
Financial Reform in Japan

— Developments and Prospects*

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I. Factors Leading to Financial Reform

The financial system of a country, regardless of time or place, is maintained to meet the economic conditions of that country. In the process of economic development, however, there occur new economic or technological conditions that foster change of the financial system: the coherence between the old financial system and the new conditions breaks down; internal inconsistencies develop; and the financial needs of the economy are not met sufficiently. In this situation, private financial institutions, which are rich in the spirit of creative tinkering, develop innovations even within the old financial system and circumvent old regulations in order to conform to the new conditions. There is, however, a limit to what such innovations can do, and eventually political and economic pressure develops for relaxation or abolition of all regulations. Meanwhile the regulatory authorities have no choice but to ratify these private sector innovations through liberalization of regulations or restructuring of the regulatory framework. In this way, the driving forces for financial reform are the emergence of contradictions between the old financial system and the new technological or economic conditions and the reaction of both public and private sectors to these contradictions (Suzuki 1983a, 1984a, 1984b, 1986a; Silber 1983).

What then are the new technological and economic conditions that have driven

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the recent worldwide and simultaneous trend of financial reforms? There were, in my opinion, four such conditions common to all countries. The first condition was the inflation that occurred worldwide after the first oil shock and the resulting sharp increases and volatility of interest rates. The second condition was the rapid progress of computer and telecommunications technology and its application in financial business; with this technology, financial institutions developed many of the so-called new financial products and lowered significantly the supply costs of financial services. The third condition was the more active international capital flows that occurred after the shift to the floating exchange rate system in 1973. The fourth and final condition was the expansion of fiscal deficits in various countries, which has tremendously expanded open markets in various countries because of the large-scale flotations of government bonds (Akhtar 1984; Suzuki 1984a).

Although financial reform is a phenomenon common to many countries, it did not necessarily manifest itself in the same way everywhere. In some countries it was accompanied by disturbances such as bank insolvencies and bank runs, while in some countries there was intense pressure to change the permitted fields of business for financial institutions. Thus, it is difficult to describe simply the degree of financial reform in a country. If I may, however, make a bold attempt at classifying countries, they would fall into three categories; those that experienced sudden financial reforms such as the United States and the United Kingdom, those that experienced gradual financial reforms such as Japan and France, and those that experienced only limited reforms such as Germany and Switzerland.

These differences in category may be attributed to two factors, the degree of regulation in the old financial system and the means by which the new conditions express themselves (Akhtar 1984; Bingham 1985; Suzuki and Yomo 1986). For example, in the financial system in the United States there were, until very recently, strict interest rate regulations administered under Regulation Q and the regulations under the Glass-Steagall Act separating commercial banking from investment banking. In addition, there was the prohibition on carrying out banking business across state lines according to the McFadden Act, regulation not seen in other countries. Under this regulatory system, sudden, concentrated, and simultaneous changes in technological and economic conditions caused large fluctuations of both interest rates and prices in short periods of time, and thus invited rapid financial reforms. In Japan, there also existed not only interest rate regulations and business activity regulations as in the United States, but also, until very recently, regulations that separated domestic and foreign markets. The new conditions in Japan, however, were primarily the large-scale flotation of government bonds and the growth in the movement of international capital flows, and were felt over an extended period. Hence, there were no large fluctuations in interest rates and prices so that financial reform could proceed gradually. In Germany and Switzerland, interest rate decon-

trol had already been achieved in the 1960s and regulations on the business activities of banks did not in principle exist because of the approach of universal banking. Even with new conditions, the fluctuations of interest rates and prices were rather small so that financial reform proceeded only to a limited extent.

Looking to the future, one may expect that financial reform will be relatively rapid due to the development of information technology, even if other conditions are calm. This technological basis of financial reform has several implications. First is that such financial reform is unavoidable and irreversible; it will be quite difficult for the new system once formed to return to its original state. Second, such financial reform will proceed more easily; since development of the computer software requires a great deal of know-how, time, and funding, it can lead to high founder's profits. Banking managers thus have a large incentive to develop new products. Third, such reforms will further globalize the financial system (BIS 1986); although the financial systems of each individual country grew in their own particular historical gardens, they must now adjust to the new, common, and worldwide soil.

II. Financial Reform Today and Tomorrow: The Japanese Experience

Financial reform in Japan first attracted attention when a new historical era emerged for the Japanese economy, the time of the Nixon shocks, the first oil shock, the end of the high-growth period, and the start of the floating exchange rate system. These developments faced the Japanese economy with a number of changes in technological and economic conditions.

The first major change was the large-scale flotations of government bonds that accompanied the shift to low growth and the consequent expansion of free-rate, broad, and open financial markets in both long and short-maturity assets. Developments included the secondary market in long-term government bonds, the primary market in medium-term government bonds, and the repurchase market. A second major change was the new sensitivity of corporations and individuals to free interest rates. This new sensitivity developed because of the need to cut costs in a period of lower growth, the lower rate of increase of wages, the strengthening of the own-capital base of corporations, and asset accumulation by individuals. The third major change was the integration of domestic and foreign financial markets after new incentives brought by the shift to floating exchange rates and the revision of the Foreign Exchange and Foreign Trade Control Law in 1980 that made capital transactions free in principle. The fourth major change was the active introduction of new telecommunications technology and computers by financial institutions, which improved efficiency of portfolio management and reduced costs (Suzuki and Yomo 1986; Cargill 1985).

With these four changes the movement for financial reform began, but soon conflicted with the financial regulations and customs of the postwar recovery period and high-growth period. The most important conflicts were in the areas of interest rate regulation, business activity regulation, and auxiliary regulations such as those on capital flows, those on foreign exchange, and those aimed at maintaining orderly credit conditions (for example, collateral and entry regulations in banking).

1. Interest Rate Regulations

Because all but a very small portion of lending rates and bond rates in Japan are market-determined, the core of interest rate regulation is that on deposit rates. Such regulations were first introduced in the form of agreements among banks during the first third of this century, when there were repeated financial panics. These agreements were transformed into law in the postwar period in order to eliminate cartel behavior. Throughout Japan's high-growth period the deposit interest rates were maintained in general at low levels. One cannot deny that this system intended to depress interest rates artificially in order to lower the financial costs of exports and investment (Suzuki 1986a).

The influence of interest rate controls as a policy tool weakened with the onset of the lower-growth period, but the controls themselves remained. What weakened them so much were activities in the private sector that sought to circumvent the controls. First came the large increase in *Gensaki* transactions by securities companies from the mid-1970s; these transactions were generally of the same form as Repurchase Agreements (Rps) in the United States and transformed long-term (10 year) national bonds into a short-term (3–6 month) free-rate securities. Corporations naturally shifted funds from regulated fixed-term deposits into the *Gensaki* market in order to invest their funds more efficiently. Next, the securities companies developed the medium-term bond fund, a type of investment trust for small unit transactions, and sold such funds to individual investors. In addition, the postal saving system, which is a type of publicly managed bank, developed an attractive asset known as the fixed-amount of postal savings account; this account became quite popular because of its high interest rate, and deposits shifted rapidly into such accounts. As a result of these innovations, the share of funds held by deposit taking institutions fell from the level of 60–70 percent in earlier years to about 40 percent. The banks countered these movements by the introduction of free-rate CDs in 1979 and of Money Market Certificates (MMCs) in 1985, whose interest rates were tied to CD rates (Cargill 1985, 1986; Cargill and Garcia 1982, 1985; Wenninger 1984).

On seeing these movements in the private sector, the regulatory authorities not only approved the new financial instruments outside of the old regulatory framework but also liberalized regulated interest rates that still existed. For example, in 1985,

the interest rates on large-scale fixed-term deposits of more than 1 billion yen were liberalized, and thereafter the minimum size for a free rate deposit was gradually reduced to ¥500 million, then to ¥300 million, then to ¥100 million. The denominations and minimum deposits for CDs and MMCs were also reduced, and currently the only deposits that face strict regulations as in earlier years are those of less than one month maturity and those of less than ¥10 million.

Although interest rate liberalization in Japan resembled that in the United States, there were differences in several important points. In the United States, the Depository Institutions Deregulation and Monetary Control Act of 1980 was passed in March of that year and called for a policy of liberalization in the relatively short period of three years, so that liberalization would be accomplished by October 1983. In Japan, in contrast, since the announcement of liberalization in a Ministry of Finance report in May 1984, liberalization has proceeded gradually. Second, although both countries saw confrontations between banks and securities companies, there were also demands from savings banks and similar institutions in the United States, while there were demands from foreign financial institutions in Japan. Third, in the United States there has been a complete liberalization for small deposits, while in Japan there is still need for discussion on this issue (Suzuki 1986b).

One of the great issues for Japan in the future will be how to promote the final liberalization of interest rates on small deposits. The Government has made its policy on this quite clear:

The liberalization of interest rates on small accounts will proceed after that on large accounts, and after promoting discussion at the earliest possible time of various specific problems on the basis of such factors as depositor protection, total balance between the postal savings system and other institutions, and other such background preparations.

On this basis, an advisory body to the Ministry of Finance has stated that "it is realistic to start liberalization with the establishment of small-scale MMC accounts as a transitional measure."

The difficulty is whether the introduction of small-scale MMCs can be followed by the complete liberalization of small deposit interest rates. This difficulty arises because of the postal savings system in Japan, an institution which does not even exist in the United States and which is much larger than the corresponding institutions in Europe. Because the postal savings system holds one third of individuals' deposits, liberalization of all small deposit interest rates would make the postal system the price-leader. There is a fear that interest rates will be determined at levels that are quite different from those which would otherwise be determined by supply and demand.

2. Business Activity Regulations

There are three basic distinctions of business activity in financial markets in Japan, those between banking and securities businesses, between banking and trust businesses, and between long- and short-term finance. Only Japan among the advanced countries has such a clear division of activities (Suzuki 1986a).

There are several reasons for these clear divisions. The first was the recognition — based on the process of financial panics — that banks should specialize in short-term finance both to protect depositors and to avoid conflict of interest. The second was the need in the high-growth period for financial institutions that specialized in long-term finance, such as long-term credit banks and trust banks. The third, which applies particularly to the distinction between banks and securities companies, was the rather abrupt introduction in the postwar occupation period of the American system as a whole; there was also, however, a policy of using the specialization of securities companies to develop securities markets, which had been somewhat underdeveloped until that time (The Bank of Japan 1987).

Among the major countries, the system in the United States is closest to that of Japan, but even here there are contrasts, with Japan freer in some cases and stricter in others (Suzuki 1986b). For example, the distinction between banking and securities businesses is not controlled in Japan through regulations on the acquisition of securities and equities with investment intent by banks, but the distinction is much stricter in the United States and such acquisitions are prohibited. Joint operation of banking and trust businesses by banks is permitted rather freely in the United States, but not so in Japan.

The regulations on separation of business in Japan have been eased considerably in recent years. One area of easing concerns the distinction between banking and securities businesses. In the prewar period, tradition separated these two types of business with the exception of underwriting activities; in the postwar period, Article 65 of the Securities and Exchange Law regulated most activities, including underwriting. Under this article as in the United States, the prohibition on bank securities business did not apply to national bonds, local government bonds, and government-guaranteed bonds, but administrative guidance in Japan in fact prevented underwriting all but national bonds.

But changes in conditions caused changes in the system. In the second half of the 1970s, with the large-scale flotations of national bonds, the banks wished to supply new financial products that involved government bonds. This desire led to a major debate between the banking and securities industries, and in the end, the new Banking Law of 1981 and the revised Securities and Exchange Law settled the issue by clarifying the forms in which banks might carry out securities business activities.

Under the new law, banks were permitted for the first time to carry out subscrip-

tion activities connected with the underwriting of public bonds and to deal in public bonds. Securities companies, on the other hand, were permitted to establish medium-term bond funds and also to use these to develop Cash Management Accounts (CMAs) that are almost identical to those in the United States. Thus, the securities companies were successful in creating a high-yielding account with a payments facility, even though formally these payments go through an ordinary deposit account. Moreover, securities companies were permitted to make loans to their customers on the collateral of public bonds. Both banks and securities companies are operating in the newly established bankers acceptance (BA) market and will also operate in the new commercial paper (CP) market that is expected to begin this fall.

The distinction between long-term and short-term finance is also growing weaker, as commercial banks expand long-term lending and as institutions that had specialized in long-term finance expand short-term lending. On the asset side, the regulations that separated long-term and short-term institutions are losing all meaning. On the liability side, however, the commercial banks remain restricted to deposits of less than two years in maturity, while the long-term credit banks are permitted to raise funds of up to five years in maturity. For the commercial banks, there is thus a mismatch of maturity structure, and they have handled this problem through measures to circumvent regulations, such as interest rate swaps. In the future, even liability side distinctions will gradually fade, as commercial banks may float long-term CDs in the Euro-markets or lobby to allow a lengthening of the maturity of their domestic fixed-term liabilities.

The distinction between commercial banks and trust companies is also weakening. For example, a major fund-raising method for the trust banks has heretofore been the so-called money loan trust which matched long-term assets and liabilities. However, as the barriers on the liability side between long- and short-term finance are reduced, the distinction between money loan trusts and other types of long-term fixed-term deposits will blur. Moreover, in the area of pension trusts, which were the original type of business for trust banks, criticism of barriers to entry from both domestic and foreign sources has been growing because this is a growth area. The barriers here will have to be reduced over time.

The problem of barriers between commerce and banking was one focus of the Corrigan Report (Corrigan 1987), but this particular problem is not very keen in Japan. The reasons for this are that financial holding companies are not permitted and that Japan has no interstate banking regulations that give incentives to establish non-bank banks. In addition, it is not easy for a bank to be taken over through stock purchases, because ownership of bank stock in Japan is very broad-based due to the preference of stockholders for longer-term assets.

Nevertheless, it seems inevitable that sooner or later such problems will become important in Japan as well; and when they do, as pointed out in the Corrigan Report,

it will be necessary to classify financial institutions into several categories according to their payments activities, that is, by listing the activities that may be carried out by financial institutions that have settlement facilities as part of their business. This is the right method for the distinction because the stability of the payments system is the most important basis of a financial system.

The Corrigan Report also proposes a National Electronic Payments Corporation to help stabilize the payments system. In Japan, heretofore, payments services have been provided by a cooperative system between the central bank and private sector banks; it would be necessary to consider carefully what effect the establishment of a third party in the middle would have on the payments system.

3. Auxiliary Regulations for Orderly Credit Conditions

The ex ante safety net for the payments mechanism in Japan has two major parts, bank supervision and portfolio regulations (for example, capital adequacy, liquidity requirements and loan concentration limits). The ex post safety net comprises the central bank's lender of last resort function and the deposit insurance system. These two safety nets do not differ in major respects from those in the United States or other major countries (Friesen 1986). Japan does differ, however, in the financial customs for supporting orderly credit conditions and the actual administrative operation of the safety nets. The most important differences lie in the areas such as collateralization of assets, the regulations on bank entry and exit, and the supervisory system of financial institutions.

Collateralization has long been the principle for financial transactions in Japan. Both issue of corporate debentures and interbank transactions have always been collateralized; bank loans as well were mostly collateralized, but recently the proportion of collateralized loans has fallen precipitously because of increased foreign lending. Nevertheless, for city banks, 25% (and 60% if guarantees are included) of loans are collateralized.

The principle of collateralization, like other regulations, was based on the experience during financial panics and took hold spontaneously as a financial custom; but as the internationalization of finance progresses, customs such as this, which are unique to Japan, are increasingly being reconsidered. In the long-term bond market the issue standards for non-collateralized bonds have been eased substantially, and, as of April 1985, two rating companies had been established. In the money markets, at the behest of foreign banks, non-collateralized transactions were permitted in 1985. The new CP market will also be an uncollateralized market and thereafter uncollateralized transactions in corporate bonds and other instruments are expected to increase substantially. For this to occur, however, it is urgent that the rating companies mature (Cargill 1986; Suzuki 1986b).

Japan has also differed from other countries in its attitude toward entry and exit in banking; administrative guidance has enforced the basic principle that, with the exception of the entry of foreign banks, neither establishment of new banks nor dissolution of existing ones is permitted. There has not been a single newly established domestic bank since the last half of the 1950s, with the special exceptions of changes of the corporate form of certain institutions. Neither has there been a single bank failure in the postwar period nor a drawing on the resources of the deposit insurance system since the system's inception in 1971. This contrasts with practice in the United States, where more than 300 banks were established and a 138 disappeared last year.

Entry and exit practice in Japan is based on a number of factors, including historical experience and the need for efficiency. Japan's experience during the financial panics was that newly established banks went bankrupt easily. The number of banks in Japan fell from 2,036 in 1920 to 369 in 1940, but most of these were saved by provision of liquidity from the central bank, and in the end were absorbed by other banks in the form of mergers. In the postwar period as well whenever problem banks did arise, mergers were sought with other financial institutions so that there were in fact cases of disappearance of institutions. In contrast, in the United States in the period of financial panics there were many bank failures one after another so that between 1920 and 1940 the number of banks was reduced from 30,291 to 14,361, most of which came through the straight-out closing of banks. Such closings continued in the postwar period (Golembe and Holland 1983; Kane 1977, 1981). Whether this contrast will continue is an open question. As liberalization in Japanese financial markets continues, there has been a strengthening of bank management, and there was an expansion of the deposit insurance system last year. It is not clear, however, whether because of this expansion there will start to be bank failures in Japan.

The third difference between Japan and other countries is in elements of bank supervision. First, the right to issue operating permits belongs to the Ministry of Finance in Japan for all types of financial institutions, that is, not only for banks but also for credit cooperatives, government related financial institutions, securities companies, insurance companies, deposit insurance institution, etc. There is only one exception, the postal saving system, for which the supervision authority lies with the Ministry of Posts and Telecommunications (Hamada and Horiuchi 1984; Horiuchi 1984). In the United States, in contrast, the supervisory system is extremely complicated. Second, the Bank of Japan may carry out transactions with all different types of financial institutions, so that there are regulations and supervision concerning matters related both to monetary policy and credit conditions for all institutions with which the Bank of Japan has business contracts. For example, the Bank of Japan is permitted to open current transaction accounts with securities companies and may

also conclude lending transaction contracts, but, as a result of these relationships, the securities companies are subject to the same supervision as are banks. In contrast, in other major countries, the central banks in principle do not carry out transactions with securities companies, and regulation and supervision functions are carried out by other government institutions such as the SEC in the United States. Third is the central function played by examination of financial institutions. Both the Ministry of Finance and the Bank of Japan carry out on-site examination of banks every two years, and thus each financial institution has an examination every year. This method was adopted because there are limits to the effectiveness of explicit regulations such as capital adequacy; it is based on the idea that, in the final analysis, the only check on the soundness of management is an assessment of the assets of the institution at the micro-level. This method does, however, have the two demerits that it imposes a very heavy burden on the central bank and that it is difficult for depositors and investors to understand. In foreign countries explicit regulations are used for the most part; in the United Kingdom and West Germany on-site examination is not even performed. The systems of supervision are also undergoing reform as they seek to adapt to the new conditions such as implementation of electronic data processing supervision.

III. Future Issues for Japan

Financial reform has already gone far in Japan and, given the effects of technological progress and other factors, seems likely to go farther. If it does, the major issue will be the stability of the resulting financial system.

The term "stability of the financial system" has various meanings, but two are of primary importance in Japan. First is stability in the sense of whether the new financial system in Japan will in fact be consistent with those in the rest of the world and thus be able to avoid further revision — given that this new financial system will be constructed along lines that answer the realities of the Japanese economy. Consistency is particularly important for Japan today, as Japan constitutes one-tenth of the world economy and is the largest creditor on earth. Second is stability in the sense of whether the new financial system will be able to perform the major functions of the old financial system such as intermediation, risk-avoidance, and payments. As pointed out in the Corrigan Report, the most important is stability of the payments system. This importance is due to the fact that the payment system is the basis of the society and the economy and is the fundamental function of the financial system. Two aspects of this problem are of interest in light of Japanese conditions, the internationalization of regulation and ensuring stability of the payments system.

1. Internationalization of Regulations

Although the globalization of financial markets has become possible because of the easing of regulations, there has also been an inverse effect. If one were to stress domestic stability too much and resist all pressure toward change, then international stability would be sacrificed and, ironically, the system would become unstable.

One related issue is how to respond to the competition of systems that results from the competition among national markets. In a globalized situation both financial institutions and corporations may freely choose among systems and markets to make their transactions, so that, when one country's regulations are less convenient than another's, financial transactions will leave the country with the inconvenient regulations. In this process, markets in the convenient countries will wax, and those in the less convenient countries will wane. This phenomenon so-called "hollowing out of financial industry" may be seen to an extent in various countries as they changed regulations in an effort to gain business for the financial institutions and the financial markets of their own countries. This motivation was seen very strongly in the recent opening of offshore markets in various countries and in the Big Bang in London. In Japan as well, the Tokyo Offshore Market was established at the end of last year although in this case the establishment was more the result of demands from abroad.

Financial reform from an international point of view is therefore necessary, but there are many points of substance to consider. One of these is the ease with which there might emerge excesses in the competition between the systems in various countries. Precisely because the regulation and supervision of banks in offshore markets is weaker than that in domestic markets, there is a need for caution about the consequences of this competition. For this reason, the Bank of Japan has been emphasizing for some time the need for joint progress in the offshore markets and domestic liberalization.

Another regulatory problem brought by globalization is the issue of the so-called "level playing field" that accompanies the intensification of competition among market participants. This is the reaction to the competition of systems not by changing the system in one's home country to the more attractive state of that of another, but rather by trying to change the regulations in other countries with a view to offsetting disadvantages of one's home financial institutions or markets. For many years, there has been a principle among the major countries of national treatment in matters relating to the entry of foreign banks into a country and in the matter of regulation on domestic activities. But, as globalization progresses and as the competition among the world's financial institutions becomes more severe, contrary trends have emerged. One of these trends is that toward pressure on other countries to ensure that they are faithful to the promise of giving national treatment. Another is the use

of so-called reciprocity in financial activities. A third is that toward extraterritorial application of the regulations of one's home country for certain types of financial transactions. All of these methods are forcing an internationalization of systems, for better or for worse.

When the topic turns to the level playing field among many countries in a globalized situation, the issue then becomes one of standardization of regulations across countries through multifaceted discussions and international agreements among the public authorities of the various countries. For example, the United States and the United Kingdom developed a joint standard for capital adequacy for banks early this year and then called on Japan and other countries to agree to these regulations. Japan would be willing to agree to this on the condition that the definition of bank capital recognizes certain customs concerning the treatment of the difference between the market value and the book value of securities held by banks. That is, it has been a custom in Japan to cover losses not by reductions in capital but by liquidation of equities; the difference between the market value and the book value of these equities is applied to cover losses. If the unrealized profits on the holdings of securities at book value were to an extent recognized as capital, then Japan would accede to the international movement. In fact, Japanese authorities currently recognize 70% of the latent value of securities in their calculations of the capital ratios of financial institutions. On this basis, the capital ratios for city banks lie in the range of 8–10%, although the ratio would fall to about 3% if these unrealized profits were excluded.

This level playing field issue is also related to the differences between various nations' systems in the treatment of collateral requirements and separation of types of business activities. In Japan, it is generally the case, as mentioned above, the banks have either collateral or guarantee for lending, and also, as mentioned above, there are differences relating to purchase of equities by banks and joint management by a bank of both trust and commercial banking activities. In order to standardize regulations there will have to be deepening of mutual understanding of the financial systems among countries so that the various sides can meet in the middle.

2. Ensuring Stability of the Payments System

Financial reform has also brought major changes to the payments system, and one of the major concerns is increased systemic risk among banks (Corrigan 1982; Stevens 1984).

Systemic risk is now greater because of the various types of basic risk that have accompanied liberalization of finance such as interest rate risk, liquidity risk, credit risk and foreign exchange risk. On the whole, the possibility of insolvency of some participant in the payments system has risen. The development of electronic funds

transfer and of international payments systems has multiplied the quantities of funds being settled, and thus the possibility of an accident has increased (Vergari and Shue 1986). At a more fundamental level, there has been a shift of the means of payment from bank notes that are supplied by central banks to checks, credit cards, and preauthorized direct debits that are supplied by private financial institutions. The consequence of this shift has been a diminution of the "finality" that bank notes bring to the payment system and an increase in the accumulation of arrears.

In order to avoid systemic risk, several policies may be adopted. For example, in the United States there is a cap policy. Such a method of dealing with the problem cannot, however, go beyond certain limits. A more fundamental approach is the reduction of arrears through recovery of finality in payments. The reason that bank notes with their finality have been losing ground to private sector concentrated payments mechanisms is that these mechanisms are more efficient. If, however, technological progress lowers the cost of settlement on a one-to-one basis, then there will be no need to raise dependence on the private payments mechanisms to the point of ignoring the enlarged risks.

There are several types of payment mechanisms currently in use in the United States that have finality and indeed may be called "convenient electronic bank notes". Examples include the use of federal securities on other transactions that use the Fedwire or deposits at Federal Reserve banks. In Japan as well there is a clear social need for such convenient electronic bank notes, and also a need for both the Bank of Japan and private sector financial institutions to answer this need. The settlement system with federal securities over the Fedwire in the United States also involves simultaneous delivery of the securities and execution of the settlement of funds in the form of delivery against payment. Neither securities settlement system in Japan has this form. From the viewpoint of reducing risk, the necessity of introducing such a system is growing.

The traditional notion of a safety net is also important in the effort to reduce the latent risks in the payments system. To ignore it would be to increase the burden on existing safety nets, and would lead to fears of greater burdens on banks — because of the need for higher payments reserves, higher capital and higher deposit insurance rates.

The ex ante safety net must of course be based on sound management, self-responsibility, and increased supervision and examination. In the ex post safety net, the central bank would form the nucleus as lender of last resort; the net would also be supported by the deposit insurance system. It is necessary to remember, however, that too much reliance on ex post mechanisms will raise moral hazard and perhaps ironically lead to a reduction in soundness of the system (Benston 1986, Kaufman 1986). In maintaining orderly credit conditions, the ex ante elements of the framework must function sufficiently, but the ex post mechanisms must also act

appropriately. Only in this fashion can the stability of the payments system be maintained through the complimentary actions of both.

REFERENCES

- Akhtar, M. Akbar, "Financial Innovation and Monetary Policy: A Framework for Analysis", *Financial Innovation and Monetary Policy*, BIS, March 1984.
- The Bank for International Settlement, *Recent Innovations in International Banking*, 1986.
- The Bank of Japan, *The Japanese Financial System*, Oxford University Press, 1987 (forthcoming). Japanese edition, Nihon Shinyo Chosa, 1986.
- Benston, George, ed., *Ensuring the Safety and Soundness of the Nation's Banking System*, MIT Press, 1986.
- Bingham, T.R.G., *Banking and Monetary Policy*, OECD, 1985.
- Cargill, Thomas F., "A U.S. Perspective on Japanese Financial Liberalization", *BOJ Monetary and Economic Studies*, Vol. 3, No. 1, May 1985.
- , *Money, the Financial System, and Monetary Policy*, Prentice-Hall, 1986.
- Cargill, Thomas F. and Garcia, Gillian C., *Financial Deregulation and Monetary Control*, Hoover Institution Press, 1982.
- and ———, *Financial Reform in the 1980s*, Hoover Institution Press, 1985.
- Corrigan, Gerald, "Are Banks Special?", *Federal Reserve Bank of Minneapolis Annual Report*, 1982.
- "Financial Market Structure: A Longer View", *Federal Reserve Bank of New York Annual Report*, 1987.
- Friesen, Connie, *International Bank Supervision*, Euromoney Publications, 1986.
- Golembe, Carter H. and Holland, Davis S., *Federal Regulation of Banking 1983-84*, Golembe Associates, Inc., 1983.
- Hamada, Koichi and Horiuchi, Akiyoshi, "The Political Economy of Japanese Financial Markets", presented at the Japan Political Economy Research Conference, August 1984.
- Horiuchi, Akiyoshi, "Economic Growth and Financial Allocation in Postwar Japan", *University of Tokyo Working Paper*, August 1984.

- Kane, Edward J., "Good Intentions and Unintended Evil, the Case against Selective Credit Allocation", *Journal of Money, Credit and Banking*, Vol. 9, No. 1, February 1977.
- , "Accelerating Inflation, Technological Innovation, and the Decreasing Effectiveness of Banking Regulation", *The Journal of Finance*, Vol. 34, No. 2, May 1981.
- Kaufman, George, *The U.S. Financial System*, Prentice-Hall, 1986.
- Silber, W.M.L., "The Process of Financial Innovation", *American Economic Review*, Vol. 73, No. 2, May 1983.
- Stevens, E.J., "Risk in Large-Dollar Transfer Systems", *Federal Reserve Bank of Cleveland Economic Review*, 1984.
- Suzuki, Yoshio, *Money and Banking in Contemporary Japan*, Yale University Press, 1980.
- , "Interest Rate Decontrol, Financial Innovation, and the Effectiveness of Monetary Policy", *BOJ Monetary and Economic Studies*, Vol. 1, No. 1, June 1983a.
- , "Changes in Financial Asset Selection and the Development of Financial Markets in Japan", *BOJ Monetary and Economic Studies*, Vol. 1, No. 2, October 1983b.
- , "Financial Innovation and Monetary Policy in Japan", *BOJ Monetary and Economic Studies*, Vol. 2, No. 1, June 1984a.
- , "Monetary Policy in Japan: Transmission Mechanism and Effectiveness", *BOJ Monetary and Economic Studies*, Vol. 2, No. 2, December 1984b.
- , *Money, Finance, and Macroeconomic Performance in Japan*, Yale University Press, 1986a.
- , "Comparative Studies of Financial Innovation, Deregulation, and Reform in Japan and the United States", *Japan and the United States Today*, Center on Japanese Economy and Business of Columbia University, 1986b.
- and Yomo, Hiroshi, eds., *Financial Innovation and Monetary Policy: Asia and the West*, The Proceedings of the Second International Conference of the Bank of Japan, University of Tokyo Press, 1986.
- Vergari, James and Shue, Virginia, *Checks, Payments, and Electronic Banking*, Practising Law Institute, 1986.
- Wenninger, John, "Financial Innovation in the United States", *Financial Innovation and Money Policy*, BIS, March 1984.