

PROMOTING JAPANESE RECOVERY

by

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For well over five years, the Japanese economy has been stagnating and currently it appears to be mired in another recession. What should be done to break the Japanese economy out of its low growth state? What steps do policymakers need to take in order to promote a Japanese recovery?

This paper tries to provide answers to these questions by first examining what are the underlying forces that are holding the Japanese economy back. The resulting analysis suggests that increased informational problems in Japanese financial markets are the primary sources of weakness in the Japanese economy. This view has important implications for what steps need to be taken to promote recovery and the final section of the paper outlines an approach to get the Japanese economy back on track.

I. Asymmetric Information and Japanese Financial Markets

Financial markets and institutions perform the essential function in an economy of channeling funds to those individuals or firms that have productive investment opportunities. If the financial system does not perform this role well, then the economy cannot operate efficiently and economic growth will be severely hampered. Indeed, this is exactly the situation in Japan in recent years and explains why an economy which was the envy of the world ten years ago, has fallen on hard times.

Asymmetric Information and the Financial System

The financial system performs the essential function in an economy of channeling funds to those individuals or firms that have productive investment opportunities. If the financial system does not perform this role well, then the economy cannot operate efficiently and economic growth will be severely hampered. A crucial impediment to the efficient functioning of the financial system is asymmetric information, a situation in which one party to a financial contract has much less accurate information than the other party. For example, borrowers who take out loans usually have much better information about the potential returns and risk associated with the investment projects they plan to undertake than lenders do. Asymmetric information leads to two basic problems in the financial system: adverse selection and moral hazard.

Adverse selection is an asymmetric information problem that occurs before the transaction occurs when potential bad credit risks are the ones who most actively seek out a loan. Thus, the parties who are the most likely to produce an undesirable (*adverse*) outcome are most likely to be *selected*. For example, those who want to take on big risks are likely to be the most eager to take out a loan because they know that they are unlikely to pay it back. Since adverse selection makes it more likely that loans might be made to bad credit risks, lenders may decide not to make any loans even though there are good credit risks in the marketplace. This outcome is a feature of the classic "lemons problem" analysis first described by Akerlof (1970). Clearly, minimizing the adverse

selection problem requires that lenders must screen out good from bad credit risks.

Moral hazard occurs after the transaction takes place because the lender is subjected to the *hazard* that the borrower has incentives to engage in activities that are undesirable (*immoral*) from the lender's point of view: i.e., activities that make it less likely that the loan will be paid back. Moral hazard occurs because a borrower has incentives to invest in projects with high risk in which the borrower does well if the project succeeds but the lender bears most of the loss if the project fails. Also the borrower has incentives to misallocate funds for her own personal use, to shirk and just not work very hard, or to undertake investment in unprofitable projects that increase her power or stature. The conflict of interest between the borrower and lender stemming from moral hazard (the agency problem) implies that many lenders will decide that they would rather not make loans, so that lending and investment will be at suboptimal levels.¹ In order to minimize the moral hazard problem, lenders must impose restrictions (restrictive covenants) on borrowers so that borrowers do not engage in behavior that makes it less likely that they can pay back the loan; then lenders must monitor the borrowers' activities and enforce the restrictive covenants if the borrower violates them.

Another concept that is very important in understanding the impediments to a well-functioning financial system is the so-called free-rider problem. The free-rider problem occurs because people who do not spend resources on collecting information can still take advantage of (free ride off) the information that other people have collected. The free-rider problem is

¹Note that asymmetric information is not the only source of the moral hazard problem. Moral hazard can also occur because high enforcement costs might make it too costly for the lender to prevent moral hazard even when the lender is fully informed about the borrower's activities.

particularly important in securities markets. If some investors acquire information that tells them which securities are undervalued and then buy these securities, other investors who have not paid for this information may be able to buy right along with the well-informed investors. If enough free-riding investors can do this, the increased demand for the undervalued securities will cause their low price to be bid up to reflect the securities' full net present value given this information. As a result of all these free riders, investors who have acquired information will no longer be able to earn the entire increase in the value of the security arising from this additional information. The weakened ability of private firms to profit from producing information will mean that less information is produced in securities markets, so that the adverse selection problem, in which overvalued securities are the those most often offered for sale, is more likely to be an impediment to a well-functioning securities market.

More importantly, the free-rider problem makes it less likely that securities markets will act to reduce incentives to commit moral hazard. Monitoring and enforcement of restrictive covenants are necessary to reduce moral hazard. By monitoring borrowers' activities to see whether they are complying with the restrictive covenants and enforcing the covenants if they are not, lenders can prevent borrowers from taking on risk at their expense. However, because monitoring and enforcement of restrictive covenants are costly, the free-rider problem discourages this kind of activity in securities markets. If some investors know that other securities holders are monitoring and enforcing the restrictive covenants, then they can free ride on the other securities holders' monitoring and enforcement. Once these other securities holders realize that they can do the same thing, they also may stop their monitoring and enforcement activities, with the result that not

enough resources are devoted to monitoring and enforcement. The outcome is that moral hazard is likely to be a severe problem for marketable securities.

The problems created by adverse selection and moral hazard, and the related free-rider problem, are important impediments to well-functioning financial markets. Indeed, many institutional features of financial systems have developed to minimize these asymmetric information problems.

One important feature of financial systems is the prominent role played by banking institutions and other financial intermediaries that make private loans. These financial intermediaries play such an important role because they are so well suited to reducing adverse selection and moral hazard problems in financial markets. They are not as subject to the free-rider problem and profit from the information they produce because they make private loans that are not traded. Because the loans of financial intermediaries are private, other investors cannot buy them. As a result, investors are less able to free ride off financial intermediaries and bid up the prices of the loans which would prevent the intermediary from profiting from its information production activities. Similarly, it is hard to free ride off these financial intermediaries monitoring activities when they make private loans. Financial institutions making private loans thus receive the benefits of monitoring and so are better equipped to prevent moral hazard on the part of borrowers.²

²Note that by making private loans, financial institutions can not entirely eliminate the free rider problem. Knowing that a financial institution has made a loan to a particular company reveals information to other parties that the company is more likely to be creditworthy and will be undergoing monitoring by the financial institution. Thus some of the benefits of information collection produced by the financial institution will accrue to others. The basic point here is that by making private loans, financial institutions have the advantage of reducing the free rider problem, but they can not eliminate it entirely.

Banks have particular advantages over other financial intermediaries in solving asymmetric information problems. For example, banks' advantages in information collection activities are enhanced by their ability to engage in long-term customer relationships and issue loans using lines of credit arrangements. In addition their ability to scrutinize the checking account balances of their borrowers provides banks with an additional advantage in monitoring the borrowers' behavior. Banks also have advantages in reducing moral hazard because, as demonstrated by Diamond (1984), they can engage in lower cost monitoring than individuals, and because, as pointed out by Stiglitz and Weiss (1983), they have advantages in preventing risk taking by borrowers since they can use the threat of cutting off lending in the future to improve a borrower's behavior. Banks' natural advantages in collecting information and reducing moral hazard explain why banks have such an important role in financial markets throughout the world and especially in Japan.

Financial Instability and the Current Japanese Situation

Financial instability occurs when shocks to the financial system interfere with information flows so that the financial system can no longer do its job of channeling funds to those with productive investment opportunities.³ Without access to these funds, individuals and firms cut their spending, resulting in a contraction of economic activity, as has recently been occurring in

³See Mishkin (1997) for a more detailed discussion of the causes and propagation of financial instability.

Japan. The state of the balance sheet of both nonfinancial firms and banks is the most critical factor for the severity of asymmetric information problems in the financial system. Deterioration of balance sheets worsens both adverse selection and moral hazard problems in financial markets, thus promoting financial instability which creates a drag on the economy.

An important way that financial markets can solve asymmetric information problems is with the use of collateral. Collateral reduces the consequences of adverse selection or moral hazard because it reduces the lender's losses in the case of a default. If a borrower defaults on a loan, the lender can take title and sell the collateral to make up for the losses on the loan. Thus, if the collateral is of good enough quality, the fact that there is asymmetric information between borrower and lender is no longer as important since the loss incurred by the lender if the loan defaults is substantially reduced.

Net worth performs a similar role to collateral. If a firm has high net worth, even if it defaults on its debt payments as a result of poor investments, the lender can take title to the firm's net worth, sell it off, and use the proceeds to recoup some of the losses from the loan. In addition, the more net worth a firm has in the first place, the less likely it is to default because the firm has a cushion of assets that it can use to pay off its loans. High net worth also directly decreases the incentives for borrowers to commit moral hazard because borrowers now have more at stake, and thus more to lose, if they default on their loans. Hence, when firms seeking credit have high net worth, the consequences of adverse selection and moral hazard are less important and lenders will be more willing to make loans.

Declines in asset prices, both in the land and the stock market have an important role to play

in promoting financial instability through the net worth effects on adverse selection and moral hazard problems described above. As emphasized by Greenwald and Stiglitz (1988), Bernanke and Gertler (1989), and Calomiris and Hubbard (1990), a sharp decline in the stock market, as in a stock market crash, can increase adverse selection and moral hazard problems in financial markets because it leads to a large decline in the market value of firms' net worth. (Note that this decline in asset values could occur either because of expectations of lower future income streams from these assets or because of a rise in market interest rates that lowers the present discounted value of future income streams.) The decline in net worth as a result of a stock market decline makes lenders less willing to lend because, as we have seen, the net worth of firms has a similar role to collateral, and when the value of collateral declines, it provides less protection to lenders so that losses from loans are likely to be more severe. In addition, the decline in corporate net worth as a result of a stock market decline increases moral hazard incentives for borrowing firms to make risky investments because these firms now have less to lose if their investments go sour. A decline in the value of land, which serves as collateral and is also an important asset in many balance sheets, has similar effects because it lowers firm net worth and directly decreases the value of collateral. Because borrowers have increased incentives to engage in moral hazard and because lenders are now less protected against the consequences of adverse selection, the declines in land and stock markets lead to decreased lending and a decline economic activity. The collapse of the stock and land markets in Japan after the bursting of the "bubble economy" explains why the Japanese economy subsequently experienced its worst recession in the post war period.

In economies, such as Japan's, in which many debt contracts are typically of fairly

long duration, an unanticipated decline in inflation or deflation leads to a decrease in the net worth of firms. Debt contracts with long duration have interest payments fixed in nominal terms for a substantial period of time, with the fixed interest rate allowing for expected inflation. When inflation turns out to be less than anticipated, as occurred in Japan in the 1990s, the value of firms' liabilities in real terms rises so that there is an increased burden of the debt, but there is no corresponding rise in the real value of firms' assets. The result is that net worth in real terms declines. A sharp unanticipated disinflation or especially a deflation, therefore causes a substantial decline in real net worth and an increase in adverse selection and moral hazard problems facing lenders. The resulting increase in adverse selection and moral hazard problems (of the same type that were discussed in assessing the effect of net worth declines earlier) will thus also work to cause a decline in investment and economic activity. The deflation that has occurred in recent years in Japan, although not nearly as severe as that which occurred during the Great Depression in the United States in the 1930s, has thus helped prolong the malaise in the economy.

As we have seen, banks have a very important role in financial markets since they are well suited to engage in information-producing activities that facilitate productive investment for the economy. Thus, a decline in the ability of banks to engage in financial intermediation and make loans caused by a deterioration in bank balance sheets will lead directly to a decline in investment and aggregate economic activity.

Negative shocks to banks' balance sheets can take several forms. Because Japanese banks hold a substantial amount of equities, declines in the stock market have had a direct negative impact on Japanese bank balance sheets. We have already seen how stock market and land market crashes,

or an unanticipated decline in inflation, can cause a deterioration in nonfinancial firms' balance sheets that reduces the likelihood of their repaying their loans. Thus, these factors can help precipitate sharp increases in loan losses that increase the probability of bank insolvency.

Weak bank balance sheets can also occur because the supervisory/regulatory structure has not worked well enough to restrain excessive risk-taking on the part of banks. With the opening up of Japanese financial markets in the 1980s, Japanese banks suddenly found themselves in a more competitive environment. In an attempt to maintain adequate profit levels, a natural response was to take on riskier loans with high profit margins.⁴ The incentives to do this were enhanced by the presence of a government safety net which protected depositors and even large creditors if these risky loans turned sour and led to bank insolvencies. Knowing that the government would come to the rescue meant that depositors and other creditors had little incentive to monitor the banks and prevent them from taking on too much risk. The result was a well-known moral hazard problem in which the Japanese banks had increased incentives to increase their risk exposure and this is exactly what they did, especially in their lending to the real estate sector. In order to prevent this from occurring, Japanese banking supervisors had to monitor banks closely and prevent them from engaging in excessive risk-taking.

An important reason why the regulatory/supervisory process might not work well is explained by recognizing that the relationship between the voters-taxpayers, on the one hand, and the regulators and politicians, on the other, creates a particular type of moral hazard problem, the

⁴A similar phenomenon has occurred in the United States and in other countries. See Edwards and Mishkin (1995).

principal-agent problem. The principal-agent problem occurs when agents have different incentives from the person they work for (the principal) and so act in their own interest rather than in the interest of their employer. Regulators and politicians are ultimately agents for voters-taxpayers (principals) because in the final analysis taxpayers bear the cost of any losses when the safety net is invoked. The principal-agent problem occurs because the agent (a politician or regulator) may not have the same incentives to minimize costs to the economy as the principal (the taxpayer).

To act in the taxpayer's interest, regulators/supervisors have several tasks. In order to restrict excessive risk-taking they must set restrictions on holding assets that are too risky, impose sufficiently high capital requirements, and close down insolvent institutions. However, because of the principal-agent problem, regulators have incentives to do the opposite and engage in regulatory forbearance, in which they forego the right to enforce regulations or close down insolvent institutions. One important incentive for regulators that explains this phenomenon is their desire to escape blame for poor performance of their agency. By loosening capital requirements and pursuing regulatory forbearance, regulators can hide the problem of an insolvent bank and hope that the situation will improve. Kane (1989) characterizes such behavior on the part of regulators as "bureaucratic gambling". Another important incentive for regulators is that they may want to protect their careers by acceding to pressures from politicians. The failures of the Ministry of Finance to properly regulate and supervise Japanese banks in recent years is an excellent example of the principal-agent problem at work, and the result has been huge loan losses in the banking sector.⁵

⁵This principal-agent problem was also extremely important in producing the savings and loan debacle in the United States. E.g., see Kane (1989) or Mishkin (1998a).

The state of banks' balance sheets has an important effect on bank lending. If banks suffer a deterioration in their balance sheets, and so have a substantial contraction in their capital, they have two choices: either 1) they can cut back on their lending in order to shrink their asset base and thereby restore their capital ratios, or 2) they can try to raise new capital. However, when banks experience a deterioration in their balance sheets, it is very hard for them to raise new capital at a reasonable cost. Thus, the typical response of banks with weakened balance sheets is a contraction in their lending, which slows economic activity. Research in the United States, suggests, for example, that this mechanism was operational during the early 1990s in the United States when the capital crunch led to the headwinds which hindered growth in the U.S. economy at that time and we are seeing a similar phenomenon currently in Japan.⁶

II. Promoting Japanese Recovery

The analysis above suggests that the key problem in the Japanese economy is a weakened financial system that is unable to operate efficiently, thus producing a stagnant economy. This view indicates that the Japanese economy will only sustain a full recovery when the financial system is able to resume its job of channeling funds to those with productive investment opportunities. Our

⁶For example, see Bernanke and Lown (1991), Berger and Udell (1994), Hancock, Laing and Wilcox (1995) and Peek and Rosengren (1995) and the symposium published in the Federal Reserve Bank of New York Quarterly Review in the spring of 1993, Federal Reserve Bank of New York (1993).

analysis indicates that enabling the financial system to resume channeling funds to those with productive investment opportunities requires that balance sheets of financial and nonfinancial systems be restored so that asymmetric information problems lessen. In addition, confidence in the financial system also needs to be restored, which involves limiting the excessive risk-taking encouraged by the government safety net for the financial sector. This view therefore suggests two basic principles to guide policies to promote Japanese economic recovery which we will examine in turn: 1) balance sheets of financial and non-financial firms need to be restored, and 2) steps need to be taken in order to limit the moral hazard, excessive risk-taking, encouraged by the existence of a government safety net.

Restoration of Balance Sheets: Macroeconomic Policies

We have already discussed why an unanticipated inflation and especially deflation can be particularly harmful to balance sheets and hence to the economy. Clearly, using macroeconomic policies to prevent a decline in aggregate demand which can produce a deflation is essential to restoring the health of the Japanese economy. Stimulating aggregate demand also can help restore balance sheets because it makes it easier for firms to sell their goods, which not only improves their balance sheets, but also makes it more likely that they can pay back their loans, thereby leading to an improvement in bank balance sheets. One way to do this is through expansionary fiscal policy to stimulate the economy. On April 24, 1998, the Japanese government announced a comprehensive package of expansionary fiscal measures to the tune of 16 trillion yen, a little over 3 percent of

GDP. Although expansionary fiscal policy can be effective in stimulating aggregate demand, it does have the undesirable side effect of increasing future government indebtedness. This can be highly problematic in the Japanese case because the aging of the Japanese population means that future pension obligations will be colossal, suggesting severe stresses on Japanese government finances in the future.

An alternative method to restore balance sheets is to pursue an expansionary monetary policy by injecting liquidity (reserves) into the financial system. A common fallacy is that monetary policy is ineffective if interest rates are close to zero as has been recently true in Japan. A deeper understanding of the transmission mechanisms of monetary policy (e.g., see Mishkin, 1996a) and careful study of the Great Depression era in the United States when interest rates were also near zero (Friedman and Schwartz, 1963), indicates that this view is just plain wrong. Expansionary monetary policy to increase liquidity in the economy can be achieved with open market purchases, which do not have to be solely in short-term domestic government securities. Unsterilized purchases of foreign exchange can also do the trick. Even with interest rates at zero, expansionary monetary policy lifts the prices of assets, such as land and equities, which lead to increases in aggregate demand, while it also leads to currency depreciation which also increases aggregate demand because it stimulates net exports. In addition, the resulting increase in asset values directly improves balance sheets of financial and nonfinancial firms. Expansionary monetary policy also helps stimulate the economy by raising the general price level, which, has direct beneficial effects on balance sheets because it leads to a reduction in the real indebtedness of firms. Expansionary monetary policy may thus be the better choice than expansionary fiscal policy for stimulating the

economy and restoring the balance sheets of both financial and nonfinancial firms back to health.

However, there are two problems with pursuing this route. First is that further depreciation of the yen resulting from expansionary monetary policy could be dangerous given the currently fragile situation in East Asia. Yen depreciation would put more pressure on East Asian currencies to depreciate, which for reasons described in Mishkin (1998b) could make the financial crises in these countries more severe. Since the Japanese banking sector has loan exposure in these countries, a further worsening of their financial crises could be very harmful both to Japanese banks and the Japanese economy. Given the current troubles in East Asia, yen depreciation might thus be pouring gasoline onto the fire.

Second, our analysis of the current Japanese situation suggests that expansionary monetary or fiscal policy may not be enough to promote recovery. We have seen an example of this in 1995, when both Japanese monetary and fiscal policy turned expansionary. Despite the initially low levels of interest rates, stock prices rose by fifty percent, the decline of land prices decelerated, the general price level stopped falling and the yen depreciated. The result was an economic recovery with a growth in real GDP of over 3 percent in 1996. However, the underlying problem in balance sheets, particularly those of banks, were not resolved with these macroeconomic policies, and not surprisingly, the recovery fizzled out in 1997. Another factor behind the aborted recovery was the 1997 tax increase which was implemented to restore fiscal balance. Currently, economic projections from organizations such as the OECD (1998) forecast real GDP as declining in 1998, with only moderate growth in 1999.

The Japanese experience in the 1995-97 period suggests that macroeconomic policies by

themselves will not do enough to restore balance sheets. An important theme of the analysis in the previous section is that the underlying problems of the Japanese economy reside in the microeconomics of its financial sector. Thus to rebuild balance sheets and restore the financial sector to health -- a necessary condition for a full-fledged recovery -- Japanese policymakers must focus on microeconomic policies to restructure the financial sector, which we turn to next.

Restoring Balance Sheets: Microeconomic Policies to Restructure the Financial System

We have already seen that weak balance sheets in financial firms such as banks cause them to restrict their lending activities, which leads to worse asymmetric information problems in financial markets, and is thus a severe drag on the economy. A key element in restoring both the financial system and the economy back to health is the recapitalization of the banking sector. Raising new capital under the current economic environment is nearly impossible for most Japanese banks because private capital does not gravitate to institutions in financial distress. Thus the only entity that can be a source of sufficient capital to get the banking system back on its feet is the Japanese government.

For years the Japanese authorities have engaged in wishful thinking, hoping that a large injection of government funds into the banking system would be unnecessary. Banking regulators and supervisors have engaged in regulatory forbearance, in which they have avoided exercising the right to put insolvent banking institutions out of business and have artificially inflated the values of

bank capital for regulatory purposes. A key problem with regulatory forbearance is that it greatly increases the moral hazard problem of the government safety net. When financial institutions are insolvent, but are allowed to keep operating, they have little to lose by taking huge risks and "betting the bank". If they get lucky and the risky investments pay off, they get out of insolvency. On the other hand, if, as is likely, the risky investments don't pay off, the insolvent institutions losses will mount and the taxpayers will be left holding the bag. This is exactly the situation we have been seeing in Japan with estimates of loan losses in the banks continually escalating.

This pattern of not coming to grips with the severity of the banking problem is not just a Japanese phenomenon. The United States had a similar pattern of behavior in facing the savings and loan debacle of the 1980s. The S&L regulators, the Federal Home Loan Bank Board and its deposit insurance subsidiary, the Federal Savings and Loan Insurance Fund (FSLIC), engaged in widespread regulatory forbearance. To sidestep their responsibility to close ailing S&Ls, they adopted irregular regulatory accounting procedures that in effect substantially lowered capital requirements. Toward the end of 1986, the growing losses in the savings and loan industry were bankrupting the insurance fund of the FSLIC. The Reagan administration sought \$15 billion in funds for FSLIC, a completely inadequate sum considering that many times this amount was needed to close down insolvent S&Ls. The legislation passed by Congress, the Competitive Equality in Banking Act of 1987, did not even meet the administration's requests. It allocated only \$10.8 billion to FSLIC and, what was worse, included provisions that directed the Federal Home Loan Bank Board to continue to pursue regulatory forbearance and let insolvent S&Ls keep operating, particularly in economically depressed areas such as Texas. Not surprisingly, given the increased

moral hazard incentives for insolvent, but operating, S&Ls to take on excessive risk, the problem got much worse, with losses in the S&L industry surpassing \$10 billion in 1988 and approaching \$20 billion in 1989.

Finally, the newly elected Bush administration, proposed legislation, the Financial Institutions Reform, Recovery and Enforcement Act (FIRREA) which was passed in August, 1989. Among its most important provisions were the allocation of over \$100 billion in public funds to close down insolvent S&Ls and the establishment of a new government agency, the Resolution Trust Corporation (RTC) to manage and resolve insolvent S&Ls placed in conservatorship or receivership. In addition, the RTC was made responsible for selling more than \$450 billion of real estate owned by failed institutions. After seizing the assets of about 750 insolvent S&Ls, over 25 percent of the industry, the RTC sold over 95 percent of them, with a recovery rate of over 85 percent. After this success, the RTC went out of business on December 31, 1995.

The reason for going through some of the history of the U.S. savings and loan crisis is that it provides instructive lessons for how Japan should resolve the problems in its banking sector, a necessary condition, as we have seen, for achieving a full recovery of the Japanese economy. After initial misstarts, not very different from those in Japan, the U.S. government finally began to deal seriously with the problems in the S&L industry.

Recently, Japanese policymakers and politicians have come to recognize that sizeable public funds are needed to cope with the huge loan losses in the banking system, now estimated to be over 70 trillion yen (\$500 billion), and the government has raised the proposed injection of public funds into the banking system to 30 trillion yen. However, although this is an important step, just as it

was in the United States, the Japanese financial system is far from being out of the woods. Japanese bureaucrats and politicians have had a tendency to inject public funds into insolvent and very weak banking institutions in order to prop them out. This is just another form of regulatory forbearance that, as we have seen, leads to disaster.

It is thus critical at this juncture that Japanese authorities use public funds wisely to deal with the crisis in their banking industry, as occurred in the United States after 1989. Funds must not be supplied to weak or insolvent banking institutions to keep them afloat. To do so will just be throwing away good taxpayer money after bad. In the long-run, injecting public funds into weak banks does not deliver a restoration of the balance sheets of the banking system because these weak banks continue to be weak and have strong moral hazard incentives to take on big risks at the taxpayers' expense. This is the lesson learned from both the U.S. experience in the 1980s. The way to recapitalize the banking system is to close down all insolvent and weak institutions and sell off their assets to healthy institutions with public funds used to make the assets whole. If this is not possible, the RTC-like corporation will have the responsibility to sell off the assets of these closed banks as promptly as possible, so that the assets can be quickly put to productive uses by the private sector.

Although following procedures of this type has not been the typical way that the Japanese have dealt with problems in their financial sector, it is absolutely critical at this juncture. The Japanese political process is finally beginning to recognize that substantial funds are required to deal with the problems of the banking sector. If these funds are squandered in an attempt to prop up weak institutions, public support for allocating future funds to recapitalize the banking sector may

not be forthcoming in the future. This indeed could lead to disaster, because without public funds the possibility of a full-fledged banking panic is by no means out of the question. Such a banking panic would make the current situation in Japan look like child's play.

Limiting Moral Hazard

As has been mentioned above, a government safety net for the financial system creates a severe moral hazard problem because it weakens the incentives for depositors and creditors to monitor financial institutions and prevent them from taking on excessive risk. This moral hazard problem becomes even more severe after public funds have been used to restore the banking system to health because the commitment by the government to protect depositors has become even more clear cut. Thus, just as restoring balance sheets is an important principle of promoting recovery, the second principle that the moral hazard arising from the government safety net must be limited is equally important. But how should this be done?

Again the example of the resolution of banking problems in the United States is instructive. One set of provisions in the FIRREA legislation of 1989 is the strengthening of enforcement powers of S&L regulators, the raising of capital requirements for S&Ls, and an increase in restrictions on risky activities. Another set of provisions was a restructuring of the regulatory apparatus with elimination of the Federal Home Loan Bank Board and the FSLIC who performed so miserably. These measures were intended to raise the accountability of supervisors and to limit moral hazard. However, the legislation did not go nearly far enough to limit the moral hazard problem created by

the existence of the government safety net. The 1989 legislation thus had a provision that the U.S. Treasury would produce a comprehensive study and plan for the reform of the federal deposit insurance system. After this study appeared in 1991, Congress passed the Federal Deposit Insurance Corporation Improvement Act (FDICIA), which engendered major reforms in the bank regulatory system that appear to have been quite successful in reducing the moral hazard problem and helping restore the U.S. banking system back to health.

It is well beyond the scope of this paper to discuss the FDICIA legislation in detail and why it appears to have worked very well. (For further discussion see Mishkin, 1996b.) However, it is worth mentioning some of the key provisions that are particularly relevant to the Japanese situation. Among the most important features of FDICIA is its prompt corrective action provisions, which require the FDIC to intervene earlier and more vigorously when a bank gets into trouble. Banks are now classified into five groups based on bank capital. Group 1, classified as well capitalized, are banks that significantly exceed minimum capital requirements and are allowed privileges such as insurance on brokered deposits and the ability to do some securities underwriting. Banks in group 2, classified as adequately capitalized, meet minimum capital requirements and are not subject to corrective actions but are not allowed the privileges of the well-capitalized banks. Banks in group 3, undercapitalized, fail to meet risk-based capital and leverage ratio requirements. Banks in groups 4 and 5 are significantly undercapitalized and critically undercapitalized, respectively, and are not allowed to pay interest on their deposits at rates that are higher than average. Regulators still retain a fair amount of discretion in their actions to deal with undercapitalized banks and can choose from a smorgasbord of actions, such as: restrictions on asset growth, requiring the election of a new

board of directors, prohibiting acceptance of deposits from correspondent depository institutions, prohibiting capital distributions from any controlling bank holding company, and termination of activities that pose excessive risk or divestiture of non-bank subsidiaries that pose excessive risk.⁷

On the other hand, FDICIA mandates that regulators must require undercapitalized banks to submit an acceptable capital restoration plan within 45 days and implement the plan. In addition, the regulatory agencies must take steps to close down critically undercapitalized banks (tangible equity capital less than 2% of assets) by putting them in receivership or conservatorship within ninety days, unless the appropriate agency and the FDIC concur that other action would better achieve the purpose of prompt corrective action. If the bank continues to be critically undercapitalized it must be placed in receivership, unless specific statutory requirements are met.

An extremely important part of FDICIA that is often overlooked is that FDICIA requires a mandatory review of any bank failure that imposes costs on the FDIC. This report is prepared by the inspector general of the appropriate regulatory agency and must explain the regulatory agencies' actions and make recommendations for preventing such losses in the future. The resulting report must be made available to the Comptroller General of the United States (the head of the General Accounting Office) and to any member of Congress upon request, and the General Accounting Office must do an annual review of these reports and recommend improvements to the supervisory process. These provisions of FDICIA are extremely important because they increase the incentives of regulators to prevent costly bank failures. Opening up the actions of the regulators to public scrutiny will make regulatory forbearance less attractive to them, thereby reducing the principal-

⁷See Spong (1994) for an outline of the prompt corrective action provisions in FDICIA.

agent problem described earlier. It will also reduce the incentives of politicians to lean on regulators to relax their regulatory supervision of banks.

FDICIA also has provided important new legislative guidelines for the resolution of bank failures to minimize costs to the taxpayer and to impose costs on large uninsured creditors. FDICIA generally requires that the FDIC resolve bank failures using methods which produce the least cost to the deposit insurance agency. In its report to the Comptroller General, it must document the assumptions used in evaluating the different alternatives for resolution of the failure and show that it chose the least-cost method. This has resulted in substantial changes in the resolution methods pursued by the FDIC. As pointed out in Kaufman (1995), in 1991 the FDIC imposed losses on uninsured depositors of only 17 percent of failed banks undergoing costly resolutions (which held only 3 percent of total assets in failed banks). By 1993, the percentage of failed banks with costly resolutions in which uninsured depositors suffered losses had climbed to 88 percent (with the percentage of total assets equaling 95 percent). In 1990, uninsured depositors at all large banks that failed were fully protected, while in 1993 all of uninsured depositors at the largest of the banks that failed -- none were particularly large -- were subject to losses.

These changes in resolution methods do alter the incentives for depositors with over \$100,000 in an account to monitor banks because they are now subject to losses. This may in part help explain why U.S. banks have increased their capital in recent years. On the other hand, the FDIC did not have lower losses as a percentage of failed bank assets in 1992 and 1993, possibly because of losses incurred by the banks before the establishment of these new procedures.

There are Japanese plans to adopt many of the provisions of FDICIA such as prompt

corrective action, but there is still a possibility that these plans will be postponed. Because FDICIA tightened up the supervision of banks, it is not surprising that once FDICIA was implemented many bankers complained that supervisors were unfairly tightening standards, making it harder for the banks to earn profits. Implementation of serious prompt-corrective-action provisions in Japan is likely to lead to the same outcome. The result could be intense political pressure to weaken these provisions or to postpone their adoption indefinitely. This pressure must be strongly resisted. Not only are provisions to strengthen bank regulation and supervision like these critical to restoring confidence in the Japanese financial system, but to delay adoption or weaken them is likely to lead to excessive risk-taking in the future that could cause a further continuation of the weakening of the Japanese financial system.

Japan also needs to adopt the features of FDICIA which impose losses on large uninsured creditors when a bank fails. This has often not been the way the Japanese supervisory authorities have operated in the past, but it is critical. Indeed, in Japan not only have large uninsured creditors of failed institutions been protected, but this has also been the case for stockholders and managers of these institutions. Protecting managers, stockholders and large uninsured creditors from the consequences of excessive risk-taking increases the moral hazard problem immensely. It is particularly important that managers and stockholder be punished when public funds are injected into the banking system in the process of restoring bank balance sheets and resolving the current problems in the Japanese banking sector. In addition, least-cost-resolution provisions need to become part of future bank regulation in order to ensure that large uninsured creditors also suffer losses when a bank fails, thereby increasing incentives for these creditors to monitor banks and keep

them from taking on too much risk.

The traditional approach to bank supervision has focused on the quality of the bank's balance sheet at a point in time and whether the bank complies with capital requirements. Although the traditional focus is important for reducing excessive risk-taking by banks, it may no longer be adequate. First is the point that capital may be extremely hard to measure. Furthermore, in today's world, financial innovation has produced new markets and instruments which make it easy for banks and their employees to make huge bets quickly. In this new financial environment, a bank that is quite healthy at a particular point in time can be driven into insolvency extremely rapidly from trading losses, as has been forcefully demonstrated by the failure of Barings in 1995 which, although initially well capitalized, was brought down by a rogue trader in a matter of months. Thus an examination which focuses only on a bank's position at a point in time may not be effective in indicating whether a bank will in fact be taking on excessive risk in the near future.

Bank examiners in the United States are now placing far greater emphasis on evaluating the soundness of bank's management processes with regard to controlling risk. This shift in thinking was reflected in a new focus on risk management in the Federal Reserve System's 1993 guidance to examiners on trading and derivatives activities. The focus was expanded and formalized in the Trading Activities Manual issued early in 1994, which provided bank examiners with tools to evaluate risk management systems. In late 1995, the Federal Reserve and the Comptroller of the Currency announced that they would be assessing risk management processes at the banks they supervise. Now bank examiners give a separate risk management rating from 1 to 5 which feeds into the overall management rating as part of the CAMEL system. Four elements of sound risk

management are assessed to come up with the risk management rating: 1) The quality of oversight provided by the board of directors and senior management, 2) the adequacy of policies and limits for all activities that present significant risks, 3) the quality of the risk measurement and monitoring systems, and 4) the adequacy of internal controls to prevent fraud or unauthorized activities on the part of employees.

This shift toward focusing on management processes is also reflected in recent guidelines adopted by the U.S. bank regulatory authorities to deal with interest-rate risk. As required by FDICIA, U.S. regulators were contemplating requiring banks to use a standard model to calculate the amount of capital a bank would need to allow for the interest-rate risk it bears. Although bank examiners will continue to consider interest-rate risk in deciding on the bank's capital adequacy, the regulatory agencies decided to adopt guidelines for how banks manage interest-rate risk, rather than a one-size-fits-all formula. These guidelines require the bank's board of directors to establish interest-rate risk limits, to appoint officials of the bank to manage this risk and to monitor the bank's risk exposure. The guidelines also require senior management of a bank to develop formal risk management policies and procedures, to ensure that the board of director's risk limits are not violated and to implement internal controls to monitor interest-rate risk and compliance with the board's directives. Clearly, Japanese bank supervision needs to adopt similar measures to those used by other countries to ensure that risk management procedures in Japanese banks are equal to the best practice in banking institutions elsewhere in the world.

Another direction taken by bank regulators to limit moral hazard is to beef up disclosure requirements. More public information about the risks incurred by banks and the quality of their

portfolio can better enable stockholders, creditors and depositors to evaluate and monitor banks, and so act as a deterrent to excessive risk-taking. Indeed, measures to increase disclosure are particularly important in Japan where bank balance sheets are viewed as being far less transparent than in countries such as the United States. Increasing disclosure and the quality of public information is a nontrivial task in Japan because it may require changes in accounting rules and tax treatment of asset sales to make it easier for banks to reveal the true value of their assets. Nonetheless, it is an important step to restore confidence in the financial sector and limit moral hazard in the future.

III. Concluding Remarks

This paper has argued that increased asymmetric information problems in the Japanese financial sector, which are microeconomic problems, are the primary sources of weakness in the Japanese economy. This view suggests that a Japanese recovery will not be on a sound footing until a set of microeconomic policies to reform the financial sector are put in place that deal with these problems. These policies include: injection of public funds to close down insolvent and weak banking institutions; punishment for stockholders, managers and large uninsured creditors at weak and insolvent institutions; prompt corrective action; careful monitoring of risk management

procedures; and adequate disclosure requirements.

The recent focus in Japan, and by the U.S. Treasury, has been on macroeconomic policies, particularly expansionary fiscal policy measures, to promote Japanese recovery. As argued above, monetary policy may be a more effective way to promote economic recovery than fiscal policy although it is not without its problems. Furthermore, a focus on macroeconomic policies to promote recovery may encourage Japanese authorities to think that they do not have to seriously deal with microeconomic reform of their financial sector. By focusing on a fiscal package to promote economic recovery, Japanese policymakers and politicians may avoid making the harder choices to institute the necessary microeconomic reforms to restore bank balance sheets and limit moral hazard encouraged by the government safety net for the financial system. A single-minded focus on fiscal policy as a solution to their problems could thus be counterproductive. The result could be a similar outcome to the expansionary macroeconomic policies put in place in 1995: a recovery that does not last. Indeed a better approach is to implement the needed microeconomic reforms of the financial system while possibly pursuing expansionary macroeconomic policies to jump start the economy.

Again events in the United States provide a precedent. In the early 1990s, the problems in the banking sector in the banking sector produced a substantial drag on the economy (referred to as "headwinds" by Alan Greenspan, Chairman of Board of Governors of the Federal Reserve System.) To counter these headwinds, the Federal Reserve kept interest rates adjusted for inflation at unusually low levels (near zero) for an eighteen month period in the middle of 1992 until February of 1994. The serious restructuring of the bank regulatory/supervisory system which restored confidence in the banking system, along with the expansionary monetary policy which lasted until

the banking system returned to health, helped lead to a sustained economic expansion which continues to this day.⁸

⁸Another extremely important factor behind the long-lived recovery was the preemptive strike that the Federal Reserve took against potential inflationary pressures in the economy starting in February 1994. This also provides an important lesson. The price stability goal must not be forgotten: expansionary policy to promote recovery in the face of difficulties in the financial sector must be terminated once the financial sector returns to health and the economy has the potential to undergo sustained inflation.

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