Systemic Supervision - *A Necessity of Financial Modernization*

by Cathy E Minehan[*]

The world of financial services has changed rapidly in the past decade. The recent pace of innovation suggests that change could, if anything, accelerate in the coming years. Such an environment poses difficult challenges for financial industry supervisors, especially in addressing threats to the overall stability of the financial system. Financial supervision in the United States has evolved in recent years to keep pace, but the coming, new environment may require an approach to supervision that more explicitly monitors the health of the financial system as a whole.

Aspects of this issue have been widely discussed in the regulatory and the financial services communities, nationally and internationally, as reflected in published works by the Bank for International Settlements and the Group of Thirty. The subject holds obvious importance to New England as well, given the breadth of the region's financial services industry and the importance of that industry to the region's economy.

Society has reaped huge benefits from global competition in providing financial services, spurred by the revolution in information technologies and the related development of sophisticated financial instruments. The advent of instantaneous communications has powerfully impacted financial activity worldwide, resulting in institutions that are globally active to an unprecedented degree. The power of computers and the breadth of telecommunications networks, along with advances in financial theory, have spawned new products and allowed capital to flow more efficiently to projects and businesses worldwide. Such innovations and efficiencies promote economic growth but, at the same time, introduce levels of complexity and interdependency that present new risks as well.

The nation's largest financial intermediaries are among the institutions most affected by recent developments. Increasingly, the lines between traditionally separate financial businesses — banking, insurance and securities, for example — have become blurred by new products and by de facto or de jure changes in allowable activities. U.S. laws may or may not be changed to eliminate the restrictions imposed by the Glass-Steagall Act and permit full integration of financial services firms in the near future, but integration is taking place nonetheless. As these large firms face intensified competition from new rivals, consolidation within the financial services industry has become the common strategy to develop the scope and means needed to excel worldwide.

This trend shows no likelihood of diminishing — large financial conglomerates are likely to play an even greater role in the world economy as time progresses. Such conglomerates, whether their primary business is commercial banking, investment banking, or insurance, will continue to design new, customized products and deliver them

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more efficiently over a wider geographic area. Sophisticated techniques for centralized risk management allow large firms to analyze risks across a spectrum of activities in the organization and allocate resources to the countries and products that provide the highest risk-adjusted returns. As these firms grow in size and scope, they also become more important players in domestic and international payments systems, and in the clearing and settlement of all types of financial transactions.

One inevitable side effect of these developments is a growing web of interconnectedness; problems within this group of financial giants can cause financial contagion that in turn can create gridlock in payment and settlement processes. While contagion risk alone is troublesome, even more critical is the possibility that gridlock will coincide with other problems and affect the viability of financial institutions more generally—a true systemic crisis. Current sophisticated risk management techniques act to control risks at the firm level, as does an increased emphasis by supervisors and market participants on financial transparency and, of course, the traditional lender-of-last-resort capabilities of the central bank can help to stem such crises as well. But, while the likelihood of a systemic crisis may be low, the costs, if realized, would be potentially enormous.

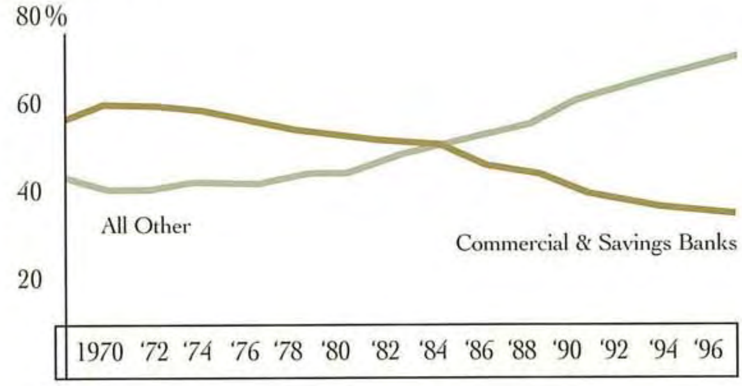
The Nature of Systemic Risk

One way in which large financial institutions are interconnected is through the payments system, the set of mechanisms for daily clearing and settling of transfers among banks, securities firms, and others. Systems that clear and settle large-value transactions stemming from payment orders and trading of financial instruments and their derivative products are used primarily by the largest financial institutions. In such systems, processing and settlement of payments are often not simultaneous, and the inability of one participant to settle could cause other participants to fail to meet their obligations. Isolated shocks could cascade into multiple problems. Such a cascade could be transmitted from the direct participants of a clearing system to financial institutions that depend on one of the participants to settle payment obligations. Risk controls both at the firm level and within clearing systems aim at reducing the probability of these problems, but this risk probably can never be fully eliminated.

Financial institutions are also interconnected when they invest in similar types of assets, some of which can be difficult for the marketplace to value or monitor. The disclosure of problems at one such institution can have spillover effects on others. For example, if short-term debt holders cannot distinguish between institutions, or even soverign states, that are viable from those that are not, they may refuse to roll over the debt of institutions with assets similar to those of the troubled firms. If this refusal forces the liquidation of assets at fire-sale prices, initially solvent institutions may experience difficulties. The risk of "runs" is greatest for banks, because their deposit contract involves obligations that can be withdrawn essentially on demand, while at least a portion of their assets may lack a ready market value. But nonbank financial firms are not immune to run-like conditions.

The Lines Have Blurred...

In lending
Credit Created



In Underwriting
Top 15 Underwriters, 1997

Merrill Lynch
Salomon Smith Barney
Morgan Stanley Dean Witter
Goldman Sachs
Lehman Brothers
J.P. Morgan
CS First Boston
Bear, Stearns
Donaldson, Lufkin & Jenrette
Chase Manhattan
Paine Webber
Prudential Securities
NationsBank
NatWest Markets
Deutsche Morgan Grenfell

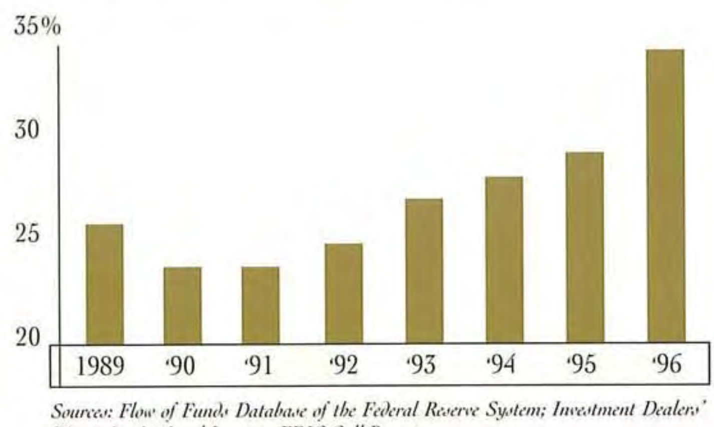
In Derivatives
Top 15 Derivatives Dealers, 1997

Citicorp
Goldman Sachs
J.P. Morgan
SBC Warburg
Merrill Lynch
Morgan Stanley Dean Witter
Chase Manhattan
UBS Securities
Deutsche Morgan Grenfell
NatWest Markets
Bankers Trust
BZW
CS First Boston
Bank America
Lehman Brothers

■ *Commercial Bank* ■ *Securities Firm* ■ *Insurance Company*
■ *Subsidiary of Foreign Financial Services Company*

...and The Major Players Have Consolidated.

Top 25 U.S. Banks' Share of Total Bank Assets, 1997



Sources: Flow of Funds Database of the Federal Reserve System; Investment Dealers' Digest; Institutional Investor; FDIC Call Reports.

Many of the largest securities and life insurance companies finance a portion of their operations with short-term debt; in times of financial turmoil, when some securities may be difficult to liquidate, the announcement of a problem at one such firm could cause lending to similar firms to be curtailed as well.

A related problem occurs when the failure of a major player in a particular asset market depresses the asset's value, causing other firms holding the same asset to suffer. The failure of Drexel Burnham Lambert in 1990, for example, caused the junk bond market to become illiquid. Many other markets are similarly structured. Moreover, if a market leader has developed an expertise that customers cannot easily replicate, its failure can sever important relationships, impairing financial and, potentially, economic activity.

The problems of interconnectedness can be multiplied by the simultaneous occurrence of a threat to the viability of financial institutions, such as a widespread "macro" shock to asset prices or a major international issue of sovereign insolvency. Events can proceed as follows: a decline in asset values exacerbates liquidity risk, perhaps leading to insolvency concerns about some financial institutions. A few key institutions falter, exacerbating problems because of their extensive connections with other firms. Because other firms are already weakened by the shock, they may lack the capital base to protect against counterparty problems, and additional failures can occur. In the end, the severity and cost of resolving the original macro problem multiplies and the system itself is in danger.

Financial Market Supervision

Mitigating systemic concerns is a central challenge for financial policy makers. Increased financial transparency has been encouraged as a way to enable markets to better assess risks, and arguably it has done so. But systemic risk, though rare, may be too unpredictable and widespread for markets to control fully. Indeed, governmental

Evolution of the Current Supervisory Framework

Banks were supervised to varying degrees at the state level prior to the Civil War, but bank notes circulating at a wide range of discounts made interstate commerce difficult. To address the problem, legislation in the 1860s established a uniform national currency and brought the federal government into active supervision of national banks through the establishment of the Office of the Comptroller of the Currency (OCC). The OCC, the first of the federal bank supervisors, was granted the responsibility for chartering and supervising national banks.

Despite supervision of banks by states and by the OCC, bank runs and financial panics continued to occur through the early 1900s. These crises were exacerbated by the inability of the banking system to provide for the orderly conversion of deposits to currency. Banks were forced to liquidate assets to meet obligations to depositors when reserves were exhausted. To curtail such disruptions to the financial system, the Federal Reserve System was established in 1913 as the country's central bank, lender-of-last-resort and mechanism for ensuring an elastic currency. The Federal Reserve was granted authority to supervise member banks, to provide a source of liquidity to member banks through its discount window and to establish a nationwide payments system. Bank supervisory authority thereafter was shared at the federal level, with the OCC supervising national banks and the Federal Reserve supervising state-chartered banks that elected to become members of the Federal Reserve System.

The third piece of our current bank supervisory structure was a by-product of the stock market crash of 1929 and the Great Depression. That era witnessed an unprecedented wave of bank failures, and as depositors lost savings, public confidence in the banking system collapsed. The underwriting of securities by bank affiliates was viewed as a contributing factor, and as a result the Banking Act of 1933 enforced a separation of banking from securities activities and established federal deposit insurance. The Federal Deposit Insurance Corporation (FDIC) was organized to implement and administer the deposit insurance provisions. The FDIC was also granted authority to examine all insured banks, although in practice FDIC supervision has been confined primarily to state-chartered banks that are not members of the Federal Reserve System.

Since the 1930s, commercial banks have been supervised by a combination of state banking supervisors, the FDIC, the Federal Reserve, and the OCC. Banks supervision and regulation of free markets is premised on the need to ensure that broad areas of public interest are protected from harm as individual firms optimize profits. In terms of maintaining financial stability, government supervision and regulation has focused on three main areas:

- maintaining depositor and investor confidence and the safety of insurance funds;
- ensuring broad access to financial services and overall effectiveness and efficiency of markets; and
- preventing systemic contagion.

While all these objectives are important, increasingly the prevention of systemic contagion must take center stage.

The nation's current financial supervisory system evolved over time and in response to a variety of specific industry events. The creation of the Federal Reserve System, for example, was in part the direct result of the bank liquidity shortage brought about by the financial panic of 1907; the Federal Deposit Insurance Corporation was founded on the heels of bank failures during the Great Depression. State financial service regulatory bodies coexist with federal, and, at least in the case of insurance companies, are the primary regulatory bodies. Whether state or federal, financial service regulators tend to focus on those industries and the risks they were established to oversee—for example, investor safety in the security industry is a major concern of the Securities and Exchange Commission. Bank holding company supervision and regulation is somewhat of an exception as it encompasses all the subsidiaries of the holding company, though, as a result of regulation, and as a matter of evolution, such subsidiaries are largely engaged in businesses closely related to banking. Thus, financial supervision and regulation often has a relatively narrow focus, though efforts at the Federal level—specifically through the President's Working Group on Financial Markets—are aimed in part at creating a broader perspective.

gradually regained viability and competed for funds, employing the use of holding company structures to engage in activities not permissible under a bank charter. Because of concerns that holding companies were being used to circumvent geographic and investment restrictions on banks, another layer of supervision was added to the existing framework in 1956: multi-bank holding companies were brought under the jurisdiction of the Federal Reserve, and in 1970 that authority was expanded to cover all bank holding companies. As supervisor of bank holding companies, the Federal Reserve was charged with ensuring that the nonbanking activities of those companies were closely related to banking and yielded net public benefits. It has been primarily through the holding company vehicle that banks have been permitted by supervisory authority to gain experience with nonbank financial products and services as well as to diversify their banking operations.

The Office of Thrift Supervision (OTS) is the primary regulator of all federal and many state-chartered thrift institutions. The OTS was established as a bureau of the Department of the Treasury on August 9, 1989. Up until 1989, thrift institutions were primarily regulated by the Federal Home Loan Bank Board (FHLBB). However, not satisfied with the FHLBB oversight of the industry during the thrift crisis of the 1980s, Congress abolished the FHLBB and established the OTS.

The Securities and Exchange Commission (SEC) was also established in the 1930s, to supervise the practices of the securities industry. The SEC exercises jurisdiction over the original issuance, distribution, and trading of securities as well as investment companies and advisors, pursuant to federal securities law. The SEC's supervisory framework relies on a combined public-private effort in which significant activities are delegated under federal securities laws to Self-Regulating Organizations (SROs), such as the New York Stock Exchange. SROs are responsible for preventing fraudulent acts, protecting investors, and providing for a free and open market. They also ensure an investment firm's ability to meet its day-to-day obligations given its rapid turnover of financial assets.

Responsibility for insurance supervision still rests primarily with the states, with coordination facilitated by the National Association of Insurance Commissioners. Historically, state insurance commissioners have been independent regulators with legislated responsibility to administer and enforce state insurance laws. State insurance regulation emphasizes consumer protection, with supervisory approval often required for policy terms, rates, and disclosures. Consumer protection is also the principal focus of underwriter solvency oversight.

BROAD-BASED FINANCIAL INDUSTRY CONSOLIDATION AND INTERCONNECTEDNESS, COUPLED WITH THE ADVENT OF INSTANTANEOUS COMMUNICATIONS, HAVE POWERFULLY IMPACTED FINANCIAL ACTIVITY WORLDWIDE, RESULTING IN INSTITUTIONS THAT ARE GLOBALLY ACTIVE TO AN UNPRECEDENTED DEGREE AND INCREASING THE POTENTIAL FOR MORE RAPID AND WIDESPREAD TRANSMISSION OF SYSTEMIC RISK.

This fragmented system has the virtue of creating supervisors intimately aware of their particular industries, but it could lack the inherent strength of a system specifically crafted to achieve the goal of containing systemic risk. Moreover, the challenges facing supervisors are now evolving at an accelerated rate. Many of the complex, new financial products virtually defy categorization; they do not fall clearly within the traditional boundaries of commercial banking, investment banking, or insurance. As the financial services industry changes, so must the supervisory structure. It may be time to consider the benefits of a supervisor charged specifically with the objective of monitoring and ultimately limiting systemic risk in the financial system, wherever and in whatever financial industry structure it may arise.

The Systemic Supervisor: Two Models

Any definition of the role of a systemic supervisor, and the specific institutions that it would oversee, would be the subject of considerable debate in legislative and other circles. However, as a first premise a systemic supervisor should be responsible primarily for those firms posing the greatest risks to the stability of the financial system—firms of significant size and impact relative to domestic and global markets; those extensively involved with the payments system and in the clearing of financial transactions more generally; and those that could create financial contagion in this country and abroad. Again, as a general premise, this definition would likely include the largest banks and securities firms, as well as financial conglomerates that control significant banking organizations. It probably would not include finance companies, and many insurance and securities firms and banks in the United States whose activities are of such a scale, scope and complexity not to present undue systemic threat. And it certainly would not include non-financial companies which are fully outside of the public safety net.

The systemic supervisor would focus on limiting the risk of cascading transactional liquidity, and credit problems. Its emphasis would be on counterparty relationships, netting arrangements, concentration of assets and capital adequacy, relationships within the payments system and securities clearing systems, coordination with foreign supervisors, and the organization's consolidated risk management infrastructure. In addition, because of the complexity of the organizations supervised, enhanced financial disclosure would be essential, so that market evaluations and discipline could continue to complement supervisory evaluations.

A systemic supervisory approach might be implemented in a number of ways—all of which present some obstacles—but two models are worthy of discussion for illustrative purposes. Under one regime, a *systemic supervisor* would be solely responsible for the prudential supervision—the financial oversight, oriented towards safety and soundness—of all aspects of those firms that are potential conduits of a systemic crisis. Under this model, the systemic supervisor would oversee both functional business lines and the conglomerate's activities as a whole, and would be responsible for all prudential supervision of the firm, taking account of

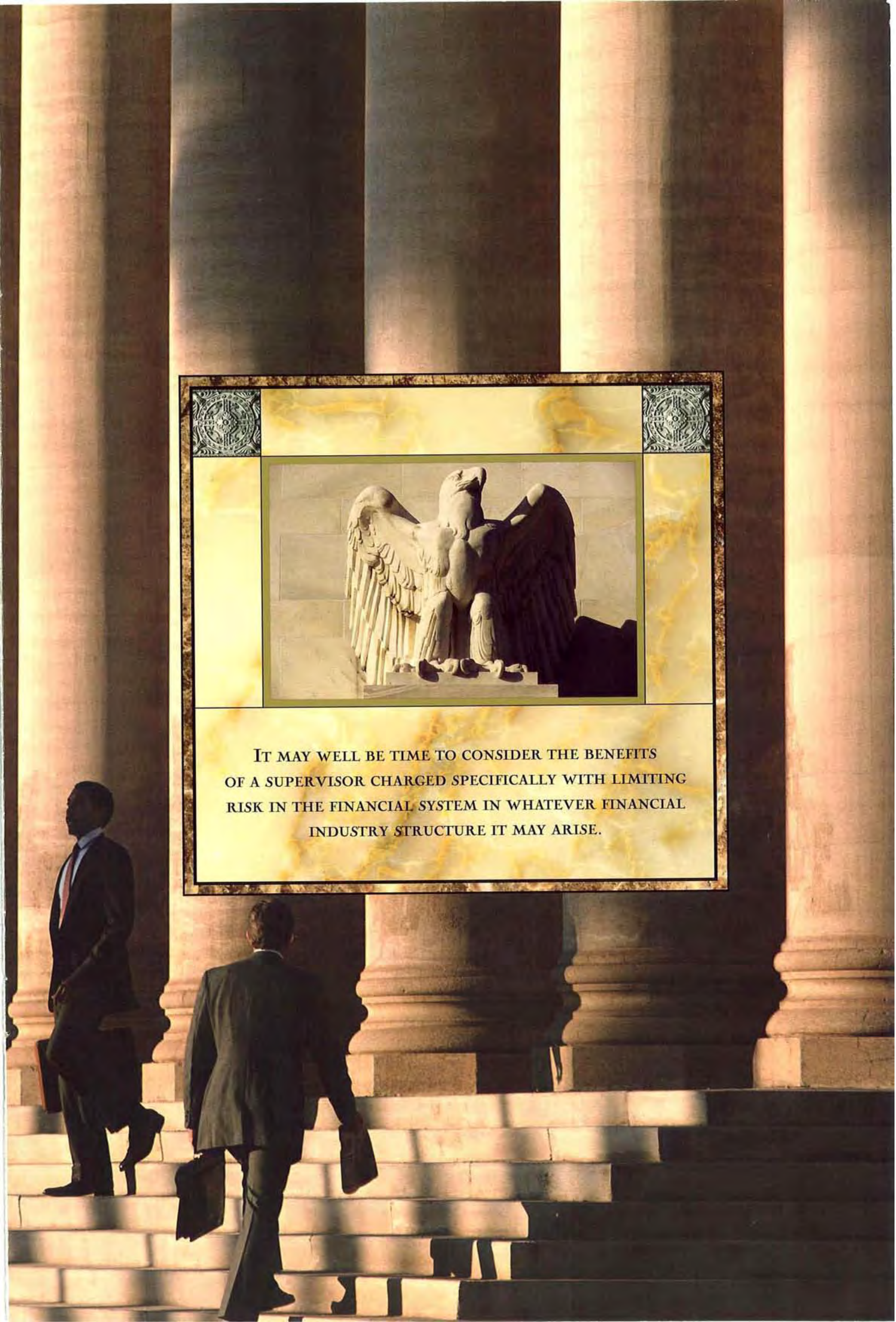
the effect that risk-taking in any segment of the firm could have on the organization as a whole. Traditional functional supervisors would have little role in the prudential supervision of these large financial institutions, but would retain all other supervisory responsibilities, such as consumer and antitrust compliance, for the firm and its subsidiaries. Obviously this model would be a major change in the current regulatory regime, and while theoretically strong and arguably efficient, it may be less practical than other models, as is discussed more fully below.

The second choice is a *systemic coordinator*. Under this regime, the systemic supervisor would have ultimate responsibility for the prudential supervision of all firms that are potential conduits of a systemic crisis, but the actual monitoring and supervision would be a collaborative effort between the systemic supervisor and current functional supervisors. For firms whose activities cross business lines, the systemic supervisor, in addition to its focus on limiting systemic risk, would collect and disseminate information among the functional supervisors, and would evaluate capital levels, and examine internal controls, risk management, and managerial activities at the conglomerate level. This approach would represent less of a change from current practice, and is not radically dissimilar to other proposals, but it does require the systemic coordinator to assume responsibility for curbing risk without full control over the supervisory process.

In both approaches, supervision would not change for firms that do not cross functional lines and whose failure is deemed not to threaten the stability of the financial system. For intermediaries whose businesses cross functional lines, but do not pose the same degree of systemic risk, one of the functional supervisors could assume the role of coordinator and take responsibility for collecting and disseminating information. This supervisor would also be responsible for examining the internal controls, risk management, and managerial activities at the conglomerate level.

Both approaches to systemic supervision could appear to increase the risk of moral hazard. Generally speaking, moral hazard occurs when people, institutions and even countries are shielded somehow from the full consequences of their actions, and, as a result, engage in more risk-taking than would be optimal otherwise. It has been argued, for example, that automobile seat belts present moral hazard; they could cause accidents since their use could encourage drivers to believe they can go faster more safely.

In the special case of financial institutions, aspects of moral hazard are often referred to by the phrase "too big to fail." It is thought that institutions so regarded have an incentive to engage in excessively risky activities, or, at a minimum, have a competitive advantage by virtue of their presumed protection from failure. In reality, moral hazard is mitigated by the fact that under current supervisory approaches, managers and shareholders of institutions that fail lose their jobs and investments, respectively, and uninsured creditors face some risk. However, some moral hazard exists, since many institutions are perceived as so critical to markets that they could not be allowed to fail abruptly. However, there is a sense of ambiguity currently about which institutions at any point in time might be so regarded. A systemic supervisor, in either model, would undermine this ambiguity, a fact which would sharpen the dilemma for policy makers.



IT MAY WELL BE TIME TO CONSIDER THE BENEFITS OF A SUPERVISOR CHARGED SPECIFICALLY WITH LIMITING RISK IN THE FINANCIAL SYSTEM IN WHATEVER FINANCIAL INDUSTRY STRUCTURE IT MAY ARISE.

On the one hand, clearly identifying institutions subject to systemic supervision could, at a minimum, give those institutions a cachet that in and of itself could heighten risk taking. On the other hand, enhanced supervisory information for the systemic supervisor could lessen the probability of a systemic crisis, and speed response when one occurs. Arguably, enhanced information and speed become even more vital as the financial services industry grows increasingly more complex and global. The trade-off with ambiguity is difficult, but it may be well worth considering.

Finally, systemic supervision under either approach could complicate the difficult issue of how much and under what circumstances supervisory information is shared internationally, simply by making the repository of relevant data and that repository's information-sharing role more explicit. Currently, international information-sharing is handled on a case-by-case basis, under general BIS agreements and various bi-lateral understandings, and reflects a delicate balance between the need to respond quickly to problems and the legitimate information needs of the appropriate bodies in other countries. Systemic supervision could complicate this process and create expectations as to information flows that could be counterproductive. Even without a change in supervisory regime, however, increasing globalization may require increased transparency.

Systemic Supervision: The Reasonable Model

Implementing systemic supervision under either of the alternatives presents considerable risks and challenges, and, as a result, could generate significant controversy and debate. However, the more far reaching of the alternatives—a single systemic supervisor model—is the more radical, largely as a result of at least three key issues.

First, the task of a systemic supervisor may be quite complex. It may not be feasible for a single supervisory body to assess the risk implications of a broad range of constantly evolving financial services conducted in the same large organization. However, a systemic coordinator working with functional regulators may be able to more effectively address the complexity involved, though issues related to how to coordinate organization-wide capital requirements and risk controls; information-sharing; the level of regulatory overlap; and the limits of regulatory responsibility without full control will doubtless prove difficult.

Second, it may not be possible to arrive at precise definitions of what constitutes systemic risk, or the specific institutions that would be overseen by the systemic supervisor, without some legislative involvement. The development and passage of such legislation would be difficult at best. Lodging authority in a single systemic supervisor likely exacerbates this problem, as major financial institutions might be faced with a move from one known supervisory body or bodies to the new supervisor. Systemic coordination may well ease this transition.

Finally, the single systemic supervisor alternative may confer too much power on a single supervisory body. Under this alternative, other banking and industry supervisors would remain, and would oversee the activities of less systemically sensitive organizations. However, the systemic supervisor's relationship with the largest, most globally active financial services firms could make it a "first among equals" to a perhaps unparalleled degree in recent U.S. regulatory history. The systemic coordinator approach, however,

shares supervisory power more broadly, though it could involve a second level of arguably burdensome supervisory authority for those organizations currently not managed as bank holding companies.

Systemic Supervisory Responsibility

There is no question that implementing systemic supervision, while ultimately necessary, will not be easy to do or without complications and challenge. One of these involves deciding on the appropriate systemic supervisory body. There are several possibilities. Various agencies of the U.S. government have an obvious interest in financial stability and a key role to play particularly if taxpayer funds are involved. Several countries, including the United Kingdom, are looking to an independent supervisory body to oversee all financial institutions. However, even in the United Kindgom, the Bank of England is expected to retain responsibility for financial stability. In other countries, and in the United States, there are good reasons for the central bank to play a substantial role as well.

As the central bank of the United States, the Federal Reserve has an independence from political influence that is helpful in making difficult supervisory and regulatory calls. Protecting financial stability is the inherent responsibility of all central banks and that is one reason why they have broad lender-of-last-resort powers. Clearly these functions are the first line of defense against systemic contagion. The Federal Reserve also has the key task of ensuring the country has a reliable and efficient national payments system. This provides a unique insight into those mechanisms that are often involved in the transmission of systemic risk, and allows policy and operational responses aimed at risk reduction. Finally, the Federal Reserve has a long and respected tradition of working with other central banks and in shaping international perspectives on supervisory and payments matters.

To be sure, academicians and others have argued that central banks could be diverted from their core purpose of promoting price stability if they were also responsible for financial supervision and regulation. As noted above, some countries have ceded broad financial industry supervision and regulation to an independent body, with various links, and sometimes none, to the central bank. It is also true that central bank supervision of banks has had its failures as well as its successes worldwide. However, in this country, the Federal Reserve's record of supervisory oversight, its demonstrated ability in the last fifteen years or so to balance the task of controlling inflation with its supervisory responsibility, and its important focus on financial stability strongly suggest that it play a role in systemic supervision, however it might be implemented.

An Emerging Design for Stability

Competition and innovation flourish best within the context of a safe, sound financial system. The need for systemic supervision is becoming more widely recognized as global financial intermediaries increase their penetration in many countries. While these institutions provide financial services in a more efficient and cost-effective manner, they also increase the speed and severity of the transmission of financial and real shocks. The potential for heightened systemic risk calls for a supervisor that crosses traditional institutional lines, and whose primary focus is the stability of the financial system as a whole. This is an area in which the Federal Reserve can and should play an important role.