Global Financial Markets: Moving Up the Learning Curve

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After being burned by some costly crises, players in international financial markets are learning from past mistakes and finding new ways to minimize risk.

DURING the last ten years, global financial markets and intermediaries have faced several costly and contagious crises. There have been abrupt declines in asset prices, major bouts of volatility in the foreign exchange markets, an exchange rate crisis together with a debt crisis in the emerging markets in early 1995, and a number of costly banking problems in several industrial and some key emerging market countries. In addition, there has been a string of serious, albeit nonsystemic problems in individual financial institutions around the world.

Although many factors have contributed, including macroeconomic policies and management control failures, these events appear to have been a by-product of the transformation and restructuring of international finance that has taken place during the last ten years. These changes included the increase in competition that accompanied the liberalization of the financial sector in most of the major countries, the integration of capital markets, the increasing dominance of institutional investors, the development of new financial techniques and instruments, and the growth of the emerging markets. The transformation of the international financial environment has forced both official and private participants to "move up the learning curve" in order to better manage the private and systemic risks posed by these developments.

Managing risk

New approaches to banking supervision. Both the private and official sectors were forced to learn to manage the new risks generated by the evolving financial environment. The efforts by the official sector are clearly evident in the strengthening of the regulatory and supervisory environment in response to the significant losses sustained by many of the industrial country banking systems in the 1980s and

Rapid growth of derivatives

(billion dollars, end-of-year data)

	1986	1990	1994	1995
Exchange-traded instruments	618.3	2,290.4	8,862.5	9,185.3
Interest rate futures	370.0	1,454.5	5,757.4	5,863.3
Interest rate options [1]	146.5	599.5	2,623.5	2,741.6
Currency futures	10.2	17.0	40.1	37.9
Currency options [1]	39.2	56.5	55.6	43.2
Stock market index futures	14.5	69.1	127.3	172.2
Stock market index options [1]	37.8	93.7	238.3	326.9
Over-the-counter (OTC) instruments [2]	...	3,450.3	11,303.2	17,990.0
Interest rate swaps [3]	400.0 [4]	2,311.5	8,815.6	...
Currency swaps [3, 5]	100.0 [4]	577.5	914.8	...
Other swap-related derivatives [3, 6]	...	561.3	1,572.8	...

Sources: Bank for International Settlements (BIS) and International Swaps and Derivatives Association, Inc. (ISDA).

[1] Calls plus puts.

[2] The OTC figures reported in the table are from ISDA only and are not as comprehensive as the BIS's first survey of the OTC markets, published in July 1996. The BIS's survey of the OTC derivatives markets estimates the notional value of outstanding OTC foreign exchange, interest rate, equity, and commodity derivative contracts at $47.5 trillion (after adjusting for double counting) at the end of March 1996.

[3] Contracts between ISDA members reported only once.

[4] Estimates.

[5] Adjusted for reporting of both currencies.

[6] Caps, collars, floors, and swap options.

... Data not available.

early 1990s. These losses were due in large part to the increased competitive pressure that arose with the liberalization of the financial sector, which also led to rapid growth in lending, frequently in an environment of rising asset prices. In the prevailing highly regulated environment, the role of supervisors had been limited and they often lacked the experience, expertise, and authority to exert sufficient oversight and restraint as banking expanded into new products and services. And they were faced with the consequences of the monetary contraction, which produced a sharp fall in asset prices and a corresponding increase in nonperforming loans.

Spurred by the cost of these crises, banking supervisors made significant efforts to improve their regulatory and supervisory capability. These included allocating increased staff resources to on-site inspection, developing rigorous, early systems of classifying nonperforming credits, and obtaining greater authority to close failing institutions.

The most important initiative in the banking supervision area was the 1988 Basle Accord, which raised and harmonized risk-weighted regulatory capital ratios among the Group of Ten (G-10) countries. However, even before the Basle Accord was fully implemented, it became clear that the growth of the global over-the-counter derivative business was posing another challenge to bank supervisors (see table). The ability of international banks and securities houses to alter the risk characteristics of financial instruments and to shift risk positions off their balance sheets, combined with the growing possibility of moving financial activity from one jurisdiction to another, gave international banks the tools to blunt the impact of prudential restrictions. The traditional financial policy paradigm, which sought to balance the benefits of the official financial safety net provided by the central bank with a binding regulatory structure and supervisory oversight, had become unbalanced. Thus, the private financial sector retained the benefits of the safety net, but had managed to lessen the impact of prudential oversight.

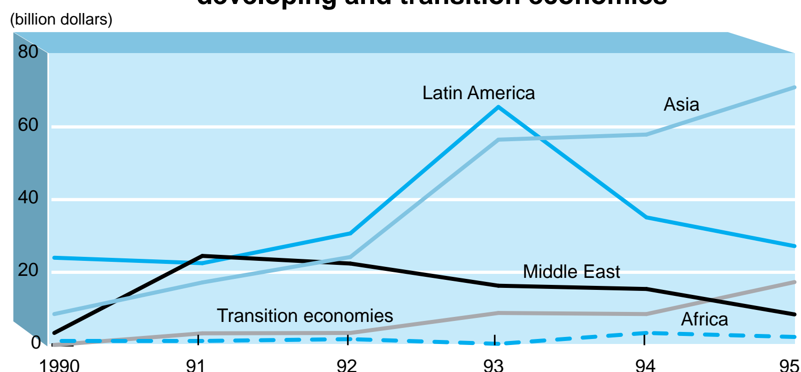
A supervisory approach based on forcing compliance with a prescribed set of balance sheet ratios was no longer effective for risk management of international financial intermediaries, however refined the definitions and calculations might be. In response, the Basle Committee on Banking Supervision changed the focus of surveillance to ensure that banks in the G-10 countries had the ability to control and manage financial risk adequately. To this end, internationally active banks will be allowed to use their own internal risk-management models to estimate and control the total net loss that they could sustain during a specified number of trading days (the so-called value-at-risk methodology), with the regulatory minimum capital requirement for market risk then being determined as a multiple of the bank's value at risk.

The new methodology is creating powerful incentives for encouraging banks to improve their risk management—for the first time, successful efforts by banks to control market risk will be directly rewarded with a lower regulatory capital ratio. Under the earlier approach—still in use for credit risk—which required banks to maintain prudential ratios, the banks' regulatory capital requirements were largely determined by the size of their asset and liability positions rather than by their risk exposures. There was only a limited possibility of reducing regulatory capital by reducing risk through diversification and hedging.

In response to the growth in cross-border exposure and the expanding participation of foreign institutions in domestic wholesale finance, authorities with responsibility for financial surveillance in the major countries also strengthened their cooperative arrangements. The Basle Concordat, which allocates responsibilities between home and host country supervisors, has been extended to allow the host country to deny access to banking institutions from countries whose oversight over the consolidated activities of the institutions is not up to the agreed minimum standards. In addition, efforts are under way in a joint forum, consisting of banking, securities, and insurance supervisors from the G-10 countries, to consider the issues relating to the supervision of international financial conglomerates. In the aftermath of the Mexican crisis, G-10 central banks also have begun to consider more orderly procedures to prevent and resolve sovereign liquidity crises.

Settlement risk. The stability of the international banking sector was further strengthened by improvements in financial market infrastructure in the major industrial countries. Foremost among these have been the risk-reduction initiatives in the wholesale payment systems in the major industrial countries. Central banks in many of the European Union countries have initiated efforts to reduce intraday payment-related credit in net settlement systems by restructuring payment systems into real-time gross settlement (RTGS) systems with collateralized overdrafts. (An RTGS system is a gross settlement system in which processing and settlement take place continuously.) Furthermore, to reduce risk, the RTGS system in the United States places caps on the size of uncollateralized daylight credit and levies charges on overdrafts. Reducing the intraday exposure of unsettled payments means that the failure of a single financial institution will have less of

Foreign direct and portfolio investment in developing and transition economies



Source: IMF. World Economic Outlook database.

an impact on the ability of the other financial institutions it deals with (its counterparties) to make good on their payments. Hence, payment system reform is an important component of the efforts to strengthen the market mechanism in banking and finance and reduce the cost of the financial safety net.

Financial institutions are more cautious. A more cautious attitude toward risk on the part of international banks can be seen in their efforts to reduce their credit risk exposures—the traditional source of banking problems and the most difficult exposure to hedge. Banks have reduced their unsecured credit exposures to other banks and financial institutions in favor of collateralized lending through repurchase agreements. Although detailed balance sheet data are not readily available, bank rating agencies confirm that the international banking sector has become more diversified, in part because the increased securitization of bank loans has allowed banks to achieve a better geographic and sectoral distribution of their credit exposures.

The management and control of the credit risk associated with their off-balance-sheet derivative positions has also been improved. It has become commonplace to mark positions to market regularly (reappraise them to ensure they reflect current market values) and, if necessary, to ask for collateral. Moreover, major banks now undertake extensive bilateral netting of credit exposures with their major counterparties, which is estimated to reduce gross exposures by more than half. Most important, there also appear to be greater efforts to guard against unlikely but costly events: for example, stress-testing and simulations of the impact of a loss of liquidity in individual markets are now routine risk-management tools. These developments represent an improvement over the situation of only 18 months ago, as well as a significant change in attitude toward risk and risk management.

There are indications that the investment activities of the high-risk/high-return pools of institutional investment funds have become more cautious. The high leveraging and rapid positioning—with the extensive use of derivatives (see table)—across international markets and currencies by this new group of market participants added considerable pressure and momentum to market movements. During 1990–94, hedge funds scored major gains and saw their capital under management grow from less than $10 billion to more than $100 billion; there are now more than 3,200 such funds. However, during the last two years, these gains have been offset by large losses. Several of the larger hedge funds and proprietary traders have curtailed, for now, their activities and re-examined their strategies. What is more important, the international banking sector, which provides the credit that allows the funds to leverage their capital, also has become more conservative in managing exposure to this sector and has raised margins and collateral requirements. Banks' proprietary trading activity has likewise been cut back since the end of 1994. These changes in investment strategies appear to be reflecting both improvements in risk assessment and changes in preferences for risk taking.

Emerging markets. Developments in the emerging markets in late 1995 to early 1996 represent a further example of a return to a more stable environment. Most developing countries appear to have become more cautious about relying on highly volatile short-term portfolio capital flows, and investors seem to be paying more attention to economic fundamentals when evaluating the risks of investing in emerging markets. Significant flows of capital had surged, at relatively low spreads, into many of the emerging markets during the first half of the 1990s, as a result of optimistic assessments of the borrowers' economic prospects and yields that were relatively attractive vis-à-vis yields in industrial country markets (see chart). Flows began to level off in 1994 when interest rates rose in some of the major industrial countries. The devaluation of the Mexican peso in December 1994, and the financial contagion that followed during the first quarter of 1995, produced a sharp across-the-board decline in flows to emerging markets, combined with significant market pressures on the exchange rates of several countries. Most of the emerging market countries, regardless of economic performance, felt at least some temporary effects from the changes in investor sentiment and the rebalancing of international portfolios that followed.

After the initial overreaction to the Mexican crisis, investors began to discriminate more carefully between regions and then between countries within regions, and investment increasingly took the form of more stable, longer-term direct investment, rather than portfolio flows. For example, while net foreign direct investment in developing countries increased by 17 percent in 1995, net portfolio flows declined by 27 percent. The regional pattern and composition of flows suggest that investors have become more sensitive to economic fundamentals in host countries—the size of current account deficits in relation to foreign exchange reserves, external debt, and domestic saving; growth potential; and the soundness of the banking system. Furthermore, those segments of the international investment community—mostly institutional investors—that invested heavily in the emerging markets appear to have become more knowledgeable; the quality of country research and the availability of financial data all have improved, compared with what existed in 1994. Although continued volatility in emerging market asset prices and capital flows cannot be ruled out, the risk of contagion from a disturbance in one of the major recipient countries is now thought to be lower than in 1995.

Lessons learned

Market participants in the major industrial countries appear to be heeding the lessons from their earlier mistakes and excesses. For now, investment behavior is viewed as having become more conservative, with leveraged position-taking in the global financial system having been reduced to the levels of the late 1980s, and with banks having become more conservative in financing leverage. It also appears that the official sector has been able to restructure financial regulations and oversight in response to changes in the environment, and cooperation in the surveillance of international banking markets has been strengthened. All in all, it appears that international financial markets are now better placed to support global macroeconomic developments. F&D

This article was prepared by a staff team from the IMF's Research Department and was adapted from Chapter II of International Capital Markets: Developments, Prospects, and Key Policy Issues, *World Economic and Financial Surveys*, *International Monetary Fund (Washington, 1996).*