

Establishing New Financial Markets in Japan

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In recent years, Japan's big bang has made steady progress in the financial markets. At the same time, however, a crisis occurred in the country's financial system, which received an injection of taxpayer money. These developments have had various ripple effects on the markets—effects that have not always acted in the same direction.

Resorting to taxpayer money in order to widen the safety net under the financial system risks creating moral hazard among depositors, banks and regulators via a variety of mechanisms. After some ups and downs, the United States has come to attach great importance to the restraint of moral hazard and has taken a number of measures, including resort to Prompt Corrective Action.

Japan also needs to devise banking regulations that are compatible with its aim of deregulating its financial services industry and take account of the fact that the banking industry has been the recipient of taxpayer money. The approach that should be adopted is to devise rules that encourage market discipline and create incentives for banks to be more efficient while trying to stabilize the financial system with the smallest safety net possible.

However, with the economy growing more slowly and the price of land falling, there is a risk that merely trying to stabilize the banking sector may lead to soaring costs. A more fundamental approach would be to develop more alternative financing channels and improve their efficiency. Measures along these lines, such as a clearer statement of fiduciary duty, strengthening the functions of venture capital to screen and monitor startup businesses, and the greater use of securitization, are likely to prove most effective.

Also likely to prove effective—by increasing the professional expertise of those working in the country's financial markets and developing alternative channels of service—are efforts to minimize the risk of moral hazard, extend financial deregulation and improve the quality of the various economic institutions that serve as infrastructure, as well as more advanced city functions.

I Japan's Financial Markets in the 1990s

For the Japanese economy the 1990s were a period of major upheaval as the boom of the late 1980s turned to bust and the rate of economic growth declined. One of the radical policies that were adopted to deal with this situation was to enable the country's financial system to compete more successfully with its international rivals by creating a new—and especially regulatory—framework, which is usually referred to as “Japan's big bang.” This has led to a situation where there are almost daily reports of new financial products, new market players, and new strategic alliances. There has also been an overhaul of the regulatory system, such as the creation of a Financial Supervisory Agency and proposals for new rules, including an Omnibus Financial Services Law.

At the same time, Japan's financial system faced a threat from a mountain of non-performing loans. In late

1997 this threat became real when a number of the country's biggest financial service companies failed and the credit crunch in the banking system reached critical proportions. In response, the government drew up plans to stabilize the system once and for all by injecting taxpayer money into the banking sector. These have since been implemented, and the threat to the financial system would appear to have receded at least for the time being. (See Table 1.)

Although all the elements needed to establish new financial markets might now appear to be in place, it is doubtful whether these will be enough for the financial system to stabilize of its own accord and regain its ability to compete in the international arena. For all the efforts that have been made, the end product lacks definition because of shortcomings in either the elements themselves or the way in which they have been used.

This report deals with two of these perceived shortcomings: first, the need to devise rules to prevent moral hazard and, second, the need to develop alternative chan-

Table 1. Main Events Affecting the Japanese Financial System

June 1991	Securities companies discovered to have compensated clients for losses	October 1997	Kyoto Kyoei Bank fails, and business is transferred to Kofuku Bank
March 1992	Toyo Shinkin Bank split up, and business transferred to Sanwa Bank	November 1997	Sanyo Securities files for reorganization Hokkaido Takushoku Bank fails, and business is transferred to North Pacific Bank Yamaichi Securities decides to cease business
July 1992	Securities and Exchange Surveillance Commission formed		Tokuyo City Bank fails, and business is transferred to Sendai Bank
April 1993	Financial System Reform Law comes into effect (permitting financial service companies to engage in other financial services through subsidiaries)	February 1998	Bridge Bank Law passed, allowing public funds to be used to support the banking system
May 1993	Major banks announce figure for non-performing loans (¥8,455.3 billion for top 11 banks) for the first time	March 1998	Examination Board of Financial Crisis Management (Deposit Insurance Corporation) decides to use taxpayer money to support 21 (major and regional) banks
January 1995	Bank of Japan and consortium of commercial banks set up Tokyo Kyodo Bank in an operation to rescue Tokyo Kyowa Credit Union and Anzen Credit Union Sumitomo Bank declares a loss as a result of writing off all its non-performing loans	June 1998	Financial Supervisory Agency formed
July 1995	Tokyo Metropolitan Government issues a cease-and-desist order to Cosmo Credit Union not to take any new deposits or extend any new loans	July 1998	Government announces “Comprehensive Plan for Financial Revitalization”
August 1995	Hyogo Bank and Kizu Credit Union fail	October 1998	Financial Reconstruction Law and Early Strengthening Law come into effect Long-Term Credit Bank under “special public administration”
September 1995	Daiwa Bank's New York branch discovered to have suffered huge trading losses	December 1998	New Financial System Reform Laws (“Big Bang Laws”) come into effect Financial Reconstruction Commission set up Japan Credit Bank under “special public administration”
August 1996	Government decides to use taxpayer money to rescue housing loan companies	April 1999	Financial Reconstruction Commission allows Kokumin Bank to fail
November 1996	Prime Minister Hashimoto announces his “big bang” program of financial reform Ministry of Finance orders Hanwa Bank to cease business	May 1999	Kofuku Bank applies to cease business
March 1997	Major banks and securities companies discovered to have helped racketeers to make illicit profits Ministry of Finance and Bank of Japan announce support for Japan Credit Bank	June 1999	Toho Life and Tokyo Sowa Bank fail
April 1997	Ministry of Finance orders Nissan Life to cease business	August 1999	Namihaya Bank fails
		September 1999	Government decides to transfer Long-Term Credit Bank's business to Ripplewood Holdings
		December 1999	Introduction of pay-off system postponed for a further year

Sources: Nomura Research Institute, from various sources.

nels for financial services and to make these more efficient and professional.

The report is organized as follows: Section II deals with the general functions of financial markets and their inherent risks; Section III considers the problem of moral hazard; Section IV suggests various ways of increasing the number of channels for financial services; and Section V discusses policies that might enable financial service companies to provide more professional service. Each of these sections refers to the experience of the United States, a pioneer of financial deregulation that has also had to resort to the use of taxpayer money to stabilize its financial system.

II The Functions and Risks of Financial Markets

1 Economic Growth and Financial Markets

(1) The function of financial markets

The general function of financial markets is to balance the supply of and demand for loanable funds and determine the market rate of interest. Financial markets are also the object of a continuous process of arbitrage—horizontal arbitrage between different financial markets, and vertical arbitrage between the same market in the present and the future. Financial markets are operated by financial service companies, each with its own area of expertise. In other words, financial markets represent different channels of operation.

As far as the real economy is concerned, financial markets perform a variety of functions. For households they are both a source of funds and a means of investing surplus funds. They enable consumers to plan how they save by using individual time preference rates as a criterion and to follow a more flexible life-cycle pattern. For companies they are both a source of capital and a means of investing it, enabling them to raise funds for capital investment by using the marginal efficiency of investment (i.e., the rate of return on additional investment) as a criterion and to increase their future production capacity. Markets serve to determine interest rates by aggregating such behavior choices on the part of households and companies and by integrating their time preference rates and the marginal efficiency of investment.

(2) The supply of equity capital

This leads to the question what role financial markets play in national economic growth. This can perhaps best be answered by bearing in mind that all national economies need a system for integrating the various factors of production—knowledge, information, and technology; human capital; physical capital; and financial capital—in order to function properly.

Japan's owes its long-term economic development to the fact that its companies have succeeded in combining

an increasing stock of new knowledge and a well-trained workforce with an ample supply of investment capital provided by households with a high propensity to save. Particularly when Japan was still catching up with the West during the period of rapid economic growth from the Korean War until the 1980s, the high marginal efficiency of investment in all sectors of the economy appears to have meant that the more households saved, the more industry invested, thereby boosting the stock of physical capital and productivity.

If Japan is to be dynamic once again, its entrepreneurs, managers, skilled workers, and investors need incentives to cooperate. In recent years, in particular, increasing the stock of knowledge and human capital has become the key to boosting economic growth. As well as meaning that the stock of knowledge (including information technology) forms the basis of growth, this suggests that specialization and the division of labor are essential conditions for further development.

However, even if these conditions are fulfilled, an economy must have access to ample equity capital if it is to continue to raise productivity. It therefore needs effective financial markets to channel this supply of equity. Unlike the period of rapid economic growth, however, when the marginal efficiency of investment was high in all sectors of the economy, returns on investment now vary considerably from company to company and winners and losers clearly divided. As a result, the ability to achieve high rates of return on equity is becoming the benchmark by which managers are judged.

Only companies that can raise productivity and achieve high rates of return on investment will be able to enjoy ready access to equity capital. In turn, this will make it easier for them to raise debt. This cycle is enabling highly productive companies to increase production and the economy as a whole to be more efficient.

One of the characteristics of the vibrant US economy in the 1990s was the growth of numerous small and medium-sized businesses with new knowledge, information and technology, which could count on the support of the stock market. By providing the critical link between the initial private funding and the broader, public financial markets, venture capital made the ideas of entrepreneurs a reality.

The agility of US equity capital has also helped nurture an innovative spirit in established companies. Pressure from shareholders to achieve high rates of return on investment can be seen as having induced companies to undertake bold restructuring programs.¹ This would suggest that one of the main benefits that can be expected from Japan's big bang program of financial reform is a positive impact on the real economy from more efficient financial markets.

(3) Financial markets and expertise

In the following we shall examine one of the conditions that we have described as essential for economic growth: specialization and the division of labor. In order to achieve

this, not only must there be greater opportunities for employees to acquire a broad range of specialist skills, but also companies that are able to integrate such specialists into teams have to be able to improve their organizational capital.²

In addition, cities, which represent a dense market, have to develop. This will help to increase the division of labor by achieving scale merits. The development of financial markets in different countries shows that in many cases such markets have developed because of the existence of such cities. It would also seem that, when the Japanese government proposed its big bang program of financial reform in order to put the country's financial markets back on an even footing with markets such as New York and London, it had in mind such synergies between financial markets and cities.

It is interesting to note in this connection that Sakia Sassen of Chicago University has developed a theory according to which the modern global market consists of a network of dozens of global cities that form nodes for functions such as corporate headquarters, specialized corporate services, and specialist fund management services. The two centers of this network are New York and London, which, in cooperation with the other nodes, carry out sophisticated capital transactions on behalf of governments and corporations from all over the world.

As to why these two cities should happen to be at the center of this network, Sassen suggests that it is because they have a sophisticated information infrastructure for international communication and a stock of outstanding specialists who are able to analyze complex data and provide their analyses to market participants. In Sassen's view, it is this concentration of specialists covering a wide range of disciplines that constitutes the essence of a city.³

In summary, properly functioning financial markets are essential to a national economy if it is to develop by means of its stock of knowledge and human capital. In turn, sophisticated financial markets will only develop if an economy has an advanced knowledge base (e.g., an information infrastructure) and the high degree of specialization and division of labor that can only be achieved in developed cities.

2 Various Market Risks

However, there are a number of risks inherent in such financial markets that can have a crucial impact on the real economy. The greatest of these risks is the threat to the financial system that can be posed by factors such as macroeconomic fluctuations, deflation and unpredictable events—in other words, the risk that a significant number of financial and non-financial companies may suffer balance sheet deterioration serious enough to severely restrict the ability of financial institutions in general to perform their function as intermediaries. Many countries—not least of which included the United States during the Depression—have experienced a situation where

such a risk has become a reality. The recent use of public funds in Japan to support the banking system was aimed not simply at ensuring that the payments system continued to function, but also at preventing a possible breakdown of the country's financial markets and a possible credit freeze.⁴

This report is concerned mainly with the policies that have been adopted following this injection of taxpayer money and, in particular, with rules for preventing moral hazard. In recent years there has been an unprecedented surge in M&A activity by some of the largest financial institutions. Such moves can only be assessed properly if account is taken not only of the impact of the big bang program of financial reform, but also of the impact of the policies that have been and will be adopted following this injection of public funds. These have the potential not only to magnify the intended impact of the big bang, but also to reduce it.

III Safety Nets and Moral Hazard

1 Portfolio Selection and Moral Hazard

(1) The notion of moral hazard

Financial intermediaries perform an information-collecting and assessment function by screening and monitoring the activities and balance sheets of corporate borrowers. Banks are regarded as being in a particularly favorable position to perform this function by virtue of the fact that (1) when a corporate borrower signs a loan agreement with a bank this gives the bank access to inside information and (2) every time a corporate borrower applies for such an agreement to be renewed it is giving the bank an opportunity to perform a new check.⁵ By performing this function well, a bank is able to generate a profit by assuming highly liquid debts in the form of deposits in exchange for illiquid, but high-return assets in the form of loans.

Depositors know that they can withdraw their deposits at any time, but they cannot be certain that the bank will repay principal and interest in full. What this means in theory is that, if a large number of depositors demand to withdraw their deposits at the same time because of a perceived threat to their security, the bank will not be able to meet their demands because of the way its balance sheet is structured. Herein lies its vulnerability. In fact, if macroeconomic fluctuations lead to a situation where a large number of corporate borrowers suffer deteriorating balance sheets and earnings, banks face the risk of mounting bad loans and growing nervousness on the part of their depositors.

During the period of rapid economic growth, however, funds flowed smoothly from the banks, which were able to attract ample deposits, to the corporate sector, which had a voracious appetite for such funds. Any problem

banks were taken over by stronger rivals. This is what probably gave rise to the myth that bank deposits were guaranteed in full. In recent years quite a few financial institutions have experienced problems, but virtually none of these occasions has given rise to a run on a bank. In terms of actual policy, the deposit insurance scheme and the safety net provided by recourse to the public purse mean that, to all intents and purposes, deposits are guaranteed in full.

However, although a deposit insurance scheme would seem an effective way of preventing a run on a bank, it is also sometimes said to pose the threat of moral hazard. In the following we shall take a closer look at this notion.

Originally an insurance term, moral hazard refers to a situation where taking out an insurance policy increases a person's willingness to assume risk. A driver who takes out an automobile insurance policy, for example, is more likely to drive recklessly than before. Another example is that of someone who takes out a health insurance policy. The marginal cost to that person of receiving medical treatment is virtually zero. If that person's price elasticity of demand for medical treatment is high, the policy holder is likely to make excessive use of such treatment as a result of the distortion effect caused by the insurance. This also is what is known as moral hazard.⁶

Let us also consider the effect of public pension and health service schemes funded by social insurance contributions and general tax revenue. If there were no pensions, living longer would mean that people would often have to put up with a lower standard of living. This is because there is a trade-off between the extension of the human lifespan—a quantity—and the standard of living—a quality. If there is a pension system, however, people will be able to have their incomes supplemented even if they live longer. With a health insurance system, moreover, they will have greater opportunities to extend their lifespan at no significant cost to themselves. Generally speaking, therefore, such systems will act as an incentive to the individuals who benefit from them to seek to live longer—even if this means that society (and, in particular, later generations) will have to bear

an enormous cost burden in the form of social insurance contributions and taxes. This effect is another type of moral hazard.⁷

(2) Portfolio selection by households

When we use the term moral hazard in connection with the financial system, it should be understood to mean “a problematical incentive to those involved in the financial system by virtue of the existence of safety nets such as those provided by deposit insurance schemes.”

Problematical incentives include not only excessive risk-taking by financial intermediaries, but also such behavior as depositor indifference to risk and failure by creditors to monitor debtors or their agents properly. (Strictly speaking, such behavior could also be considered a kind of risk-taking.)

A further example would be distorted portfolio selection by households directly unaware of the social cost of providing safety nets. Nowadays, globalization, a greater choice of financial products, and lower transaction and information costs mean that households would be expected to construct optimum portfolios by selecting the best combination of financial products available either at home or abroad and balancing features such as risk and return.

In view of their convenient payment facilities and ready convertibility into cash, bank deposits are also likely to form an important element of a portfolio. However, by providing deposit insurance and even full guarantees backed up by public funds, policymakers are encouraging individuals to give bank deposits an excessive weighting in their portfolios. (See Table 2.)

This distortion effect may already have been a major factor at work during the period of rapid economic growth, when the myth that bank deposits were fully guaranteed already existed. If so, it is likely to have been an effective means of accumulating capital at a time when there was a high marginal efficiency of investment throughout the economy and economic fluctuations were limited. When times changed, however, the negative effects of this myth (namely, an elephantine banking sector) began to appear.

Table 2. Comparison of Household Deposits in Japan, the United States and Germany (1975-1998)

(%)

	1975	1980	1985	1990	1995	1998
Japan	84.6	100.8	118.2	126.0	146.7	159.1
	75.2	73.8	70.1	58.6	60.0	62.9
United States	61.3	60.4	64.0	60.1	51.2	55.1
	36.8	35.7	33.0	23.0	17.0	15.5
Germany	56.8	59.8	62.5	63.6	58.5	59.3
	64.1	60.4	54.6	48.3	43.3	39.3

Notes: (1) The upper set of figures indicates the ratio of household deposits to GDP, while those in the lower set are the ratio of deposits to household financial assets; (2) the figures for Germany before 1990 are for West Germany only.

Source: Nomura Research Institute, from *Nihon Keizai o Chushin to Suru Kokusai Hikaku Tokei* [Comparative Economic and Financial Statistics: Japan and Other Major Countries], Bank of Japan.

Strictly speaking, it may not be fully accurate to say that banks are in a favorable position when it comes to the production of information. What happened in the boom of the late 1980s suggests that much of the lending that went on was backed by land rather than reliable information about the borrowers. When the falling price of land makes land an increasingly ineffective form of collateral and when economic fluctuations are increasing, the ability of banks to produce information (i.e., to screen and monitor borrowers' activities and creditworthiness) becomes increasingly important. However, it remains to be seen whether, with all the changes going on around it, the banking sector can maintain a sufficient comparative advantage in the production of information by lending to a wide range of borrowers to enable it to maintain an asset base as large as its present one over the long term.

This summary assessment of the banking sector's assets and liabilities suggests that it is currently expected to play an excessive role in financial intermediation. Rather than being overprotective of bank depositors, policymakers should make it their priority to create the conditions where households can construct a balanced portfolio.

In this connection it is perhaps worth mentioning that there have been a number of proposals in recent years for "narrow" banking.⁸ These proposals focus on the problem of moral hazard created by schemes such as the deposit insurance system and suggest that, instead, priority be given to ensuring the integrity of the payments system. The idea behind this is that the two functions which banks currently combine—that of performing payments and that of acting as financial intermediaries—should be separated.

According to the advocates of narrow banking, limiting the function of such a bank to performing payments would limit the bank's financial risks and thereby minimize the possibility of a run on the bank. As far as other types of deposits (i.e., those not used to settle payments) are concerned, households would choose from a wide range of financial products on the basis of their risk and return in accordance with normal investment principles (i.e., without any public safety net).

2 The Banking System and Moral Hazard

Next we shall consider what kind of moral hazard is created for each type of market participant by the existence of a safety net for the banking system, given that the banking system directly affects the stability of the financial system.⁹

1) Depositors

- Tend to concentrate their assets in deposits (see above).
- Tend not to make an effort to learn more about financial matters, especially risk. (This exacerbates their tendency to rely on government to come to their rescue if something bad happens.)

- Tend to deposit their money with banks paying the highest rates of interest regardless of their fundamentals.

2) Banks (companies)

- Tend to grant loans irresponsibly without carrying out a proper credit check.
- Tend to try to attract deposits with high interest rates without making adequate disclosure.

3) Regulators

- Tend to delay resolving problems at banks that are likely to fail because the existence of deposit insurance reduces the risk of an untoward event such as a run on a bank.
- Tend to delay dealing with a problem because of the risk that the actual failure of a bank would be seen as their responsibility.

As these examples indicate, the risk of moral hazard in the banking sector is not a new phenomenon—it has always existed. Robert E. Litan of the Brookings Institute has pointed out that the main aim of the regulatory system that has been put in place by the US authorities since the Depression has been to reduce the risk of moral hazard created by the introduction of deposit insurance.¹⁰ In order to reduce the cost of monitoring, the system incorporates both on paper and in practice detailed (prohibitory) rules to prevent the occurrence of moral hazard.

In order to deal with changing economic circumstances such as rising inflation, however, the regulators began to relax these rules in the 1970s. Not only were detailed provisions explicitly relaxed by federal and state legislators, such as when the rules governing interest rates on bank deposits were abolished, but there was also a tendency for them to be relaxed in practice at the initiative of financial service companies, such as when bank holding companies began to engage in underwriting commercial paper and other securities.

In place of prohibitory rules, the emphasis shifted to the use of capital adequacy requirements as a buffer against all types of risk. As we shall see below, however, these changes were not enough to deal with moral hazard.

However, once cases of moral hazard did occur in the United States, the need to prevent this happening was clearly recognized and various measures were taken to deal with the problem. US experience suggests that there is an urgent need in Japan to devise means of preventing moral hazard. This is because the present situation, where taxpayer money is used to provide a safety net of last resort, cannot be allowed to continue indefinitely.

A more efficient solution must be found before the current one incurs additional costs that could balloon out of control. A number of measures have been adopted, and while efforts are being made to deal with the risk of moral hazard, the results are not always comprehensive or compatible. In particular, it is ques-

tionable whether they are compatible with some of the aims of the big bang financial reform program, e.g., to encourage a healthy degree of competition and greater efficiency.

As an example, let us take the use of public funds to purchase preferred shares in major banks. Under the Emergency Banking Act of 1933, US regulators were permitted to use taxpayer money to purchase preferred shares with voting rights to bail out the banking system. Shareholders had to take on some of the pain by accepting a reduction in ordinary share capital. In many cases, the Reconstruction Finance Corporation (RFC) exercised its rights as a shareholder to have the managers of problem banks replaced. From the outset a redemption fund was set up and banks were required to pay into it roughly half of their after-dividend profits in order to pay back the money that had been borrowed from the public purse.¹¹

In Japan the regulators were in such a hurry to deal with the threat to the financial system that they did not have time to be as thorough as this. Moreover, banks today are engaged in a much wider range of activities than they were in the 1930s, and this increases the risks considerably.

In such a situation, the use of public funds to purchase preferred shares may serve not only to help an institution recover—the proper aim of such action—but also to send a signal to the market with wide implications. For example, if a bank received an injection of taxpayer money just as it was about to set up a subsidiary to engage in another area of finance, this could be interpreted as an “official blessing.” This could then work to the advantage of that bank but the disadvantage of other banks not benefiting from a taxpayer bailout.

3 US Experience

We shall now take a closer look at recent US experience in this area to see whether it can suggest possible solutions. As particular detailed rules were relaxed (see above), the failure to deal adequately with the problem of moral hazard became apparent. First there was the savings and loan crisis of the 1980s, and then there was the banking crisis. In other words, what might otherwise have been only minor dislocations became major crises because of the following types of moral hazard:

- Intermediation of deposits by deposit brokers.
- Extending loans to risky and unfamiliar businesses and regions, and purchasing junk bonds.
- Forbearance by regulators following the relaxation of accounting rules.
- Virtually unlimited guarantees of deposits as a result of excessive use of the “too big to fail” principle.
- Excessive lending by the Federal Reserve Banks via their discount window (a 1991 study commissioned by the House of Representatives showed that 90 percent

of the banks that had been supported in this way in the late 1980s later failed).¹²

There was also criticism of the way in which failed institutions were dealt with, especially of the terms offered to NCNB (now part of BankAmerica) by the Federal Deposit Insurance Corporation (FDIC) for rescuing First Republic (the largest bank in Texas) in July 1988.

First Republic was originally the product of a merger between two Texas banks both of which had a bad loan problem and saw the merger as a way of surviving by cutting their overhead. However, it did not prove a solution. By the end of 1987 the bank’s bad-loan ratio had risen to 16 percent, and the bank reported a loss of \$660 million. Early in 1988 customers started to withdraw deposits, and in March of that year the bank had to receive a bridge loan of \$1 billion from the FDIC.

At that point, the FDIC announced (on the too big to fail principle) that it would guarantee all deposits held by First Republic. However, this failed to solve the problem, and at the end of July the FDIC set up a bridge bank, which took over First Republic’s assets and liabilities. This business, in turn, was then transferred to NCNB.

Under this arrangement, NCNB initially contributed \$210 million and acquired 20 percent of the bridge bank’s capital and took over its management. (The remaining 80 percent, or \$840 million, was contributed by the FDIC. However, NCNB acquired 100 percent of the capital by the third quarter of 1989.) The terms of the transfer, which was at virtually no risk to NCNB itself, were as follows:

- A Special Asset Department (SAD) was to be set up, to which the problem loans were to be transferred. All related costs (including funding costs) were to be borne by the FDIC.
- NCNB of Texas (as the bridge bank was called after the transfer) was not required to write off more than 0.35% of these problem loans in 1989 and 0.5% in 1990 (excluding SAD). The cost of any additional write-offs was to be borne by the FDIC.
- NCNB was allowed to move any sound loans extended before First Republic’s assets were seized by the FDIC to SAD within the first two years of the transfer. (However, there was a limit on how much it could move during the second year.)
- NCNB was to assume any tax-allowable accumulated losses incurred by First Republic. In addition, as the holding company, NCNB as a whole (and not just the bridge bank) was allowed to offset these losses against future taxable profits.

The final cost to the FDIC of rescuing First Republic was \$3.8 billion—a record for rescuing any one institution. However, the FDIC claimed that this was still more cost-effective than paying off depositors with deposits totaling some \$20 billion. Nevertheless, there was widespread criticism of this approach (e.g., from Congress), especially of the preferential tax treatment.

With financial institutions continuing to fail, the Federal Savings and Loan Insurance Corporation (FSLIC) itself eventually became insolvent, and the FDIC's reserves became depleted. As a result, the regulators had no alternative but to consider the use of taxpayer money.

4 The FDIC Improvement Act

First, the Financial Institutions Reform, Recovery and Enforcement Act (FIRREA) was passed in 1989. At that point, some (albeit limited) action was taken to deal with moral hazard, which had exacerbated the problem. (See Table 3.) This included (1) prohibiting undercapitalized savings and loan associations (S&Ls) from taking brokered deposits and (2) carrying out a study on whether deposit insurance premiums should reflect the degree of risk. These measures marked the first step towards policies aimed at (1) curbing the willingness of financial institutions to take risks and (2) encouraging them to be more efficient.

However, it was not until the FDIC Improvement Act (FDICIA) was passed in 1991 that any serious action was taken. The following are its main provisions:

(1) The reintroduction of caps on deposit rates

FDICIA introduced restrictions on brokered deposits. (See Table 4 for the initial provisions. Similarly, Tables 5 and 6.) As a result of these restrictions, 92 out of the 807 banks (and 66 out of the 264 S&Ls) that were taking deposits at the beginning of 1992 had to discontinue this

activity. Also, 450 institutions were obliged to obtain FDIC approval.

(2) The introduction of deposit insurance premiums reflecting the degree of risk

Before FDICIA, banks had to pay a flat-rate premium of 23 cents on every \$100 in deposits they held. FDICIA, however, proposed that they should pay a variable-rate premium, as outlined in Table 5. (This came into effect in January 1993.) Exactly what degree of risk depositors were taking at that time by entrusting their savings to banks can be seen in Table 6. If the premium rates in Table 5 are then used to calculate appropriate rates for the banks in Table 6, the average rate works out at 28 cents per \$100.

(3) Making capital adequacy requirements more of an incentive for financial institutions

As was mentioned above, there had been a move to replace detailed regulations with more stringent capital adequacy requirements ever since the early 1980s. However, the approach adopted by FDICIA was to replace a uniform requirement with a range of regulatory responses according to actual capital-asset ratios.

The first response was to introduce Prompt Corrective Action (PCA) for banks whose capital-asset ratio was declining. This gave the authorities more scope for intervention. In the course of tackling the savings and loan crisis, the regulatory authorities had already acquired various powers, including that of demanding that a bank's

Table 3. Main Points of Financial Institutions Reform, Recovery and Enforcement Act (FIRREA) of 1989

1	Resolution of failed S&Ls and funding thereof <ul style="list-style-type: none"> • Creation of Resolution Trust Corporation (RTC) • Provision of \$50 billion for the next three fiscal years • Funds to be borrowed from the Treasury Department during the first year and by issuing Resolution Funding Corporation (REFCORP) bonds thereafter
2	Reorganization of supervisory agencies <ul style="list-style-type: none"> • Closure of Federal Home Loan Bank Board (FHLBB) and Federal Savings and Loan Insurance Corporation (FSLIC) • Regulatory authority transferred to Office of Thrift Supervision (OTS) • Creation, under the Federal Deposit Insurance Corporation (FDIC), of a separate Savings Association Insurance Fund (SAIF) to supervise deposit insurance system
3	Reorganization of the deposit insurance system <ul style="list-style-type: none"> • Insurance premium rates increased • Study carried out on use of risk-adjusted insurance premium rates
4	Introduction of more stringent regulation and supervision of existing S&Ls <ul style="list-style-type: none"> • State-chartered S&Ls made subject to the same restrictions on their activities as federally chartered S&Ls • Forbidden to acquire equity-linked bonds or junk bonds • Undercapitalized forbidden to take brokered deposits • Introduction of more stringent capital adequacy requirements • More staff hired to take civil and criminal action against S&L staff suspected of breaking the law
5	Miscellaneous <ul style="list-style-type: none"> • Commercial banks allowed to take over financially sound S&Ls

Table 4. Regulations Governing Taking of Brokered Deposits

Capital ratio	Taking of brokered deposits	Deposit rate
10% or more	No restrictions	No restrictions
8% or more, but less than 10%	Prior approval of FDIC required	Subject to restrictions 1) Covered by deposit insurance (Up to \$100,000) • Upper limit on deposits sold locally: average local rate for similar deposits + 0.75% • Upper limit on deposits sold nationally: 120% of market rate for treasury bills with the same maturity + 0.5% 2) Not covered by deposit insurance • 130% of market rate for treasury bills with the same maturity + 0.5%
Less than 8%	Not permitted	

Note: Capital ratios are as defined in the BIS guidelines. Half of each ratio is required to consist of core (Tier-I) capital.

Table 5. Table of Risk-Adjusted Deposit Insurance Premium Rates (per \$100)

Capital ratio	A	B	C
10% or more	Group 1 (25 cents)	Group 2 (28 cents)	Group 3 (30 cents)
8% or more, but less than 10%	Group 4 (28 cents)	Group 5 (30 cents)	Group 6 (30 cents)
Less than 8%	Group 7 (30 cents)	Group 8 (30 cents)	Group 9 (31 cents)

Note: Subgroup A: This subgroup consists of financially sound institutions with only a few minor weaknesses and generally corresponds to a CAMEL rating of 1 or 2 under the Uniform Financial Institutions Rating System.

Subgroup B: This subgroup consists of institutions that demonstrate weaknesses that, if not corrected, could result in significant deterioration of the institution and increased risk of loss to the BIF or SAIF. This subgroup assignment generally corresponds to a CAMEL rating of 3.

Subgroup C: This subgroup consists of institutions that pose a substantial probability of loss to the BIF or the SAIF unless effective corrective action is taken. This subgroup assignment generally corresponds to a CAMEL rating of 4 or 5.

Source: Federal Deposit Insurance Corporation.

Table 6. Risk Assessment by Regulatory Authorities

Group	Number of institutions	Average assets (\$ Million)	Capital ratio (%)	Return on assets (%)
1	7,844	107.2	23.95	1.09
2	1,220	94.0	15.25	0.33
3	193	177.0	13.81	-0.37
4	347	1,700.9	9.41	0.93
5	228	2,454.5	9.04	0.64
6	236	1,887.0	8.66	-0.46
7	24	757.3	7.56	1.11
8	39	3,895.2	7.76	0.01
9	305	762.3	6.10	-1.71

Source: Federal Deposit Insurance Corporation.

management be replaced. However, PCA was epoch-making inasmuch as it enabled the authorities in a country with a liberal ideology to take effective control of private companies that were still solvent at an early stage in the process. PCA was also designed to limit the discretionary powers of regulatory authorities and to remove any scope for arbitrariness—especially by resort to forbearance—as far as possible.

In addition, even those banks that satisfied the existing minimum requirements were only allowed to engage in

new business activities on certain conditions. For example, in calculating their core capital, banks had to deduct items such as any stake in a subsidiary of a different type of financial institution or the interest rate premium on any deposits they had purchased from other banks. Only banks with a core capital of 5 percent (compared with the minimum requirement of 4 percent agreed under the Basle Accord for banks engaged in international business—the so-called BIS guidelines) and an overall capital-asset ratio of 10 percent (compared with the BIS

Table 7. Introduction of “Differentiated” Regulations Based on Equity Ratios

Capital ratio (Total)	Regulatory provisions
Zone 1: Well-capitalized (10% or more)	<ul style="list-style-type: none"> • Allowed to take brokered deposits (no restrictions on interest rates) • May be allowed to engage in new activities
Zone 2: Adequately capitalized (Less than 10%)	<ul style="list-style-type: none"> • Allowed to take brokered deposits
Zone 3: Undercapitalized (Less than 8%)	<ul style="list-style-type: none"> • Not allowed to take brokered deposits • Required to draw up capital restoration plan within 45 days • Required to restrict asset growth to below that of the previous quarter • Not allowed to acquire banks or engage in new activities • More stringent monitoring by regulatory authorities required • Access to the Federal Bank discount window restricted
Zone 4: Significantly undercapitalized (Less than 6%)	<p>Same as for Zone 3</p> <ul style="list-style-type: none"> • Required to recapitalize by issuing new shares or merging with another bank • Interaffiliate transactions restricted • Interest rates for new deposits restricted to below the local average interest rate <p>Asset growth restricted more severely than for Zone 3</p> <ul style="list-style-type: none"> • Order cessation of activities where excessive risks are being taken • Replace officers (restrict pay) • Install suitable officers from outside • Forbid taking of deposits from correspondent banks • Payment of dividends to parent holding company requires prior approval from the FRB • Order sale of subsidiaries • Take any other action considered necessary by the regulatory authorities
Zone 5: Critically undercapitalized (Less than 4%)	<p>Same as for Zone 4</p> <ul style="list-style-type: none"> • Take action within 90 days to protect depositors (including appointment of receiver) • Appoint receiver within 270 days

Source: Federal Deposit Insurance Corporation.

requirement of 8 percent) were allowed to engage in other activities, such as the securities business. This approach was similar to that adopted for regulating deposit rates and deposit insurance premiums in that it abandoned blanket regulations in favor of a “differentiated” approach—in this case, differentiated according to the level of a bank’s equity capital. (See Table 7.)

(4) Other provisions

In addition to the above measures, FDICIA included provisions such as the following: (1) a requirement that the regulatory authorities had to demonstrate, after the event, that they had followed the “least cost” principle in whatever action they had taken; (2) more stringent conditions for applying the too big to fail principle; (3) a call for a further study (by the US General Accounting Office); (4) the introduction of checks on risk management systems (e.g., for derivatives trading); and (5) a more explicit statement of the terms on which banks could use the Federal Reserve Bank discount window.

In summary, Congress sought to reduce the future burden on the public purse by (1) introducing a new regulatory system that placed greater emphasis on market discipline so as to make banks more efficient and (2) minimizing cases of moral hazard of the type mentioned above. (The latter includes limiting the discretionary pow-

ers of regulatory authorities by specifying the action they may take for a particular capital-asset ratio.)

5 Issues for Japan

In the United States, the passing of the Gramm-Leach-Bliley Act in November 1999 marked the official abolition of the walls separating banking, investment banking and insurance, which had formed the basis of US financial regulation since the Depression.¹³ It also reaffirmed the authorities’ desire to ensure the stability of the financial system by continuing the process of deregulation and encouraging competition and efficiency based on the existence of multiple channels of financial intermediation.

Since FDICIA, US financial authorities have set up a system to deal with problem banks by means of early quarantine before they become a systemic risk, while making the most of competition and other market forces.¹⁴ Recently there have even been proposals to improve this system by requiring banks to issue subordinated debt as part of their equity capital and thereby encourage investors to monitor their activities. Similarly, although there have not been any major bank failures since FDICIA, the purchase and assumption (P&A) approach to resolving deposit-taking institutions means

that, whereas in the past deposits would have been virtually assumed in full, it is becoming increasingly common for this to be limited to only the amount actually covered by deposit insurance. Deposits in excess of this amount tend only to be repaid at a fixed rate, which could be zero in the worst cases.

The key point, in other words, is that the regulators have tried to use PCA to prevent the safety net from having to be extended even further, while allowing inefficient and problematic banks to fail as a result of free competition. The risk of moral hazard has therefore been reduced—even at the cost of sacrificing some traditional US views on regulations. Two facts are particularly important in this: (1) guidelines are now stated more precisely to ensure that problems are detected early and quarantine achieves the desired effects; and (2) regulatory authorities are required to justify their actions. Bank managers and investors (including depositors) are also likely to have been given a clear signal.

In conceptual terms, any regulatory scheme for maintaining the stability of the financial system while trying to minimize the possibility of moral hazard is likely to adopt one of the following two approaches:

- 1) Impose detailed and specific regulations in order to ensure the stability of individual institutions.
- 2) Regard the stability of individual institutions and the stability of the system as separate issues, and take action to prevent the failure of individual institutions from threatening the system as a whole. In order to prevent moral hazard by market participants—and especially problem banks—it will also introduce regulations that emphasize the importance of market discipline while still being incentive-compatible.

The United States is clearly aiming for the second approach. Japan's big bang program of financial reform is similar. In practice, it is highly unlikely that a major player such as Japan, linked as it is to the global marketplace and subject to the violent changes that occur in financial markets, will press for the reintroduction of the first approach.

The problem facing Japan, however, is the delay that has occurred in creating a system that attaches sufficient importance to market discipline while still being incentive-compatible. If the authorities were to try to introduce the kind of competition envisaged in the big bang program of financial reform while a safety net provided through public funds was still in place, there would be a risk that enormous additional costs could be incurred unless there were provisions to deal with moral hazard.

Although Japan already has provisions along the lines of those adopted in the United States (e.g., PCA), it is unclear how they relate to the original aim of stabilizing the financial system while only using the safety net as a last resort. This principle has to be established clearly as a basis for specific policies. There is also an urgent need

for clearer guidelines and a more stringent requirement for justification in order to ensure that any measures adopted are effective.

An example of this is the way in which the Japanese authorities appear intent on transferring the businesses of failed banks in their entirety—even if the problem institution is a major bank. If one accepts the principle that individual banks should be allowed to fail, there would appear to be no justification for this. An excessive desire to save jobs or to protect the local economy will only cloud the issue, which is ultimately about stabilizing the financial system.

Another problem in Japan is that when the business of a problem bank is transferred, the new owners are often required to maintain all outstanding loans. Although there may be a need for exceptional measures to prevent any short-term impairment of a bank's ability to function as a financial intermediary, allowing the new owners to exercise their credit control function as soon as possible should be seen as compatible with the original aim of stabilizing the financial system.

As we shall see below, there is also the possibility of using alternative financial channels such as the secondary markets for loan assets. To exclude such possibilities by requiring new owners to maintain outstanding loans over a long period risks causing new cases of moral hazard, in which borrowers fail to make an effort to diversify their sources of funding and improve their balance sheets.

There is also the problem of how to discipline banks that are kept afloat by taxpayer bailouts. There have been calls in Japan for such institutions to be required to draw up plans for restructuring, but the kind of provisions for preventing excessive risk-taking contained in FDICIA, such as restrictions on an institution's freedom to set interest rates and choose where it conducts its business, cannot be considered adequate.

Finally, there is a need for measures to deter forbearance, as indicated by the debate over postponing the adoption of PCA and the introduction of a pay-off system (i.e., a limit on the repayment guarantee for bank deposits). This is not to say that postponement is wrong, but rather that it needs to be justified in terms of whether it serves the original aim of stabilizing the financial system.

IV Developing a Range of Channels for Financial Services

1 Developing More Channels

One simple way of preventing a rapid deterioration in the ability of the financial system to act as intermediary and of dealing with moral hazard is to develop a number

of parallel channels. The need for such channels has been pointed out by Robert Merton of the Harvard Business School, who compares them to the various means of crossing the English Channel. If there were only an air link between Britain and France, there would be no way of crossing the Channel in thick fog. However, if there are alternative means (e.g., a Channel tunnel or hovercraft), the risk of suddenly not being able to cross the Channel is significantly reduced.¹⁵

Although a bank failure is a typical example of the kind of event that can disrupt financial markets, the effects can range widely—from disrupting the payments system to threatening the creditworthiness of other banks and financial intermediaries, and causing losses for depositors as well as difficulties for borrowers. If the response of the authorities, as we saw above, is to dish out taxpayer money right, left and center, the costs can balloon.

Also, since the failure of large companies and of financial intermediaries other than banks can have similar effects, it could be argued that it is unfair to restrict the use of public funds to dealing with bank failures.¹⁶ If the costs to the taxpayer begin to mount, the authorities will face increasing criticism and find it difficult to provide a

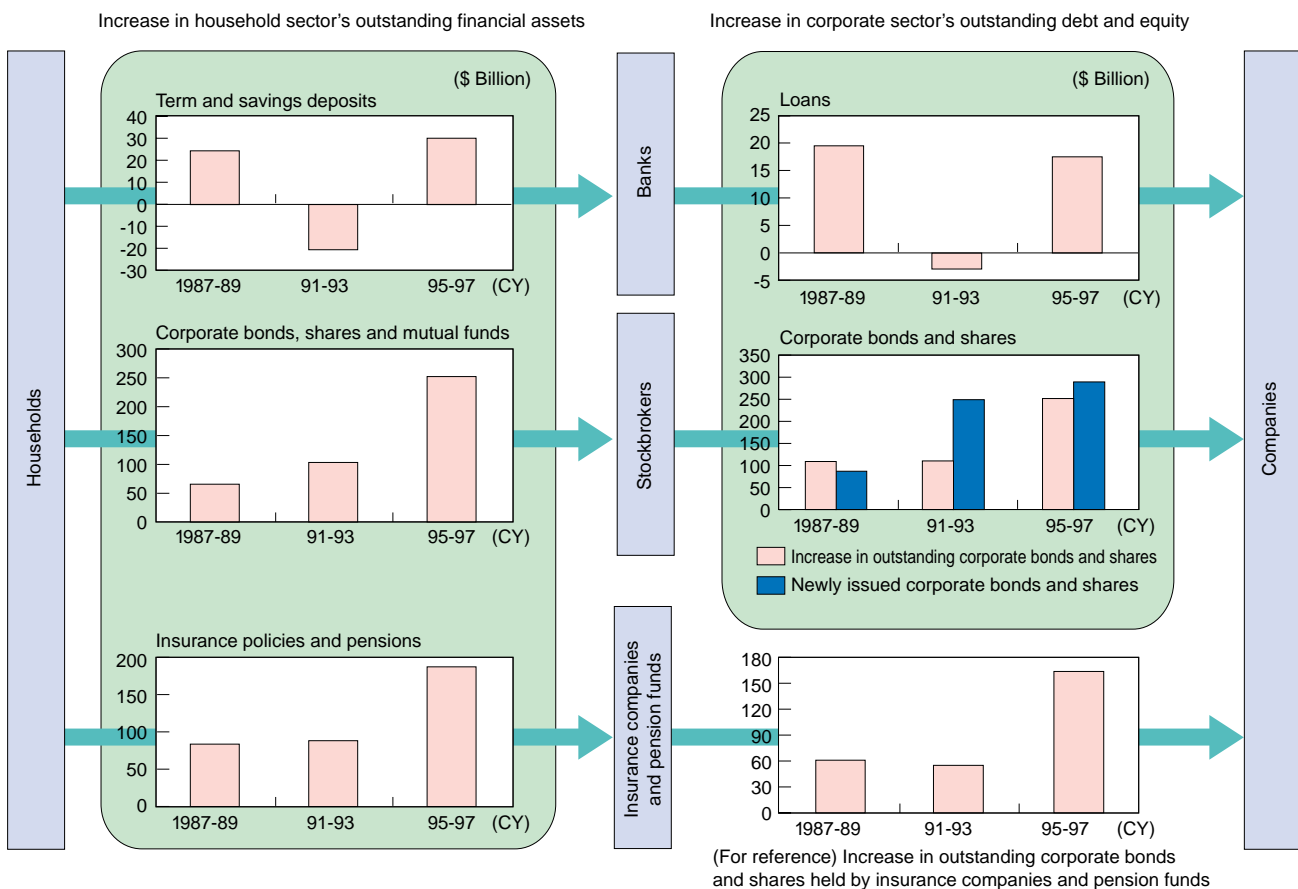
suitable safety net. The way to avoid such a situation is to develop alternative channels of service.

During the US banking crisis of the early 1990s, the banking channel was unable to function properly, but there was a considerable number of alternatives, which later enabled the economy to enjoy a strong recovery. (See Figure 1.)

In the United States the main areas of financial intermediation other than banking are the securities industry, corporate finance (including M&A and advice on restructuring), fund management and the private equity business. However, this diversification and efficiency has only been achieved after many years. For example, although Wall Street is now a center for sophisticated financial services, the main driving force behind this has been deregulation, especially the deregulation of brokerage commissions in 1975.

This has led US financial service companies, which used to be much like peas in a pod, to take the management of their businesses more seriously, reorganize, and develop a wider range of business models. The result is the wide-ranging US financial services industry of today. In the same way, innovation in financial trading, such as the development of securitization, junk bonds, and

Figure 1. Growth of Direct Finance



Notes: (1) "Companies" excludes financial institutions; (2) "corporate bonds" includes foreign bonds; (3) mutual funds purchased via insurance companies and pension funds are not included; (4) the increase in outstanding amounts for 1995-1997 was calculated on the basis of the outstanding amount for the third quarter of 1997; and (5) the amount of newly issued securities for 1995-1997 was calculated by annualizing the figure for the third quarter of 1997. Source: Yuko Numata and Yukihiro Endo, "Beigin no Kigyomuke Yushi Gyomu no Hen'yo" [The Changing Pattern of Corporate Bank Loans in the United States], *Zaikai Kansoku* [Financial World Observation], published by the Nomura Financial Research Center, February 1998.

derivatives, has helped the securities industry to become more efficient and to capture a share of a market once dominated by bank lending.

The ample availability of risk capital in such forms as venture capital funds, mezzanine funds (specializing in subordinated debt), and leveraged buyout funds (which borrow against the assets of their takeover target) from long-term investors such as pension funds, has helped to ensure that corporate borrowers have continuous access to alternative funding that matches the degree of risk of their capital structure.¹⁷

US experience and the current situation in Japan suggest that policies such as the following are needed if Japan is to develop effective multiple channels of financial intermediation. These policies should also help to boost the supply of equity capital.

(1) A clear statement of the principle of fiduciary duty

These alternative channels—whether it be the securities market open to retail investors or financial products, such as investment trusts, that are only available via institutional investors—differ from banking channels in that the risk is borne directly by the investor. For this to work properly, there has to be a clear statement of the principle of fiduciary duty, according to which the intermediary (e.g., the sales representative or fund manager), functioning in the capacity of the investor's agent, is required to exercise caution and act faithfully.

US pension fund managers are more skilled and more diverse than when the Employee Retirement Income Security Act of 1974 (ERISA) established the principle of fiduciary duty. In terms of actual investments, active use of innovative financial techniques—and not just plain vanilla equity investment—has ensured the ample availability of risk capital.

(2) Need for more monitoring of venture companies

There has been much debate about how to make capital more readily available to venture businesses, and this has led to the reform of stock exchanges and OTC trading. Given the inherently risky nature of investment, however, investors themselves need to become better informed and more information-productive.

There are greater information asymmetries when a bank lends to a venture business than when it lends to an established company, and the risk of moral hazard is therefore also greater. If equity capital is to be readily available to venture businesses, there have to be specialist venture capital companies that can screen and monitor them.¹⁸ Otherwise, ordinary investors are likely to get their fingers burned when exposed to such businesses on securities markets.

A study of venture capital investment in Canada by Raphael Amit his colleagues at the University of British Columbia indicates that, when companies have little collateral and only a short credit history, inside information

becomes doubly important. As a result, venture businesses seldom go public and are almost always acquired by either third parties with specialist knowledge or managers with inside information.¹⁹

In the United States, the fact that venture capital funds have been joined by a growing number of mezzanine funds, which specialize in lending to small and medium-sized businesses, underlines the need for specialists who can carry out such screening and monitoring.

(3) Need for greater use of securitization

Many small and medium-sized businesses do not have the financial muscle to earn a credit rating or issue sufficient securities to ensure a liquid market. If such businesses are to have ready access to financing, greater use needs to be made of securitization. There also has to be a system that will allow retail investors ready access to such securities.

In the United States, mortgages have been securitized by government agencies (Fannie Mae, Freddie Mac, and Ginnie Mae). In other words, by using the credit rating of a government agency and its guarantee that the principal and interest of the mortgage-backed securities will be repaid, mortgagors are able to obtain a high credit rating and attract growing investor interest. During the credit crunch of the early 1990s there was a proposal for a federal agency (Velda Sue) that would have used a similar method to securitize the loan assets of small and medium-sized businesses. In the end, nothing came of the proposal and it was decided to let the private sector find a solution. In Japan, however, securitization is still in its early years, and an approach such as this may be worth considering.

(4) Establishing an equity-based system of governance

Equity rather than debt should become a much more important tool for exercising control over corporate borrowers. In other words, in addition to their existing role in financing, financial markets should play a more active role in corporate governance.

In the United States, hostile M&A activity has led to the formation of a market for corporate control. The development of leveraged buyouts using junk bonds and shareholder activism by pension fund managers mean that even the largest companies have a weak spot somewhere and cannot entirely escape pressure to improve their performance. While we are not suggesting that Japan should adopt such an approach right away, as a first step it should be made clear to pension funds that exercising their voting rights is an integral part of their fiduciary duties.

If institutional investors exercise these rights more actively, they will also be able to use their know-how to control companies (to an extent that retail investors cannot). This should help to reduce the risk of moral hazard—not just on financial markets but throughout the

economic system. This, in turn, should encourage companies to generate more added value, and stimulate demand for equity capital.

(5) Improving the ability of households to select a portfolio

It would appear to be the general view that when it comes to portfolio selection the household sector lacks both information productivity and know-how. That is why financial service companies exist to support households in their selection of a portfolio and also why households are prone to moral hazard such as that caused by deposit insurance.

Because of this, it is all the more important for households to take every opportunity to improve their ability to select a portfolio. In view of the growth of new financial products (fueled by the big bang financial reform program) and plans to introduce defined-contribution pensions, there is an urgent need to create the conditions in which households can improve their ability to select a portfolio, including a feeling for what is an appropriate combination of risk and return.

There also needs to be more in-depth discussion of how investors should be protected. For example, when discussions were going on about what should be included in the Omnibus Financial Services Law, there was apparently a proposal for a cooling-off period similar to the kind that applies to goods purchases.²⁰

While there needs to be legislation to deal with losses suffered by investors as a result of unscrupulous behavior by financial intermediaries, a cooling-off period (during which investors would be allowed to have their investment refunded at the purchase price) is not something that is likely to find acceptance for financial products as the market price of such vehicles is constantly changing. If anything, such an arrangement would seem certain to increase the risk of moral hazard.

2 Relationship with the Banking Channel

Banks have performed the main role in Japan's postwar financial system, especially with regard to "the need for more monitoring of venture companies" and "establishing an equity-based system of governance." The so-called main banks, in particular, have been a source of both debt and equity financing for the corporate sector.

However, now that the rate of economic growth has slowed and the marginal efficiency of investment has declined across the board, and with land held as security no longer the gold standard it used to be, there is a risk that under the existing system banks may take excessive risks.

Our basic tenet is that by relying on highly liquid deposits (which play an important role in the payments system, as indicated by the proposal for narrow banking) for their principal source of funds, banks may become overstretched if they are expected to provide risk capital

funded mainly by deposits on a wide scale. It would be better for the future development of the financial system if the growth of alternative channels of financial intermediation were to be fostered and financial intermediaries were each to assume responsibility for a different function, cooperating where necessary.

If this can be done, the safety net beneath the financial system can be made smaller by reducing the amount of each deposit that is guaranteed. This, in turn, would reduce the risk that one of the types of moral hazard mentioned above may occur.

V Specialization in Financial Services and Cities

1 Cities and the Accumulation of Professional Expertise

This paper has examined the various types of financial intermediation in parallel. The particular intermediation channel a company uses for financing will depend on the competitiveness of each type, which is determined by its information productivity and professional expertise.

Although we have already touched on the role of cities in the accumulation of such expertise, in the following we shall consider this aspect in more detail. Cities make it easier for companies and individuals to meet and exchange ideas. Cities with a range of different industries are fertile centers for new industries. By being located in a city, companies and individuals can gain access to firms that are developing or applying leading-edge knowledge, including new technology and business models. The bigger cities become, the more opportunities there are for developing skills by specializing in a particular area and for supplementing any shortcomings by cooperating with other companies and individuals. These processes would appear to lead to the accumulation of a wide range of specialities in cities.^{21, 22}

Such observations have been made of the relationship between cities and industry in general, including financial services. Accordingly, certain basic conditions that enable cities to function must exist if financial services are to develop. These basic conditions include a properly functioning legal system to ensure that business contracts are enforced; a system of general and vocational education that can provide a pool of well-trained workers; and a policy environment that will ensure a high degree of economic freedom.

2 Conditions Necessary for Developing More Sophisticated Financial Services

To be a financial center, however, a city must also have a number of additional features. For example, it must be able to transmit information from both home and abroad

rapidly and simultaneously. That means that it must have an advanced data transmission and transport infrastructure and offer easy two-way access to the outside world.

Another feature of financial centers is that, although there is a very wide range of financial products, there is also a very high degree of fungibility between them. This suggests that regulations and artificial barriers to the risks presented by certain financial products should be kept to a minimum.

Yet another feature is the fact that knowledge and human capital are more important determinants of productivity in financial service companies than they are in other types of firms, where physical capital is the main determinant. The main factors determining which financial service providers will make the most of new opportunities for arbitrage or creating added value are factors such as whether a company has groups of well-trained specialists and is able to integrate specialists in a wide range of financial areas into teams.

Furthermore, an important aspect of pooling and creating knowledge, information and technology in the field of financial services is whether or not financial specialists are able to move from one company to another, whether the financial services industry is open to entrepreneurial talent from other areas, and whether there are informal opportunities for specialists to exchange views. There are major advantages if a wide range of knowledge and ideas can be pooled in a highly concentrated market. This is reflected in the view that what distinguishes Wall Street is its efficient labor market. All this suggests that entry barriers to the financial services industry should be kept to a minimum.

Another important point is that market players need to be given strong but appropriate incentives to increase their information productivity and expertise. For this purpose, more advanced economic institutions—such as more efficient systems for tax, accounting and labor legislation, and, above all, as was mentioned above, a comprehensive law covering financial services and a clear statement of the principle of fiduciary duty—can make an important contribution.

In summary, financial markets will only function efficiently if a wide range of information is concentrated in cities, if there is a wide range of competing financial products, and if a wide range of specialists can compete and cooperate. In such markets, minimizing the risk of moral hazard, carrying out full-scale deregulation, and creating more advanced economic institutions are both necessary and an effective way to achieve greater specialization and division of labor.

As US experience shows, it takes many years for a country's financial markets to become sophisticated and competitive—even if it does carry out full-scale deregulation. This is because investment in knowledge, information and technology by individuals, companies and financial service companies needs to be carried out over a long period.

Throughout this paper we have pointed out the fact that individuals, companies and financial service companies are all sensitive to regulations and insulation from risk. If the direction of future policy is unclear and the policies actually implemented are very different from the initial design, those directly affected by such policies will be unable to plan their investments properly and the process of trying to make Japan's financial markets more sophisticated and competitive will be hampered. Policy-makers therefore need to have long-term objectives, and their policies for financial markets must be consistent.

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