Global Institutions, National Supervision and Systemic Risk

A Study Group Report

Group of Thirty, Washington, DC
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Foreword

For the last two years, a study group commissioned by the Group of Thirty has been examining the supervision of financial institutions with substantial international operations and the potential for systemic risk. This is a natural topic for study by the Group since the safety and efficiency of the international financial system have been among the G-30’s principal concerns since its formation in the late 1970s. It is also a logical—and potentially broadening—extension of two of the Group’s major studies, “Clearance and Settlements in World Securities Markets” and “Derivatives: Practices and Principles.”

Those earlier studies examined the functioning and safety of settlement arrangements for the rapidly growing volume of securities transactions internationally in the late 1980s and of derivatives markets as they expanded in the early 1990s. They each suggested steps to reduce and minimize risk consistent with effective market operation. However, neither study focused on the safety and stability of the financial system as a whole.

Consequently, the Group decided it was time to consider more fully the implications of the emergence of trans-national financial institutions and global markets. One premise of the effort is evidence that efforts by national and functional supervisors to keep pace with these developments need reinforcement. At the same time, methods of achieving more effective cooperation between the large international
institutions and national supervisory authorities may require fresh and imaginative initiatives from the side of the institutions most directly involved.

Against that background, a distinguished study group was assembled and set to work. The group met four times over 18 months, conducted a survey of 66 financial institutions and produced the report that follows.

The report concludes that an ambitious effort to produce an international framework to serve as a guide to the management, reporting and supervision of major financial institutions and markets is justified and even imperative, beginning with global commercial and investment banks. A collaborative effort between financial institutions and their supervisors would be most likely to be effective and broadly acceptable over a wide range of institutions and countries.

The study group has proposed this initiative at a time of tremendous flux in major financial markets. The US Congress is considering repeal of the Glass-Steagall Act’s legal separation between banking and securities activities in the United States and debating authority for consolidating in one institution other financial functions previously kept separate. The new Labour government in the United Kingdom has announced its intention to combine the responsibilities of the Bank of England for bank supervision and various self-regulatory organizations for securities trading and investment activities in an expanded Securities and Investments Board. In Japan, far reaching financial deregulation is now planned in what is being billed as Japan’s “big bang.” And many “emerging” economies are facing new exposures to international finance and are reexamining their own supervisory and regulatory approaches.

All of this complicates the challenge of developing a coherent and acceptable international approach, even if limited to those institutions engaging in large and systemically important transaction volumes across national borders. At the same time, the flux in international markets, the variety of national approaches, and the inherent uncertainties only emphasize the need for an appropriate international framework.

I am conscious, too, that this study has not encompassed two other concerns of fundamental importance in the regulation and stability of the financial system. As the study group itself points out, many governments in recent years have found it necessary or desirable, acting as lender of last resort or otherwise, to directly intervene in their national banking systems to provide liquidity or
capital support in the interest of preserving financial stability. As distinctions between banks and other financial institutions become increasingly blurred and their international character more pronounced, the proper role of governmental safety nets and their implications for institutional behavior need re-examination.

There is also debate over whether traditional distinctions between "commerce" and "banking," particularly in Anglo-Saxon countries, are any longer relevant, or whether they should be strengthened in countries where the distinction has been less clear. In any event, mixing of banking and commerce will have important implications for the proposals in the report, the nature of supervision and application of the safety net.

What is clear is that the study group has advanced serious proposals in an important area, and the Group of Thirty believes they deserve serious consideration. The Group itself will be reviewing the work of its study group in September. We look forward to hearing the views from both the private and official sectors as we consider how the study group initiative might be carried forward.

One thing is certain, no initiative of this kind will work without two key ingredients. Major financial institutions must be willing to accept the need for a certain consistency of approach—a common framework—in assessing, managing and reporting risks, and to work with official supervisors in developing standards. Supervisors in turn will need to work with each other and to understand competitive and technological realities in order to ensure the effectiveness and the necessary degree of commonality of their approaches.

I look forward to discussion of these proposals and suggestions as to how best to proceed in developing and implementing this work.

PAUL A. VOLCKER
Executive Summary

The threat of serious disruption to the international financial system may be small, but is nonetheless a serious concern. Shocks sufficient to disrupt the international financial system may arise in individual countries or from the institutions, markets or the clearing and settlements mechanisms that link them. Rapid changes occurring in the international financial system have resulted in new sources of, and transmission mechanisms for, systemic shocks.

The institutions active in international markets are becoming larger and more complex. A rapidly growing volume of transactions and an expanding array of new products are moving across borders at ever faster speeds. New entrants to the system, often from outside the Group of Ten (G-10) countries, are less well known to the international financial community and may be weakly supervised or not supervised at all. Indeed, the global operations of major financial institutions and markets have outgrown the national accounting, legal and supervisory systems on which the safety and soundness of individual institutions and the financial system rely.

There have also been positive developments: expanded use of netting and collateral; improvements in measuring risk; greater disclosure of off-balance-sheet risk; substantial increases in equity capital of many major financial institutions; financial sector consolidation; and the growth of securitization. Yet despite these improvements, substantial uncertainty remains over the level and
direction of risk in the system and the effectiveness of measures to control it.

When shocks have occurred in the past, central banks, often in collaboration with market participants, have managed to prevent gridlock in the payments system and more serious disruption through skillful *ad hoc* crisis management. But the changes occurring in the international financial system are also likely to make improvised crisis management increasingly difficult in the future. And even if crisis management were completely reliable, it would be more efficient and sensible to establish policies and procedures to prevent and contain crises in the first instance. Much remains to be done to ensure the safety and efficiency of the international financial system.

- Large, internationally active commercial banks, the major participants in large-value payment systems, along with the largest investment banks, which are key participants in the clearing and settlement systems for globally-traded securities, represent the core institutions in the international financial system. It is essential that they are well capitalized and have management systems that are global in scope and of a high standard.

- Market participants must have the means to judge the financial condition, risk exposures and risk controls of major counterparty firms, information which may be difficult to obtain at present.

- Government supervisors, who oversee the safety and soundness of complex global firms currently operating within and beyond their borders, have difficulty achieving a global view of these firms because of the limits of national jurisdiction and supervisory charters. Although international cooperation among supervisors has helped considerably, global surveillance remains a challenge.

For all these reasons, this report proposes a global initiative that will aim to: encourage consistently high standards of risk management; improve market transparency; and promote more effective supervision of core institutions. Our conclusions:

*Management.* Core financial institutions must shoulder the burden of strengthening their own management and the market infrastructure through which they do business. Their agenda:

- Establish a *standing committee* to develop *global principles for managing risk* at these firms. Such a risk-management framework would cover all aspects of risk monitoring, risk management and internal controls and would provide the basis for evaluating
a firm's own operations and those of major counterparties. The framework would be developed in cooperation with international groupings of supervisors and national supervisors and would be subject to periodic review and revision.

- Submit their worldwide operations to an independent external global audit of both financial performance and management controls and agree upon more consistent and meaningful disclosure of financial and risk information on a global, consolidated basis.

Supervisors should pursue stronger international coordination and greater consistency in supervisory requirements. The agenda for national and functional supervisors:

- Agree on a lead coordinator for global firms, apply a global framework for comprehensive and effective management controls in reviewing all parts of a financial group and agree upon consistent reporting requirements for global firms.

- Establish performance criteria and risk management guidelines for exchanges, clearing houses and settlement systems to strengthen the underpinnings of the entire international system.

Legislatures should provide a reliable legal framework for international transactions by strengthening national laws governing netting, contract enforceability and insolvency of financial institutions.
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I. Introduction

The rapid evolution of financial institutions, products and markets is increasingly challenging the effectiveness of management oversight, market discipline and official supervision. That concern prompted the creation of this study group on the global supervision of financial institutions and markets by the Group of Thirty.

Managing an expanding range of complex products and varied services around the globe and around the clock is a daunting challenge, but it has become business as usual for globally active firms. This operating environment places a premium, as never before, on understanding and managing risk. A key to understanding and managing a firm’s own risk is evaluating how effectively counterparty firms understand and manage theirs—a task that is, if anything, more challenging than the first because of the limited grounds on which to base such a judgment. Most daunting of all is the difficult task facing national supervisors who are charged with setting supervisory requirements for the global operations of complex financial conglomerates while operating within the limits of national legal jurisdiction and supervisory charters. Even as progress is being made in strengthening the international supervisory framework for financial services, the significance of the institutional and geographic boundaries that define the existing framework continues to diminish.
This study first examines the potential for systemic risk arising from the gap between the global operations of financial institutions and markets and nationally-based systems of accounting, reporting, law and supervision. It then proposes actions that the financial services industry, the accounting profession, supervisors and legislatures should take to promote the continued stability and efficiency of global financial institutions and markets.
II. The Nature of the Risks Facing the International Financial System

Systemic risk may be defined as the risk of a sudden, unanticipated event that would damage the financial system to such an extent that economic activity in the wider economy would suffer. To qualify as systemic, shocks must reverberate through and threaten the financial system, not just some small part of it. They may originate inside or outside the financial sector and may include the sudden failure of a major participant in the financial system; a technological breakdown at a critical stage of settlement or payments systems; or a political shock such as an invasion or the imposition of exchange controls in an important financial center. Such events can disrupt the normal functioning of financial markets by destroying the mutual trust that lubricates most financial transactions.

When a shock occurs, problems in one institution or sector of the market can spread to other institutions or markets. Contagious transmission of the shock may occur because of actual direct exposures to the damaged sector or, more insidiously, because of suspected exposures. In the absence of clear and convincing evidence to the contrary, market participants are likely to suspect that the institutions least able to withstand a shock have been damaged by one. They will attempt to protect themselves by liquidating their claims on these suspected, weaker institutions and shifting their portfolios in favor of claims to institutions perceived to be stronger. The result is a flight to quality.
When markets seize up, they cannot perform their essential function of channeling funds to those offering the most productive investment opportunities. Some institutions or sectors may lose access to the markets. Investment spending may suffer in both quality and quantity. Indeed, if the damage affects the payments system, the shock may also dampen consumption directly. The fear of such an outcome is what motivates policymakers to act.

Over the past two decades, numerous domestic shocks have occurred which raised the specter of systemic risk. Emerging markets in Asia, Eastern Europe and Latin America have sustained costly financial collapses and, since 1980, more than a dozen have suffered systemic shocks that cost more than 10% of GDP to resolve. Among the much larger OECD economies, France, Finland, Japan, Norway, Spain, Sweden and the United States have all experienced costly financial problems within the last ten years that were (or are being) resolved by governments at substantial budgetary cost. In almost every case, governments chose to absorb losses and stand behind the financial system, apparently in the belief that this would be less costly than dealing with the consequences if a shock were to spread to the rest of the financial system and the wider economy. Concerned by the high costs involved and the danger of spillover into the international financial system, the G-7 Heads of State have called for measures to strengthen supervision and a number of initiatives have been launched (see Appendix A).

This study has focused on shocks that could cause international systemic risk, whether arising from the spillover of domestic shocks into the international arena or disruption of institutions, markets or the clearing and settlements mechanisms which link domestic financial systems. The most prominent example of international systemic risk was the LDC debt crisis of the 1980s. The crisis arose out of excessive floating-rate, hard-currency borrowing by developing countries and a concentration of those cross-border exposures in the largest, mainly US, commercial banks. Beginning in Mexico and concentrated in Latin America, the problem threatened the solvency of major banks and had a depressing effect on economic growth in many countries. The US banking system was adversely affected throughout the 1980s and many of the heavily indebted countries took a full decade to put the problem behind them.

A more recent example of domestic spillover was Mexico in early 1995. A build-up of short-term, dollar-linked debt combined with the devaluation of the peso and a sharp rise in interest rates
undermined the solvency of most of Mexico’s banking system and led to a liquidity crisis. International investors shifted their claims away not just from Mexico, but also from other countries merely suspected of similar weakness. This “Tequila effect” had damaging consequences for countries as diverse as Argentina and Thailand.

The world economy experienced a foretaste of a “linkage” shock in June 1974 with the failure of Bankhaus Herstatt, a small German bank active in the foreign exchange market. Several internationally active banks had paid Deutschmarks (DM) to Herstatt to fulfill maturing foreign exchange contracts at the conclusion of the German business day in the expectation of receiving US dollars later that day at the close of business in New York. Herstatt’s shutdown before settlement occurred in New York left counterparties exposed for the full value of DM deliveries made. The market’s alarmed reaction led to substantial dislocations in the Clearing House Interbank Payments System (CHIPS), the main dollar clearing system for international transactions, as well as a collapse in the volume of trading in the dollar/DM foreign exchange market.

Herstatt’s collapse also produced significant tiering of interbank interest rates, with premiums as high as 200 basis points charged to even the largest Italian and Japanese banks and smaller banks excluded from the market entirely. While the fundamental condition which gave rise to “Herstatt risk”—the time lapse between payment of Asian or European currencies and the receipt of dollars in foreign exchange transactions—has improved only marginally, no subsequent shock to the foreign-exchange payments system has triggered such severe consequences.

Market participants likewise experienced anxious moments in the February 1990 collapse of Drexel Burnham Lambert; the August 1990 Iraqi invasion of Kuwait; the August 1991 attempted Soviet coup; and the February 1995 failure of Barings Bank. None of these shocks would necessarily have triggered widespread international disruption, yet officials were not inclined to wait and see if the problem would spread. Where there was not an official rescue as in Mexico, central banks acted in collaboration with market participants to prevent gridlock in foreign exchange markets.

The history of official intervention is reassuring; in fact, it could be a source of moral hazard if boards and management of financial institutions took too much comfort from it. But these successes have been largely attributable to skillful crisis management rather than effective preventative measures. Looking ahead, the
increasing size, velocity, and complexity of international transactions, and the increasing concentration of trading activity in a relatively small number of institutions that play a leading role in multiple markets, suggest an increased potential for shocks as well as increasing difficulty in improvising effective crisis management in the event a shock occurs.

This study is concerned with shocks that would not only threaten a major financial institution, but could cascade through the international financial system threatening additional major institutions and the financial infrastructure of the international system itself. The Mexican crisis, even with its spillover effects, remained localized, although this was ensured through an official rescue. A major asset deflation as occurred in Japan is too slow moving, although the slow build-up of unrecognized credit losses could seriously weaken a banking system’s ability to withstand a systemic shock. This is a high threshold but it cannot be ruled out in the evolving world of international finance.

New technologies, new financial products and funding techniques, internationalization of markets and the erosion of legal and trade barriers between markets and firms have all contributed to the increasing size, speed and complexity of international transactions. Advances in information and telecommunications technology have reduced the costs of cross-border transactions by dramatically lowering costs for collecting and analyzing data, initiating and confirming transactions, clearing and settling payments and monitoring financial flows through management information and accounting systems. These advances have broadened the financial horizons of users of financial services, and enhanced the ability of financial institutions to provide international solutions to financial problems. They have made it possible for sophisticated firms to raise or invest funds, exchange currencies, or change the attributes of assets around the globe and around the clock.

Opportunities for cross-border financial transactions have increased as well. In recent years, country after country has liberalized its financial system and dismantled capital controls that were intended to seal off national financial markets from global influences. This has opened new markets to established firms as well as brought new players that are differently regulated or not regulated, often from countries outside the G-10, into international markets. In addition, the growing importance of institutional investors has contributed to the globalization of financial markets. In almost every major country
institutional investors—banks, insurance companies, investment banks, mutual funds, pension funds and hedge funds—have come to dominate financial markets. Institutional investors face much lower transaction costs than do individuals and, thus, are much more likely to allocate assets across a global range of investment opportunities.

These trends have brought about enormous increases in the volume of foreign exchange and cross-border securities transactions. For example, the Bank for International Settlements (BIS) estimated that during April 1995 an average of $1.2 trillion flowed through foreign exchange markets each day, up 45% from three years earlier. Just twenty banks clear and settle 70% of the dollar leg of these transactions through CHIPS. Transactions in derivative instruments have also increased dramatically. An April 1995 BIS survey estimated that the notional value of over-the-counter derivative contracts was $47.5 trillion (with replacement value of about $2.2 trillion). Estimated average daily turnover was $880 billion, about two-thirds of which involved transactions between counterparties in different countries.

The same developments that make possible these enormous volumes of international transactions have also encouraged the emergence of integrated global financial firms with extremely complex financial and corporate structures. In fact, the growing volume of international financial transactions is heavily concentrated in a relatively small number of institutions, which have the presence and the technical expertise, information and communications systems to manage risks globally. These “core institutions” tend to play a leading role in multiple markets and form an important part of the international financial infrastructure.

For purposes of this study, core institutions are defined as large, internationally-active commercial banks, which are major participants in large-value payment systems, along with the largest investment banks which are key participants in the clearing and settlement systems for globally-traded securities. Core institutions do not include large insurance companies or large finance companies, even those that are very active in international markets. Although these institutions are important by virtue of their size, they present substantially less risk to the system than failure of the core institutions of which they are customers.

Core institutions are generally well-capitalized and headquartered in well-supervised jurisdictions. While it makes sense for international financial activity to concentrate in a small number of firms that can meet the challenge capably, the fact of concentration is worrisome
given the complexity of interconnections among them. These institutions tend not just to be each other's largest counterparties, but also to have extensive dealings with many of the same customers around the world and to be members of the same clearing houses and exchanges. While mutual credit exposures with individual firms may not be excessive, direct and indirect risk exposures within this group are so complicated and opaque and change so rapidly that it is virtually impossible to monitor them in anything like real time. Accounting and disclosure practices have not begun to keep pace. Risk exposures can build up undetected by existing monitoring systems. In a crisis, both peer institutions and regulators may feel they have too little information about the condition of a faltering institution and insufficient time to assess this complex information to warrant taking action.

An institution active in scores of jurisdictions is also subject to the vagaries and interactions of the laws and regulations of each. The sudden collapse of a large, internationally-active participant in a payments system, for example, would cause unexpected difficulties for its counterparties if agreed netting arrangements prove not to be legally binding. A counterparty may have permitted gross claims on the failed institution to rise to an amount larger than the counterparty's capital, presuming that claims would be netted down to a small fraction of the gross amount. If this presumption proves invalid, the surviving counterparty can be forced to join the queue as a general creditor of the failed institution since laws in many jurisdictions favor the claims of local investors and depositors over those of foreign institutions. And even a netted claim may not be collectible in an emergency.

Despite the complexities that have arisen in recent years, not all developments have been in the direction of increased risk. Technological improvements make possible more effective management information and control systems and analytic models which help institutions manage risks more effectively. Positive developments include: ongoing improvements in the measurement of credit and market risk; enhanced diversification of portfolios across markets; expanded use of netting and collateral; greater disclosure of off-balance-sheet risk; substantial increases in equity capital of many major financial institutions; financial sector consolidation; and the growth of securitization.

Yet despite these improvements, substantial uncertainty remains over the level and direction of risk in the system and the effectiveness
of measures to control it. Given the speed with which market participants can react to events anywhere in the world, reaction times in the event of a shock are virtually instantaneous. Managers and regulators have very little time to analyze the problem, formulate and implement a response. The sheer velocity with which international transactions take place may increase the risk of a misjudgment.

Confronting these challenges successfully will require improvements in management, market discipline and supervision. A survey of institutions undertaken as part of this study revealed a clear consensus that action is needed. (See Appendix B.) How best to achieve these changes was the key issue confronting the study group. Core institutions should take the lead in developing an international framework for risk measurement and management. Not only do these institutions have an obvious stake in the success of such an effort, but no other institutions—private or official—are likely to bring comparable analytical resources or first-hand knowledge of global institutions and markets to the task.

Governments are also anxious that solutions are found to this new systemic concern. Three times the G-7 Heads of State have expressed concern about vulnerability to international systemic risk, pointing out the need for remedial measures. International regulatory and supervisory authorities continue to move on a number of fronts to forge links of cooperation to overcome their individual geographic and functional constraints in dealing with global financial conglomerates. (See Appendix A.) This continuing succession of initiatives suggests that no single action by itself can meet the challenge. There has to be an ongoing, cooperative effort.

Of course, there is no way to eliminate risk or failure completely. The business of market intermediation is to accept an appropriate amount of risk and manage it effectively. A financial system that attempts to eliminate risk rather than managing it well would be costly and inefficient. What's more, it would deprive the markets of innovation and creativity. Furthermore, market discipline requires the possibility of failure. This is not to say that the ideal financial market is one in which institutional failure is commonplace. Nonetheless, shareholders and managers must know that failure is possible; that knowledge is a powerful motivator of responsible behavior.

While it is not sensible to eliminate risk, the objective must be to eliminate systemic risk—to devise an international financial system that can withstand shocks without failures cascading through the
system. It is unreasonable to proceed as if no major institution can fail or to expect that a large, global institution will go quietly. The size and immense complexity of such institutions will make them virtually impossible to isolate.

This study’s focus is addressing international systemic risk. Certainly this is not the only, nor even the primary, public interest in the financial services industry. Protecting depositors and ensuring transparency for investors are a primary focus for supervisors and market participants. Enhancing the efficiency and reducing the cost of financial intermediation and preserving the integrity of markets are important goals of economic and supervisory policy.

Implementation of the study group’s recommendations should serve those interests as well. Depositors and investors will be better protected to the extent that the potential for institutional failure and systemic disruption are reduced. And efficiency should be increased to the extent that redundant supervisory requirements and segmentation of capital and risk management on a national and legal-entity basis are reduced, and provision of financial services to clients on a global basis is encouraged.
III. Addressing the Challenge of Managing, Monitoring and Supervising Global Institutions and Markets

The international financial system is going through a period of profound change that has brought about, among other things, the emergence of large integrated financial firms with corporate structures and finances of extreme complexity and global scope. Counterparties wishing to deal with them and supervisors charged with their oversight need to adopt a similarly global view of these firms’ operations and finances. National systems of accounting, reporting and supervision, however, fall short of this objective. The legal structure upon which national regulators focus is no longer relevant to overall control of risk. Indeed, undue focus on legal structure could diminish the effectiveness of overall risk control in a global group.

Cognizant of this challenge, financial institutions have devoted substantial resources to improving risk management and global controls. National supervisors have likewise focused their attention on risk management, including such matters as active board and management oversight; the capacity to measure, monitor and control risks by activity; and the adequacy of internal controls.

Supervisors are also recognizing the need to work with the market, so that prudential safeguards do not stifle financial innovation
or competitiveness, and to encourage transparency and market discipline. The many international initiatives underway to expand cooperation and improve coordination are also signs of progress. But there are limits to what can be achieved in this way.

Even with full understanding of these new challenges and the best of intentions to address them, supervisors find themselves hemmed in by national legislative mandates and agency practices, often based on a sectoral approach. They face political constraints arising from the issues of the moment when legislation is drafted. Such legislation may compel supervisors to act in a fashion which is unnecessarily at odds with the market unless they receive specific legislative authority to change the way they do business.

So cooperation among national and functional supervisory agencies alone is unlikely to produce adequate oversight of global institutions on the time scale that the problem demands. As new issues arise, each supervisor will adopt its own reporting requirements to deal with them. Not only will reporting vary from country to country as it has in the past, but it may also be inconsistent with the practices of private managements and markets. The study group believes that an industry initiative is needed to promote a consistent, high standard of risk management and control for global institutions.

1. Major financial institutions should take the lead in developing a global framework for comprehensive and effective management controls, in cooperation with supervisors and as a continuing enterprise.

A single, globally consistent framework should apply to all globally-active institutions. This framework must start from the premise that the fundamental responsibility for ensuring the stability of financial institutions, and thereby limiting systemic risk, rests with the Board and management of global institutions themselves.

While this premise is not new, assigning enhanced responsibility to financial institutions implies an approach that, in practice, is much more than the status quo. It also implies that supervisors will be readier to rely on the institutions that they supervise, and that the institutions themselves will accept the responsibility to improve the structure of, and discipline imposed by, their internal control functions. Furthermore, it suggests a regime for global institutions that is different and more elaborate than that imposed on smaller or less geographically diversified competitors, although the responsibility
of management in the area of internal controls is no less at smaller firms.

There are two reasons for this change in approach. First, by far the largest proportion of serious financial problems which beset financial organizations (whether or not they involve systemic risk) arise from problems which the organizations ought to be able to control themselves. By way of example, the failures of Continental Illinois and Barings, and the trading losses at institutions such as Daiwa Bank, Morgan Grenfell and Sumitomo Corporation could have been avoided if they had fully comprehensive internal controls and stronger management oversight. Survey respondents listed three likely causes of failure of a financial institution: inadequate management procedure; failure of internal controls; and the actions of a rogue employee.

Second, it is patently unreasonable to expect supervisors alone to keep global institutions from mishaps. Even if they had the resources, their mission cannot be to evaluate the quality of every trader or the current intra-day value-at-risk in trading exotic derivative instruments. The speed and complexity of innovation in the markets, the supervisors' inevitable position "behind the curve" and their real handicaps in competing for talented staffers all argue for private institutions to take on greater responsibility.

An industry framework must address the difficulties posed by institutional complexity, market volatility and geography. Yet the greatest challenge to address is the excessively risky behavior that is the most likely underlying cause of losses to a financial institution. Since no code of ethics is likely to eliminate this tendency, an institution's control system must at least aim to check the excesses of human nature by establishing an internal vigilance system that will provide early warning of such behavior. Controls must withstand both external shocks and internal breakdowns.

Comprehensive and effective controls must cover: an institution's audit committee; the internal audit function; the risk management function; and the compliance functions, including legal, regulatory and ethical review. Implementation will call for a major commitment in several discrete areas. Institutions will have to:

- hire, support and retain employees throughout the management system with appropriate training and background in trading, modeling, information technology and other required skills.
- invest in global risk-monitoring systems, encompassing both sophisticated risk models and sufficient computer and
communications capacity to handle high-volume, high-speed transactions in all their financial and legal complexity.

- establish a management structure with appropriate checks and balances, between front and back office, for example, and with more direct responsibility to the respective audit committees.

- adopt a more sophisticated approach to credit risk, operational risks, management of collateral and related disciplines.

From this list it should be apparent that comprehensive and effective controls are not solely a matter of skills and technologies, but of organizational culture as well. The Board and its management must exercise their responsibility to understand and manage the risks undertaken by their firm. This responsibility requires that senior management conduct a broad review of risks in the various parts of its business and follow up with an ongoing program of action to improve risk management practices. Attention should be given to market and credit risk measures, to risk-limit structures, to operational and legal risk, to the impact of risk on capital allocation and compensation, and to the authority and effectiveness of internal functions such as risk control, internal audit and compliance.

Above all, management must pay attention to "people issues" and the potential systemic danger posed by inexperienced, incompetent or malicious staff. Attracting the right people, establishing an appropriate ethical environment and instituting compensation practices that do not encourage excessive risk-taking by traders and other risk-takers are the best safeguards. Staffs that maintain internal controls must have sufficient independence, status and authority to make decisions and make them stick. To ensure that, staffers in risk control, audit and compliance must enjoy career and compensation prospects within the firm closer to that of staff in front-office functions.

An effective control environment requires attention to information. The industry survey indicated substantial concern over the quality of information fed into risk monitoring systems, both market-risk data and credit data on counterparties. Similarly, the International Securities Market Association has identified another problem requiring collective action by industry: the cost of producing securities data of sufficient quality to support risk management activities. Finally, the Group of Thirty's draft report *International Insolvency in the Financial Sector* argues that speedy handling of insolvencies will only be possible if internationally active firms
keep up-to-date information on all significant exposures in a central location and in a readily available, standard form.  

Effective management controls rely on many practices throughout the firm, some of them quite complex. To evaluate their own management controls and compare them to those of others on a mutually comprehensible basis, global firms will need an industry-wide framework. This is not to argue for new or higher standards in all areas. Many of the practices and principles that should be part of any such framework are well known. The Treadway Commission in the United States; the Cadbury Committee in the United Kingdom; the Global Derivatives Study Group of the Group of Thirty; the report of the Derivatives Policy Group; and the various official initiatives described in Appendix A have laid the groundwork. Moreover, many firms already employ state-of-the-art risk management and control systems that arguably represent sound practice. But a consistent framework is needed within which firms can pursue sound practices and principles.

The study group is proposing that global institutions undertake the difficult task of devising a framework that is appropriately aligned with supervisory requirements. The objectives and methodologies of management and supervisors do not always coincide. In some cases, they will have to be reconciled. To expedite the development of a framework, the industry and the supervisory community will have to maintain close contact and cooperate throughout the process.

It would be neither possible nor appropriate for the study group to enunciate the control framework that will emerge from the proposed industry exercise. At a minimum, however, the framework should cover the areas and incorporate the principles discussed above. Neither would it be sensible to fix a framework at one point in time and expect the resulting control systems to keep pace with the development of new products and trading strategies. The institutions that participate in this exercise must inevitably accept this effort as an ongoing enterprise—a standing committee—with the continuing support and participation of leading financial institutions.

The study group envisages creation of this framework as a voluntary exercise. However, if the framework comes to be identified with a strong internal control environment, and if strong controls are viewed as a key component of effective management, the markets are likely to provide incentives to implement it—in the form of
higher credit ratings or earnings multiples. Likewise, supervisors, whose duty it is to make sure that management pursues strong internal controls in any case, are likely to provide direct regulatory incentives for its general adoption.

2. Global institutions should subject their worldwide operations to expanded review by a single, independent, external audit firm or firm group, and should agree upon more consistent and meaningful disclosure of financial and risk information on a global, consolidated basis.

For modern global institutions, the traditional audited financial statement provides only limited assistance. In many cases, it is not really a global report. And while audited annual reports have begun to explore the risk profile of a firm in recent years, management, its risk philosophy and control regime remain largely opaque to the outside world. The institutions interviewed routinely expressed total confidence in the management controls of their major counterparties, yet generally acknowledged that they based this judgement on rather thin information. A more useful external review is needed to better inform management and the markets.

The first requirement for improving the external audit is a single, external auditing firm or firm group acting as the principal auditor and reporting on the global audit of the global institution. Most global institutions now have financial statement audits that approximate a review of global financial operations. However, the annual audit's utility is reduced if it consists of a compendium of subsidiary audits by different firms, operating under a variety of audit and accounting standards and reported in a variety of formats. Worse yet, some firms do not report global results at all.

The clear goal of the Board and its management should be the most comprehensive audit possible. Most institutions surveyed reported movement toward a single, global audit by a single firm or firm group. While this is a clearly a decision that is within the control of the Board and its management, it may rule out audit firms with which an institution has a long-standing relationship for lack of global capacity.

Universal understanding of a global audit would also be greatly assisted by agreement on common accounting standards internationally. This is not a matter that global institutions can resolve. However, the need for common standards of high quality is
well recognized, and a major project is underway in the International Accounting Standards Committee to agree upon standards by 1998. IOSCO will consider endorsement of standards in the interest of facilitating cross-border listings and offerings of services. Global institutions should lend their support to this project. At the same time, the difficulty of securing acceptance of new standards in national legislation must be recognized. Change in this area is likely to be slow.

The other key ingredient in improving the external audit is an expansion of what is reviewed. The audit proposed here would go beyond traditional review of a firm’s financial statements. It would assess whether the risk management policies and procedures promulgated by senior management to fulfill the objectives of the industry framework had in fact been implemented. The independent external auditor would attest, in accordance with accepted auditing standards, to the implementation of the institution’s internal controls generally and, in particular, of internal controls over the preparation of applicable financial statements and risk information on a comprehensive, global basis. The industry survey showed broad support for review by external auditors of firms’ risk data reports and implementation of risk management policies and procedures.

Information from the expanded audit should be made available to supervisors and the public. How best to provide this information to supervisors should be a topic for consideration by the industry committee and relevant supervisors. The extent to which supervisors rely on the reports of external auditors will depend on the structure of supervision in each country, but the additional information should better inform the supervisory process, even where direct examination is the norm.

The industry committee should also agree upon a framework for more consistent and meaningful disclosure of financial and risk information to the public. This should include business objectives, risk appetite, approach to risk management and actual risk-earnings performance. An agreed approach for all core institutions would overcome the reluctance of individual firms to publish information about their inner workings that is not matched by other firms. Expanded information is needed so that counterparties can make sound judgements about the risks they are taking, but this is not only a concern in the case of financial transactions among core institutions. Other creditors and liability-holders must be in a position
to make judgements about the creditworthiness of financial institutions if market discipline is to function effectively.

The major accounting firms have the global reach and technical skills to attest to the implementation of management controls of global institutions. Many of the institutions surveyed indicated a high level of confidence in their independent external auditor's abilities. However, the terms of reference and audit standards for these attestations will have to be very clear if external audit firms are to be willing to assume responsibility (and liability) for them.

Credit rating agencies might also be able to undertake such an evaluation. Their greatest strength is their influence in the markets, which gives them influence over the firms. However, survey respondents questioned whether such agencies spend enough time in a firm to make the proper assessments or whether they have the resources to verify procedures and practices. Even though rating agencies are not equipped to undertake such a detailed analysis, they could have considerable influence if the external auditor's evaluation were made available to them for use in developing an overall credit rating for an institution.

3. Assessment of legal risk in international transactions should take into account the enforceability of contract provisions, including netting, and the effectiveness of insolvency procedures. To reduce such risk, countries should be encouraged to strengthen legal standards.

Enforceability of netting, collateral and derivatives contracts, and incompatibilities in national insolvency laws have concerned global institutions and their supervisors for a number of years. Providing legal certainty in these areas was one of the 21 recommendations in the Group of Thirty's 1993 report "Derivatives: Practices and Principles". In an effort to reduce settlement risk, the Basle Committee has taken steps to recognize the effectiveness of close-out netting.

These efforts notwithstanding, uncertainty of netting was repeatedly cited as a concern in the study group's industry survey. It is also discouraging to note that, according to firms interviewed for the survey, netting was considered legally binding in only a few countries: the United States, the United Kingdom and France.

The survey and interviews suggested a similarly high level of concern over collateral arrangements. Perhaps because collateral has become increasingly popular as a risk reduction technique, its
enforceability is a source of increasing attention. But concerns are not limited to matters of law. Liquidity of collateral and lack of systems within firms to monitor and control collateral obligations cause, if anything, greater concern. In consequence, collateral management also needs to be addressed in the proposed industry framework.

The problems of international financial insolvency are the subject of separate work by the Group of Thirty. A discussion draft report, *International Insolvencies in the Financial Sector* is now undergoing international review. A final report and recommendations are expected later this year. The draft report includes 14 recommendations that would, if adopted, help to ensure that if a global institution fails in the future, its insolvency could be handled with speed and certainty. In the survey, the most important considerations in achieving a speedy resolution were given as: effective netting; ready access to good information on the insolvent firm’s exposures; and legal distinction between the firm’s own and client funds.

Reducing legal risks associated with netting, collateral and insolvency will ultimately require changes in national law—always a protracted process. Arcane legal issues raised by international financial transactions are not among the highest priorities of national legislatures. The limited progress on netting, where attention has focused the longest, indicates the limited likelihood of speedy progress on collateral contracts and insolvency law, where relatively less effort has been made and the issues are, at least in the case of insolvency, considerably more complicated.

Careful evaluation of legal risk as part of overall risk control should provide an incentive, at the margin, to negotiate contracts in safer jurisdictions. Legally risky transactions would face higher capital charges and more quickly exhaust credit limits. If this was perceived to restrict transactions on a particular exchange or in a particular country, this would create a constituency for change out of the exchanges, financial institutions, supervisors and finance ministries in the affected country.

Even if substantial progress is made in encouraging legislative changes, however, the most admirably drafted law will not remove all legal uncertainty. Most legal systems do not permit uncertainties to be resolved in the absence of specific case law, and advisory opinions are hard to come by. Industry can reduce this uncertainty by making it standard practice to apply the best available legal
advice. The Financial Law Panel in London is an example of a body that tries to do this.¹⁰

4. National and functional supervisors should agree upon a lead coordinator for global firms, apply a global review framework to all parts of a financial group and agree upon consistent reporting requirements for global firms.

Current efforts to expand cooperation with their peers demonstrate that supervisors themselves recognize the need to improve oversight of global firms. These efforts would not be necessary if there were true global, hands-on supervision. No such global agency exists, nor is one to be desired. Given that reality, the recommendations in this report are intended to create a system that works as effectively as if there were a global supervisor.

This requires someone at the center of the process to coordinate contacts among supervisors and their sharing of information. Bank and securities supervisors are now pursuing a lead-coordinator model for information sharing in emergencies. While substantial logistical and inter-country problems remain, this model should become part of the ongoing process of supervision as well. Over the long term, consideration should be given to changing the role of administrative coordinator to that of a coordinating supervisor who will take the lead in routine supervisory matters affecting a global firm.

With or without a strong coordinator at its center, the basic underpinning of international supervision should be strong capital standards and a strong framework for comprehensive and effective management controls as described above. The framework would apply to the entire global institution, including subsidiaries and affiliates that may not be subject to supervision at present.

Although the industry framework discussed above is intended to serve, in the first instance, as a guide to management and as a basis for review by an independent external audit firm, it can only become the standard for global supervision if it is acceptable to national and functional supervisors. The best way to ensure that a framework devised by industry wins the support of supervisors is if global institutions enter into early and ongoing dialog with supervisory agencies. On this basis, it should be possible to agree on a set of guidelines that transcend geography and function. It is in
the clear interest of both supervisors and supervised institutions to do so.

The resulting framework could then serve as a consistent basis for evaluating all global institutions. The framework would serve as a general blueprint, within which detailed procedures would be implemented by each firm. The evaluation would be performed in the first instance by an institution’s internal audit function, and would be verified by the external auditor. The external audit and evaluation of management controls by the external auditor would be provided to supervisors in appropriate form. This audit and evaluation would not be a substitute for supervisory judgement, nor would it relieve supervisors of their statutory duty to evaluate or examine the firms they supervise. However, it would provide additional information to supervisors on critical issues and, to the extent that supervisors were to pursue their own evaluation of the firm, they would likely use the same framework as an important part of that evaluation.

Thus, supervisors would want to be certain that appropriate management and control structures were in place, with appropriate Board oversight and checks and balances. They would have to be in a position to evaluate the basic building blocks of risk management—global monitoring systems, sophisticated models, and staff with the appropriate skills and training to operate them—which may exceed the current capability of some supervisors.

Supervisors must also examine organizational culture and the ethical climate in the firm. They may consider a firm’s recruitment practices and how prospective risk-takers are evaluated. They would almost certainly have to examine compensation practices—not with a view to determining what industry compensation should be, but as a basis for monitoring risk control and excessive risk-taking, and to ensure that the compensation (and stature) of risk-controllers is adequate.

Understanding the intricacies of risk management systems and overseeing a complex firm in a crisis will require a high level of skills. Supervisors will have to exercise judgment about a firm, making assessments of risk, not only compliance with rules. They will be called upon to provide feedback to the firm. People with scarce skills will have to be recruited, and they are likely to demand compensation closer to market rates rather than on public-sector pay scales. Keeping supervisors’ knowledge up to date may require structured training in cooperation with industry, or a system of
inward and outward secondments between supervisors and supervised. These steps would bring supervisors closer to the market, but carry the potential risk or perception of regulatory capture and conflict of interest.

Coordination of supervisors across borders and functions is an important part of achieving a global view of a firm. A common approach among bank supervisors has already been achieved for capital. Going further, effective coordination between supervisors will only come about if supervisors recognize their mutual interdependence and adopt common supervisory techniques. Harmonizing supervisory procedures and requirements across borders might make it possible, over time, to pursue coordinated, global inspections, although clear differences between banks, securities firms and insurance companies will complicate this. But even where multiple reviews of management controls by an independent external auditor and on-site examinations by various supervisors continue to occur, at least they would all be based upon a consistent, mutually reinforcing global framework.

Application of the new framework in the course of supervisory reviews is not, of course, the same as having it fully implemented by financial institutions. Not only are detailed compliance checks by supervisors resource intensive, they can encourage a minimalist approach to compliance by the supervised institutions without generating any commitment to underlying objectives. It is essential also to provide incentives for a financial institution to make the agreed framework part of its internal culture.

Supervisors can offer a variety of incentives, positive and negative, to global institutions. These might include:

- differentiating capital requirements for institutions based on the strength of their risk-management systems;
- differential supervisory monitoring of firms judged to be superior performers, for the entire institution or for particular areas of a firm, and greater reliance on external-auditor reporting for such firms;
- differential supervisory reporting, either in frequency or scope;
- supervisory fees adjusted to reflect the degree of required supervisory attention;
- fewer prescriptive rules for good performers and greater reliance on broad standards of review; and
• harsher penalties for poor performers who have not taken more extensive measures to control risk.

Certain supervisory techniques may be more conducive to the adoption of high standards than others. For example, supervisors might create a rating scheme for firms, with incentives or disincentives for higher or lower ratings. Alternatively, they might use a precommitment approach, whereby an institution would commit to meet certain goals mutually agreed with its supervisors, and would enjoy various incentives of the type described above as long as it met those goals.

Finally, the incentive for industry to develop a global framework would be increased if supervisors used the occasion of reaching agreement with industry on such an approach to promulgate consistent, global supervisory reporting requirements to the maximum extent possible. With nearly half of survey respondents reporting filing more than 500 supervisory reports a year, and over half operating in more than 25 countries, simplification of reporting would be a powerful incentive to cooperation.

Promoting adherence to a global control framework would, of course, be only one ingredient in the supervisors' broader efforts to ensure the safety of markets and of the international financial system, albeit a very important part of the overall picture. Supervisory responsibility for protection of depositors, transparency for investors, smooth functioning of markets, appropriate capital standards, crisis management and the full range of other duties would be unaffected. There would be no reduction of responsibility or yielding of sovereignty.

That is not to say that a process of cooperation with industry holds no potential for conflict. In some cases, the process might suggest areas in which supervisors should divide responsibilities along functional lines; in others, it might suggest areas where responsibilities should be expanded. And, surely, conflicts between a desirable global framework and current national supervisory mandates and practices will have to be resolved. For the most part, however, adoption of a consistent risk management approach internationally, and external evaluation against an agreed framework, should better inform and strengthen supervisory review.

Ultimately, it remains the supervisor's responsibility to examine an institution, decide when deficiencies in management control warrant corrective action, and initiate appropriate enforcement
measures. Whether this is left to supervisory judgement, based on a specific problem-response regime or based on precommitment by the firm to certain standards of performance, the threat of sanctions against internal management must be clear.

5. *Supervisors should formulate guidelines for risk management in organized markets and at institutions that are part of the market infrastructure.*

Capital markets and the market infrastructure on which they rely are increasingly important components of the international financial system. Market infrastructure includes deal-reporting and confirmation systems, clearing houses, central depositories and payment systems. These mechanisms are essential to the operation of financial markets; their disruption could be a source of systemic risk; and they are certainly a conduit for transmission of shocks through the financial system. Thus maintaining their integrity, financial stability, and their ability to withstand shocks and recover from disasters is essential.

Exchanges, OTC markets and settlement systems were major sources of concern for systemic risk in the industry survey. In general, exchanges inspired no more confidence than over-the-counter trading, despite the greater certainty provided by their admission requirements for participants, margin requirements and other operating rules. Respondents reported use of a variety of risk reduction techniques in their market transactions. These included collateral, guarantees and reliance on netting, although there are, as mentioned above, concerns about their effectiveness. Respondents registered strong support for supervisory or private-sector initiatives to strengthen international cooperation and improve the operating safety of markets and market infrastructure.

IOSCO, the Futures Industry Association, the Bank for International Settlements and others have proposed actions to address concerns over markets and market infrastructure. In order to reduce risk and ensure stability, there are a number of areas in which action should be considered.

- There may be need for overall standards at exchanges and clearing houses regarding back-up sites, contingency planning, etc.
- Futures exchanges and related clearing organizations should publish information on their own finances, market-protection
mechanisms, sources of financial support and default procedures. Each exchange or clearing house should develop a mechanism for communicating information to market participants if and when default procedures are initiated.

- Cross-border coordination and communication among exchanges, clearinghouses and their supervisors needs improvement. In particular, if something is going wrong in the market, supervisors that need to be told should receive the necessary information immediately so that they can take action. There has been progress in this area, especially on large-exposure reporting.

- Governments should strengthen laws and procedures for market default and for protection of customer assets, funds, and positions.

Steps that have already been taken to increase the amount of information available to the markets about individual exchanges and market entities should certainly be useful. Published audits would create even stronger pressure to improve performance at exchanges and clearinghouses. But to be fully effective, any evaluation of these markets and market entities should be based on standards that cover not only the effectiveness and safety of operations, but available legal protection of client funds, netting, contract enforceability and insolvency. Moody's Investors Service provided one example of a generic evaluation of this kind in the June 1995 report “Credit Risks of Clearinghouses at Futures and Options Exchanges.” If trades on low-rated exchanges faced higher capital charges, higher collateral or other risk-reduction measures, there would be market-driven pressure for improvement.
IV. Recommendations

Areas for voluntary action by industry:

1. Create a standing committee to promulgate and review global principles for managing risk, covering the full range of management control functions; the full range of risks in a global firm; the efficacy of risk-reduction strategies; the type, format and location of information to be maintained by all institutions; etc.

2. Subject their worldwide operations to expanded review by a single, independent, external audit firm or firm group, and agree upon more consistent and meaningful disclosure of financial and risk information on a global, consolidated basis.

3. Support efforts to agree upon high quality, uniform accounting standards internationally.

Areas for action by global auditors:

4. Work with global firms, audit-standards bodies and supervisors to achieve an agreed upon approach to financial-statement audits and other information for portraying risk.
5. Work with global firms, audit-standards bodies and regulators to specify the appropriate criteria for reporting on internal accounting and risk-management controls over global financial and operational risks.

**Areas for action by supervisors:**

6. Agree upon a lead coordinator for all global financial institutions.

7. Work with global firms in reviewing a global framework for comprehensive and effective management controls, use the framework in the supervisory review process, and provide incentives for adoption of strong controls.

8. Formulate standards for exchanges, clearinghouses and settlement systems, including risk management and financial stability; protection of customer assets, funds and positions; and netting, contract enforceability and insolvency.

9. Agree on a standard international approach to the number and basic content of supervisory reports, with modifications or appendices to meet specific supervisory needs.

10. Improve the capabilities of supervisory agencies to understand complex financial products, assess sophisticated risk management systems, and deal with crisis management in global markets.

**Areas for action by legislatures:**

11. National legislatures should provide a reliable legal framework for international transactions by strengthening laws regarding:

   • enforceability of netting
   • enforceability of collateral contracts
   • speedy and sure insolvency procedures
   • protection of customer assets, funds and positions on exchanges.
Endnotes

1. The Group of Ten countries include Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States.

2. The OECD is the Organisation for Economic Co-operation and Development. Its members include Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Republic of Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

3. The Bank for International Settlements (BIS) was created in 1930 to promote international central bank coordination and, therefore, international financial stability. It hosts meetings of central bankers, provides facilities for both standing and ad hoc committees, and conducts monetary and economic research on monetary policies and international financial markets. The BIS acts as Agent or Trustee for various international financial agreements. In addition, it serves as a bank for central banks, providing a range of financial services for managing their external reserves. Forty-one central banks are shareholders in the BIS: all the G-10 central banks — namely Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States of America — and the central banks of Australia, Austria, Brazil, Bulgaria, China, the Czech Republic, Denmark, Estonia, Finland, Greece, Hong Kong, Hungary, Iceland, India, Ireland, Korea, Latvia, Lithuania, Mexico, Norway, Poland, Portugal, Romania, Russia, Saudi Arabia, Singapore, Slovakia, South Africa, Spain and Turkey. Since September 1994, the eleven countries from which the members of the Bank’s Board of Directors are drawn have been identical with the countries which comprise the Group of Ten.


5. The National Commission on Fraudulent Financial Reporting, known as the Treadway Commission, was a private-sector initiative chaired by James C. Treadway, Jr., former SEC Commissioner. The American Institute of Certified Public Accountants, the American Accounting Association, the Financial Executives Institute, the Institute of Internal Auditors and the National Association of Accountants sponsored the Commission, which issued its report in October 1987.
6. The Committee on the Financial Aspects of Corporate Governance, known as the Cadbury Committee, was established in 1991 under the chairmanship of Sir Adrian Cadbury by the London Stock Exchange, Financial Reporting Council and the accounting profession. Its terms of reference called for a review of issues related to financial reporting and accountability with recommendations on good practice, including the reporting responsibilities of executive and non-executive directors and the form and frequency of reports; the role and composition of audit committees of the board; the responsibilities of external auditors; and the links between shareholders, boards and external auditors.


8. The Derivatives Policy Group consisted of representatives of CS First Boston, Goldman Sachs, Lehman Brothers, Merrill Lynch, Morgan Stanley and Salomon Brothers. It was organized to respond to public policy concerns raised by the OTC-derivatives activities of unregulated affiliates of SEC-registered broker-dealers and CFTC-registered futures commission merchants. The DPG formulated a voluntary oversight framework that addressed management controls, enhanced reporting, evaluation of risk in relation to capital and counterparty relationships.

9. The International Accounting Standards Committee, based in London, is pursuing a project to publish a comprehensive list of international accounting standards by March 1998.

10. The Financial Law Panel is an independent body sponsored by the Bank of England and the City of London, but financed by private-sector banks and professional firms. Its role is to address legal uncertainties which affect wholesale financial markets, with the object of eliminating uncertainties or limiting their scope, through the use of market-based solutions.

Appendix A
The Official Response to Systemic Risk

Coordinated action by supervisors to address the potential for systemic disruption dates back two decades. The collapse of Bankhaus Herstatt in 1974 and the ensuing gridlock of the payments system provided the impetus for creation of the Basle Committee on Banking Supervision at the Bank for International Settlements. This cooperative effort among bank supervisors has produced a number of important agreements on supervision of internationally active banks. These include minimum capital standards, which continue to evolve to address capital markets risks; and minimum standards governing the supervision of banks' cross-border establishments.

Similarly, other supervisory agencies have pursued international dialog and cooperation in their areas of responsibility. Created in 1984, the International Organization of Securities Commissions (IOSCO), based in Montreal, Canada, seeks fair and efficient markets, stronger international market surveillance and more effective enforcement. Its Technical Committee addresses regulatory problems related to international securities transactions. In 1995, national insurance supervisors came together to pursue cooperation in areas of common concern in the International Association of Insurance Supervisors (IAIS). The IAIS has now set up its international secretariat at the Bank for International Settlements.
Recently, supervisors have also begun to cooperate across sectors. This is largely in response to the emergence and growth of financial conglomerates. In 1993, the Tripartite Group, an informal group of banking, securities and insurance supervisors from the G-10 countries, undertook to identify problems that financial conglomerates pose for supervisors, and to consider ways to overcome them.

Following upon the Group’s report, the Basle Committee, IOSCO and IAIS formalized tripartite discussions by creating the Joint Forum on Financial Conglomerates, which began work in early 1996. Its mission is to seek mechanisms for exchange of information, explore legal barriers to such exchanges, examine the potential for identifying a lead regulator of financial conglomerates, and review other supervisory principles. Among the issues to be considered are: group-wide supervision; methods to assess capital adequacy; assuring managers’ conformity to fit and proper standards; treatment of large and intra-group exposures; and the ability to intervene in structures that interfere with supervision. This work is continuing.

At the beginning of 1995, two events occurred that dramatically increased the level of official anxiety about the stability of the international financial system. The Mexican crisis disrupted the market for Mexican government obligations, and then spread contagiously through other emerging markets in Latin America and beyond. The Barings crisis, in February 1995, demonstrated that a rogue trader could not only bring a prominent merchant bank to ruin, but also jeopardize futures exchanges in two different countries.

The two events engendered very different responses. The Mexican crisis brought an unprecedented infusion of official financial support from the United States and the International Monetary Fund, while the Barings collapse triggered a number of actions by supervisors to promote the safe operation of international exchanges and markets.

At a May 1995 meeting in Windsor, England, supervisors of the world’s major futures and options markets from 16 countries issued the Windsor Declaration. The Declaration called upon supervisors to cooperate in responding to market disruptions, and to share information regarding large exposures in individual markets. Meeting participants agreed to designate a contact person at each supervisory agency to be available at all times in the event of a disruption, and to maintain a list of such contacts.

In the interest of protecting customers, the authorities called for: clear segregation of client funds; full disclosure to market participants of current policies regarding treatment of client funds;
and further work to make such policies more consistent across markets. The Declaration also recommended that "standards of information" on default procedures be made available to customers, and called for a mechanism for informing market participants when default procedures were initiated.

Immediately following the Barings collapse, the Futures Industries Association, a US-based association which speaks for the futures and options industry, created a Global Task Force on Financial Integrity. The Task Force involved exchanges and clearinghouses, brokers and customers from 17 jurisdictions, and produced wide-ranging recommendations intended to protect customers' assets. The goals of the proposals were to: provide market participants with the means to evaluate and compare exchanges and clearinghouses, brokers and intermediaries; improve cross-border coordination and communication among exchanges, clearinghouses and their supervisors; improve internal risk management by brokers and intermediaries of their customers' exposure; and improve internal risk management of brokers, intermediaries and customers of their own trading activities and those of affiliates.

The extraordinary attention given to financial system issues at the G-7 Economic Summit in Halifax, Canada in June 1995 attested to the profound concern these events generated. The Halifax Communiqué focused heavily on the Mexican crisis, and steps necessary to address country liquidity emergencies. It also concentrated unprecedented attention on supervisory issues, calling for:

- intensified international cooperation between regulators and supervisors to promote the development of globally-integrated "safeguards, standards, transparency and systems necessary to monitor and contain risks;"

- continuing removal of capital market restrictions, accompanied by guidance from international financial institutions on "appropriate supervisory structures;"

- reports at the next summit by the international banking and securities regulators analyzing the current supervisory and regulatory system, and proposing improvements.

In a companion statement, the G-7 Finance Ministers and Central Bank Governors called for stronger international cooperation in regulation and supervision to protect the international financial
system and called upon the G-10, Basle Committee and IOSCO to address these issues.

In response, the Basle Committee and the Technical Committee of IOSCO formed a Coordination Group to examine information exchanges between banking and securities supervisors, and cooperative efforts in supervising financial conglomerates and the use of derivatives. In April 1996, the two bodies issued a Basle-IOSCO joint response, which detailed the extensive program of work already underway, and pledged to carry it forward both individually and jointly.

Meanwhile, building upon the Windsor Declaration and the work of the Futures Industry Association, supervisors and representatives of exchanges and clearinghouses from Asia, Australia, Europe, and the United States met in Boca Raton, Florida in March 1996. The result was a Declaration on Cooperation and Supervision of International Futures Exchanges and Clearing Organizations and an accompanying Memorandum of Understanding (MOU) among the supervisors. To date, 55 organizations have signed the Declaration (a number of others are prohibited from participating by national law). The MOU has been signed by 15 supervisors.

The Declaration sets forth events which will trigger a request for information from another exchange or clearinghouse: a large decrease in a member's capital position; large cash flows in proprietary or customer accounts; or a concentration of positions in any futures or options contract. Conclusions are to be shared with the other exchange, and all information is to be held in confidence, even if the MOU is terminated. The Boca Raton documents also include emergency contact lists.

Also in March 1996, the Bank for International Settlements issued the report Settlement Risk in Foreign Exchange Transactions. This was the culmination of work that had been underway for several years, first in the New York Foreign Exchange Committee, and subsequently in the Steering Group on Settlement Risk in Foreign Exchange Transactions of the Bank's Committee on Payment and Settlement Systems. Motivated by concern over the large exposures associated with $1.25 trillion of daily foreign exchange trading, the report detailed practical steps for dealing with this risk. It also called upon individual banks and industry groups to improve current practices, and devise safe mechanisms for addressing settlement risk. The report warned that, unless action were taken, central
banks would have to consider further regulatory steps to strengthen risk management in the foreign exchange area.

The G-7 Heads of State repeated their call to action at the Lyon Economic Summit of June 1996. The expressed satisfaction with IMF efforts to improve its early warning system for country liquidity problems, and to mobilize resources for emergency financing. The Lyon Communiqué focused on the challenges posed to supervisors by financial innovations, growing cross-border capital movements, and the increasing number of internationally-active financial institutions. It called for:

- deeper cooperation among supervisors of global financial firms, and a clarification of their roles;
- improved risk management and transparency in markets;
- strong, prudential standards in emerging markets, deeper cooperation with their supervisors, and international financial institution support for "effective supervisory structures;" and
- an examination of the significance of new technology for retail electronic payments.

The G-7 Finance Ministers issued a companion report that underscored the themes in the communiqué, and urged groups such as the Basle Committee and IOSCO to action. It also called for better cooperation between exchanges, either through the implementation of the Windsor recommendations, or by working out others.

In August 1996, the Co-Chairmen of the original meeting issued a final report pursuant to the Windsor Declaration. This report noted progress on a number of problems identified in the original Windsor agenda, with special attention to the Boca Raton Declaration and MOU, and the work of the Futures Industry Association (FIA) Global Task Force. However, the report cited areas for further work. It called on various governments to strengthen laws and procedures for market default, and for protection of customer assets, funds, and positions. It also urged implementation of the FIA Global Task Force recommendations that futures exchanges and related clearing organizations publish information on market protection mechanisms, financial support sources, default procedures, and their own finances.

Finally, in case governments and supervisors needed reminding that problems can emerge suddenly and from unexpected quarters, Sumitomo Corporation, the world’s largest copper trader, announced
market losses of $2 billion. Although this was well in excess of the $1.4 billion loss suffered by Barings, the incident was not fatal, owing to Sumitomo's size. Nevertheless, regulators sprang into action to review the situation and take remedial action.

In November, 1996, supervisors of commodity futures markets from 17 countries met in London to discuss the oversight of commodity futures markets, and issued the London Communiqué on Supervision of Commodity Futures Markets. Because none of the work underway on market supervision and international cooperation specifically addressed commodity futures markets, the supervisors identified issues peculiar to the commodities trade, and agreed on a series of initiatives in that area.

Mirroring earlier initiatives, the London Communiqué emphasized the need for deeper cooperation between authorities, and:

- called for interchange of information, both on a regular basis and in emergencies;
- agreed to promote regulatory measures to identify large exposures in the derivative and cash-market positions of traders;
- pledged to procure greater access to information on prices, open interest, and deliveries;
- ordered a survey of markets and their practices in order to enhance supervisory awareness of current market practices;
- suggested consideration by authorities of contract design principles to ensure that contract terms and conditions minimize the potential for abusive conduct; and
- proposed that the public should be provided access to information on rules, contracts, and procedures of commodity markets.

In April, 1997, responding to calls from the G-7 for measures to strengthen bank regulation and supervision at the Halifax and Lyons Summits, the Basle Committee on Banking Supervision issued a consultative paper entitled Core Principles for Effective Banking Supervision. The paper sets out 25 basic principles required for effective supervision. These ranged from licensing, to methods of supervision, to information, to issues of cross-border banking. The principles were developed by a group including G-10 bank supervisors and representatives from Chile, China, the Czech Republic, Hong
Kong, Mexico, Russia and Thailand. Brazil, Hungary, India, Indonesia, Korea, Malaysia, Poland and Singapore were also closely associated with the work. Also aiming at more effective bank supervision, the IMF is making an evaluation of financial supervision and regulation part of its annual country reviews, and the World Bank is emphasizing the strengthening of financial infrastructure as an important part of its structural assistance programs.

In May, 1997, the Committee on Payment and Settlement Systems of the G-10 central banks, in cooperation with the Bank for International Settlements, issued a report on Clearing Arrangements for Exchange-Traded Derivatives. This report focused on the importance to the financial integrity of futures and options markets of robust arrangements for clearing and settling trades. It cited vulnerabilities in several areas: inadequate financial resources to withstand member defaults or extreme price movements; lack of mechanisms to monitor and control intra-day risks; and weaknesses in money settlement arrangements, including the risk of unwinding provisional funds transfers late in the day.

Although the report did not dictate a course of action, it suggested several ways to strengthen clearing arrangements. These included: stress testing to identify and limit exposures and to ensure the adequacy of financial resources; better intra-day risk management, including more frequent trade matching, calculation of exposures and settlement; and strengthening money settlement arrangements through use of real-time gross settlement.

This succession of studies, reports and initiatives of recent years is an indication that the challenges facing the financial system are many, complex and constantly changing. The response to these problems must be similarly broad and continuous.
Appendix B
Survey of Globally Active Firms

This study focuses on global institutions and the market framework within which they operate. To test the study's premises against the realities of the marketplace the group decided to survey those institutions. A questionnaire went out to 90 institutions, most of them large, global players, but also to a few smaller institutions playing specialized roles in global markets. Banks received the majority, but a number also went to a selection of large investment banks, insurance firms and non-bank financial firms.

Sixty-six institutions, roughly 75 percent of the sample, responded to the survey. The respondents, listed on page 53, comprised 47 banks, 11 investment banks, eight insurance companies and one specialized institution. Both European universal banks and US and Japanese institutions with more limited charters participated. Together they represent a reasonable cross-section not of the financial services industry, but, as planned, specifically of global financial institutions.

The survey covered a wide range of issues. It asked respondents to speculate on the likelihood of a serious systemic disruption and its possible sources. It asked factual questions about the scope and timing of their risk monitoring, the quality of their information and their use of models and methods for mitigating risk. It asked for
facts and attitudes about reporting to supervisors and the public; the role of external review by independent external auditors, rating agencies and supervisors; and legal issues, including netting, enforceability of contracts and insolvency. The survey asked for an assessment of various supervisory approaches, as well as public and private initiatives to strengthen systemwide oversight. And it closed with a series of questions on specific issues related to exchanges and clearinghouses, over-the-counter markets and settlement systems.

Many survey questions were general and impressionistic; and the answers lent themselves to a range of interpretations. To remedy this shortcoming, the study group conducted follow-up interviews with a dozen institutions in the United States, Europe and Japan. Based on analysis of responses to the questionnaire and follow-ups, these are the study’s conclusions.

Systemic Risk: Respondents generally agreed that a serious disruption of the international financial system could occur, rating the likelihood at one in five over the next five years. If such an event were to occur, however, institutions did not see a substantial threat to their survival or that of their major counterparties. Rather they count on their own risk controls, and trust that central banks and other supervisors would act reliably in an emergency to limit damage and calm markets. Perhaps for this reason, respondents generally doubted that any shock would spread far beyond the initial “point of impact” to threaten widespread disruption of the financial system. Despite this expressed confidence, the firms surveyed would support actions to reduce the risk of shocks to the system.

Sources of Risk: Asked to name triggers capable of producing a major systemic shock, respondents listed the failure of a major institution, market disruptions and the failure of a settlement system. Their greatest concerns were problems that: could grow very rapidly; could remain hidden while they grew in size and complexity; or involved counterparty linkages that could tie the system in knots.

- The failure of a second-tier institution with enough market linkages to affect many firms or tie up a settlement system gave respondents the greatest concern. Trouble could come from a second Bank Herstatt or, perhaps, a fast-growing, but weakly-supervised emerging market institution.

- They recognized the trading area as a place where large amounts of money move quickly, and problems with market, credit and operational risks can grow apace. They were skeptical, however, that really large losses would arise from position-taking because
market-risk controls are the strongest and past shocks have produced minimal losses.

- Operational risk raised greater anxiety. Respondents fear that internal controls may fail to detect excessive risk-taking or fraud, permitting initially modest losses to grow hidden from view.

- Collateral, increasingly popular as a risk reduction technique, troubles many survey participants. They cited uncertain legal enforceability and liquidity, as well as the lack of effective systems for monitoring and controlling collateral obligations throughout an institution. No firm indicated that it has a system capable of monitoring the full range of legal and financial risks involved with collateralization.

- There was general agreement that any shock, regardless of its source, would be particularly problematic if it deadlocked a settlement system.

*Risk Monitoring, Measurement and Control:* Rating effective risk measurement, monitoring and control as important, respondents expressed a generally high level of confidence in their own systems and practices. Most firms reported that they were managing risk globally and monitoring market risks at least daily, although insurers represented the largest portion of those who do neither.

- A substantial minority of survey respondents do not stress-test key risks, perform worst-case simulations or back test their models. Interviewees underlined the need for testing of models because prevailing assumptions about the direction of markets and the effectiveness of hedging strategies may be wrong. If many widely-used models incorporate similar assumptions about where markets and policies are headed, the resulting "herd mentality" could be a source of systemic risk.

- Despite the confidence expressed in risk management systems, many firms achieve global, daily risk assessment only with a great deal of human intervention to fill gaps and reconcile incompatible systems. While most firms aspire to "push a button" to measure global value-at-risk, few institutions can so do now. Sizable investments lie ahead.
• The survey uncovered real concern about the quality of information fed into risk monitoring systems—both market-risk data and credit data on counterparties. In the view of most respondents, however, data errors are not large enough to have systemic implications.

• While the survey did not find much preoccupation with measurement systems, internal control systems did give some institutions doubt about their ability to detect excessive risk-taking and fraud. This concern centered as much on culture as systems: attention to controls at senior levels, risk control as part of business decision making, etc. While substantial management attention and resources have been devoted to market risk controls, respondents would clearly favor a good deal more attention going to credit and operational risks.

Reporting: Most firms publish financial results and report to supervisors at least twice a year. Few, however, publish any information on their risk profile or the effectiveness of their internal controls; and more than one-third provide no such information to their supervisors. Owing to a general concern with the adequacy of counterparty information, global standards on the scope and timing of public reporting received strong support, as did standards for reporting to supervisors.

External Review: The survey revealed strong support for external review of a firms’ global operations by independent external auditors, with results published at least annually. Respondents agreed that these reviews would have greatest impact if based on globally harmonized audit and accounting standards. Most reported movement toward a single, global external auditor. The complaint heard most is that a traditional audit provides a once-a-year snapshot of the financial position of a firm. In many cases it provides only a limited picture of trading activities, that is not particularly useful for evaluating a global firm. For this reason, respondents supported focusing audits more on risk management systems and internal controls, and developing standards against which to rate those functions.

Considering a role for credit rating agencies in evaluating internal controls and risk models, those interviewed generally argued that they are not up to the task, because they spend so little time with a firm, and they have no capacity to verify their conclusions.

Role of Supervisors: By a wide margin, survey respondents rated global monitoring of supervised institutions as the most important
contribution home country supervisors could make to reducing systemic risk. However, respondents indicated only moderate confidence that their own supervisor was achieving effective global oversight of their firm. US investment banks and insurers from a number of countries, whose primary supervisors lack the authority or capacity to achieve global oversight, have obvious problems in this regard.

Respondents favored some form of oversight of currently unsupervised financial entities. They expressed strong support for giving a single supervisory entity in each country the authority to oversee all significant financial firms operating there. In addition, they tended to believe that effective risk measurement, monitoring and control should be the primary focus of supervisory oversight; and that incentives would be helpful in promoting best practice in these areas.

Confidence in supervisors was very high in the event of systemic disruption. A large majority believed that their home supervisor could manage a financial crisis, particularly through provision of liquidity by central banks and official intervention in troubled firms. Respondents generally considered communication and coordination between home and host country supervisors important, but never more so than during a crisis. They rated lack of effective coordination between home and host supervisors as the greatest threat to worsen a systemic disruption once under way.

Legal Issues: Legal risks and uncertainties repeatedly appeared as concerns—chiefly the enforceability of netting and collateral contracts, and conflicts of insolvency and other laws. As usual, respondents universally supported netting, but found it distressingly unreliable, and legally binding in only a few countries They cited the United States, United Kingdom and France as the reliable exceptions. To achieve speedy resolution in the event of an international insolvency, the factors they considered most important were effective netting; ready access to good information on the insolvent’s exposures; and legal distinction between own and client funds.

Exchanges, OTC Markets and Settlement Systems. While the survey addressed separately issues relating to the markets and institutions that link global institutions, the responses tended to focus on the same counterparty and legal risks covered elsewhere in the survey. Thus, whether transacting business on or off exchange, respondents cited use of collateral as the best way to limit risk. They strongly
supported internal controls and risk management systems for the linking organizations, and called on them for greater legal certainty in issues of netting, enforceability of collateral and insolvency. They also called for global standards to govern the operation of settlement systems, and for rating the safety of exchanges and clearinghouses. And they favored strong entry and minimum capital requirements for exchanges and settlement systems.

Respondents expressed satisfaction with current industry and supervisory initiatives to reduce risk: sharing of information on large exposures among exchanges; promotion of standard documentation for OTC contracts; and the steps to reduce foreign exchange settlement risk promulgated by the BIS [id?].

Global Standards: Respondents favored a wide range of actions to improve systemic safety. Proposals by the Basle Committee and IOSCO to strengthen supervision received strong support; as did BIS efforts to reduce foreign exchange settlement risk; and private sector initiatives like that of the Derivatives Policy Group. As elsewhere in the survey, they strongly supported development of industry standards across a range of areas:

- risk monitoring and measurement, and internal controls at firms;
- the scope and timing of financial reports to supervisors and the public, including information on value at risk, and the effectiveness of internal controls;
- audit and accounting information; and
- rating the safety of exchanges, particularly regarding the exchange’s own risk management capability, and including the legal basis for netting and insolvency resolution in the jurisdiction of the exchange.

The survey found almost no objection to raising risk management standards systematically, even among the institutions expressing little anxiety about systemic risk. However, respondents did not want standards to be over-specified. Their argument went: there is no single model for risk management and internal control in all institutions, nor would pursuit of a single model be safe or sensible. Many supported the idea of industry standards as a basis for external ratings.
### Survey Responses

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<th>Country</th>
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<td>Australia</td>
<td>Australian Mutual Provident Society</td>
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<td>ANZ Banking Group</td>
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<td>Commonwealth Bank of Australia</td>
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<td>Depository Trust Company</td>
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<td>Republic Bank</td>
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<td>Salomon Brothers</td>
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<td><strong>Total:</strong> 66</td>
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