Rethinking Financial Regulation

By Thomas M. Hoenig

In recent years, revolutionary changes in financial markets, combined with incidents such as Barings and Daiwa, have revived concerns about the adequacy of financial regulation. Historically, financial regulatory policy has been driven by the view that to maintain the health of the financial system you must maintain the health of individual institutions. Accordingly, if institutions are protected from failure through regulation of capital and prudential supervision, the viability of the system is ensured and the risks to the explicit or implied government safety nets that protect financial institutions are minimized. Indeed, recent discussions about how to deal with incidents such as Barings and Daiwa have centered on ways to extend the traditional safety and soundness regulation of individual institutions to incorporate an increased emphasis on risk management policies and procedures.

In light of ongoing changes in financial markets, however, extending the traditional approach to financial market regulation may not work. Extending the traditional approach may be too costly and difficult, especially for large, globally active institutions, because of the complexities of many new activities and financial instruments. Given these difficulties, it seems appropriate to ask whether there is an alternative regulatory approach to promoting financial stability and protecting government safety nets without sacrificing efficiency or stifling innovation.

My comments today are designed to provide some thoughts on possible alternatives. Two changes in emphasis to the regulatory system are discussed. First, instead of regulating to make institutions fail-safe, an alternative approach is to strengthen the stability of the financial system by designing procedures that prevent large interbank exposures in the payments system and interbank deposits. Second, although moral hazard problems can be contained through traditional regulatory approaches, an alternative is to require those institutions that engage in an expanding array of complex activities to give up direct access to government safety nets in return for reduced regulation and oversight. By further emphasizing these elements within the regulatory system over expanded micromanagement, individual institutions could be permitted to engage in new activities and sometimes to fail because financial stability would be less threatened by the failure of an individual bank—large or small, global or domestic. At the same time, the cost of protecting the safety nets would be better confined because traditional regulation would focus on traditional banks that choose to have access to the safety nets.

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THE CHANGING FINANCIAL SYSTEM

In recent years, financial markets around the world have experienced significant structural changes. Some of the more important changes are the growing importance of capital markets in credit intermediation, the emergence of markets for intermediating risks, changes in the activities and risk profiles of financial institutions, and the increasingly global nature of financial intermediation. These changes have been spurred largely by a technological revolution that has reduced the costs of information gathering, processing, and transmission. As this information revolution continues, there is little doubt that the changes in financial markets will also continue.

More than ever before, banks face greater competition from other financial institutions. Many businesses are turning away from banks and other depository institutions and directly toward capital markets and nonbank intermediaries for their funding needs. In the United States, for example, banks have lost market share in the short-term lending market to commercial paper and finance company loans. Over the past 25 years, bank loans as a share of short-term debt on the books of nonfinancial corporations have fallen from about 80 percent to about 50 percent. In addition, corporations have greater access to other sources of finance, such as medium-term note facilities and junk bonds. Similar movements away from banks and toward capital markets have occurred in Europe, although the movement started later and has not been as large as in the United States. As these changes occur, financial activities are increasingly taking place outside of the traditional bank regulatory framework.

Another change is that intermediation has expanded in scope from credit intermediation to risk intermediation. In particular, growth in the markets for both off-balance and on-balance sheet derivatives has skyrocketed. These markets allow banks to intermediate risk by unbundling the total risk of an asset into its component parts and then transferring combinations of those components to those who are most willing and able to bear the risks. As a result, both financial institutions and nonfinancial corporations are more able to actively manage the risk characteristics of their portfolios.

The increased competition in traditional lines of business and the opportunities in capital and derivatives markets have led the largest domestic and global banks to significantly alter their activities and products. Among the most significant of the new activities are trading and market-making in money markets, capital markets, foreign exchange, and derivatives.

The rise in proprietary trading, market-making, and active portfolio management has also dramatically altered the risk profiles of financial institutions. If used properly for portfolio management, new financial instruments can certainly reduce an institution's risk exposure and raise its profitability and viability in the financial marketplace. If used improperly, however, they expose the institution to sudden, extraordinary losses, raising the likelihood of failure. Moreover, the risks and opportunities for failure are often exacerbated by the leverage associated with the new activities and the larger numbers of players and greater degree of anonymity in financial markets. Increased trading activity, for example, has significantly increased the exposure of banks to market risk—the risk of loss due to changes in asset prices and the volatility of asset prices. Like traditional credit risk, market risk can lead to significant losses and ultimately to failure if not managed appropriately. In contrast to credit-related losses, which can take time to develop, losses due to market risk can occur quickly. The Barings failure is a prime example of how quickly a large exposure to market risk can cause an institution to fail—the bulk of its net losses

occurred over a two-week period, with one-fourth of the losses occurring in a single day.

A final structural change is that financial intermediation has become more global, sweeping aside regional and national borders. In banking, for example, the share of U.S. business loans made by foreign banks rose from about 20 percent in the early 1980s to about 50 percent in the early 1990s. On the other hand, non-U.S. corporations are increasingly turning to U.S. financial firms for their credit needs and financial advice. For example, seven of the top ten merger advisers worldwide are American financial institutions, and each of the top four global underwriters over the past three years have been American firms.

CAN THE TRADITIONAL REGULATORY APPROACH KEEP PACE WITH THE CHANGES?

Understandably, regulators have adapted to the ongoing financial market changes by extending traditional safety and soundness regulatory practices—capital requirements for intermediaries have been raised and adjusted to incorporate new risks, and the emphasis of prudential supervision on risk management has been significantly increased. In light of the changes in financial markets, however, simply extending the traditional regulatory approach to achieve the goals of financial regulation may be too difficult and costly. But before looking at some of the problems with extending traditional regulation, I think we must first take a closer look at the objectives of financial regulation.

The goals of financial regulation

Most people would agree that the principal goal of financial regulation is to promote financial market stability. In an operational sense, this means that financial market disruptions should not have a significant impact on aggregate real economic activity. This definition suggests that the failure of an individual financial institution, even a large institution, should not be a concern unless it is allowed to propagate or become systemic. By itself, the failure of a single, large institution is unlikely to have a great effect on aggregate output because the total assets of even the largest financial firms account for only a small share of aggregate output. When Drexel, Burnham, Lambert failed in 1990, for example, there was no noticeable or lasting effect on economic activity. As we know from the banking panics of the late 1800s and early 1900s, however, failures that propagate through the financial system can have disastrous consequences for the real economy.

The primary ingredients that make it possible for problems at a few institutions to spread to many are the use of extensive leverage by these institutions and their direct ties to the payment system. For example, the failure of a single bank could spread to other banks that have large credit exposures to the failing bank through clearinghouses and correspondent deposits. The failure of these banks, in turn, could spread to other institutions in a similar manner.

As it turns out, actual losses are rarely large enough to turn the financial problems of only a few institutions into a systemwide financial panic. Nevertheless, the mere *possibility* that losses can spread, combined with customer uncertainty about the condition of their banks, can cause depositors and other creditors to lose confidence and run on their banks—both problem and healthy banks alike. In a fractional reserve banking system, bank customers know their deposits are not backed by liquid assets. As a result, if customers are uncertain about the condition of their banks and their funds are not guaranteed, the only certain way they can get all of their money is to be one of the first to withdraw funds before the bank fails. And when a large fraction

of a bank's depositors or creditors behave this way, even solvent banks can fail.

In the United States, the problem of bank runs was solved by the creation of deposit insurance. Other countries also have explicit or implied government guarantees backing their financial institutions. With such guarantees, depositors and creditors have no reason to run when problems occur at banks other than their own. Indeed, they have no reason to run even if they think their own bank might fail.

Such guarantees and the associated loss of market discipline as an effective check on institutional excesses, however, lead to another problem—namely, the moral hazard that institutions will take excessive risks. While preventing runs on solvent institutions is desirable, preventing runs on insolvent institutions is not. The threat of failure keeps a bank honest and inhibits it and the industry from trending toward excessive risks. Without this market discipline provided by creditors willing to withdraw their funds when they suspect a bank of being unsafe, banks have an incentive to take excessive risks. While these risks are borne by the banks, they are also partly borne by taxpayers and others who fund the financial safety nets. In the United States, for example, the risks are borne by the healthy banks who fund the deposit insurance system, by their customers who pay the costs through higher loan rates and lower deposit rates, and ultimately, as we learned from the U.S. savings and loan crisis of the 1980s, by taxpayers.

The moral hazard caused by deposit insurance creates a second reason for financial regulation. Since insured depositors no longer have an incentive to monitor and discipline banks, someone else must take over the responsibility of preventing banks from imposing the costs of excessive risk-taking on the safety nets. This responsibility has naturally fallen to those agencies who are already regulating banks.

Problems in extending the traditional regulatory approach

The traditional approach to maintaining financial stability and to protecting government safety nets is safety and soundness regulation. While safety and soundness regulation has evolved through the years, the premise that underlies this approach is that the best way to maintain the health of the financial system is to maintain the health of individual institutions. According to this view, if institutions are protected from failure through regulation of capital and prudential supervision, the health of the system is ensured and potential risks to the safety nets are minimized.

The regulatory changes of the past decade have largely been within the context of this traditional approach. The raising of capital requirements and the incorporation of risk into capital requirements in accordance with the 1988 Basle Accord on capital standards are an example of how the traditional approach to regulation has been extended. In addition, in the United States, laws such as the FDIC Improvement Act were passed in response to the S&L crisis and the bank failures of the 1980s and early 1990s to reduce the likelihood of future failures.

More recently, discussion in the United States and abroad has turned its attention to how regulation should respond to the ongoing changes in financial markets and to the Barings and Daiwa incidents. The discussion has focused on extending the traditional regulatory system by substantially increasing the degree of oversight of a bank's risk management and internal operations, especially for large, globally active institutions. In the United States, for example, the Federal Reserve and the Office of the Comptroller of the Currency have both started "supervision by risk" programs that increase the focus of bank examinations on risk management processes.

Extending traditional regulation is difficult and costly. Given the extent of the ongoing changes in financial markets, an extension of traditional safety and soundness regulation may not be effective. The biggest problem with extending safety and soundness regulation is that it is costly and difficult to implement for those institutions that are engaging in more active portfolio management and extensive trading and market-making activities. One reason it is so difficult is that many of the new activities and financial instruments and the associated risks and risk management practices are extremely complex. As a result, examiners need to develop the expertise to understand and keep pace with the continuing evolution of asset valuation models and risk management techniques and processes. This difficulty is not meant as a criticism of the capabilities of bank examiners; rather, the point is that the private sector has significantly more resources—both human and financial—than the regulators for keeping pace with the changes in financial markets.

For example, consider the Basle Committee's recent revision to the capital adequacy standards to incorporate market risk. The Committee's capital standards allow banks to use their own value-at-risk models to determine the amount of capital necessary to protect themselves from market risk. Clearly, banks need to use their own models to effectively manage risk. To effectively supervise banks that use their own models, however, examiners need to have the expertise to judge the adequacy of the models and the risk management practices. At a minimum, this requires understanding the quantitative aspects of the model, such as its statistical structure, its accuracy in valuing assets, and the adequacy of the stress tests used to determine the financial consequences of large movements in interest rates and asset prices. In addition, examiners must understand the qualitative aspects of a risk management strategy, such as how management uses the model's information and ensures compliance with its risk management strategy. Indeed, the Barings and Daiwa episodes are prime examples of the importance of these qualitative aspects. The lack of internal controls that monitor compliance with management's risk strategy is the reason that these institutions' exposure to market risk was able to rise to extreme levels. Overall, then, examiners have to know as much about a bank, its model, and control procedures as the rocket scientists who built the model and the management team who designed the risk management strategy.

The complexity of the new activities and instruments also makes traditional safety and soundness regulation more difficult by making traditional capital regulation less meaningful. Capital is harder to measure because it is increasingly difficult to assess the value of many of the new assets that are not regularly traded, such as over-the-counter derivatives and structured notes. Moreover, balance sheet information that is reported at, say, quarterly intervals is less useful because it is only a snapshot of a portfolio whose value can change dramatically within a day. Also, the pure lack of information about many off-balance sheet activities makes it more difficult to assess capital adequacy.

The complexity of the new activities is not the only reason it is more difficult to extend traditional regulation—another reason is the erasure of national borders. With the globalization of finance, uncertainty about regulatory responsibility and the difficulty of coordinating regulatory policies across international agencies have made it easier for problems to go undetected or undisciplined. In the United States, for example, steps were taken after the BCCI failure to prevent global institutions from slipping through the regulatory cracks. The recent Daiwa incident, however, indicates the difficulty of solving these problems.

Finally, extending traditional regulation is more difficult and costly due to the growth of financial activity taking place outside of the banking industry and the traditional bank regulatory system. At a minimum, the growth of activities outside of banking requires bank regulators to coordinate their policies with the regulators of other types of financial institutions, such as securities and insurance firms. In addition, to the extent nonbank activity exposes the financial system to systemic risks, extending the traditional regulatory approach might require extending safety and soundness regulation to other types of financial institutions. This is not only economically costly, but is also probably politically infeasible.

Extending traditional regulation could reduce financial efficiency. A second problem with extending the traditional approach to regulation is that to the extent it makes regulation more intrusive, the efficiency of the financial system is reduced. More intrusive regulation can substantially increase compliance costs. In the United States, for example, the FDIC Improvement Act included certain micromanagement provisions that were costly to implement and monitor.

Efficiency is also reduced because regulatory restrictions, by their nature, slow innovation and spawn attempts to avoid the restrictions. In the United States, the banking industry has devoted significant resources to avoiding and lobbying against laws that prevent it from expanding geographically and from engaging in other financial activities, such as securities underwriting and insurance sales.

Extending traditional regulation might not ensure financial stability. Finally, history is replete with examples of regulation that have led to less, rather than more, stability in an industry–both financial and nonfinancial. One reason stability may decline is that regulation often limits the ability of institutions to adapt to changing market conditions. The U.S. savings and loan crisis in the 1980s is a prime example of how the inability to adapt can wreak havoc on an industry.

ALTERNATIVES TO TRADITIONAL FINANCIAL REGULATION

In light of the problems with simply extending safety and soundness regulation, it is natural to ask whether there is an alternative to the traditional approach. Specifically, is it possible to promote financial stability and protect the safety nets from moral hazard problems in a cost effective way that does not sacrifice efficiency, stifle innovation, or create alternative sources of instability? While I make no pretense that we should abandon all aspects of traditional forms of regulation, I would like to outline two changes that should receive greater emphasis in lieu of expanding our current system. The first change would promote financial stability by expanding efforts at reducing large interbank credit exposures in the payments system and interbank deposits. The second change would protect government safety nets by requiring those institutions that engage in complex activities to give up direct access to the safety nets. In return, these institutions would receive reduced regulation and regulatory oversight. The primary advantages of these features are that financial stability would be threatened less by an individual bank–large or small, global or domestic–while the cost of protecting the safety nets would be limited by focusing traditional regulation on traditional banks that choose to have access to the safety nets.

How could regulation be changed?

The first step in building an alternative regulatory approach is to go back to the beginning and rethink why we are regulating the financial system. As was discussed earlier, a key to ensuring financial stability is to prevent the failure of an

individual institution from spreading through the payments system to an economywide financial crisis. The current approach to protecting the financial system from the propagation of financial disturbances is to try to prevent problems from occurring at individual institutions in the first place by regulating the activities of banks and other financial institutions.

An alternative solution is to set up mechanisms that prevent problems that do occur from spreading to other institutions. Specifically, measures such as collateral requirements, debit caps, and pricing of intraday credit can be used to prevent large interbank credit exposures in the payments system. In addition, limits on interbank deposit exposures and on loans to a single borrower can further protect the economy from problems at both bank and nonbank financial institutions. By limiting interbank exposures, problems at a particular institution cannot threaten the viability of any other institution. As a result, any institution—big or small—could fail without threatening financial stability.

In the United States, we have made some progress in reducing the vulnerability of the payments system to the failures of individual financial institutions. On large-dollar payments systems, such as Fedwire (the Federal Reserve's electronic funds transfer system) and the Clearing House Interbank Payment System (CHIPS), the payments system is protected by a combination of fees on daylight overdrafts, collateral requirements for institutions using the payments systems, well-defined loss allocation formulas to ensure settlement in cases of default, and overdraft and net debit caps. In addition, the FDIC Improvement Act set caps on some interbank deposits. Specifically, banks that have deposits at correspondents who are classified as less than adequately capitalized must limit their interday credit exposure to no more than 25 percent of their capital. Further progress needs to be made in this area, particularly in the settlement of foreign exchange and other international transactions where nonsynchronous operating hours and other institutional features continue to expose banks and other firms to considerable risks.

Even if large interbank exposures are limited, however, safety and soundness regulation is needed to protect government safety nets from the moral hazard problems at institutions protected by the safety nets. In light of the costs and difficulties of implementing prudential supervision for larger institutions who are increasingly involved in new activities and industries, the time may have come to sever the link between these institutions and the safety nets, making it feasible to significantly scale back regulatory oversight of their operations. This could be accomplished by not allowing these institutions to offer deposits backed by government guarantees. Such institutions could still offer safe deposits, but they would have to be guaranteed in other ways, such as by collateralizing the deposits or by offering the deposits through insulated subsidiaries that only engage in relatively safe activities. In addition, access to central bank discount window loans would be minimized so that these institutions would not have the option of asking the central bank for a loan if they got into trouble. Because these institutions would not have direct access to government safety nets and would not expose other banks to risks through the payments system, it would not be necessary to subject these institutions to extensive regulation.

It is important to emphasize that the lack of direct access to the safety nets would only apply to those institutions that are involved in new and more complex activities and not to the vast majority of institutions that continue to engage in traditional lending and investment activities. These "traditional" institutions would continue to operate and be regulated much as they are today.

What are the merits of the proposed changes?

In light of the recent changes in financial markets and the likelihood that the markets will continue to evolve, the regulatory changes discussed above have several advantages over a policy of simply extending traditional safety and soundness regulation.

- First, by preventing large interbank exposures, financial stability would not be threatened by any individual bank–large or small, global or domestic.

- Second, by limiting access to government safety nets to those institutions who engage in traditional activities, the safety nets would be less exposed to the moral hazard problems. Moreover, this approach is feasible and not too costly or difficult to implement. Specifically, since banks involved in complex activities that are difficult and costly to regulate would pose a reduced threat to the safety nets, they would be subject to less regulation. Institutions that choose to retain direct access to the safety nets, however, would continue to be regulated as they are now.

- Third, it follows from the first two advantages that there is much less of a rationale for a policy that makes some banks "too big to fail." Under the current regulatory system, regulators are unlikely to allow large, globally active banks to fail because of the potential systemic problems and the threat to government safety nets. With the changes in the regulatory emphasis that I am proposing, however, the financial system and safety nets would be better insulated from large failures.

- Finally, since traditional regulation would not be extended for those institutions involved in new activities, the changes described above would not produce some of the other problems associated with extending the traditional regulatory system. For example, banks involved in nontraditional activities would not face an increase in compliance costs and would have no need to devote resources to avoiding new regulations. In addition, the changes would allow banks to adapt to changes in the financial and economic environment. As a result, the proposed changes would not stifle innovation or reduce the efficiency of the financial system.

CONCLUDING COMMENTS

I would like to conclude by placing my thoughts on financial regulation in a somewhat broader context. The premise of my remarks is that it is becoming increasingly difficult for financial regulation to keep up with the complexity of the changes in financial markets. Specifically, it is becoming too costly and difficult to effectively monitor the activities of large, globally active institutions that are involved in nontraditional financial activities. Simply extending traditional methods of regulation to cope with these changes may not be the best way to promote a stable and efficient financial system.

The alternative, however, is not to throw up our hands, turn away from regulation, and rely exclusively on market discipline to create a better financial system. Market discipline by itself cannot solve all of the systemic problems or moral hazard issues. What I am suggesting is for us to focus on the issue of systemic risk by placing an emphasis on efforts to strengthen the ability of the financial system to cope with the failure of individual institutions. In addition, while moral hazard problems can be dealt with by traditional regulation, an alternative is to lessen access to government safety nets for those institutions that pursue complex, nontraditional activities. It is important to realize that such an approach does not require a radical change in regulatory practices, merely the recognition that institutions

that engage in different activities may need to be regulated differently. Indeed, the majority of depository institutions would continue to have access to government safety nets and would continue to operate and be regulated as they are today.

Although the approach I am suggesting should result in a more stable and efficient financial system in the long run, it would not eliminate the possibility of macroeconomic disruptions causing financial crises that may affect the health of a large number of financial institutions. As a result, central banks will continue to have an important role in promoting stability of the economy and in providing liquidity to the financial system in times of crisis. Thus, it is crucial that central banks pursue macroeconomic policies that preserve economic and financial stability. In addition, if a large macroeconomic or financial shock to the economy should occur, central banks must be able to respond quickly by providing the liquidity necessary to maintain the smooth functioning of the financial system.