Chapter 1

The Evolution of a Global Securities Market

As national economies are linked together by the exchange of goods and services and by public and private communications networks, global securities markets develop. American securities markets, among the world's best in liquidity, efficiency, and fairness, should stand out in this expanded arena, provided they do not fall behind in technological and financial innovation. But securities trading on a global scale brings with it new risks, as well as beckoning opportunities. American investors and American regulators and policymakers are seeking to understand these risks and appraise the demands that they will place on markets, market participants, and their regulators.

This background paper describes the forces encouraging the development of international securities markets, the obstacles that must be overcome, and the major sources of unnecessary risk. It provides some estimates of the present extent of cross-border trading, and describes the largest and most active organized markets-our competitors in providing securities-related services—in Japan, the United Kingdom, and the rest of the European Community. It also describes the important clearing, settlement, and payment mechanisms that support major markets. Finally, it outlines the questions to be faced as the span of securities trading stretches beyond the scope of national regulatory regimes.

This background paper prepares the way for a forthcoming OTA report, ***Electronic Bulls and Bears: Securities Markets and Information Technology,*** which will probe policy issues arising from the impacts of communications and computer technology on traditional market structures and practices, and their ability to meet the demands implied by global securities trading.

INFORMATION TECHNOLOGY FOR GLOBAL MARKETS

Global telecommunications shrink distances and time differences, tie together national economies, and thus encourage the growth of securities trading across national boundaries. The rapidly increasing capacity and declining cost of communications and computer systems make these trends sure to continue. The emergence of multinational corporations with presence throughout the world is also hastening the globalization of securities markets. The needs of large institutional investors for cross-national investments to diversify or to hedge their portfolios is another strong driver.

The technology for global trading is basically in place, in the form of public and private communications networks, the specialized computer-communications systems used for market data dissemination, and—just poised for take-off—automated systems for 'round-the-globe, 'round-the-clock trading. The integration of the world economy means that multinational enterprises and their products and services become known to investors throughout the world, reducing the information barriers that have in the past inhibited international securities trading. Significant obstacles remain, because international standards and effective international regulatory protections are not yet developed.

The growth in demand for international market news and market data (quotations, last sale prices, volume), together with the effects of the digitizing of data, has led to brisk competition among information services vendors, and to a turbulent restructuring of that industry. Electronic trading systems being developed both by information vendors and by forward-looking exchanges could become the international exchanges of the future. At present, they are essentially unregulated. These changes are forcing two issues into new prominence:

- Who owns digitized data at various stages of its processing and dissemination, who can enforce ownership rights, what constitutes "value added," and how should digitized data be priced?

- Should proprietary trading systems be regulated as organized markets (like exchanges), and if so, by whom?

It is by no means certain that U.S. markets will remain in the forefront of the movement toward ‘round-the-clock global securities trading. While U.S. futures exchanges and our over-the-counter market are acting aggressively to put worldwide electronic networks in place, the U.S. stock exchanges have been slower to act. Meanwhile, securities exchanges in many countries are moving toward highly automated markets.

The lack of international standards will be increasingly important; for example, standards that apply to international financial services, especially securities trading, need attention urgently. Government involvement in standards-setting appears to be essential if new sources of operational risk are to be minimized.

THE MEANING OF GLOBALIZATION

Foreign currency exchange and markets for government debt securities have long been international. To the extent that there is still argument about the future of global securities trading, it focuses on how quickly 24-hour trading will emerge, and to what degree it will extend to corporate equities. A two-tier market system could develop, with international electronic trading of the shares of 500 to 1,000 multinational corporations, and domestic (country of domicile) trading on traditional exchanges and over-the-counter markets of most other corporate securities. Or—although this is less likely—traditional exchange-based, face-to-face markets could lose out entirely to the competition of electronic systems.

There is growing evidence, especially since the October 1987 market break and the October 1989 break, that securities markets around the world are linked. They tend to move in parallel in response to economic and financial news, and to react sharply to stress in other markets. Although there has been relatively little response in other markets to sharp declines in Tokyo Stock Exchange prices in early 1990, the anxious attention of market observers around the world attests to the general recognition that this stability may be precarious.

“Globalization of equity securities trading” is a term that covers a variety of related growth trends. It includes the cross-listing of securities in several countries, cross-national portfolio diversification and hedging, holding membership (generally through affiliates) in another country’s exchanges, legal or contractual ties between exchanges, electronic systems for 24-hour trading, “passing the book,” the development of cross-national stock index derivative products, and related phenomena such as multinational primary offerings of stock and international mutual funds. All of these are now growing, although at different rates.

There are nevertheless major obstacles, such as legal, regulatory, and cultural differences between nations and markets. Some of these differences impose serious risks on investors, market organizations, and other financial institutions. These new or aggravated risks are often poorly understood by individual investors and perhaps by professional investment managers.

In the worst case, the failure of major market participants (e.g., securities firms or banks) with heavy commitments in several countries could have gravely detrimental results for national financial and payment systems and possibly for entire economies.

COMPETITORS IN WORLD SECURITIES TRADING

Our rivals as centers of international securities trading today are Japan and the United Kingdom. The potential integration of a European securities market, with the European Community’s 1992 Initiative, will bean important factor in future competition. Other nations are or may become niche competitors.

The Tokyo Stock Exchange (TSE) vies with the United States as the world’s largest securities market in terms of capitalization and trading volume. It has the advantage of a strong economy with many multinational corporations, a concentration of capital that may exceed domestic investment opportunities, a large retail customer base, and supportive government policy. It is not as ‘‘international’ as London’s markets nor as accessible to foreign investors as either London or New York, because of regulatory, institutional, linguistic, and cultural barriers. Transaction costs and listing costs are relatively high.

London’s International Stock Exchange (ISE) is also among the four or five largest markets (usually following the TSE, the New York Stock Exchange, the Osaka Stock Exchange, and NASDAQ, the U.S. over-the-counter market); and it is the most international major market, with nearly a quarter of its listings and a quarter of its transactions involving foreign issues. However, in the aftermath of deregulation and automation—the ‘Big Bang’ of 1986-and the market crash in 1987, the ISE has serious problems, including the growth of off-market trading that threatens to cause market fragmentation. Spreads and commissions, two components of transaction costs, are very low; but settlement costs are disproportionately high. Strenuous efforts are underway to solve these problems.

Other European markets, especially the German exchanges, the Paris bourse, and the Swiss exchanges, are making vigorous efforts to increase their volume, automate their activities, and modernize their regulatory regimes. The European Community intends to achieve regulatory harmonization and an integrated, strong “European trading arena” in services by 1992, including eventually an integrated European securities market. This is a goal rather than an achievement, and there are many obstacles, but substantial progress has already been made.

CLEARING AND SETTLEMENT

The most critical problems for international securities trading, but also the most concerted efforts at problem resolution, are in the area of clearing and settlement. Clearing and settlement systems for financial instruments differ greatly within and across countries, in procedures, in timing of settlement, in the institutions involved, and in the degree, nature, and locus of risks. These differences in countries’ systems are important because: 1) systems traditionally used for domestic trading are now being called upon to accommodate international participants; 2) the integrity and efficiency of a nation’s clearing, settlement, and payment system are important to its internal financial and economic stability and its ability to compete with other nations; 3) the failure of a foreign clearing entity could affect a U.S. clearinghouse through the financial failure of a common clearing member; and 4) the growing number of U.S. investors in foreign markets may be unaware that risk levels in some foreign markets can be much higher than those in our domestic markets.

To improve efficiency and reduce risks, the world’s clearing and settlement systems must be coordinated with each other in a number of ways. Both the private sector and regulators in the United States and other countries have begun to take, or are considering, actions to accomplish the needed improvements. A number of international studies are in general agreement on the types of improvements needed. These studies have been done by the European Economic Commission, the Federation International des Bourses de Valeurs (FIVB), the Group of Thirty, the International Society of Securities Administrators, and Bankers Trust Co. (the last as contractor to OTA). One of the shared conclusions of these studies is that the world’s major clearing and settlement systems should be “harmonized” in selected ways in order to strengthen them and prepare for the emerging global trading environment.

The private sector in the United States, with encouragement from regulators, is making impressive progress in paving the way for needed improvements, but many are complex, time-consuming, and costly. In some areas legislation is likely to be needed, e.g., to make it possible to eliminate all, or most, physical certificates for securities and to align holidays observed by banks and financial markets. In other cases, U.S. regulators will need to take action.

In many cases, U.S. and foreign government cooperation will be needed to effect change. Six major concerns need to be addressed: risks associated with default; risks associated with the payment process; information sharing; progress in technology development; standardization; and shortening the time to settlement using same-day funds. The attention to date by various organizations to international clearing, settlement, and payment systems has been helpful, but these efforts are unlikely to provide needed continuity, and have not addressed all financial products, such as derivative products (e.g., stock-index futures and options). Because of the diversity, complexity, and universality of issues likely to continue to arise over the next decade, a single international body should be considered to facilitate world cooperation in addressing these issues.

COMPETITION AND REGULATION

Many complex problems and unnecessary risks arise from differences between nations in regulations and in regulatory objectives, and from the lack of international machinery for monitoring, surveillance, and governing of global markets. Significant risks associated with international securities markets are related to substantial differences among nations and markets in:

- prudential regulation (i.e., investor protection rules, such as disclosure requirements or safeguards against market manipulation or fraud);
- capital requirements, accounting practices, and other factors relating to the financial integrity of market professionals and intermediaries, brokers, dealers, and traders; and
- margining systems, clearing and settlement mechanisms, and payment systems, especially important because they may involve systemic risks to financial institutions that are involved in the markets of several countries.

There are also important differences in the activities permitted to certain market participants (e.g., separation between banking and securities activities, or separation of broker/dealer functions).

Differences among nations in regulation of securities markets are a factor both in risks and in competition among markets. There are sharp disagreements about the effects of market regulation on competition among markets for customers. Some market participants stress that regulatory costs add to transaction costs, and oppose most regulation on the grounds that it could drive securities trading (both domestic and international) to overseas, less regulated markets. This concern could lead to ‘regulatory arbitrage, ’ or a movement to reduce regulatory supervision of markets to the level of that in the least regulated competitive market.

However, there are two broad categories of market regulation: access regulation, and prudential regulation. In most countries, there has been a movement toward access deregulation in the last few years; i.e., reducing the barriers to broad participation (including foreign participation) in organized markets or exchanges, and this has encouraged internationalization. In some countries, there has at the same time been a movement toward strengthening prudential regulation, or rules aimed at protecting investors against unrecognized risk or against market fraud, abuse, and manipulation. This is sometimes called "re-regulation, " and it is also often done for the purpose of attracting investors, especially international investors. (Neither movement has been obvious in the United States, which already had better investor protection laws than many countries, and few if any barriers to foreign participation.)

The problems of enforcing national regulations are complicated by the difficulty of investigating and correcting abuses that originate overseas or involve participants outside of the country's borders. In the United States, legislation is being considered that strengthens the powers of U.S. regulatory agencies to cooperate with foreign regulators. Cooperative efforts are complicated by laws in some countries that restrict the disclosure of financial data, i.e., privacy and secrecy laws.

Free market proponents argue that regulatory differences between nations are best resolved by deregulation in all nations, letting market forces and competition decide which risks are acceptable to investors. But in most markets and in most countries, there is a movement toward seeking "harmonization" of regulations and cooperative enforcement of standards of fairness and honesty. Many industry groups and international associations in the private sector, as well as regulatory authorities in the major market countries, are participating in these efforts.

However, at the policy setting level and at the negotiating level there are substantial disagreements about what "harmonization" should mean. Even among regulatory agencies in the United States, there appear to be significant differences in the approach to harmonization of regulations. There are several different approaches loosely designated as 'commonality' (universal regulations); "comparability" (acceptance of substantially equivalent rules); "national treatment" (each country subjecting domestic and foreign institutions to the same rules within its borders); and ''mutual recognition" (a country allows foreign institutions to operate within its borders under the rules of their countries of origin). The last two of these approaches actually do not require, or constitute, harmonization.

There are several movements underway involving either governmental bodies or private sector associations, or both, to achieve greater harmonization. Stronger initiatives by U.S. governmental agencies may be needed to encourage such efforts, or to assert U.S. leadership on behalf of such efforts, in order both to protect U.S. investors and institutions and to enhance our competitive position vis-a-vis global securities trading.

THREE SCENARIOS FOR GLOBALIZATION

These trends suggest several scenarios for possible regulatory responses to the globalization of securities markets. The scenarios outlined below are intended merely to focus discussion on the implications of international securities trading, and are not suggested as fully developed strategies or policies.

The present political, economic, and regulatory environment for international securities trading consists largely of informal or contractual institutional arrangements and bilateral agreements between national regulatory authorities. The future regulatory framework for world markets could be a continuation and extension of these evolutionary developments; or strikingly different frameworks might develop. They could come about as a result of severe market breaks and disruptive economic and political events, or as a result of initiatives shared by private and public financial institutions and regulatory authorities around the world.

Many forces, acting together at many levels, could influence such developments. At the level of the global economy, the process of continuing economic development is driven by such forces as the impacts of major economic imbalances, national economic and finance policies, trade patterns, inflation rates and interest rates. It will also be shaped by political events-e. g., change in Eastern Europe, the unification of Germany, and the European Community's 1992 Initiative. At another level, the evolution of financial markets will be shaped by the course of technological and product innovation and the behavior patterns of key players—multinational and translational business enterprises, securities underwriters, institutional investors, securities firms, exchanges, banks, clearing organizations, information services vendors, and national regulatory authorities.

The pattern of technological innovation is an important factor in the behavior of securities markets. Innovation in technology and in financial instruments could contribute to sustained liquidity and expansion; but it is also possible that innovation could outpace the capability of market participants to comprehend and control its effects, or could merely be a drain on resources and attention without contributing to economic utility. Accelerating obsolescence of information technology could diminish the return on investment, eventually discouraging innovation. Financial product innovation can draw new investment into securities markets or drive out some traditional investors. Some financial innovations (e.g., stock-index futures) have certainly dramatically increased the linkages between different kinds of capital markets, with secondary impacts that are not yet well-understood and are the subject of much controversy, especially in the United States and Japan. [These forces are discussed in a forthcoming OTA report, ***Electronic Bulls and Bears: Securities Markets and Information Technology.]***

Peter Schwartz, of Global Business Network, ties together the economic, political, and market possibilities into five models of international securities trading: These are:

- Fragmenting Markets-Conflicts of interest, political friction, and protectionism inhibit the process of integration of financial markets. Costly and unreliable technology adds to the burdens on market participants. Key players see no value in creating an international framework for regulation of securities trading.
- Regional Markets-Integration occurs at the regional level as part of a protectionist world of trading blocs, with diminished interbloc trading, and possibly with new capital controls.
- Integrating Markets-Multinational trading blocs develop, but are not an impediment to global integration. They provide useful models for complex multilateral economic regimes. Agreements on general principles are a step along the path toward broader multilateral regulatory regimes. The OECD is the model of a regional organization in which the political capability for agreeing on very complex issues can be developed.
- Stratified Markets—A two-tiered market develops, with the off-market, large bloc institutional investors constituting a global marketplace and an array of smaller domestic retail markets.
- Global Markets-New technology, the global economy, and the commercial strategies of financial companies and their customers and suppliers, drive the evolution of global financial markets. They develop within a regime of bilateral cooperative agreements, but the world is moving toward a 24-hour trading day operating mainly in commercial networks outside of recognized markets and their regulators. This is, like the Eurobond market today, an arena for professionals.

Although many others could be fashioned by varying one's assumptions, three possible scenarios for international securities regulation are outlined below. The first assumes a gradual and orderly transition from the present. If international securities trading expands through gradual evolution and there are no major economic or political disruptions or global market crashes, this is a highly likely scenario; it appears to be the probable one for global securities markets. But reason and goodwill can be defeated by "accidents of history." Disruptions have often been the triggers of change, sometimes undesirable change and sometimes change for the better.

The second and third scenarios acknowledge the possibility of drastic disruption and discontinuity. Either of these scenarios could develop if changes in the marketplace outrun the market's ability to adjust, regulate, or even comprehend its implications. Either might result from a major market disruption, as large or larger than the break of October 1987. Such a disruption might be set off, for example, by a sharp decline in the Japanese market, the after-effects of the bankruptcy of one or two major U.S. securities fins, or changes in currency value related to unification of Germany or other events in Eastern Europe or the Soviet Union, or the Japanese real estate market. While a market break might begin as an internally caused ‘‘accident, it is more likely to result from an economic environment of weak profits and price volatility. Continuing economic imbalances, widening recession, and the inflationary boom that would likely follow could set the stage for one or the other of these scenarios.

Scenario 1: A Cooperative Framework

A series of efforts, already underway in 1990, leads to the slow development of an effective international regulatory structure.

- There continues to be a stable, “fairly prosperous economy. The industrialized world enjoys slow but steady and unbroken growth, low inflation, and unemployment of less than 6 percent. Interest rates follow a somewhat higher path trailing the slow decline in the U.S. fiscal deficit. International imbalances slowly unwind, currency volatility diminishes as a result, and there are no major shocks or disruptions.
- As capital investment in new technology increases, and productivity improves, the stage is set for higher growth and accelerating investment, placing great demand on international capital markets. A continuing bull market supports a climate of sustained financial innovation. Today’s multi-domestic markets with limited international activity move toward ever more international flows.
- The true global marketplace begins to develop in the off-market trading arena used by large institutional investor/professionals. As the structure of markets gradually becomes ever more stratified, and the systemic risks associated with them become more apparent, the pressure for some regulatory response mounts.
- Economic integration begins at a regional level and moves toward the global level in the first decade of the new century. Cooperation is embodied in the development of the international information systems and the regulatory agreements required to foster increasing integration. Emerging regional blocs are the vehicles for greater global cooperation rather than sources of conflict.
- The integration of the European Community leads to a closely linked European Market centered in London. Many of the issues resolved in that process became the basis for wider international agreements (e.g., prospectus standards).
- A major step in the process is the continuing development, following the path earlier taken by the Cooke Committee,[1] of the International Organization of Securities Commissions (IOSCO) technical committee as an effective, permanent organ for setting the agenda for agreements and preparatory steps. The Group of Thirty provides continuing encouragement and support. A high degree of collaboration ensues between private-sector financial leaders and regulatory authorities in the major market countries.
- During the 1990s a new regulatory framework gradually emerges out of the slow accumulation of bilateral agreements, or Memoranda of Understanding (MOUs). This is a very modest regulatory regime, with limited overt organization.
- Through the collaborative actions of these several bodies a schedule of agreements emerges focusing initially on the risks associated with settlement and common

[1] In the 1970s a large number of foreign multinational banks situated in London shared several serious concerns: over disparities in accounting standards, over who would act as lender of last resort if one of these branches failed, etc. The Bank of England proposed the establishment of an international Standing Committee of regulators, established in 1974 [now called the Cooke Committee after its chairman, Peter Cooke]. The Standing Committee developed the Basle Concordat, a set of international principles for handling a banking crisis. The concept here is that the technical committee of IOSCO (already established and working) or a similar permanent committee of another international organization might quasi-formally assume many of the coordinating functions of an international regulatory body.

conditions for capital adequacy. The issues of futures markets and questions of multiple listings and multinational share offerings are slowly resolved. Common accounting standards take even longer.

Scenario 2: *An International Regulatory Regime*

- The average growth rate might be slightly lower or slightly higher than in the cooperative framework scenario, but economic variables swing widely. Exchange rates, interest rates, and inflation rates interact in a period of flux driven by unmanaged imbalances and cascading shocks.
- Some event—a severe earthquake in New York or Tokyo, a financial scandal in London's Eurobond market-triggers a general crisis in already stressed securities markets.
- The major market disruption creates the political will to establish an institutional regulatory regime at the international level, although none of today's international financial institutions, such as the World Bank, the IMF, or the Bank of International Settlements, or IOSCO, provide a completely adequate model.
- Galvanized by necessity, nations act rapidly and effectively to set up a new institution and enforce its decisions. U.S. Government and private sector representatives play a leading role in the negotiations.
- The U.S. Congress articulates a forceful policy of support for the new institution; at its instructions, the regulatory agency begins a rigorous assessment of markets-related laws, regulations, procedures, and policies to identify necessary changes and adaptations.
- The economic volatility does not inhibit technology-based investment, but actually accelerates change as the downswings facilitate the write-off of obsolete capital and the upswings support new investment—Schumpeter's model of "creative destruction.' A volatile early 1990s leads to higher growth and increasing integration of the global marketplace.

Scenario 3: Conflict and Disintegration

- A break occurs, as a result of a fundamental currency reevaluation crisis, that is severe enough to seriously erode confidence.
- Market discontinuity and economic downturn lead to increasing friction rather than cooperation. Slower recovery and a bear market result as there are vicious cycles of mounting damage.
- Market growth slows dramatically or reverses, and becomes more volatile. There is widespread loss of confidence. Lack of resources and motivation are almost insurmountable barriers to innovation.
- Efforts for international regulatory cooperation wither quickly.

IMPLICATIONS OF THE SCENARIOS

Effective response to a major securities market break will in the future require international as well as domestic actions. The central issue may be how to prevent a liquidity crisis from becoming a solvency crisis. This requires a better understanding than we have now of how large a market break could occur, how and why it might happen, and how to restore confidence afterward. In some markets, there may also be unexamined risks of overstraining key systems (e.g., clearing and settlement) in a roaring bull market. These uncertainties are probably as poorly understood as the risk of a major market break.

International securities markets may be moving toward a structure that is efficient, stable, and adequately well-regulated. This outcome is likely if there are no cataclysmic changes from today's situation, either generated internally (by behavior of the participants, or by failure of basic market structures) or generated by macroeconomic events outside of the markets. As internationalization continues, it will be important to deal with the perils of "regulatory arbitrage' if competition tempts participants to move trades to the cheapest, least regulated markets.

It is increasingly likely that there will be a stratified or two-tier market structure. This could mean a divergence of interests between the large, wholesale, institutional, global transaction market and the domestic, retail market. What have been considered off-market activities (nonorganized, negotiated trading on proprietary systems, perhaps unregulated) may come to dominate global equity markets for the securities of at least 500 to 1,000 translational or global companies in the future.

The central problem will become one of systemic risk. Will there be a lender of last resort? Will the real risks devolve onto commercial banking systems, and national payment systems? How can volatility in the global market be kept from cascading onto domestic markets, where the consequences might be greater? How can the global economy be protected from excessive risk from the unregulated international securities market?

It is clear that the U.S. Congress will necessarily have a critical role to play with regard to the globalization of securities trading. At a minimum, Congress will be called on for oversight and guidance of U.S. regulatory bodies and executive agencies—the Securities and Exchange Commission, the Commodity Futures Trading Commission, the Federal Reserve Bank Board of Governors, and the Department of the Treasury, all of whom will be involved in framing the position of the United States in the evolution of an oversight, supervisory, or regulatory regime for international securities trading. It is not clear that these authorities now hold a common view of the interests of the United States with regard to either: a) the kinds of aggressive actions and innovation needed to compete in offering services and products to investors around the world, or b) the degree of risk inherent in international trading and the desirability of working with other nations to develop a stronger regulatory regime to reduce these risks.

In this critical situation, it may be necessary for the U.S. Congress to articulate a clear statement of the national interest for the guidance of regulators, as it did in 1934 with the Securities Exchange Act, and in 1975, with the Securities Exchange Act Amendments.