



The Federal Reserve Board

Remarks by Chairman Alan Greenspan

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Lessons from the Global Crises

With the benefit of hindsight, we have been endeavoring for nearly two years to distill the critical lessons from the global crises of 1997 and 1998. From what seemed at the time to be isolated and contained disruptions in Thailand and Indonesia, economic turmoil deepened and spread, ultimately engulfing the emerging-market economies of East Asia and other parts of the globe and then the financial markets of industrial countries.

The failure of normal adjustment processes to contain the financial turmoil made this crisis longer and deeper than any of us had expected in its early days. One possible clue to this breach may reside not in the events leading up to the East Asian crisis in the spring of 1997, but rather in the extraordinary episode of financial market seizure that afflicted some emerging-market and industrial-country markets, particularly in the United States, a year ago.

Following the Russian default of August 1998, public capital markets in the United States virtually seized up. For a time not even investment-grade bond issuers could find reasonable takers. While Federal Reserve easing shortly thereafter doubtless was a factor, it is not credible that this move was the whole explanation of the dramatic restoration of most, though not all, markets in a matter of weeks. The seizure appeared too deep seated to be readily unwound solely by a cumulative 75 basis point ease in overnight rates. Arguably, at least as relevant was the existence of backup financial institutions, especially commercial banks, that replaced the intermediation function of the public capital markets.

As public debt issuance fell, commercial bank lending accelerated, effectively filling in some of the funding gap. Even though bankers also moved significantly to risk aversion, previously committed lines of credit, in junction with Federal Reserve ease, were an adequate backstop to business financing.

With the process of credit creation able to continue, the impact on the real economy of the capital market turmoil was blunted. Firms were able to sustain production, business and consumer confidence were not threatened, and a vicious circle--an initial disruption in financial markets leading to losses and bankruptcies among their borrowers and thus further erosion in the financial sector--never got established.

What we perceived in the United States in 1998 may be an important general principle: Multiple alternatives to transform an economy's savings into capital investment offer a set of backup facilities should the primary form of intermediation fail. In 1998 in the United States, banking replaced the capital markets. Far more often it has been the other way around, as it was most recently in the United States a decade ago.

Highly leveraged institutions, such as banks, are, by their nature, periodically subject to seizing up as difficulties in funding leverage inevitably arise. The classic problem of bank risk management is to achieve an always elusive degree of leverage that creates an adequate return on equity without threatening default.

The success rate has never approached 100 percent, except where banks are credibly guaranteed, usually by their governments, in the currency of their liabilities. But even that exception is by no means ironclad, especially when that currency is foreign.

When American banks seized up in 1990, as a consequence of a collapse in the value of real estate collateral, the capital markets, largely unaffected by the decline in values, were able to substitute for the loss of bank financial intermediation. Interestingly, the then recently developed mortgage-backed securities market kept residential mortgage credit flowing, which in prior years would have contracted sharply. Arguably, without the capital market backing, the mild recession of 1991 could have been far more severe.

Similarly Sweden, like the United States, has a corporate sector with a variety of non-banking funding sources. Bank loans in Sweden in the early 1990s were concentrated in the real estate sector, and when real estate prices also collapsed there, a massive government bailout of the banking sector was initiated. The Swedish corporate sector, however, rebounded relatively quickly. Its diversity in funding sources may have played an important role in this speedy recovery, although the rapidity and vigor with which Swedish authorities addressed the banking sector's problems undoubtedly was a contributing factor.

The speed with which the Swedish financial system overcame the crisis offers a stark contrast with the long-lasting problems of Japan, whose financial system is the archetype of virtually bank-only financial intermediation. The keiretsu conglomerate system, as you know, centers on a "main bank," leaving corporations especially dependent on banks for credit. Thus, one consequence of Japan's banking crisis has been a protracted credit crunch. Some Japanese corporations did go to the markets to pick up the slack. Domestic corporate bonds outstanding have more than doubled over the decade while total bank loans have been almost flat. Nonetheless, banks are such a dominant source of funding in Japan that this nonbank lending increase has not been sufficient to avert a credit crunch.

The Japanese government has intervened in the economy and is injecting funds in order to recapitalize the banking system. While it has made some important efforts, it has yet to make significant progress in diversifying the financial system--which arguably could be a key element, although not the only one, in promoting long-term recovery. Japan's banking crisis is also ultimately likely to be much more expensive to resolve than the American and Swedish crises, again providing prima facie evidence that financial diversity helps limit the

effect of economic shocks.

This leads one to wonder how severe East Asia's problems would have been during the past eighteen months had those economies not relied so heavily on banks as their means of financial intermediation. One can readily understand that the purchase of unhedged short-term dollar liabilities to be invested in Thai baht domestic loans (counting on the dollar exchange rate to hold) would at some point trigger a halt in lending by Thailand's banks. But why did the economy need to collapse with it? Had a functioning capital market existed, the outcome might well have been far more benign.

Before the crisis broke, there was little reason to question the three decades of phenomenally solid East Asian economic growth, largely financed through the banking system, so long as the rapidly expanding economies and bank credit kept the ratio of nonperforming loans to total bank assets low. The failure to have backup forms of intermediation was of little consequence. The lack of a spare tire is of no concern if you do not get a flat.

East Asia had no spare tires. The United States did in 1990 and again in 1998. Banks, being highly leveraged institutions, have, throughout their history, periodically fallen into crisis. Where there was no backup, they pulled their economies down with them. One can wonder whether in nineteenth century United States, when banks were also virtually the sole intermediary, the numerous banking crises would have periodically disabled our economy as they did, had alternate means of intermediation been available.

In dire circumstances, modern central banks have provided liquidity, but fear is not always assuaged by cash. Even with increased liquidity, banks do not lend in unstable periods. The Japanese banking system today is an example: The Bank of Japan has created massive liquidity, yet bank lending has responded little.

With very large nonperforming loans of indeterminate value, the size of capital in Japanese banks is difficult to judge. The periodic eruption of the so-called Japanese funding premium in recent years attests to the broad degree of uncertainty of the viability of individual banks. This understandably creates considerable caution on the part of Japanese bank loan officers in committing scarce bank capital. But unlike the United States and Sweden a decade ago, alternate sources of finance are not yet readily available.

The Swedish case, in contrast to America's savings and loan crisis of the 1980s and Japan's current banking crisis, also illustrates another factor that often comes into play with banking sector problems: Speedy resolution is good, whereas delay can significantly increase the fiscal and economic costs of a crisis. Resolving a banking-sector crisis often involves government outlays because of implicit or explicit government safety net guarantees for banks. Accordingly, the political difficulty in raising taxpayer funds has often encouraged governments to procrastinate and delay resolution, as we saw during our savings and loan crisis. Delay, of course, can add to the fiscal costs and prolong a credit crunch.

The annals of the United States and others over the past several decades tell us that

alternatives within an economy for the process of financial intermediation can protect that economy when one of those financial sectors experiences a shock. But the mere existence of a diversified financial system may well insulate all aspects of a financial system from breakdown. Australia serves as an interesting test case in the most recent Asian financial turmoil. Despite its close trade and financial ties to Asia, the Australian economy exhibited few signs of contagion from contiguous economies, arguably because Australia already had well-developed capital markets as well as a sturdy banking system. But going further, it is plausible that the dividends of financial diversity extend to more normal times as well.

It is not surprising that banking systems emerge as the first financial intermediary in market economies as economic integration intensifies. Banks can marshal scarce information about the creditworthiness of the borrower to guide decisions about the allocation of capital. The addition of distinct capital markets outside of banking systems is possible only if scarce real resources are devoted to building a financial infrastructure. It is a laborious process whose payoff is often experienced only decades later. It is thus difficult to initiate, especially in emerging economies that are struggling to edge above the poverty level. They perceive the need to concentrate on high *short-term* rates of return to capital rather than accept more moderate returns stretched over a longer horizon. We must continuously remind ourselves that financial infrastructure comprises a broad set of institutions whose functioning, like all else in a society, must be consistent with the underlying value system and hence its time preference.

On the surface, financial infrastructure appears to be a strictly technical concern. It includes accounting standards that accurately portray the condition of the firm, legal systems that reliably provide for the protection of property and the enforcement of contracts, and bankruptcy provisions that lend assurance in advance as to how claims will be resolved in the inevitable result that some business decisions prove to be mistakes. Such an infrastructure in turn promotes transparency within enterprises and corporate governance procedures that will facilitate the trading of claims on businesses in open markets using standardized instruments rather than idiosyncratic bank loans. But the development of such institutions is almost invariably molded by the culture of a society. The antipathy to the "loss of face" in Asia makes it difficult to institute, for example, the bankruptcy procedures of western nations. And even the latter differ from one another owing to deep-seated differences in views of creditor-debtor relationships. Arguably the notion of property rights in today's Russia is subliminally biased by a Soviet education that inculcated a highly negative view of individual property ownership. Corporate governance that defines the distribution of power, of course, invariably reflects the most profoundly held societal views of the appropriate interaction of parties in business transactions.

It is thus not a simple matter to append financial infrastructure to an economy developed without it. Accordingly, full convergence across countries of domestic financial infrastructure or even of the international components of financial infrastructure is a very difficult task.

Nonetheless, the competitive pressures toward convergence will be a formidable force in the future if, as I suspect, additional forms of financial intermediation will be increasingly seen

as benefiting an economy that develops capital markets. Moreover, a broader financial infrastructure will also likely be seen as strengthening the environment for the banking system and enhancing its performance. The result almost surely will be a more robust and more efficient process of capital allocation, as a recent study by Ross Levine and Sara Zervos suggests.¹

Its analysis reinforces the conclusion that financial market development improves economic performance, over and above the benefits offered by banking sector development alone. The results are consistent with the idea that financial markets and banks provide useful, but different, bundles of financial services.

It is no coincidence that the lack of adequate accounting practices, bankruptcy provisions, and corporate governance have been mentioned as elements in several of the recent crises that so disrupted some emerging-market countries. Had these elements been present, along with the capital markets they would have supported, the consequences of the initial shocks of early 1997 may well have been quite different.

It is noteworthy that the financial systems of most continental European countries escaped much of the turmoil of the past two years. And looking back over recent decades, we find fewer examples in continental Europe of banking crises sparked by real estate booms and busts or episodes of credit crunch of the sort I have mentioned in the United States and Japan.

Until recently, the financial sectors of continental Europe were dominated by universal banks, and capital markets are still less well developed there than in the United States or the United Kingdom. The experiences of these universal banking systems may suggest that it is possible for some bank-based systems, when adequately supervised and grounded in a strong legal and regulatory framework, to function robustly.

But these banking systems have also had substantial participation of publicly owned banks. These institutions rarely exhibit the dynamism and innovation that many private banks have employed for their, and their economies', prosperity. Government participation often distorts the allocation of capital to its most productive uses and undermines the reliability of price signals. But at times when market adjustment processes might have proved inadequate to prevent a banking crisis, such a government presence in the banking system can provide implicit guarantees of resources to keep credit flowing, even if its direction is suboptimal.

In Germany, for example, publicly controlled banking groups account for nearly 40 percent of the assets of all banks taken together. Elsewhere in Europe, the numbers are less but still sizable. In short, there is some evidence to suggest that insurance against destabilizing credit crises has been purchased with a less efficient utilization of capital. It is perhaps noteworthy that this realization has helped engender a downsizing of public ownership of commercial banks in Europe, coupled with rapid development of heretofore modest capital markets, changes which appear to be moving continental Europe's financial system closer to the structure evident in Britain and the United States.

Diverse capital markets, aside from acting as backup to the credit process in times of stress, compete with a banking system to lower financing costs for all borrowers in more normal circumstances. Over the decades, capital markets and banking systems have interacted to create, develop, and promote new instruments that improved the efficiency of capital creation and risk bearing in our economies. Products for the most part have arisen within the banking system, where they evolved from being specialized instruments for one borrower to having more standardized characteristics.

At the point that standardization became sufficient, the product migrated to open capital markets, where trading expanded to a wider class of borrowers, tapping the savings of larger groups. Money market mutual funds, futures contracts, junk bonds, and asset-backed securities are all examples of this process at work.

Once capital markets and traded instruments came into existence, they offered banks new options for hedging their idiosyncratic risks and shifted their business from holding to originating loans. Bank trading, in turn, helped these markets to grow. The technology-driven innovations of recent years have facilitated the expansion of this process to a global scale. Positions taken by international investors within one country are now being hedged in the capital markets of another: so-called proxy hedging.

But developments of the past two years have provided abundant evidence that where a domestic financial system is not sufficiently robust, the consequences for a real economy of participating in this new, complex global system can be most unwelcome.

Improving deficiencies in domestic banking systems in emerging markets will help to limit the toll of the next financial disturbance on their real economies. But if, as I presume, diversity within the financial sector provides insurance against a financial problem turning into economy-wide distress, then steps to foster the development of capital markets in those economies should also have an especial urgency. And the difficult ground work for building the necessary financial infrastructure--improved accounting standards, bankruptcy procedures, legal frameworks and disclosure--will pay dividends of their own.

The rapidly developing international financial system has clearly intensified competitive forces that have enhanced standards of living throughout most of the world. It is important that we develop domestic financial structures that facilitate and protect our international financial and trading systems that, aside from their periodic setbacks, have brought so much good.

Footnotes

¹ Ross Levine and Sara Zervos, "Stock Markets, Banks, and Economic Growth," *American Economic Review*, vol. 88 (June 1998), pp. 537-558.

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