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Remarks by

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It is a pleasure to address the Federation of Bankers Associations of Japan. The linkages among the banking and financial sectors in the United States, in Japan, and in the world at large have increased substantially over the past decade and now can only be described as intense. The links between Japanese and U S financial markets are particularly strong. Japanese financial institutions conduct significant operations in U S markets, and Japan-based risk, largely through interbank transactions, is by far the largest country exposure for U S banks.

Developments in financial sectors around the world have been dramatic over the past decade, and especially in the past few years. It is a challenge for market participants and the financial authorities alike to understand the factors underlying these changes, so that we can each carry out our responsibilities in an efficient, sound, and constructive manner.

Market participants, on the one hand, and financial authorities, on the other, have a shared interest in sound financial institutions and well functioning financial markets through which monetary policy can help to achieve price stability and maximum sustainable growth of economic activity and income. Changes in market prices for financial assets, along with appropriate and comprehensive data on changes in the assets and liabilities of banks and other financial institutions, are an important part of the information base upon which macroeconomic policy is formulated.

Public policy, and central bank policy in particular, perform two crucial functions for private participants in financial markets. First, monetary and fiscal policies condition the macroeconomic

environment in which financial markets evolve and participants operate. Second, the financial authorities enforce and often establish the specific rules that govern the activities of participants in financial markets. I will discuss these two areas this afternoon, against the background of the evolution of financial markets.

Forces Behind Evolution of Financial Markets

The most important force underlying the evolution of banking and finance in the world today is the rapid explosion of technology in the areas of information processing and communication. Banking and finance are information-intensive service industries, and are especially well situated to exploit these technological advances. Unit costs have been reduced dramatically. At the same time, banks and other financial service companies offer a broader array of financial products, often highly customized to the needs of specific clients. Unfortunately, changes that are essential for the continued profitability that is needed to attract and retain capital often require difficult and painful choices for bank managers, particularly when they necessitate a cutback of experienced personnel.

For years, technological changes have been accelerating the rapidity with which payments are made and securities transferred in the United States and around the world. More and more countries are installing, or increasing the effectiveness of, electronic large-value transfer systems. Proposals are increasingly heard for cross-border multicurrency payment and settlement systems. All of these developments bind world financial markets ever more tightly and thereby increase the need for central bank cooperation in these areas.

In the United States we recognize the risk implications of these developments and have considered how markets will think about the units of time over which payments are due and made and what the effect will be on the conduct of monetary policy. Let me first address the risk issue.

In retrospect it appears that the transition from manual, paper-based systems to electronics may not have been managed by those sufficiently sensitive to credit and risk exposures. In both the private and the public sectors, low-cost, high-speed, highly efficient systems were built that delivered what was requested: speed at low cost. Only after the fact did we all become aware that the financial systems were at risk with serious implications for world markets. In the United States, we began to insist that private systems adopt finality rules, loss-sharing, collateralization, and other techniques designed to assure settlement each day and--more importantly--to focus participants' attention on counterparty risk. In the public sector, we began to control our own risk exposures by real-time monitoring, by credit limits, and--just this month--by adopting a pricing scheme to induce changes in the behavior of participants in their use of Federal Reserve intraday credit.

In part through joint efforts at the Bank for International Settlements, the other G-10 countries are also devoting substantial efforts to controlling risk in both the private and public sectors. All of us need continuously to be sensitive to this issue and to think carefully about the implications of certain difficulties and the development of contingency plans needed to address them.

The spread of systems made possible by technology has already affected how participants think of units of time. A generation or so

ago, one-day money meant just that--close-of-business to close-of-business, or 24 hours. Now, most one-day credits are really overnight, with the borrower receiving funds late one day and repaying it early the next day. Lenders want the funds to begin other payments during the day that in a paper-based world simply could not occur that fast. The true value of money is beginning to become evident in less than one day units. Market participants thus already think of overnight and during-the-day as distinct components of a 24-hour period. Central bank and private sector efforts to control risk, the wider and wider reach of electronic systems, and the lack of synchronization of operating schedules in major world centers all lead inevitably to viewing a "day" in much finer time intervals.

The U.S. decision to price explicitly intraday credit simply accelerates the inevitable development of an intraday market for funds. Around the world of the future, even 30-year contracts will specify the time of the maturing day in which payment is to be made. The 24-hour day, the intraday price of money, ever faster and better technology, and accelerating efforts to control risk will, I believe, inevitably lead not only to 24-hour trading and time-of-day maturities, but also to simultaneous settlement of both legs of foreign exchange transactions. Movement in this direction may well be incremental as the gradual expansion of central bank operating hours shrinks the time interval between final settlement of the two legs, but simultaneous settlement seems inevitable once 24-hour trading produces round-the-clock liquidity in money markets. In the United States, we have just proposed opening our funds transfer service 2 hours earlier, a first step toward what I suspect eventually will be 24-hour, or nearly 24-hour, operations.

These changes will affect the way we conduct monetary policy. With intraday credit costless and its supply subject to very little constraint, the overnight interest rate has been virtually the same as the 24-hour rate because the intraday rate was zero. But as intraday money becomes explicitly of value, the 24-hour rate will have at least two components: the overnight and the daylight rates. We central bankers thus must be cautious, as intraday interest rates develop, that we do not inadvertently disrupt financial markets by thinking that the same overnight rate will provide the same indication of market conditions that we had grown used to when intraday money was free. And, inevitably, we will discover that this change, too, has other implications that we had not perceived, but to which policy must nevertheless adjust.

Increased integration of banking and financial markets, both within countries and across international boundaries, has been an important result of the explosion of information-based technology. Within countries, direct borrowing in capital markets has become an increasingly close substitute for bank credit. Information has become available to a wider array of potential investors at low cost. As a consequence, the information advantage once enjoyed by banks has been reduced. This development is an important factor in the increasing proportion of credit demands met outside the banking sector. But, in addition, it has facilitated the ability of banks to originate and sell the high quality loans they make--that is, to securitize a portion of their credit portfolio.

Internationally, financial market integration has proceeded apace with domestic integration for many of the same reasons. Over the decade 1982-1991, world trade, measured in current dollars, increased by

about 80 percent. The stock of cross-border assets held by banks at the end of 1991, measured in current dollars and adjusted for changes in reporting coverage, was about 3-1/2 times as large as at the end of 1981.

Data showing the rapid growth of cross-border banking alone understate the true extent of international financial integration because they refer only to the growth of assets reported on banks' balance sheets. They do not include cross-border financial services provided by nonbank intermediaries. Annual issuance of international securities was 9 times as great in 1991 as a decade earlier. Moreover, these data covering the decade 1982-1991 do not include the more recent growth in various cross-border off-balance-sheet instruments, such as interest-rate and currency swaps and options or standby letters of credit. A recent survey by the Federal Reserve Bank of New York indicated that foreign exchange turnover in the New York market tripled between 1986 and 1992. In the area of off-balance-sheet business, data published by the BIS indicate that in the three-year period from December 1988 to December 1991 the notional principal of currency and interest-rate swaps approximately quadrupled. While the notional value of such instruments can be misleading for most purposes, it does convey a meaningful sense of the growth of this activity.

Such rapid growth in cross-border banking, however measured, should not be surprising given the extent to which low-cost information processing and communications technology have improved the ability of customers in one part of the world to avail themselves of borrowing, depositing, or risk management opportunities offered anywhere in the world on a real time basis.

These developments enhance the process whereby an excess of saving over investment in one country will find an appropriate outlet in another. In short, they facilitate the drive to equate the rate of return on all investments worldwide. They thereby provide an improvement in the worldwide allocation of scarce capital, and, in the process, engender a huge increase in arbitrage activities. Moreover, as technology continues to downsize the products we produce, thereby lowering transportation costs, growth in the cross-border volume of trade in goods will surely continue to outstrip growth in real world GDP. Trade in services will doubtless increase even more. The financing of expanding cross-border merchandise trade and the rapid development of accompanying arbitrage and risk dispersion suggest a far larger world financial system than currently exists. If we can resist protectionist pressures in our societies, we can look forward to the benefits of the international division of labor on a much larger scale in the 21st century.

Macroeconomic Environment

But those benefits will require the maintenance of a stable macroeconomic environment. An environment conducive to stable prices and to maintaining sustainable economic growth is a central responsibility of monetary authorities. How well we do our job has implications for participants in financial markets because we provide the backdrop against which individual market participants make their decisions. Perhaps the most important development that has occurred in recent years has been the shift from an environment of inflationary expectations built into both

business planning and financial contracts toward an environment of lower inflation. It is important that that progress continue.

Few question either the overall benefits for economic growth and stability of the dramatic slowdown in the rate of price inflation on a worldwide basis, or the need to maintain a credible long-run commitment to price stability. However, the decline in inflation has been associated with substantial declines in the prices of some real assets with consequent implications for financial institutions. Bankers on both sides of the Pacific, or anywhere in the world for that matter, do not need to be reminded of problems associated with making loans for highly leveraged commercial or residential real estate on the expectation that continuously rising asset prices would reduce the leverage and improve the security of these loans over time.

These transitional problems underscore not only the need for financial institutions to guard against the chance that unforeseen developments may adversely affect their balance sheets but also the importance of maintaining price stability. Price stability contributes to financial stability and is the most important contribution that central bankers can make to the general welfare. Price stability is a condition in which households and businesses do not base their decisions on expectations of continued price inflation. While this does not imply literal stability in our measured price indexes, it does require low measured inflation. Indeed, with the likelihood that most of the broader price indexes in the industrial world fail to capture fully increases in quality, the true underlying rate of inflation in today's world may not be far from what I would call price stability.

In the context of rapid changes affecting financial markets, disruptions are inevitable. The economic consequences of these disruptions will be minimized if they are not further compounded by financial instability associated with fluctuations in underlying inflation trends. Thus, as international financial markets continue to expand, monetary authorities have twin objectives: achieving macro-economic stability and maintaining safe and sound financial institutions that can take advantage of stability while exploiting the inevitable new technological advances.

Regulatory and Supervisory Policies

The evolutionary changes I have broadly described have important implications also for the regulation and supervision of banks. Consider, for example, limits on interest rates that banks are permitted to pay on deposits.

It is interesting to note that the original purpose of deposit rate ceilings in the United States was to improve bank profits by protecting banks from paying high rates of interest for funds. In later years small differentials in deposit rate ceilings for thrifts were designed to expand loans to the housing sector. While this price protection apparently served its intended purpose for a number of years, over the long run the market-induced development of high yield substitutes for bank deposits meant that bank profits overall suffered more from the reduction in the quantity of their business. Nonmarket interest rates for thrifts did not guarantee a continuous flow of funds to the housing sector, but rather resulted in recurring liquidity problems. Banks in the United States, particularly the largest banks,

sought to bypass these deposit rate ceilings by developing alternative sources of funding, often from foreign sources, and large U S banks came to support deposit rate deregulation

The Japanese experience, as I understand it, has shown some similarities to the U S experience At first, limits on deposit interest rates in Japan provided a subsidy that was shared between banks and their borrowers Over time this system of constrained interest rates resulted in an excess demand for funds from banks in Japan and a migration of Japanese banking business to other centers, including the United States, where the pricing environment had become less regulated The progress toward deregulated interest rates in Japan, including increased use of market-based lending rates, should remove the incentive for Japanese banks to book business offshore and is likely to reduce the reported size of Japanese banks in offshore markets Market-determined interest rates in Japan will also improve the efficiency of the Japanese financial system in responding to price signals in the allocation of capital

Financial markets are characterized by both a high degree of integration of institutions and ease of substitutability of products They differ considerably in this respect from other regulated markets, such as public utilities, transportation, and communications, where price distortions can persist because the products offered are less easily substituted for each other Firms active in these markets often have an interest in maintaining the regulated price structure, the same is not usually true for financial markets

My reading of the evolution of financial markets going back to the 1960s is that any country that wishes to have a major international

financial center simply cannot impose restraints on international transactions through taxation or the equivalent. Sophisticated depositors and borrowers will avoid these costs by shifting their business to other, untaxed centers. The development of London as a major international banking center since the 1960s was largely driven by successful attempts of American and other banks to avoid the costs and restraints of doing a dollar-based international banking business in the United States.

In response to this competitive situation, in 1981 the Federal Reserve took steps to improve the competitiveness of the United States as an international financial center by amending our banking regulations to permit banks to establish International Banking Facilities (IBFs). These facilities were able to conduct business with foreign residents without being subject to various costly restraints such as reserve requirements. Japan followed suit by adopting regulations establishing the Japan Offshore Market in 1986.

The 1980s have taken this process one step further. The experience of the 1980s appears to be that banking has become an integrated and footloose industry, where the locations at which transactions are booked are becoming increasingly less relevant. Any country imposing taxes or other restraints on competitive market pricing for domestic banking services will find that some of its own residents have the option of shifting their banking business to a convenient offshore center. Perfunctory duplicate records may actually be kept at facilities in offshore centers to maintain the fiction that offshore transactions have really taken place, but in reality the business

relationship between the bank and its customer often occurs in the home country

The use of banking facilities in offshore centers in the Caribbean and elsewhere by U S residents and residents of other developed countries has proliferated in recent years. While our data on this activity are very far from ideal, data published by the Bank for International Settlements indicate that banking assets and liabilities in these centers at the end of 1991 were on the order of \$1.5 trillion, of which something approaching \$600 billion may represent claims on nonbank customers and about \$300 billion may be liabilities to nonbank depositors.

The growth of banking in offshore centers suggests that banking is a very mobile industry and that banks and their customers will find perfectly legal ways to avoid the costs of certain kinds of regulations by shifting the booking of their transactions, where such booking shifts need not result in any change in the particular bank with whom they are dealing.

The migration of banking to offshore centers in response to monetary policy measures is a serious concern. An important issue for the Federal Reserve is that the statistical coverage of banking assets and liabilities of U S residents, which is an essential input into the policy process, is compromised as both credits and deposits that formerly were booked in the United States are now recorded offshore. To remedy this problem, we have announced our intention to improve statistics in

this area, which should improve our information base for policymaking and the information base available to private market participants

Regulatory policies designed to achieve prudential objectives also have significant effects on banking and financial markets, domestically and internationally. The safety and soundness of the financial system has always been a paramount concern of financial authorities in all countries. Against the background of the global integration of financial markets, a significant enhancement of prudential policy is in agreement on the need for one supervisory body to accept responsibility for the worldwide consolidated activities of a banking institution whose head office is domiciled in its country. Supervisors in the host country of an overseas branch or subsidiary of the foreign parent have a shared responsibility to supervise compliance with host country regulations. This position of joint supervisory responsibility was set forth originally in the Concordat distributed in 1974 by the Basle Supervisors Committee, a fuller appreciation of its implications has evolved over time, and this past spring the Committee agreed upon minimum standards for the supervision of international banking groups and their cross-border establishments that incorporate this concept.

In addition to agreeing to the importance of assigning international responsibility for supervision of individual institutions, the countries represented on the Basle Supervisors Committee have implemented an accord on capital standards for their internationally active banks, and some other countries have voluntarily agreed to comply with these standards. The capital accord establishes standards for measuring capital and for weighting the credit risk associated with

various assets, including off-balance-sheet assets. It thereby established minimum capital ratios for operating in international markets that will help to level the playing field for banks domiciled in different countries.

The capital agreements reached so far go a long way toward improving the level and international consistency of the overall capital base of internationally active banks, although improvements can still be made. For example, work is in progress to incorporate risks other than credit risk in the capital standards. At the same time, we all recognize that capital alone is not a sufficient measure of an institution's financial strength. Supervisors must assess the total financial resources of an institution, its risk management procedures and controls, and both the credit and noncredit risks inherent in its assets and liabilities. While this is primarily a task for national supervisors, looking at their institutions on a global consolidated basis, supervisory authorities in other countries have a responsibility to ensure that banks operating in their countries are subject to consolidated home-country supervision and comply with host-country regulations. In the United States, the Foreign Bank Supervision Enhancement Act, passed last December, requires that foreign banks, as a condition of entry, satisfy this standard.

Prudential standards, such as capital requirements, may seem costly to some market participants that, as a consequence, need to raise capital at an inconvenient time. However, over the long run they improve the public's confidence and willingness to place funds with these institutions. Indeed, research at the Federal Reserve has indicated that well-capitalized banks can enjoy funding advantages that in some cases

outweigh the costs of holding additional capital. Prudential supervision of banks on a worldwide basis should not have any impact on the location at which banking transactions are carried out. Over the long run sound prudential supervision, if carried out in an efficient and low-cost manner, may actually improve the competitiveness of supervised institutions by improving the confidence of depositors and other counterparties.

As I noted earlier, advances in computational technology have permitted banks to offer their customers a much wider menu of instruments, including importantly derivative and other off-balance sheet instruments. Banks and their customers alike can manage and hedge various market risks more completely and more efficiently than they could in the absence of such instruments.

While new technologies have the potential to unlock efficiencies in financial contracting, they also carry with them risks that need to be understood clearly. For example, understanding the risks, both credit and market risks, of any single off-balance-sheet contract may appear relatively straightforward. However, understanding the aggregate set of risks in a wide assortment of nonstandardized contracts is an enormously complex undertaking. Moreover, reliance on advanced technology in the design and monitoring of these contracts cannot be counted on completely to replace informed analytic judgments.

For example, risk management strategies involve assumptions about potential future changes in interest rates, exchange rates, commodity prices or equity prices over the remaining life of the contracts. These assumptions typically are formed on the basis of historical experience. If history turns out to be a poor guide to the

future, that is, if events in the real world fall outside the judgmentally forecasted range, then the risk management efforts might prove to be unsuccessful. History cannot be reduced to a set of statistics and probabilities, it is important that the judgment of experience be brought to the underlying assumptions. Senior management of financial institutions and their supervisors must have a good understanding of the nature of these complex instruments and of the risks they entail. That is not an easy task. We must all guard against a situation in which the designers of financial strategies lack the experience to evaluate the attendant risks and their experienced senior managers are too embarrassed to admit they do not understand the new strategies.

A further complication is that a significant number of participants in the market for financial derivatives are unregulated nonbank financial institutions, and increasingly even nonfinancial institutions. A failure by one of these institutions to perform on its contractual obligations could impose serious losses on customers and could result in serious systemic problems.

In addition to monetary policy and supervisory policies, basic law affects the structure of the financial services industry. In the United States, we continue to have a debate over the geographical location at which domestically chartered banks can operate full service branches. The Federal Reserve believes that full interstate branching would reduce costs and improve efficiency of banking in the United States.

Another statutory limitation imposed on the U S banking system is the limit on the appropriate financial activities for companies with a

bank subsidiary, that is, the ability of the holding company to provide a full range of financial services, including securities underwriting and insurance. Differences in banking powers across international borders, with some banks having wider powers to conduct activities, both in their home markets and abroad, have an international component as well. Banks with wider powers in their home market enjoy some competitive advantage, although the extent of this advantage is very difficult to quantify.

On a more practical level, differences in regulatory structure across countries provide the Federal Reserve with a continuous set of difficult policy cases. These involve applications by U.S. banks to conduct activities abroad that are not permitted in the United States, and in considering applications by foreign banks to conduct U.S. activities without unnecessarily interfering with the extra-territorial activities of the foreign bank. Some of the more highly publicized cases involve de novo securities powers in the United States for banks headquartered in countries without a Glass-Steagall type of restraint. Many other cases involve permitting a foreign bank to do a banking business in the United States without requiring it to divest some relatively small non-complying U.S. business that itself may be an important part of a business activity outside the United States.

The Federal Reserve strongly supports broader activities for a financial services holding company that would be able to offer customers a wide array of financial services. The holding company structure would be utilized to insulate that part of the institution that is protected by the safety net of government support from risks in the nonbanking activities. In addition, the holding company structure could be used to assure that nonbanking activities in bank-related companies do not

receive an unintended subsidy vis-a-vis their competitors who are not affiliated with banks. That type of structure would rationalize the U S financial system by improving competition in various service areas, and would improve the competitiveness of U S banks on a worldwide basis.

A final and perhaps more complex set of structural issues involves the direct ownership by banks of equity in nonfinancial companies. Historically, the United States has not experienced such ownership links, while in Germany and Japan these shareholding arrangements are quite common, although subject to certain limitations.

The basic argument favoring these equity interests by banks is that they improve the information flow between banks and corporate borrowers and bring a closer sharing of business risks. Improved information and closer risk-sharing should lead to an improved allocation of resources. The basic argument against these equity investments is that they foster concentration of economic power and that lenders will favor established clients in whom they hold a vested equity interest at the expense of seeking out new promising startup ventures.

Banking systems are the product of their underlying cultures and the business relationships these cultures have developed. At present I see no evidence to suggest that one type of structure is inherently better than another. Therefore, I see no compelling need to seek a one-size-fits-all resolution to the issue of ownership interlocks for competitive equity. Rather, each country can experiment with its own system based on its own unique circumstances, concerns, and historic legacy.

Conclusion

I would like to be able to reassure you that the financial authorities have learned their lessons well, that they will never again allow macroeconomic instability to disrupt financial markets, and that international cooperation in the supervision of financial markets is well advanced. Such statements undoubtedly would be both overly optimistic and premature. However, I can say with confidence that we appreciate that financial markets, and economies in general, are closely linked. We have a shared responsibility internationally and with the private sector to act to strengthen financial markets to provide the foundation of stability that is essential to the efficient allocation of resources and maximum global growth.