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The Structure of Japan's Financial Regulation and Supervision and the Role Played by the Bank of Japan*

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In this short note, I will explain the structure of Japan's financial regulation and supervision and discuss by way of examples the structure's weaknesses and strengths. In doing so, I pay particular attention to the role played by the Bank of Japan (BOJ). The paper focuses mostly on the period since the late 1980s when Japan saw the formation of land and stock price bubbles, their burst and serious negative effects on the financial system and the economy. I argue that, despite a streamlined structure of financial regulation, monetary authorities' response was not quite optimal and discuss possible reasons for the sub-optimal behaviors. I also point out that there are significant synergies between monetary policy and prudence policy at central banks, but that such synergies are not fully exploited.

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In this short note, I will explain the structure of Japan's financial regulation and supervision and discuss by way of examples the structure's weaknesses and strengths. In doing so, I pay particular attention to the role played by the Bank of Japan (BOJ).

1, Japan's regulatory and supervisory structure

Japan's regulatory and supervisory structure of the financial industry has been a fairly simple one. Until the mid to late 1990s, inspection and supervision of financial institutions as well as the function of financial system planning had been the responsibility of the Ministry of Finance (MOF). Then, as a result of rising criticism against the MOF regarding its cozy relationship with the financial industry, separation of fiscal policy and financial administration was carried out in the 1990s. The Financial Supervisory Agency (FSA) was established in June 1998 and since then it has been in charge of inspection and supervision. Furthermore, drafting of laws and other rule making function regarding the financial system were also moved from the MOF to the FSA in July 2000. Similarly, the planning and execution of measures directed at crisis prevention and crisis containment have also been moved from the MOF to the FSA, after a temporary period in which an ad-hoc committee, the Financial Reconstruction Committee, was in charge of the matter.

One exception to this structure is that the FSA delegates the surveillance of securities and financial futures markets to the Securities and Exchange Surveillance Commission.

The transfer of the financial regulatory responsibility from the MOF to the FSA has created one substantive change regarding financial crisis resolution. The FSA, unlike the MOF until 1997, cannot by itself make decisions on the use of public money for resolving financial crises.¹ In order to fill the gap, there is now a committee headed by the Prime Minister, the Financial Crisis Management Council, that makes decision on the use of exceptional measures involving fiscal resources during a financial crisis. I will come back to this point in the next section.

2, On-site examination of financial institutions by the Bank of Japan (BOJ)

In addition to the FSA, the BOJ has carried out the inspection (on-site examination) of the financial institutions that have current accounts with the BOJ. The BOJ law stipulates that the BOJ can enter into contracts with financial institutions to

¹ More precisely, even the MOF until 1997 had to obtain the consent of the cabinet and diet to use public money for crisis resolution.

carry out such on-site examinations in order to fulfill its objective of the maintenance of financial system stability.² The BOJ seems to interpret the role of inspection more broadly. The BOJ (2004) states that “the Bank conducts on-site examinations and off-site monitoring of financial institutions that hold current accounts with the Bank, so that it can assess their business operations and financial condition, and where it is necessary from the perspective of maintaining financial system stability, urge them to make improvements. The Bank uses the information it acquires to improve the payment and settlement system, and to better understand the financial intermediary function of financial institutions when conducting monetary policy.”

It is noteworthy that nonbank financial institutions such as securities companies, money market dealers and securities finance companies have accounts with the BOJ and thus are more likely, than in the case of the absence of transactions with the BOJ, to obtain lender of last resort lending from the BOJ.³ The practice of regular on-site examinations and the possibility of LLR lending have given huge power to the BOJ to collect all sorts of information on financial institutions through off-site monitoring.

3, A brief history of crisis resolution policies

After the burst of the stock price and land price bubble in the early 1990s, the Japanese financial system experienced serious stresses for more than a decade. The bad loan related losses of depository institutions amounted to about 110 trillion yen, 20% of GDP. Many banks, securities and insurance companies went under.

Of the 110 trillion yen losses of depository institutions, the government took a loss of 10.4 trillion yen and the banks assumed the rest, which in turn consisted of writing down bad loans out of current profits and financial assistance to debt holders of insolvent banks by the Deposit Insurance Corporation of Japan (DICJ) that collected insurance premiums from banks.

The government injected capital to 57 financial institutions in the amount of 12.4 trillion yen of which about four thirds have been returned at the time of writing. The government also created programs to purchase assets from financial institutions; the

² Article 44 of the BOJ law.

³ In fact, Yamaichi Securities obtained special loans from the BOJ, albeit by way of its mainbanks, twice, in 1965 and in 1997. More precisely, however, having a current account at the BOJ is not a necessary condition for access to LLR lending by the BOJ. According to article 38 of the BOJ law, the government can ask the BOJ to lend or provide other forms of financial assistance to financial institutions if necessary to maintain financial stability. And, this article does not specify which types of financial institutions are eligible for such assistance. The BOJ, however, would still find it more comfortable to lend to entities whose financial health it thinks it knows well.

purchases amounted to approximately 10 trillion yen and most of this has been recovered if capital gains are included.⁴

In the early 1990s the government, effectively the MOF, used a scheme to let healthy financial institutions take over troubled ones by providing financial assistance from the DICJ that was within the payoff cost of troubled financial institutions. As the crisis turned more serious in the mid 1990s, it became difficult to find financial institutions capable of taking over troubled ones. Thus, the government decided to establish bridge banks to which private banks and the BOJ provided capital. In order to contain depositor fears about the health of financial institutions, the government also announced the policy to protect all deposits in 1995. Furthermore, the government decided in 1995 to use taxpayers' money to resolve the crisis emerged among a group of nonbank financial institutions called Jusen, special housing loan corporations. The government also decided to use taxpayers' money to resolve problems with credit unions. At this stage, however, the use of public money was not extended to larger financial institutions. The public was fiercely against "assisting" financial institutions.

In the fall of 1997, the failure of a medium sized securities company, Sanyo Securities, triggered a panic in Japan's financial system and led to the failure of three other financial institutions in the same month. The public opinion quickly turned in favor of using public money for the resolution of the financial crisis. The government decided to use public money for resolving problems of larger financial institutions and injecting capital to them. Despite the initial round of capital injection which was in total 1.8 trillion yen to 21 banks, stresses in the financial system did not dissipate and the Long-term Credit Bank of Japan and Nippon Credit Bank faced serious attack by the market. Thus, the government decided to nationalize these banks temporarily in 1998 and injected a second round of capital, amounting to 7.5 trillion yen, to 15 large banks in early 1999. Stresses continued into the early 2000s, but finally with significant bad loan write downs and the turn around in the economy, the financial system emerged out of the crisis in the mid 2000s.

In response to the normalization of the financial system, the government discontinued the program to protect all deposits. Since 2005, protection by deposit insurance has been confined to transactions balances and other deposits up to ten million yen. Separately, in order to cope with systemic risks the government has

⁴ The data are available on the HP of the FSA and the DICJ. In addition, the BOJ bought equities and asset backed securities from financial institutions. The amount of equities purchased was about 2 trillion yen of which a sizeable amount is still held by the BOJ. And, the BOJ restarted the scheme to buy equities in response to the current financial crisis.

established the Financial Crisis Management Council that consists of the Prime Minister, the Minister of Finance, Commissioner of the FSA, the Chief Cabinet Secretary and the BOJ Governor. The Prime Minister, after discussions at the council, determines if exceptional measures such as capital injection to, full protection of all liabilities of, and temporary nationalization of financial institutions are necessary to contain possible systemic risks. As a result, the BOJ's involvement in crisis management is now in principle confined to lending to solvent but illiquid financial institutions, lending to financial institutions receiving public support based on the decision of the Prime Minister and lending to DIC with government guarantee.⁵

4, The performance of Japan's financial regulatory system

What can we say about the performance of Japan's regulatory structure as summarized in sections one and two in light of the history of Japan's financial system and regulatory response during the last two decades?

(1) The stock and land price bubble

To begin with, it may be appropriate to discuss why regulators were not able to check the formation of stock and land price bubble, especially, the land price bubble. After all, the MOF possessed huge power to influence the behavior of Japanese financial institutions. They were supervising and monitoring effectively all financial institutions.

There is a view that blames (the uneven pace of) financial deregulation that had been taking place in Japan since the late 1970s. Large sales of government debt and other forces led to significant liberalization of the bond market, while liberalization of retail deposit rates and the availability of other financial instruments lagged behind. Large companies left banks and went to the bond market for raising funds, but deposits continued to flow into banks. Also, there was still rigorous separation of banking and securities businesses. Banks competed fiercely for loans. An easy way out was land and equity related loans.⁶

While the above factor seems to go some way toward explaining the formation of the bubble, it still leaves unanswered the failure of the regulatory authorities to check the growth of real estate and equity related lending at an early stage.

⁵ Some of the measures adopted by the BOJ during the current financial crisis, however, seem to go beyond such a division of labor concerning financial crisis resolution between the government and the BOJ. Such measures include purchases of equities from banks and extending subordinated loans to banks.

⁶ See, for example, Ueda (1994).

Hoshi and Okazaki (2002) point out that while the MOF was aware of the growth of these loans, it was more worried about the rising real estate prices and its consequences for income distribution than the possibility of financial instability arising from the possible burst of the bubble. The MOF did ask financial institutions to slow down real estate lending in 1985. Since 1986, the MOF had ordered financial institutions to report regularly on real estate related loans. In 1987 at the request of the MOF, financial institutions agreed to voluntarily contain the growth of such loans.⁷ But lending and the rise in property prices continued. It appears that the MOF did not use strong enough policy measures.

Aggravating the situation was a Japanese version of the “shadow banking system.” Banks lent huge amounts to nonbank financial institutions which in turn lent to residential and commercial real estate related projects. Included among them were so called Jusen, special housing loan companies, that started as entities specializing in residential mortgage loans but later expanded business in commercial mortgage loans. As the MOF’s guidance to contain the rise in real estate related lending became tougher, financial institutions increasingly lent through the shadow banking system. As of the mid 1990s, banks and insurance companies lent 13 trillion yen to 7 Jusens, of which 6 trillion yen became non-recoverable. Lending by banks and insurance companies to other nonbanks was even larger at around 50 trillion yen. A significant portion of this was also channeled into real estate related loans.⁸ The MOF was surely aware of the situation, but again did not try to crack down on the problem.

Bank inspection did not find major problems with bank behavior. After its fiscal year 1988 inspection which the MOF said placed importance on risk management by financial institutions, the MOF concluded that “on the whole, credit risk is prudently and properly managed.”⁹ However, financial institutions had huge exposure to the property market. In addition to direct lending by banks to real estate and construction companies there were indirect exposures through nonbanks as we just argued. Furthermore, significant portions of loans in general were backed by land as collateral. Neither the regulator nor financial institutions seem to have taken the trouble to calculate the vulnerability of financial institutions to changes in land prices. Kumakura (2008) points out that the director of the BOJ’s inspection department warned in 1986 that financial institutions’ lending was too much concentrated in a small number of industries. There is, however, no sign that such a concern led to a significant action by

⁷ Hoshi and Okazaki (2002), pp.351-53.

⁸ Kinyu-Business, May 1995, pp.11-13.

⁹ Annual Report of the Banking Bureau, MOF (1989), p. 324.

the BOJ.

Japan's experience during this period is an example of the difficulty to take proper care of tail risks. After all, land prices in Japan had never declined in the post war period with the exception of 1974. Any statistical analysis that relied on past data would have placed a negligible probability to the possibility of significant land price declines. It was not easy for inspectors to warn of such risks of declines in land prices. In the end, however, the manifestation of a "tail risk" had hit the Japanese financial system hard.

The MOF did employ a very strong weapon in March 1990 when it ordered banks to limit the growth of loans to the real estate industry to the growth of total loans. This appears to have exerted strong negative effects on property prices, but probably came too late and may have made the downturn in land prices overly severe.

What was the BOJ doing on the monetary policy side during all this? As is almost always the case with large bubbles, this bubble turned on easy monetary policy. Responding to the deflationary effects on the economy of yen appreciation in the mid to late 1980s, the BOJ lowered the discount rate five times from 5.0% to 2.5% between January 1986 and February 1987. In its economic outlook report in the summer of 1987, the BOJ noted that "we have to be very cautious about the risk that the rise in asset prices (which is supported by easy monetary conditions) will jeopardize income equality and the health and stability of the economy in the long run."¹⁰ The BOJ, however, started the process of rate hike only two years later, in May 1989 and moved the discount rate up to 6.0% by August 1991. As with the MOF's policy of restricting credit to the real estate sector, the BOJ's rate hikes seem to have come a bit too late and the size of the rate increases may have been too large.¹¹

To summarize, both the MOF and the BOJ recognized the relationship between easy monetary conditions and rising asset prices. They seem to have been, however, fairly optimistic about the long-term upward trend of asset prices. In other words, they were a captive of "this time is different" psychology.¹² Even when they worried about this as in the BOJ's case in 1987, they did not take decisive actions at early stages. Also, it appears that either the departments within the MOF and the BOJ in charge of bank inspection were not equipped with ways to worry about systemic risks or even when they got concerned, their views were not effectively used in macroeconomic policy

¹⁰ Jousei-Handan-Shiryō, summer 1987, p 25. Translation by the author.

¹¹ The usual suspects for the reason for the delay in rate hikes are: the Black Monday stock market crash, political pressure on the BOJ against rate hikes in the environment of international policy coordination and the absence of the tendency for significant increases in the general price level. See, for example, Ueda (2000).

¹² Reinhart and Rogoff (2008).

making.

(2) The mid 1990s: struggling to recognize the severity of the situation

In retrospect the mid 1990s can be seen as a period when the authorities could have acted more decisively and promptly to resolve the emerging financial crisis but failed to do so and allowed the vicious cycle between a dysfunctional financial system and a stagnating economy to play itself out.

Beginning with the BOJ, one is struck with the slow speed with which the BOJ recognized the effects of the deterioration in the financial system on the economy. Nikkei 225 declined by more than 50% by October 1990. The index of urban land prices started to fall clearly only in 1992, but the BOJ must have known the state of the property market at a much earlier stage. Looking at the BOJ's economic reports, however, one does not find reference to the negative effects of the balance sheet deterioration of financial institutions on the economy until 1993QIV.

Anecdotal evidence exists that the prudence wing of the BOJ was more worried about the state of the financial system and a possible vicious cycle between the financial system and the economy. This, however, did not seem to have affected the monetary policy wing before it became a bit too late.¹³

On the MOF's side, the key issue was the delay in the decision to use public money to resolve the financial crisis. As explained in the last section, the absence of the decision to use taxpayers' money until the mid 1990s led to the reliance on "taxes" on financial institutions and the BOJ for constructing schemes to address bad loan problems and naturally limited the scope of such operations.

A significant turning point came when the deterioration of the balance sheets of Jusen became all too apparent in 1995. The banking bureau of the MOF was still working on the assumption that no tax payers' money could be used to address the situation. Powerful lobbying activities by agricultural banks who would have been hit hard without the use of public money forced the budget bureau to make a decision to use 685 billion yen in taxpayers' money to resolve the situation. The non-transparency of the process of decision making was criticized harshly by the public and made it even more difficult to use taxpayers' money further for the resolution of the crisis.

The amount decided was too small to address the problems of the entire financial

¹³ The BOJ did lower rates very aggressively between 1991 and 1995. Thus, it is not easy to prove that the pace of the interest rate cut was not fast enough or the monetary policy wing was not worried about the financial system. But at least, the official view of the Bank responded slowly to the evolving situation.

system. More importantly, the decision was not quite made with a view to resolving the crisis but rather to cater to the interest of specific segment of the financial industry. This seems to have reflected the superiority of the fiscal policy wing of the MOF over the financial regulatory wing at the time and provided an example of the risk of having a financial regulator within a fiscal authority.

(3) Dealing with further deterioration of the financial system:1997-1998

Stresses in the financial system became even more serious in the late 1990s and led to the closure of many financial institutions. A clear trigger of all this was the failure of Sanyo Securities in November 1997.

Karube and Nishino (1999) provide a detailed account of the process in which attempts to bail out Sanyo all failed. Let us here focus on the decision by the BOJ not to extend an LLR loan when Sanyo failed.¹⁴

Sanyo declared bankruptcy on November 3. The BOJ had known in advance that this would create a default in the interbank market. Of course, such information was made available through on-site and off-site examinations and through a wide range of market intelligence as the central bank. According to Karube and Nishino (1999), the BOJ's Financial and Payment System Department was worried about systemic risk implications of Sanyo's default. The Credit and Market Management Department, however, thought differently. Sanyo was a small player in the interbank market and the amount of default would accordingly be small. Any spillover effect of the default that might arise could be counteracted by the BOJ's fund provision. After all, Japan was undergoing the Big Bang of the financial system and the market needed to take care of itself. The BOJ made no serious move to extend an LLR loan to protect creditors to Sanyo. In a discussion on the legal aspects of the scheme to close Sanyo in the Tokyo district court, when the chief judge asked if it was not appropriate to use LLR, the BOJ clearly said it was not.

Sanyo's default was in fact small, 1 billion yen in the call market and 8.3 billion yen in the JGB repo market. For a few days the market remained calm. In the second week of November, however, market rates started to move up (Fig. 1) and financial institutions that were perceived to have some serious problems no longer were able to borrow in the market. On November 14 Hokkaido Takushoku Bank, a city bank, was

¹⁴ Under the current BOJ law, which went into effect in 1998, LLR lending by the BOJ is first requested by the Minister of Finance and then approved by the BOJ (article 38). Under the previous law, the BOJ was able to make decisions on LLR but with the consent of the Minister of Finance (article 25).

not able to meet the reserve requirement. The decision was made to transfer key businesses of Hokkaido Takushoku to Hokuyo Bank on November 16. The BOJ decided to provide an LLR loan to Hokkaido Takushoku until the transfer was complete.

Sanyo's default in the repo market spilled over to Yamaichi securities, who now found it difficult to raise funds in the repo market. It went down on November 24. On November 26 Tokuyo City, a regional bank, also went under. In both cases the BOJ provided LLR loans. The discussion within the BOJ on whether or not to provide an LLR loan to Yamaichi as described by Karube and Nishino is very interesting. Key members of the BOJ were still skeptical of the view that a bankruptcy of a securities company could be a systemic event. They also worried about the possible effect of such a loan on the balance sheet of the BOJ if it defaulted. In the end, the then governor, Yasuo Matsushita decided to provide a loan.

It now seems clear that the default of Sanyo Securities was a systemic event. Despite its close dealings with securities companies and market intelligence the BOJ was not able to correctly foresee what was to come. Again, it seems that it is not enough to be close to the market. One needs to be able think about all sorts of inter-connectedness within the financial system.

Having said this, I would add that it was a good thing that the BOJ had the power to provide LLR loans to securities companies. Had liabilities of Yamaichi securities not been protected, its bankruptcy would have created a serious stress in the international financial system as I argue below. I may also add that even if the BOJ had rescued the creditors to Sanyo, things may not have been very different. Many of the financial institutions that went down would have gone down anyway. But the process could have been at least slightly more orderly.

(4) Merits of having an inspection department and being close to the market

There have certainly been many merits for the participation in the resolution scheme of failing financial institutions of the central bank who has good intelligence on the market, that is, there is a positive externality for a central bank to combine monetary policy making and financial stability responsibilities.

Despite the initial hesitation to extend an LLR loan to Yamaichi, once the decision was made it was executed well. The emergency liquidity assistance by the BOJ was carried out via Fuji Bank. This was because Fuji was a main bank for Yamaichi and held accounts for the entire Yamaichi group, not just Yamaichi itself. Such a decision was made possible by the BOJ's close knowledge of the structure of transactions in the market. More importantly, the BOJ explained carefully to the global financial

community, especially, overseas authorities, the consequences of the liquidity assistance for global creditors to Yamaichi; the intention of the assistance would be an orderly unwinding of the existing positions and that the Japanese authorities would bear any losses incurred from Yamaichi's failure.

Long-Term Credit Bank of Japan (LTCB), which was temporarily nationalized in October 1998, was more active in the global financial market. It had huge presence in the interbank and derivatives markets. Market participants feared that the nationalization of LTCB might constitute an event of default in the contracts of transactions in these markets. If so, serious turmoil could have developed in the markets. The BOJ worked closely with ISDA and explained to the market that loans from DICJ would cover all possible losses in the markets. As a result, disruptions in the market were avoided. The BOJ assumed a similar role in the case of the failure of Nippon Credit Bank in December 1998.

To summarize, after Yamaichi's failure, the BOJ understood well the systemic risk implications of the failure of these large financial institutions and the BOJ's moves during the resolution of the failures seemed to have kept international repercussions at a minimum.

(5) Relationship with monetary policy

There remains a key question concerning the BOJ's involvement in financial stability issues; has it been useful for monetary policy decisions?

The information the BOJ's involvement in financial stability issues generates has been an important factor in the monetary policy decisions of the BOJ. The results of on-site examinations of financial institutions are regularly reported to the policy board. Results of all sorts of interviews the staff carries out with financial institutions and non-financial firms are brought to the attention of the board. When banks experience serious liquidity problems as in the period of 1997-2003, board members are informed of the amount of daily deposit outflows from the banks.¹⁵ Since the early 2000s, the prudence wing of the BOJ has reported monthly to the board on the state of the financial system, covering such topics as capital adequacy ratios of financial institutions, their funding liquidity risk and the exposure to interest rate and stock price risks. Since 2006, the Financial Stability Report has been published twice a year right before the board publishes its bi-annual economic outlook.

¹⁵ Even under normal times, the BOJ obtains daily data on the liquidity funding positions of all financial institutions that have accounts with the BOJ. See the BOJ (2009)

Some examples are discussed below. The BOJ lowered the policy rate by 25 basis points on September 9, 1998. The minutes of the board meeting on the day show that board members were significantly influenced by the state of the financial system. Thus, a member noted that “financial institutions were adopting stricter screening criteria for firms’ borrowing of operating funds and firms had become nervous about extending trade credits.” Another expressed the view that “the availability of funds to small firms was limited due to the cautious lending attitude of financial institutions.” Turning to monetary policy, one member argued for a reduction in the policy rate by saying that “a credit crunch was observed in some parts of the economy,” and suggested that “the Bank’s injection of ample funds into the markets would relax the cautious attitude of financial institutions.” Hopefully, such remarks reveal that members had access to information on markets and financial institutions beyond what can be inferred from movements in interest rates and other asset prices. It is hard to judge, however, whether such information on the state of the financial system affected members’ economic outlook and hence affected monetary policy, or it had direct effects on monetary policy.

With the decision to lower the policy rate to 0.25% the BOJ started to seriously feel the constraints created by the zero lower bound on nominal interest rates. As a result, the BOJ increasingly moved into the area of what people now call credit easing. Needless to say, carrying out credit easing policy properly requires substantial knowledge of the state of the financial system. It also becomes rather hard to distinguish monetary policy from policies to maintain financial stability. One example where the knowledge of the market has affected the BOJ’s operations is the BOJ’s heavy reliance on fund provision in the term markets. This was certainly necessary during the quantitative easing period, but already in late 1998 the BOJ supplied huge amounts of term funds in an attempt to reduce term premiums generated by stresses in the financial system.¹⁶ Similarly, in response to the re-emergence of term premiums in the second half of 2007 the BOJ was one of the first central banks that increased term fund supplying operations on a large scale.¹⁷

On the other hand, despite inputs from the staff close to the financial system, the BOJ’s economic outlook did not seem to have reflected the severity of the global financial turmoil as early as one would like. Thus, the BOJ’s economic outlook report, although it flagged the risk of serious deterioration of the global financial system and its

¹⁶ See, for example, Ueda (1998). The BOJ supplied funds in the term markets using instruments such as CP, bills and JGB repos and withdrew funds at shorter horizons using, for example, BOJ bills.

¹⁷ See the BOJ (2008).

effect on the global economy, did not turn very bearish until October 2008. The Financial Stability Report was not able to forecast what was to come even as of the spring of 2007. I may add, however, that it was pointing out the risk of increases in real estate non-recourse loans as early as in 2005, which needs to be commended in the light of what happened subsequently.

5, International issues

Have international considerations made the job of the MOF/FSA/BOJ more difficult? They certainly have on a number of fronts.

There is first the level playing field issue between domestic and foreign financial institutions. Since the late 1980s, the regulators have taken pains to persuade Japanese banks to increase their capital adequacy ratios on the one hand, and, on the other, tried hard to prevent the international minimum capital requirements from becoming excessively high for Japanese banks. Consideration of the pro-cyclicality problem of the capital regulation might have meant lowering of the minimum requirements for Japan during its financial crisis. Such a possibility, however, does not seem to have been pursued in earnest. The challenge facing the authorities has become worse with the current crisis, but this is probably not the best occasion to go into the issue in more detail.

Equal treatment of domestic and foreign financial institutions within the domestic market is also not straightforward. During Japan's financial crisis foreign securities companies in Japan were asked to join the securities company version of DIC, the Japan Investor Protection Fund, but refused to do so and established a separate fund. It was not until 2002 that the two funds merged.

Systemic risks now easily transcend national boundaries. As explained in the last section, the BOJ tried hard to explain to and sometimes work together with international authorities to contain the international repercussions of the failure of Japanese financial institutions in the late 1990s.

During the last two years, Japan's financial system experienced serious instability as a result of the global financial turmoil. This was so despite minimal participation of Japanese financial institutions in the global credit market binge. Financial stresses traveled through the money market, the corporate bond/CDS markets, the equity market, and even the JGB market and the property market. The spillovers mainly came through participation of foreign financial institutions in these markets. The BOJ and the government have used a number of measures to contain such stresses. I don't try to go through them here, but point out that given that spillovers took place in the markets and

that prompt policy moves were necessary, the involvement of the BOJ was crucial for their containment.

During Japan's financial crisis Japanese financial institutions experienced serious difficulties in borrowing in the U.S. dollar. The LLR function in this case was partially fulfilled by the MOF who lent its international reserves to financial institutions. The BOJ also played a role by lending yen in the term market which financial institutions swapped into dollars. The terms of the swap were extremely unfavorable for many Japanese financial institutions, obliging them to substantially curtail international operations.

In the current crisis financial institutions around the world experienced similar difficulties. The currency swap market became dysfunctional. The Fed was obliged to step in as an international lender of last resort.

Such a framework is useful, but it is unclear how formal it should be. The roles assumed by authorities will not be symmetric because the market or governments would be in need of a global vehicle currency or at least some international currency, not any currency. Which currency will be in demand should depend on the situation and whether authorities want to step in also should depend on the nature of the problem. What is necessary seems to be the willingness among global authorities to exchange information and step in when necessary.

6, Concluding remarks

Japan's experience during the last two decades suggests the following lessons concerning the relationship between the structure of financial regulation/supervision and the performance of policies.

- (1) Being an integrated regulator does not mean that it is a good systemic stability regulator. There are always loopholes and the regulator must be able to think in systemic stability terms. It is difficult to discern the long-term trend of asset prices. It is also not easy to identify ex ante triggers of systemic risks.
- (2) Being alert to systemic stability issues does not guarantee good performance. There is huge gap between recognition of risks and policy action to improve the situation.
- (3) Having a systemic stability regulator within a fiscal authority runs the risk of financial stability policy objectives subordinated to fiscal policy objectives or a wider political interest.
- (4) The information the central bank collects from its interaction with market participants as an implementer of monetary policy is useful for spotting emerging

(5) Having strong financial stability responsibilities allow the central bank to collect huge amounts of information on financial institutions and the market. Such information can be used for the maintenance of financial stability, for forming economic outlook or more directly for monetary policy. But central banks have not yet established a formal approach to using such information optimally on any of these three fronts.

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Figure 1 Money Market Rates in Tokyo in the Fall of 1997

