economic outlook. The Hungarian and Polish banking systems have strengthened considerably in the last few years and are viewed by market participants as among the strongest in the region. In the Czech Republic, the improvement of bank balance sheets has been slower, but the authorities are currently seeking to privatize and strengthen major state banks through the involvement of strategic foreign partners. Czech banks were affected adversely by the May 1997 turbulence in local exchange markets as a result of unhedged currency and interest rate exposures and a deterioration in credit conditions, but have subsequently improved their risk management.

The depreciations of the crisis Asian currencies in the second half of 1997 were far in excess of estimates of the degree of overvaluation before the crisis. The large exchange rate depreciations resulted from the interaction between a number of domestic and external factors, compounded by a general increase in uncertainty in the region following many years of strong and successful macroeconomic performance. Especially important was a particularly perverse set of market dynamics under which the initial relatively small exchange rate depreciations following the July 1997 devaluation of the Thai baht led eventually to a fundamental reassessment of the long and widely held expectation that regional currencies would remain closely linked to the U.S. dollar. As a result, both foreign and domestic investors sought to unwind the extensive "carry" trade that had been based on stability in exchange rates vis-à-vis the U.S. dollar, and efforts were made to cover or reduce unhedged foreign currency exposures and to liquidate off-balance-sheet currency positions. The resulting further downward movements in regional currencies created significant problems of counterparty risk as the balance sheets of inadequately hedged domestic financial institutions and corporations weakened sharply. As a result of the increases in credit risk, derivative and other markets for covering increasing exchange rate risk began to dry up and spot markets for the crisis-affected currencies became very thin. In these circumstances, small transactions began to move foreign exchange markets by large amounts, further adding to currency weakness and creating a vicious circle. These problems were exacerbated by central banks in the crisis countries pulling back from their traditional "market maker" role in foreign exchange markets, in some cases because usable or uncommitted international reserves had reached critically low levels. Also contributing to the large currency depreciations were central banks' desire to keep interest rates low to assist already weak financial institutions and highly leveraged domestic corporations. The failure to raise interest rates significantly implied that the cost of speculating against currencies remained low and contributed to large private domestic capital outflows during the crisis.

The currency weakness was further compounded by market concerns about the adequacy and implementation of the first round of IMF-supported programs in the region and the degree of domestic political commitment to reform. In Korea, the disclosure that usable reserves had reached critically low levels and more comprehensive data on external debt generated market concerns about the adequacy of financing in the IMF-supported program in early December 1997. External confidence remained very weak until agreement was reached late in the month to roll over and eventually restructure Korea's external debt. In the first IMF arrangement with Indonesia, confidence was adversely affected by the decision early in the program to close only a small number of the seriously insolvent banks, raising concerns that further closures would be necessary. The Indonesian central bank's efforts to keep insolvent banks afloat through sizable liquidity injections in turn contributed to a loosening of monetary policy and downward pressure on the rupiah. In Thailand, a failure to deal adequately with troubled financial institutions led to large-scale official support and efforts to recycle funds from strong to weak institutions. In all the crisis countries, market participants initially expressed doubts about the commitment to the economic reforms included in the IMF-supported programs, based in part on the slow progress in dealing with financial sector and other problems and, in some cases, reversals in the reform program.

The spillovers during the Asian crisis were particularly virulent and exceeded those associated with macroeconomic and trade linkages. Incomplete information about key financial variables and a "wake-up" call about the worsening regional situation appear to have contributed to the spillovers, but the importance of these factors is obviously difficult to assess. The spillovers seem also to have been related to growing financial linkages that had developed among the Asian emerging markets. Within Asia, for example, the impairment of Korean bank claims on a number of Southeast Asian emerging markets after the Thai crisis contributed to a weakening of the liquidity position of Korean financial institutions and their ability to cope with credit withdrawals by international banks. When the crisis spread to Korea in late October, Korean financial institutions' attempts to liquidate these claims contributed to spillovers to Southeast Asia. Financial linkages also help explain the emergence of pressures in Brazil and Russia following the spread of the crisis to Korea in late October 1997, as Korean banks were reported by market participants to have sold some of their holdings of Brazilian Brady bonds

and Russian debt. There were also market reports of additional linkages through off-balance-sheet derivative exposures, but little information is available on their size.

Emerging Markets in the New International Financial System: Implications of the Asian Crisis

Despite some distinctive features, the Asian financial crisis shares a large number of similarities with the two most recent emerging market crises—the 1980s' debt crisis and the 1994–95 Mexican crisis. The common features are helpful in understanding the "virtuous" and "vicious" elements that characterize the periods of capital inflow and outflow surrounding the crises, and aspects of the subsequent pressures. The most important similarities are that the periods leading up to each of the crises were characterized by:

- Surges in private capital inflows, significant improvements in the terms and conditions of access to international financial markets, and, in the last two crises, sharp compression of spreads on emerging market debt;
- Increasingly wide investor participation as credit rating and other agencies supplied very strong assessments or ratings;
- Emergence of large unhedged exposures of domestic borrowers, especially with regard to exchange rate risk; and
- Existence of weak regulatory regimes and lack of transparency in the operation of financial systems.

Moreover, each of the crises was unanticipated by most observers right up to when the crisis occurred, and involved sharp cutbacks in short-term financing and severe curtailment in access to international capital markets. In addition, each crisis involved large adjustments in domestic asset markets—including, in particular, in the value of the domestic capital stock—and severe banking sector problems, exacerbated by large exchange rate and interest rate adjustments, as well as sharp slowdowns in growth and capital flight.

There are, however, a number of features of the Asian crisis that differentiate it from earlier crises. First, while there were some shortcomings, monetary and fiscal policies in all the crisis countries had not been judged to be seriously out of line before the crises, and macroeconomic performance as measured by growth and inflation was generally strong. While some concerns had been expressed by market participants about the high rates of domestic credit growth in a number of the crisis countries and the relatively close links to the U.S. dollar, macroeconomic policies were not generally seen as a problem. Second, compared with earlier crises, the external liabilities acquired by the Asian emerging markets were largely in the private rather than the official sector, as current account imbalances had reflected excesses of private investment over savings. Rather, the most important causes of the Asian crisis were structural: notably, weakly supervised and regulated financial sectors, poor risk management in financial institutions, problems of connected lending, and weak corporate governance. In addition, there were problems of moral hazard in the financial and corporate sectors associated with implicit or explicit national safety nets. In these circumstances, large-scale private capital inflows and high domestic saving were not invested and managed efficiently with due regard to the risks, creating severe vulnerabilities and fragilities.

The Asian financial crisis has raised the question of the factors underlying the large surges in capital flows to emerging markets and the reasons for the typically abrupt and sharp reversals. Sudden shifts in flows and prices are, to some extent, a feature of asset markets in which "new information" arrives randomly and is immediately apparent in investors' behavior. An important issue is whether there are any specific distortions or market failures that contribute to virtuous circles accompanying the periods of strong inflows and the subsequent vicious and sharp curtailments of emerging market access. The empirical literature has, unfortunately, had only limited success in shedding light on the causes of the surges in capital flows and reasons for the sharp changes in the terms and conditions of market access. The literature has helped clarify the roles of various "push" and "pull" factors in the inflow periods, including liquidity conditions in the advanced markets, improved policies in emerging markets, and external financial sector liberalization. In addition, the increased participation of the emerging markets in the global capital markets is seen as reflecting the ongoing trends toward globalization, the growing importance of institutional investors, and the implications of portfolio diversification by advanced-country investors. Recent research has paid increasing attention to the interactions between different classes of creditors and the dynamics of "herding," in which investors are importantly influenced by the behavior of other investors. Such herding behavior is typically most prevalent in situations in which there are deficiencies in information and the behavior of creditors is viewed as revealing important information about borrowers' creditworthiness. These models are still too preliminary to draw strong conclusions, but they do suggest that improved information can potentially play an important role in encouraging a more rigorous assessment of risk. The experience with surges in capital flows suggests that such surges are more likely to end "badly" the more important has been herding-like behavior and the further down the credit spectrum new lending has gone.

An important issue in understanding the surges in capital flows and financial crises is the extent to which private investors are encouraged to undertake impru-

dent risks on account of the expectation of official support. Clearly, financial crises linked to cross-border capital flows are not a new phenomenon and date back at least to the last century, well before current broad official safety nets. Even though there has been widespread publicity given to the view that the Asian crisis was exacerbated by moral hazard, there is little evidence on the extent to which it has influenced the structure and pricing of capital inflows. More generally, the assessment of the role of moral hazard has not made a clear distinction between the explicit or implicit safety nets provided by national authorities and the support packages provided by the international community, including the IMF. Many of the Asian emerging market economies had a history of relatively generous support to financial institutions that ran into difficulty. It does not seem unreasonable that such support would be taken into account by international investors in their acquisition of claims on entities in these emerging markets. Moreover, except in the unlikely event of a major systemic shock, investors might believe that the support could credibly be provided, even when external claims are denominated in foreign rather than domestic currency. The expectation of domestic support is also likely to have discouraged effective market discipline on the part of emerging market depositors, creditors, and equity holders, especially in large financial institutions. On the other hand, there is no evidence that private capital flows to Asia were based on the expectation that the international community would need to put together packages to "bail out" international investors. For one thing, it appears that investors were acting to a significant extent on the assumption that the Asian countries were "star performers" who would continue their strong performance. At the same time, it is generally recognized that any international support would directly affect only a limited number of creditors, and would not be provided on a scale to cover all the claims on countries facing balance of payments difficulties.

The evidence from the Asian crisis indicates that many equity and bond investors (as in earlier crises) have experienced substantial losses. Unless these investors incorrectly believed they would be bailed out, moral hazard seems unlikely to have been an important factor in their decisions. The extent to which the prospect of official support—from the international community or national governments—influenced the behavior of the globally active commercial and investment banks is less clear. These institutions are perceived by some market participants as being bailed out during previous emerging market crises and to have not, for the most part, suffered large losses on their balance sheet exposure to Asia. On the other hand, a full assessment of how these institutions were affected by the crisis would need to take into account the extent to which they faced losses on their off-balance-sheet exposures and activities, such as securities underwriting. Income statements released early in 1998 suggest that at least some losses were incurred in these areas, but their full extent is not yet known.

The Asian crisis has underscored the importance of strong financial supervisory and regulatory structures and sound corporate governance for the efficient intermediation of private capital flows and the appropriate management of risk. Notwithstanding the reform programs currently being implemented in these areas, some emerging markets are likely to take a long time to develop the strong supervisory and risk management systems in place in many advanced economies, and deal effectively with problems of moral hazard. This will leave these countries vulnerable to future crises. In these circumstances, it has been suggested that there may be a role for temporary taxes on emerging markets' private sector external borrowing—especially at short maturities—to safeguard against excessive and imprudent external debt accumulation by entities that by virtue of their size or importance might be expected to receive official support in the event of difficulties. The empirical evidence on the general effectiveness of such taxes is somewhat inconclusive, and the potential for circumvention is likely to increase over time. A number of countries, including Chile, have, however, had some success in discouraging short-term capital inflows through implicit "taxes." Alternatively (as discussed below), vulnerability could be partially reduced through higher capital requirements on short-term cross-border interbank lending. The intention would be to address the kinds of difficulties created by such lending during the Asian crisis, namely that it can be withdrawn very quickly and it is difficult for the authorities to allow major domestic banks to fail.

Developments and Trends in the Mature Financial Markets

Notwithstanding the Asian crisis, the performance of the mature financial markets in North America and Europe has remained favorable with only limited negative spillovers and a modest pickup in volatility. The favorable performance has reflected relatively strong macroeconomic conditions and policies in many countries, the environment of low and stable inflation, and generally relatively small and well-provisioned bank exposure to the Asian emerging markets. Negative macroeconomic spillovers on output have also been relatively small and helped lessen the risk of overheating in those countries where resource use has risen to high levels. Among the major advanced countries, performance in the United States has been especially strong with inflation remaining low notwithstanding unemployment falling to rates that in the past have been associated with growing price pressures.

Following cyclical weakness, economic activity has begun to strengthen in continental Europe as confidence has grown in the successful launch of the euro at the beginning of 1999. The main exception to the generally favorable situation has been Japan, where recession and severe domestic banking sector problems have contributed to, and been aggravated by, the crisis in the rest of Asia. The advanced economies of Australia and New Zealand have to some extent been adversely affected by their close trading links with Asia and weakness in commodity prices.

In the major foreign exchange markets, the key developments have been the further appreciation of the U.S. dollar in terms of the deutsche mark and Japanese yen. The strength of the dollar has been related to cyclical factors and safe haven effects associated with the Asian crisis, and has facilitated the widening of the U.S. external current account deficit as the Asian countries strengthen their external positions. Continental European exchange markets have been characterized by a high degree of stability as a result of progress in macroeconomic convergence and growing market confidence in the successful launch of the euro. As Japan's economic problems worsened during 1998, the yen-dollar exchange rate came under pressure and the yen weakened sharply in June 1998, prompting joint intervention by Japan and the United States.

Long-term interest rates in many mature markets have declined to their lowest levels in years and yield curves have flattened. In the United States, declines in longer-term yields—across the credit spectrum—have reflected low inflation, improvements in the federal fiscal balance, and a rebalancing of portfolios toward the U.S. market in response to the Asian crisis. Within Europe, there has been a convergence of longer-term interest rates at relatively low levels among the countries that will participate in the first round of EMU as a result of a high degree of macroeconomic policy convergence at relatively low inflation rates. Long-term yields in Japan are currently at historic lows, but credit spreads have widened as a result of growing financial sector and corporate difficulties. Concerns about the banking sector contributed to sharp increases in the premiums charged to Japanese banks in international markets to above 100 basis points in December 1997; even though the premium fell back early in 1998, it increased to over 40 basis points in June.

The year 1997 was a very strong year for the major equity markets in North America and Europe with the momentum carrying through into 1998, especially in European markets. Most notable has been the performance of the U.S. market, which, notwithstanding growing concerns about overvaluation and historically high price-earnings ratios, has continued to rise and overcome a number of setbacks including the sharp October 1997 decline. The current high stock valuations appear to be based on expectations that interest rates will remain low and continued relatively strong earnings growth, despite some recent slowing. Concerns about a correction have, however, contributed to volatility. European equity markets have also performed strongly with many markets reaching record highs. In addition to the improving macroeconomic situation and outlook, the performance is linked by market participants to growing optimism about the prospects for the EMU and the accelerated development of European-wide capital markets. Japanese equity markets have been lackluster thus far in 1998 and began to weaken around midyear.

Selected Issues in the Mature Financial Systems: EMU, Banking System and Performance, and Supervision and Regulation

The May 1998 decisions by the European Union (EU) on the 11 countries that will participate in the first round of EMU represent a further important step toward the goal of a European currency area. The potential benefits to European financial markets are far reaching and include the development of EMU-wide capital markets, creation of a European payments system, and the restructuring and consolidation of national banking systems. Nonetheless, there is uncertainty among market participants about several aspects of EMU, including the role that will be played by the TARGET real-time payments system in reducing systemic risk, the organization and structure of pan-European interbank and money markets, and how policymakers and institutions will handle EMU-wide crisis management. Some of the uncertainty is expected to be reduced in the second half of 1998 as key decisions are taken in a number of areas such as the monetary operating and control procedures of the European Central Bank (ECB) and the role of reserve requirements. The TARGET payments system is a central feature of the financial infrastructure of EMU and is intended to play an important role safeguarding pan-European financial markets and institutions from systemic risk by ensuring finality of payments and avoiding the accumulation of large counterparty exposures. Under a well-functioning real-time payments system, the reduction in systemic risk diminishes the need for lender-of-last-resort interventions for payments system reasons and facilitates the integration of national money markets. Although the TARGET system is well designed, there is some uncertainty about whether it will play its planned role, because the high costs of holding collateral for intraday credit under the system and the relatively high fees might lead to high-value payment being routed through other channels.

The development of pan-European financial markets that is expected to be facilitated by EMU is likely

to place considerable pressure on weak banks, which may then be encouraged to undertake excessive risk as interest and profit margins are squeezed. In these circumstances, the institutional framework and understandings among EMU policymakers for dealing with banking sector problems and systemic risk will be critically important. Achieving these understandings within the context of EMU—and moving rapidly to deal with any problems in a pan-European bank—is expected to present a number of challenges given that the ECB will have a relatively narrow mandate focused on price stability while banking supervision and lender-of-last-resort responsibilities may remain at the national level. The approaches to crisis management within the EMU are currently under discussion, and there is a growing recognition that workable arrangements for sharing information and responsibilities between national central banks, the ECB, and national supervisors are needed to allow for rapid coordinated responses to emerging systemic problems.

Developments in the mature banking systems continued to diverge among the major advanced countries, with serious challenges and risks remaining in Japan's financial system. Profitability and asset quality has generally remained at relatively high levels in the banking systems of the United States as a result of cyclical factors as well as efforts to strengthen balance sheets in the wake of earlier weaknesses. The main risk in these banking systems is that it is often at the top of the credit cycle when banks take on increasingly risky concentrations of loans in an effort to maintain high profitability, and the Federal Reserve in early July 1998 offered warnings in this regard. Generally, U.S. banks have relatively low (on-balance-sheet) exposure to the crisis-affected emerging markets in Asia and are seen by market participants as being able to absorb expected losses given strong profitability and high provisioning. Exposure to Japanese banks is more significant and represents an area of potential vulnerability.

Banking system performance in the large continental European countries has been mixed. Profit levels have been maintained at fairly high levels in the German banking system, where asset quality has remained at reasonably high levels. Tarnishing the prospects for continued good performance somewhat are the exposures of some of Germany's largest and second-tier banks to the crisis countries in Asia. The French banking system has continued to face difficulties, despite some recent improvement in banks' profitability. Expansion abroad in response to growing pressures on profits at home has brought new risks, as illustrated by the deterioration in asset quality in many of the large French institutions because of exposure to the Asian crisis countries. Profitability in Italy's banking system has declined, reflecting the narrowing of interest margins on the heels of interest rate convergence to core-European levels and heavy provisioning by some major banks in anticipation of privatization. Consolidation, however, has accelerated, and there has been some progress in addressing labor costs, although other structural weaknesses remain.

The most serious banking problems among the Group of Seven countries are in Japan. Seven years after the bursting of the asset price bubble, Japan's financial system problems have still not been resolved even as "Big Bang" financial sector reforms get under way. While asset quality in the banking system has continued to deteriorate, new problems have emerged, reflecting Japanese bank exposures to the crisis countries in Asia, worsening financial conditions in Japan's nonfinancial corporate sector, and emerging problems in the nonbank sector. The authorities have announced a new strategy to resolve financial system problems, including the commitment of public funds to recapitalize and restructure large and small banks, a new supervisory framework, and a timetable for deregulating domestic financial and capital markets. While these measures and blueprints are promising, the first-round implementation of bank recapitalization and restructuring raised concerns in the markets about the authorities' commitment to the new approach. Moreover, the perceived need for the new supervisory agency to strengthen and reinforce its organizational structure, including its staffing, left markets with some doubts about its ability to achieve what is required over the near term.

The structure of supervision and regulation in the advanced countries has been undergoing evolutionary change in response to the increasing conglomeration and internationalization of financial institutions, advances in private risk management, and the proliferation of new financial instruments. Most of the recent advances have been focused on refining market risk management systems. Stress testing (using crisis scenarios) has become a more critical component of risk assessment and management, but credit risk assessment and management and internal controls are moving to the forefront of risk managers' thinking. The Asian crisis exposed the inadequacy of traditional value-at-risk (VAR) modeling, as these models are unable to predict losses from "fat-tailed" events and the associated changes in correlations and volatilities across markets. Moreover, the crisis had a sobering impact on some large financial institutions that did not anticipate the link between credit and market risk: even if market risks were managed perfectly and were profitable, it cannot be taken for granted that the counterparties to these transactions will have the ability to pay if extreme events cause them to become insolvent. Currently, reforms are being discussed or adopted in four main areas.

First, the Basle Committee on Banking Supervision introduced new guidelines on market risk requirements on January 1, 1998. Under these guidelines, national supervisors are permitted to allow banks to use

their own internal VAR models for determining the amount of capital to set aside for market risk, provided these models satisfy certain conditions. An important consideration in allowing banks to use their own risk models is the increasing use of complex financial instruments and techniques for managing market risk. These techniques are viewed as making "rules-based" approaches to allocating capital increasingly inappropriate as they do not allow for the correlations between returns on different assets and the scope to reduce risk through portfolio diversification. With the increased use of credit derivatives and improvements in loan portfolio management, there has also been increasing concern in the private sector about the distorting effects of the current relatively undifferentiated Basle weights on credit risk. The Institute of International Finance has urged a rethinking of the 1988 Basle Accord. A number of Group of Ten central banks, however, have expressed reservations about a major overhaul of the Basle credit risk weights on account of the time that it could take to reach consensus and the urgent need for many emerging markets to reach even the simple Basle standards.

Second, a number of members of the Basle Committee have been considering changes to the Basle credit risk weights to address concerns about sovereign and interbank lending. There are two main areas of contention: the zero weight applied to banks' sovereign or sovereign-guaranteed claims on member countries of the Organization for Economic Cooperation and Development (OECD), and the 20 percent weight applied to interbank lending of less than 12-months' residual maturity. On the former, it has been suggested that the zero weight applied to OECD sovereign claims has encouraged banks to steer funds toward OECD emerging markets rather than to non-OECD sovereigns without adequate account of the risks. Some Basle Committee members have suggested that the weights could be linked to countries' progress in implementing reforms such as the core principles of banking supervision, or the provision of economic and financial data. As regards interbank lending, the current 20 percent weight applied to short-term interbank lending is viewed by a number of Basle Committee members as contributing to excessive funding in the interbank market, including during the Asian crisis. Changes being discussed include raising the weight "creditor" banks must apply to short-term interbank lending from the current 20 percent to the 100 percent applying to longer-term interbank funding, or linking banks' capital requirements to the maturity structure of their interbank funding. There has, in addition, been some discussion of changing the Basle weights to encourage a more cyclically neutral application of the capital adequacy standard. This could be achieved by requiring that the ratio be maintained at a minimum of 8 percent on average, thus creating a buffer during the business cycle.

Third, a number of countries have been adapting their supervisory and regulatory frameworks to enhance their ability to conduct effective supervision on a consolidated basis. A prominent recent example is the decision by the U.K. authorities to merge nine regulatory bodies into a single financial services authority and to move the responsibility for banking supervision away from the Bank of England. As part of the merging of supervisory oversight into one body, Australia has also recently moved banking supervision out of the central bank but has not yet embraced consolidated supervision across banks and securities firms. Finally, efforts are continuing in various forums to strengthen the framework for the supervision of globally active financial institutions as progress thus far has generally been perceived to have been slow. Recent steps have involved clearer understandings on the responsibilities of "home" and "host" supervisors, improved harmonization of national rules and standards for information sharing, and clarification of supervisory responsibilities for internationally active financial institutions engaged in banking and securities activities.