The Behavior of Japanese banks in the 1990s and Government Intervention for the Financial crisis*

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I. Introduction

This paper analyzes lending behavior of Japanese banks from the 1990s to the early 2000s and government intervention for the financial crisis to explain why the distress in the banking industry became serious and prolonged. Although many countries faced nonperforming loans problems from the 1980s to the first half of the 1990s, no country experienced such prolonged problems as Japan did (Horiuchi; 1998, p.31 in Japanese).[1)] This paper relates this to incentive for banks to maintain the short-termistic reputation. Someone should have good reputation when the outside people believe that he is better than anyone else under the imperfect information. Banks, which faced the increasing danger of bank runs and short-termistic behavior of the investors due to imperfect information, were more concerned about their current reputations but not about their cost in the future. They should have been more concerned about from the long-run perspectives. In order to maintain the current reputation, the Japanese banks concealed nonperforming loans problems and took lending behavior such as providing additional credit to inefficient borrowers (called *Oigashi* in Japanese). Section 2 provides empirical evidence of the banks providing additional credit to real estate firms, which eventually led the failure or serious distress of the banks.

Section 3 and 4 provide historical reviews on the intervention by the Japanese financial authorities for the banking crisis. In Section 3, the author argues that the Ministry of Finance (MOF) took a failure resolution policy to maintain the current reputation from the viewpoint of short-term concerns as such a policy led the loss of the reputation of the overall banking industry. Section 4 describes the Financial Services Agency (FSA), replacing the MOF, extremely neglected the importance of maintaining the reputation to change the resolution policy drastically, which destabilized the financial system and made the banking distress being aggravated and prolonged. Section 5 concludes the paper, suggesting the two alternative views to explain the underlying cause of destabilizing of the financial system and discuss its policy implication to stabilize the system.

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1 However, some authors argue that the degree of crisis of Japan in the late 1990s was only medium level among other countries.

II. Reputation hypothesis on the additional loan to real estate borrowers

II.1. Background and theoretical hypothesis

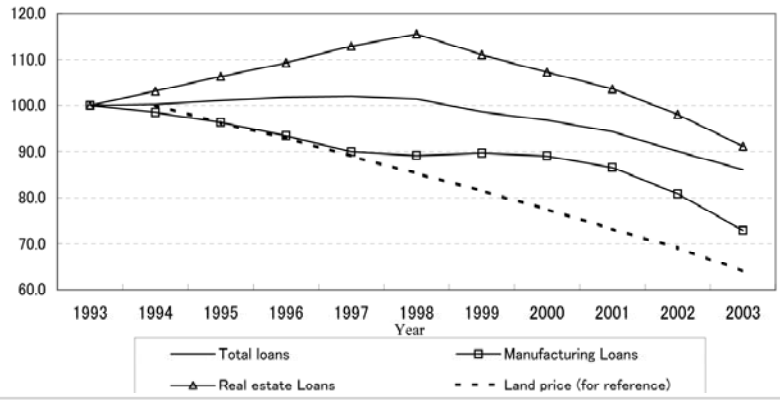
Lending policy of Japanese banks

Japanese banks did not reduced the tremendous amount of loans until 1998 in spite of the increase of nonperforming loans. As Figure 1 shows, the total amount of the loan in 1998 for ¥472 trillion was 101.4 (indexed for the base year 1993), which was slightly higher than the amount of the base year. Table 1 reports the transition of the nonperforming loans from 1993. Since the definition of nonperforming loans was changed in 1995 and 1998, it is unable to simply compare these figures. However, it is obvious that the amount or ratio of the nonperforming loans was not in the declining trend. It is a distinguished feature of these periods that the high nonperforming loans and the nondecreasing loan coexisted.[2)]

One of the reasons for nondecreasing loans is attributed to the increase in real estate loans. As Figure 1 shows, loans to manufacturing firms decreased by 10% point (¥8.1 trillion) until 1998, while real estate loans increased by 15% (¥8.3 trillion). The ratio of manufacturing loans to the total loans declined from 15.8% in 1993 to 13.9% in 1998.This is a decrease of 1.9% point. On the other hand, the ratio of real estate loans rose by 1.6% point from 11.3% to 12.9%, The total amount of loans did not decrease due to such lending policy on real estate loans.[3)]

Needless to say, real estate industry was not the only blooming industry during this period. Figure 2 illustrates the transition of ROA. The average of ROA from 1993 to 1998 was 1.85% for all industries, 2.85% for manufacturing, −0.25% for real estate. Thus, it is possible to confirm that Japanese banks maintained the amount of aggregate loans by extending the real estate loans which ROA is relatively low.[4)]

Figure 1: Lending policy of Japanese banks (1993-2003)



(Source) Bank of Japan; Loans to each industries, domestic banking accounts
(Note) Base year is 1993. Land price is deflated by GDP deflator.

[2] Note that the nominal GDP increased by 6.6% from 1993 to 1998, and M2 + CD by 16.1%.
[3] It is well known that declining trend of manufacturing loans and increasing trend of real estate loans started in 1980s. The share of manufacturing loans was 32% and 16.7% in 1980 and 1989 respectively. The share of real estate loans was 5.6% and 11.5%. Note that the real estate industry might not be only the industry to which banks expand inefficient additional credit. Some authors doubt that for the constructing industry and finance industry.
[4] It was pointed out by Hoshi (2000) in Japanese.

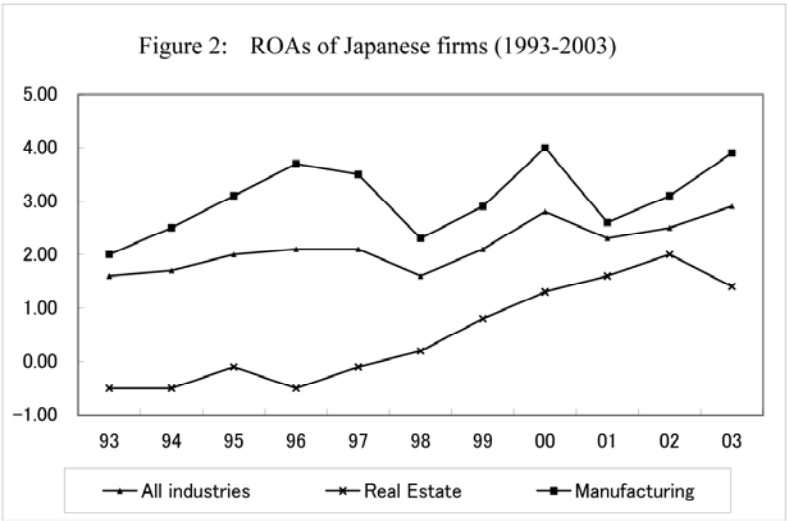
Table 1: Nonperforming loans

	Major banks			All banks		
	Nonperforming loans (¥billion)	Loans (¥billion)	ratio(%)	Nonperforming loans (¥billion)	Loans (¥billion)	ratio(%)
1993	12,775	362,979	3.52			
1994	13,576	357,284	3.80			
1995	12,546	353,563	3.55			
1996	21,868	391,853	5.58	28,504	581,530	4.90
1997	16,441	395,314	4.16	21,789	585,606	3.72
1998	21,978	365,866	6.01	29,758	553,125	5.38
1999	20,250	320,185	6.32	29,627	506,602	5.85
2000	19,772	316,546	6.25	30,366	496,173	6.12
2001	19,281	313,588	6.15	32,515	494,189	6.58
2002	27,626	293,223	9.42	42,028	473,242	8.88
2003	20,433	263,874	7.74	34,849	446,993	7.80

(Source) MOF, FSA

(note) The figure is at the end of fiscal year. Nonperforming loans as of 93, 94, and 95 are the sum of loans to bankrupt firms and past due loans in arrears. Those of 96 and 97 were defined by the old standard (above two plus loans with reduced interest). After 1998, they were risk management loans by new standard, which additionally included loans in arrears of three months and restructured loans. Taiheyo was excluded for 1996, Hanwa was excluded for 1997. Hokkaido Takushoku, Tokuyo City, Kyoto Kyoei, Naniwa, Fukutoku, and Midori were excluded for 1998. Long-Term Credit Bank of Japan, Nippon Credit Bank, Midori, Kokumin, Kofuku, and Tokyo Sowa for 1999. Nippon Credit Bank, Kokumin, Kofuku, Tokyo Sowa, Namihaya, and Niigata Chuo for 2000. Tokyo Sowa and Niigata Chuo for 2001.

Figure 2: ROAs of Japanese firms (1993-2003)



(Source) Ministry of Finance, Financial Statements Statistics of Corporations.

Disclosure and credibility of nonperforming loans

Banks and the regulatory authority were quite reluctant to disclose the amount of nonperforming loans. Although, to the best of knowledge of the author, no literature is available in terms of the relationship of this phenomenon and the bank lending policy or prolonged nonperforming problems, there is a very important relationship between the two. In September 1992, the MOF announced that nonperforming loans of twenty-one City banks amounted to ¥7.99 trillion for the first time. However, the amounts of Regional banks and *Shinkin* banks, and the amounts of loans with waived interest payment and loans to clients for financial assistance were not disclosed. Although Regional banks began to disclose the amount of loans to the borrowers at the time of legal bankruptcy in 1993, it was in 1996 that they began to disclose the amount of past due loans in arrears for six months. They began to disclose the amount of past due loans in arrears for more than three months at last in September 1998. We should also note that the definition of nonperforming loans changed for a few times. The different notions of nonperforming loans existed simultaneously. (See Horiuchi; 1998, pp. 8–14, Ueda; 2001, pp. 80–71). Furthermore, some nonperforming loans were excluded from the auditing objective of the financial statement.

It is reported that the amount of nonperforming loans of failed banks were found to be significantly different from those disclosed before the failure. According to Horiuchi (1998, p11), although the publicly disclosed nonperforming loans of *Taiheiyo* Bank which failed in 1996 was about 20 billion yen just before the failure, it turned out that it was ten times as large as the amount previously disclosed right after the failure. As for Hokkaido Takushoku Bank, which failed in 1997, the figure of the former was 1.15 trillion yen while that of the latter proved to be 2.29 trillion yen according to the MOF inspection. These facts revealed that the figures Japanese banks had disclosed were not credible, and both banks and the MOF were severely criticized for their reluctancy in disclosing the problems. However, the next subsection describes that such attitudes is rational for some extent, as it explains the amount of aggregate loans maintained by Japanese banks up to 1998.

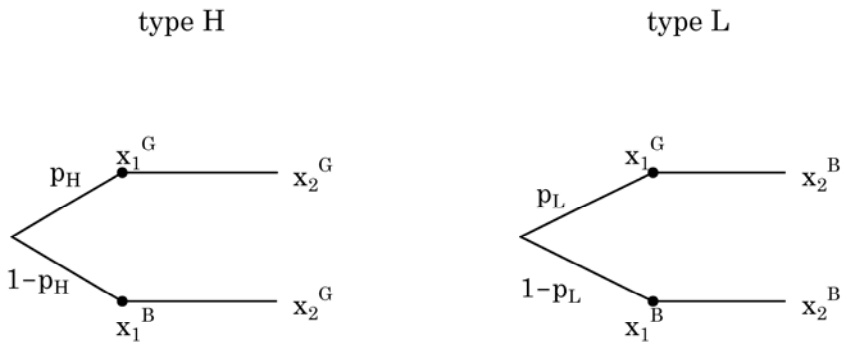
Current information and reputation

Informational asymmetry is the obstacle in stabilizing of the financial system. In the destabilized financial system, investors or depositors have particular concerns about the possibility of the future reimbursement of their funds. However, it is hard for them to obtain correct information on the bank performance, while they could only observe the current information disclosed by the banks. As long as the disclosed information is considered to be useful to prospect the future performance, investors are sensitive to the nature of current information. The bank sending good signals for their performance should be well reputatied, while the bank sending bad signals will lose their reputation.[5)]

Figure 3 depicts the returns of two types of banks. There are α fraction of H type and $1-\alpha$ fraction of L type. Each bank operates for two periods and produces return at $t=1$ and $t=2$. The return from extending loans of type H at $t=1$ is x_1^G with probability p_H and x_1^B with probability $1-p_H$. Similarly, that of type L at $t=1$ is x_1^G with probability p_L and x_1^B with probability $1-p_L$. The return of type H at $t=2$ is x_2^G with certainty and that of type 2 is x_2^B. It is assumed that $p_H > p_L, x_1^G > x_1^B, x_2^G > x_2^B$. In other words, the expected return of type H is higher than that of type L.

[5] Note that this paper considers that true reputation differs from manipulated reputation by disclosing manipulated information. See Klein and Leffler (1981) and Kreps and Wilson (1982).

Figure 3: Conjecture of future return using current information



Investors are not able to distinguish type *H* from *L* at $t = 1$, while they can observe the return. Conditional on the observations of the return at $t = 1$, investors are able to infer the return at $t = 2$ (or the type of bank) more accurately at $t = 1$ than they did at $t = 0$. That is, investors' prior belief is $Pr(x_2^G) = \alpha$ at $t = 0$. Posterior belief of investors observing x_1^G is represented as the conditional probability $\Pr(x_2^G \mid x_1^G)$. Similarly, the posterior belief conditional on x_1^B is $\Pr(x_2^G \mid x_1^B)$. These posterior beliefs are the reputation of the bank at $t = 1$. From the Bayes' rule, these posterior beliefs are calculated as

$$\Pr\left(x_2^G \mid x_1^G\right) = \frac{\Pr\left(x_1^G, x_2^G\right)}{\Pr\left(x_1^G\right)} = \frac{\alpha p_H}{\alpha p_H + (1-\alpha) p_L} \tag{1}$$

$$\Pr\left(x_2^G \mid x_1^B\right) = \frac{\Pr\left(x_1^B, x_2^G\right)}{\Pr\left(x_1^B\right)} = \frac{\alpha (1-p_H)}{\alpha (1-p_H) + (1-\alpha)(1-p_L)} \tag{2}$$

We have

$$\Pr(x_2^G \mid x_1^G) > \alpha > \Pr(x_2^G \mid x_1^B) \tag{3}$$

It means that investors infer that the banks with high returns at $t = 1$ are *H* type with higher probability and the others are *L* type with higher probability. The banks whose returns are x_1^G would obtain good reputation while the banks with x_1^B lose reputation.

Short-termism

The deterioration of reputation entails the banks to bear significant costs. The future funding cost will be higher, deposits will drain out, or the possibility of bank run may become higher. It is when the bank has short-term concerns that they place a significant importance on the reputation (or the cost of losing reputation).[6] Banks might have short-term concerns for the following three reasons. First, smart investors are more concerned about short-tem

[6] It is important to distinguish management short-termism from that of investors. Jensen (1986) suggests the possibility of the former, but skeptical about the latter. Rajan (1994) considers that manager behaves myopically because he is much concerned about his reputation in the labor market. This paper stresses that manager have short term concerns because investors have such concerns.

performance with lack of information on the ability (Shleifer and Vishny; 1990). When the performance becomes worse, it would be a large cost for them waiting for the disappearance of the mispricing. Since the investors respond to disclosed information sensitively for this reason, bank managers have incentives to defend their reputation by pretending that the current return is high. Stein (1989) also analyzes managerial behavior of boosting current earnings. These arguments are considered to be important because managers of Japanese firms seem to have become eager to maintain the stock price, as well as the fact that the MOF also executed the price keeping operation of the stock price.

Second, depositors may withdraw their funds, independent of bank fundamentals (Diamond and Dybvig; 1983). Disclosure of bad performances could cause runs at other banks, or negative prediction by the government could trigger the withdrawals of money. Demandability of bank deposits forced the banks to intensify the incentive to take short-termistic actions. Therefore, bank managers have incentive not to announce the deterioration of short-term performances. Safety net contributed to decrease the danger of bank runs. However, banks issued debt uncovered by deposit insurance (e.g. CDs) and these debt claims were held by large debtholders such as institutional investors. For instance, the ratio of deposit to the total debt in FY 2000 was only 67%. Thus, even if there was deposit insurance with full coverage on covered deposits, the deterioration of reputation entailed the great cost on the bank.

Third, in the prolonged recession of Japanese economy in the 1990s, firm managers should have had a tendency to give more importance on the present and less on the future. Simply speaking, the effective discount factor was defined to be the product of standard discount factor and (1 – default probability). The increase of default probability decreased the effective discount factor. The total amounts of debt of bankrupt firms were 7.8 trillion yen in FY 1991 and set a new record of 26.0 trillion yen in FY 2001. Such increases in the number of bankruptcies raised the default probability of rational firm managers to lower the effective discount factor.

Thus, bank managers seemed to have short-term concerns and had incentives to maintain their reputation. Such concerns or incentive may explain the behavior of banks to reluctantly disclose nonperforming loans or not to disclose the true amount of nonperforming loans. Furthermore, as analyzed below, banks took the short-termistic lending policy for these concerns.

Maintaining reputation through extension of additional credit

According to Rajan (1994), banks are likely to extend additional credit in order to pretend that the earnings are maintained. By extending additional credit to borrowers who have difficulty in repaying the interest, banks are able to make these borrowers repay the interest to maintain the earnings.[7] Assuming that the borrower repays the full amount extended in addition, the required amount of additional credit satisfies the following equation

$$\Pr\left(x_2^G \mid x_1^G\right) = \Pr\left(x_2^G \mid x_1^B + \Delta L\right) \tag{4}$$

Such additional credit prevents investors from distinguishing the bank with true earnings x_1^G from the bank with

[7] For instance, Asahi Shimbun (7.12.01) reported that Asahi Bank and IBJ might provide inefficient additional credit to Aoki Constructing. Peek and Rosengren (2003) and Hosono and Sakuragawa (2005) suggested the possibility of additional credit. Shrieves and Dahl (2003) and Moyer (1990) analyze the accounting manipulation of banks. The former argues that Japanese banks discretionarily manipulated disclosed income through capital gains and loan loss provisions during the period 1989–1996. The latter argues that capital adequacy regulation led to discretionary accounting in the U.S. during the period 1981–1986.

disguised earnings ($x_1^B + \Delta L$). The reputation of the latter is maintained in spite of the poor performance.

Of course, there may be an efficient additional credit which enhances the firm value by restructuring the business. However, this paper considers only inefficient additional credit to the borrowers which has only negative net present value project. Since the new funds are extended without investing in real project, the firm will have difficulty in repaying in the future. This is the future cost of extending inefficient additional credit. Bank optimally extends the additional credit when the benefit of maintaining the reputation is higher than the future cost. Since the short-term concerned banks place distorted importance on the current benefits, they are more likely to extend inefficient additional credit. Thus, the banks extending such credit during the current period will be suffered from the severe loss in the future. Such consideration leads to the following conjectures;

(i) banks extend additional credit in order to boost the current earnings

(ii) the performances of these banks will be decreased in the future

Failed banks and banks recapitalized with public funds

The author analyzes the reputation hypothesis that banks which extended inefficient additional credit to real estate borrowers got into more serious distress than others. The bank which failed or recapitalized with public funds during the period 1995-1999 can be defined as the "more seriously distressed" banks. These are ten major banks and sixteen regional banks[8], including all major banks except Tokyo Mitsubishi Bank. Among the sixteen regional banks, five were recapitalized with public funds and the rest of eleven banks failed.[9]

Figure 1 shows real estate loans in the increasing trend for this period. Since Ueda (2001) pointed out that the cause of nonperforming loans problem lies on the real estate loans during the latter half of 1980s, it is reasonable for us to focus on the real estate loans for this period too. According to Ueda (2001), there is an obvious and positive correlation between nonperforming loan ratio as of 1996 and the share of real estate loan as of 1990. As Figure 2 suggests, it is considered that real estate loans remained be inefficient in 1990s.

II.2. Empirical analysis of reputation hypothesis

The hypothesis is tested by estimating the loan supply function to real estate borrowers, using the panel data of the bank balance sheets. We assume that loan market is perfectly competitive and that each bank faces the same class of potential borrowers. At the beginning of period t, the i-th bank faces uncertainty of loan interest rate r_{it} repaid at the end of the period t. The distribution of random variable r_{it} of each bank is assumed to have the same expected rate $E[r_{it}]$. The bank chooses the optimal real estate loan supply as the function of $E[r_{it}]$. We use a sample mean $\overline{r_t} \approx E[r_{it}]$ as the independent variable in the regression equation. The reputation hypothesis means that seriously

[8] Major banks includes Hokkaido Takushoku, Shinsei, Mitsui Sumitomo, Sakura, Mizuho Corporate, Mizuho, UFJ, Tokai, Resona, and Asahi. Included regional banks are Hyogo, Taiheiyo, Hanwa, Tokuyo City, Kyoto Kyoei, Naniwa, Fukutoku, Yokohama, Kokumin, Kofuku, Tokyo Sowa, Ashikaga, Hokuriku, Ryukyu, Momiji, and Niigata Chuo. See Table 4 below and Table 1 in Shimizu (2006, p123).

[9] In this analysis, banks which failed or recapitalized with public funds after 2000 are not included in the group of the seriously distressed banks. Note that there are some banks which merged with failed banks earlier, which failed.

distressed banks pretend to earn as high r_{it} as the counterpart by extending additional credit ΔL_{it}. Thus, under the hypothesis, there arises strong high correlation between realized loan interest rate r_{it} and additional credit ΔL_{it}. In particular, the hypothesis is tested by investigating the influence of the cross term of seriously distressed bank dummy λ_i and r_{it}. The dummy λ_i takes 1 if the bank i is the seriously distressed, or 0 otherwise. The null hypothesis is that the coefficient of this cross term is zero. The dependent variable is the share of real estate loans to total loans ($Real_{it}$).

The regression analysis is for the sample period from 1993 to 1997. The bank is classified into "the seriously distressed" based on the data in two years later (1995 – 1999). We obtained financial statements data of major banks, Regional banks, Regional banks II from Nikkei Needs database. Note that the dramatic waves of mergers among banks after 1998 did not affect our analysis because our sample period was before 1998. The number of observations was 701 (141 banks, five years at the maximum). The number of the seriously distressed was 122. Table 2 reports the summary of descriptive statistics. The sample mean of r_{it} is 4.33% and its standard deviations are 1.10%. The mean of $Real_{it}$ is 9.7%, and the standard deviation is 5.1%. The correlation between these variables is almost zero (0.003).

Table 2: Descriptive statistics on loan rates and real estate loans

	Mean		Standard Deviation	Number of observations
All sample				
r_{it}	4.330		1.101	701
$Real_{it}$	9.714		5.063	701
ρ (r_{it}, $Real_{it}$)	0.003			
Seriously distressed banks				
r_{it}	4.292		1.097	122
$Real_{it}$	15.171		6.808	122
ρ (r_{it}, $Real_{it}$)	0.209			
Healthier banks				
r_{it}	4.338		1.103	579
$Real_{it}$	8.565		3.707	579
ρ (r_{it}, $Real_{it}$)	-0.062			
t-statistics on the difference of means				Degree of Freedom
r_{it}	0.239			212
$Real_{it}$	10.399	***		136
correlation coefficients				
ρ ($\lambda_i r_{it}$, $Real_{it}$)	0.508			

(Note) sample period is 1993–1997. *r*: loan rate (%), *Real*: real estate loans ratio(%), ρ: correlation coefficient, λ : dummy for seriously distressed banks.*** denotes the significance at 1% level.

According to the reported t statistics, the null hypothesis, that there is no difference between the means of r_{it} of the seriously distressed and the counterparts, could not be rejected. Importantly, we should note that this result does not contradict the reputation hypothesis in a sense that simple descriptive statistics is not of help to discern a good type from a bad type. There is a significant difference between the means of $Real_{it}$. The means of the seriously distressed is twice as much as that of the counterparts. Note that the correlation between $\lambda_i r_{it}$ and $Real_{it}$ is high enough. Thus, we can conclude that the descriptive statistics provides evidence supporting the reputation hypothesis.

Table 3 shows the results of regression analyses. All the samples are used to estimate the regression equation in the column (i), while the observation is restricted to the subsample consisting of only Regional banks in the column (ii). It might be important to divide the subsample in such a way because the counterparts of the seriously distressed banks mainly consist of Regional banks. Since the coefficients of the $\lambda_i r_{it}$ are significantly positive in the both columns, the reputation hypothesis was supported. The estimated coefficient of loan interest rate and deposit interest rate are consistent with the standard theory.

From the results of Table 3, we can confirm that the seriously distressed banks extended real estate loans and such behavior led to the serious distress of these banks. Note that it is hardly said that the counterparts did not extend inefficient additional credit at all, although the seriously distressed banks extended inefficient real estate loans more than counterparts. Although the simple descriptive statistics provides us no evidence of disguise, the sophisticated regression analysis reveals that the seriously distressed banks extended real estate loans to maintain the reputation.

Table 3: The estimated results of regression equation: Reputation hypothesis

	(i)			(ii)		
Dependent Var.	$Real_{it}$			$Real_{it}$		
Sample	All banks			Regional		
Mean of Dep. Var.	0.097			0.097		
S.D. of Dep. Var.	0.051			0.052		
Number of obs.	701.0			642.000		
Adjusted R^2	0.987			0.988		
$Var\ [\ e_{it}\ ]$	0.000			0.000		
$Var\ [\ u_i\ ]$	0.000			0.000		
$Corr\ [\ v_{it}, v_{is}\ ]$	0.218			0.220		
LM test statistics	9.420	(0.002)		3.530	(0.060)	
Baltagi-Li LM statistics	9.370			3.520		
Hausman specification test	0.000	(1.000)		0.000	(1.000)	
	coeff.	t-value	(p-value)	coeff.	t-value	(p-value)
$\bar{r}_t$	0.020	1.526	(0.127)	0.024	1.775	(0.076)
Deposit interest rate	-0.038	-2.488	(0.013)	-0.043	-2.740	(0.006)
$\lambda_i r_{it}$	0.001	2.869	(0.004)	0.001	2.164	(0.031)
$Real_{it-1}$	0.974	125.927	(0.000)	0.974	120.699	(0.000)
Staff costs/ Loans	0.124	0.936	(0.349)	0.176	1.164	(0.244)
Property costs/ Loans	0.210	0.745	(0.456)	0.171	0.590	(0.555)
Industrial production index	0.000	0.771	(0.441)	0.000	1.035	(0.301)
Land price	0.002	4.649	(0.000)	0.002	4.662	(0.000)
Constant	-0.235	-3.461	(0.001)	-0.257	-3.663	(0.000)

(note) Random effect estimation. $v_{it} = e_{it} + u_i$. Adjusted R^2 is calculated for fixed effect model.

III. MOF's policy of maintaining reputation

The previous section describes the bank behavior of maintaining reputation from a relatively cross-sectional viewpoint in the sense that some banks were more positively intended to maintain their reputation. This section delineates bank behaviors from a relative viewpoint of time-series, in particular governmental supervision of banks. The overall banking industry found difficult to maintain the reputation, and some of the financial institutions began to fail, in 1995. In this section, I investigate how the overall reputation fell, why financial system got destabilized, and how the MOF intended to maintain the stability of the financial system.

Construction of a failure resolution scheme

The following is to review the historical transition of failure resolution policy. Table 4 provides the whole list of the banks which failed and/or which made promptly corrective actions (hereafter abbreviated as PCA), which was issued by the government from 1995 to 2001. It starts with Hyogo Bank which failed in 1995 and ended with Chubu Bank in terms of PCA taken. Twenty cases are categorized into the two panels; the upper panel corresponds to the MOF administration and the lower to the FSA administration.

Deposit insurance system in Japan which was introduced in 1971 significantly changed its function during the financial crisis. The revision of the Deposit Insurance Law in 1996 enabled the deposit insurance corporation of Japan (hereafter abbreviated as DICJ) to provide special financial assistance. DICJ provides the assuming financial institutions with financial assistance of the amount beyond the payoff costs (defined as the amount to pay the insured 10 million yen to each depositor). This financial assistance was required to implement the blanket guarantee of deposits.[10] A blanket guarantee had not been clearly specified under the law till 1996. A policy of the blanket guarantee was first noted in June 1996 ("*Kinyu Shisutemu no Kaihuku nitsuite*") and in December ("*Kinyu Shisutemu Anteika no tameno Sho Shisaku*" by Financial System Research Council). For this reason, special financial assistance was not provided for the failure resolutions of the first two banks (Hyogo Bank and Taiheiyo Bank) while it was established right after the case of Hanwa Bank.

The revision of the Deposit Insurance Law in December 1997 facilitated mergers (Fukutoku Bank – Naniwa Bank case) and enabled DICJ to borrow the maximal amount of 10 trillion yen from the Bank of Japan. The revision of the Deposit Insurance Law in February 1998 granted 7 trillion yen of the government bonds to DICJ and set a ceiling for government guarantees as 10 trillion yen.

The Financial Rehabilitation Law introduced new arrangements such as receiver, bridge bank, and special public management (temporary government control) in October 1998. Special public management is utilized only for the cases of Long-Term Credit Bank of Japan and Nippon Credit Bank. Special public management made shares invalid by force and let the bank be under the governmental control through acquisition of all shares by DICJ. Introducing receivers enabled the bank to continue the business smoothly even after the failure was announced. As shown in Table 4, the management was replaced by receiver as soon as the failure occurred in the last ten resolutions after Kokumin Bank. A bridge bank is the bank which succeeds business when the rescuing bank is not nominated after

[10] Revision of the Deposit Insurance Law in 1986 introduced financial assistance scheme. By the revision of 1998, DICJ was allowed to purchase liabilities such as deposits. Insurance premium became seven times as before.

one or two years of receiver management. The Bridge Bank of Japan was established in 2002, which was utilized for the resolution cases of Ishikawa Bank and Chubu Bank.[11)]

Table 4 : Bank failures in Japan: How it began and how it was resolved

	how it began		resolution			financial assistance by DICJ (billion yen)			Special financial assistance	bank type	Seriously distressed
	Negative net worth etc.	PCA	Receiver appointment	Recapitalized with public funds	Ultimate resolution	Grants	Asset purchase	Total			
A: MOF era											
Hyogo	Failed in Aug. 1995	-	-	-	Business transfer to Midori Bank in Jan. 1996	4,730	0	4,730		Reg. II	*
Taiheyo	Failed in Mar. 1996. Negative net worth.	-	-	-	Business transfer to Wakashio Bank founded by Sakura Bank in Sept. 1996	1,170	0	1,170		Reg. II	*
Hanwa	Failed in Nov. 1996. Order for operation improvement	-	-	-	Business transfer to Kii Yokin Kanri Bank in Jan. 1998	814	2,083	2,897	○	Reg. II	*
Kyo Kyoei	Negative net worth in Sept. 1997 by inspection. Failed in Oct.	-	-	-	Business transfer to Kofuku in Oct. 1998	456	581	1,037		Reg. II	*
Fukutoku, Naniwa	Announcement of merger in Oct. 1997	-	-	-	Special merger into Namihaya in Oct. 1998	0	3,018	3,018		Reg. II	**
Hokkaido Takushoku	Merger postponement in Sept. 1997. Deposit drain	-	-	-	Business transfer to Hokuyo Bank and Chuo Trust Bank in Nov. 1998	17,947	16,166	34,113	○	City	*
Tokuyo City	Deposit drain in Sept. 1997. Failed in Nov.	-	-	-	Business transfer to thirteen neighboring banks in Nov. 1998	1,238	1,695	2,933	○	Reg. II	*
Midori	Deposit drain in Nov. 1997. Negative net worth in Mar. 1998	-	-	-	Merged with Hanshin into Minato in Apr. 1999	7,901	2,659	10,560	○		
B: FSA era											
Long-term credit bank of Japan	Deposit drain in Oct. 1998. Negative net worth	-	-	Mar. 00	Temprary nationalized in Oct. 1998. Stock sold to New LTCP partners in Mar. 2000	32,391	4,939	40,378	○	Long	*
Nippon Credit Bank	Negative net worth in Nov. 1998 by inspection	-	-	Oct. 00	Temporary nationalized in Dec. 1998. Stock sold to Soft Bank etc. in Sept. 2000	31,497	3,048 2,987	35,308	○	Long	
Kokumin	funding difficulty by media news in Apr. 1999	-	Apr. 99	-	Business transfer to Yachiyo Bank in Aug. 2000	1,837	824 343	2,180	○	Reg. II	*
Kofuku		Apr. 99 (Section2-2)	May 99	-	Business transfer to Kanwai Sawayaka in Feb. 2001	4,941	1,706	6,647	○	Reg. II	*
Hokkaido		May. 99 (Section 1)	-	Mar. 00	Merged with Hokuriku in Sept. 2004	-	-	-		Reg.	
Niigata Chuo		June 99 (Section 1)	Oct. 99	-	Business transfer to six neighboring banks in 2001	3,817	1,021	4,838	○	Reg. II	*
Namihaya		June 99 (Section 2)	Aug. 99	-	Business transfer to Daiwa Bank and Kinki Osaka Bank in 2001	6,526	1,905	8,431	○	Reg. II	
Tokyo Sowa	Deposit drain in May 1999	May 99 (Section 1)	June 99	-	Business transfer to Tokyo Star Bank in June 2001	7,626	1,242	8,868	○	Reg. II	*
Senshu		Sept. 00 (unknown)	-	-	Subsidiarized by Sanwa Bank in Jan. 2001	-	-	-		Reg.	
Chiba Kogyo		00 (unknown)	-	Sept. 00	-	-	-	-		Reg.	
Ishikawa	Negative net worth in Sept. 2001	-	Sept. 01	-	Business transfer to regional banks in Mar. 2005 (through Bridge Bank of Japan)	1,809	894	2,703	○	Reg. II	
Chubu		Dec. 01 (Section 1)	Mar. 02	-	Business transfer to retional banks in Mar. 2003 (through Bridge Bank of Japan)	944	646	1,590	○	Reg. II	
						125,644	45,757	171,401			

(Source) FSA, DICJ, Nikkei.

[11] Initially, blanket guarantees and recapitalization with public funds was planned to terminate on March 2001, but it postponed by March 2002. New rescuing scheme was arranged by the revision of the Deposit Insurance Law (Article 102) in 2000, which was applied to Ashikaga Bank in November 2003.

III.1. Maintaining overall reputation and its failure

Maintaining overall reputation

The MOF had great concerns about stability of the Japanese financial system. The notorious convoy system is considered as a policy of maintaining reputation of the overall banking industry. However, if we presume that market investors have short-term concerns, it is rational for the financial authority to administer the convoy system for some extent.

Three indirect facts confirm that the MOF had incentives to maintain the reputation. First, the MOF's attitude towards disclosure of nonperforming loans was negative. The MOF had administered a rule of verifying write-offs of nonperforming loans from 1950 to 1997, when the inspectors of Banking Bureau themselves granted permission of write-offs.[12] However, the MOF was reluctant to disclose the true amount of nonperforming loans.

Second, the MOF had administered the internal failure resolution policy. Within the banking industry, the failure of one bank is resolved by the rescue of other banks (Horiuchi; 1998, p76-85).[13] In terms of the failures of Hyogo, Taiheiyo, Kyoto Kyoei, and Fukutoku – Naniwa Bank in Table 4, the MOF is considered to have taken such policies because (i) no financial assistance was provided and (ii) the failure resolution method had been already determined just before the failure was announced.[14] Such internal resolutions was advantageous in deterring short-termistic behavior of depositors.

Third, the MOF injected uniformly 100 billion yen into the capital of major banks under the Financial Function Stabilization Law in March 1998. Uniformity of the injected amount was criticized for its opacity in the sense that it did not reflect the healthiness of each bank fundamental. However, such policy is not irrational from the viewpoint of maintaining reputation. The different amount of injection implies that there would be good and bad banks, which is inconsistent with the maintaining of reputation or the stability of the financial system.

Dead end of MOF administration

However, the government is unable to continue maintaining the reputation of the overall banking industry (or stability of financial system) for long time. The true type of the banks will be revealed during the period (as shown in Figure 3). The bank must owe the future costs to conceal the current bad performances. As time goes, the bank will find it more difficult than before to maintain the reputation. At last, investors will fully see the disguise of reputation and the industry will lose it.

In other words, there should benefits and costs for maintaining reputation. As nonperforming loans emerged one after another, the banking industry could not prevent its reputation from being lost. The government needed the blanket guarantee in order to make investors' decision independently regardless of reputation of the bank. At the

[12] This rule was abandoned in 1998 when PCA and a self-assessment system were introduced, as explained later.

[13] It should be noted that the presidents were *amakudari* officers from the MOF when Hyogo Bank and Hanwa Bank failed. See Horiuchi and Shimizu (2001).

[14] See Nikkei (17.11.97) for the point that failure resolution policy had been determined before the announcement of failure. Hyogo Bank announced liquidation and business transfer to new bank on August 31, 1995. Sakura Bank announced on March 31 1996, that Taiheiyo Bank failed and new bank was founded. It was reported that the information of negative net worth leaked as soon as the MOF found it. On October 9, 1997, Fukutoku Bank and Naniwa Bank announced the failure resolution policy of merger with financial assistance of DICJ. Kyoto Kyoei Bank announced business transfer to Kofuku Bank on October 14 1997. Hanwa Bank announced the liquidation after the business suspension order by the MOF (See Nikkei of each date) on November 21 1996.

outset, it was restricted to deposits. However, the MOF extended the rule to cover other financial instruments than deposits in 1997. This implies that the MOF fully abandoned the traditional policy of maintaining reputation. Indeed, the blanket guarantee was succeeded to prevent bank runs or contagion of failure from one bank to another until the fall in 1997.[15] However, deposits of some banks drained away just before the failure announcement for some extent. For instance, deposits of Hyogo Bank are estimated as the drain−away by 14% (371 billion yen).[16]

In 1997, when the currency turmoil happened in some Asian countries, Hokkaido Takushoku Bank (hereafter HTB) and Tokuyo City Bank failed. In comparison with the failures in Panel A of Table 4, the different phenomena were observed. Although, HTB announced the merger with Hokkaido Bank (a regional bank) in April 1997, they determined to postpone the merger to September. Just after the announcement of postponement, withdrawal of deposits and the fall of stock price occurred. Also, HTB had difficulty in raising funds in the call market (Nikkei evening, 17.11.97). On October 14, Standard & Poors downgraded its rating of HTB to "speculative" and the MOF began inspection. HTB had demanded the call money from Yamaichi Securities, although it was not possible on Nov. 17 because they spread the rumor that the business environment of Yamaichi became worsened (Nikkei evening, 17.11.97). On that day, it was announced that HTB abandoned voluntary corporate restructuring to transfer business to Hokuyo Bank etc. and that all deposits were safe.

On Nov. 26 1997, it was announced that Tokuyo City abandoned voluntary restructuring to transfer business to the 77 Bank and Sendai Bank. It bled red ink for two straight years in an interim earnings report in 1997. Similarly as HTB, not only its deposits has drained, but also Tokuyo faced difficulties in raising funds from the interbank market (Nikkei evening, 26.11.97).

These facts imply that the MOF failed to maintain reputation of the banking industry or to stabilize the financial system. First, unlike the past failure resolution policy, the MOF could not determine who and how rescue the failed banks yet when the announcement was made. Then, HTB and Chuo Trust Bank determined to transfer business of *Honshu* region on Feb. 23, 1998 (in three months after the failure). The general framework of resolution of Tokuyo failure was determined (Nikkei, 27.12.97) on December 27 (one month after failure). Until the resolution policy was determined, it had been indispensable for Bank of Japan to supply emergency loans, in order to compensate the withdrawn amount of deposits.

Second, since HTB was one of major City banks and Yamaichi was also one of major securities corporations, their failures made an influence on the belief of market investors. Reputation of other financial institutions became worsened. The condition of money market became tight drastically. Figure 4 shows that interest rates on CDs were about 0.5% by mid−November, which though suddenly increased to 1.26% in the fifth week of December. To ease the conditions of the financial market, the BOJ extended loans by 3.9 trillion yen and emergency loans by 3.5 trillion yen in November. The BOJ continued holding stocks of loans for the amount of 8 trillion yen until March 1998.

Figure 5 shows the change of TOPIX and stock price index of banking industry by Tokyo Stock Exchange.

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[15] It was the failure of Kizu Credit Union on August 30, 1995 that was considered as the most serious turbulence. It was reported that ten thousands of depositors formed a long queue in front of each branches at the failure day and the next day (Nikkei; 31.08.1995).

[16] Deposits drained by 12% (257 billion yen) within a month after failure. It was lower than March 1995 by 25%. The amount of deposit is estimated as 257 / 0.12 = 2141. That of one month after is estimated at 2141 − 257 = 1884. That of March 1995 is estimated at 1884 / (1 − 0.25) = 2512. 2512 − 2141 = 371. Other failed banks also experienced drains of deposits. Deposits of Hanwa Bank decreased by 8.5% within two days after failure, and by 21% (106 billion yen) within nine days (Nikkei; 23.11.1996, evening 30.11.1996). Deposits of Fukutoku Bank decreased by about 10% (Nikkei; 09.11.1997) and deposits of Midori Bank also decreased (Nikkei; 19.05.1998).

During the period 1995 – 1996, the latter hovered around 758 points (normalized to 1000 by the base year 1992) while the former hovered around 1493 points (normalized to 100 by the base year 1968). Both significantly fell at the beginning of 1997, and experienced further declines in October. The stock price index of the banking industry which was 609 points in September 1997 fell to 311 points by October 1998. On the other hand, TOPIX which was 1412 points in September 1997 fell to 1023 by October 1998. The decline rate of 49% and 28% for the former and the latter respectively. These facts suggest that the MOF failed to maintain reputation of the banking industry.

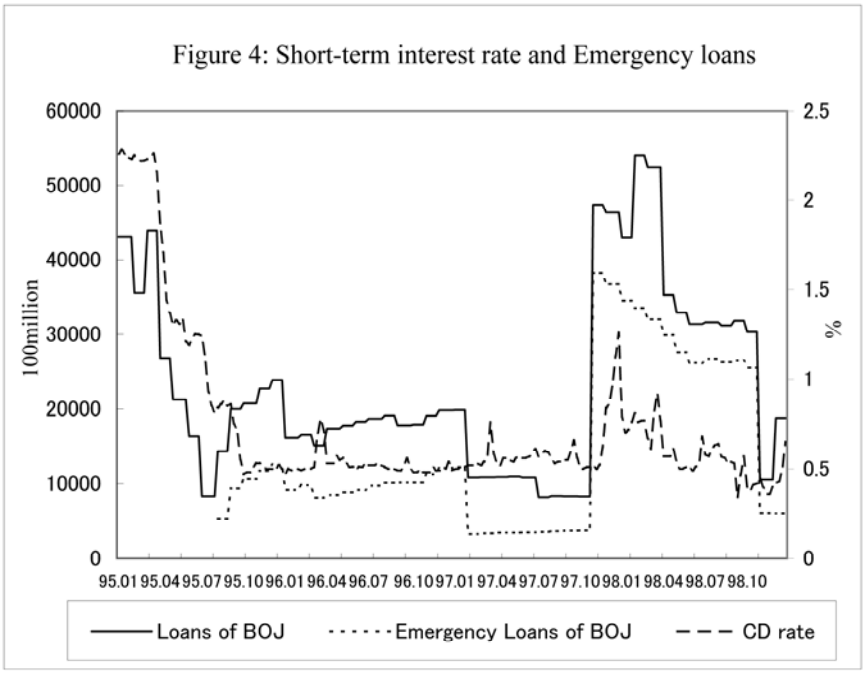
Moral hazard caused by the policy maintaining overall reputation

MOF's traditional failure resolution policy in order to maintain the reputation of banking industry failed because it caused moral hazard of Japanese banks. Since it seemed to be effective to lower the cost of failure (resolution), banks had incentives to maintain its reputation by extending inefficient loans. Otherwise, as the benefit of maintaining reputation would not exceed the cost, banks did not have incentives to maintain their reputation. From the past administration of the MOF, Japanese banks easily conjectured that the MOF eagerly attempted to administer the internal resolution or introduce blanket guarantee. For instance, the MOF had not developed the deposit insurance system until the mid-1990s. The policy reserve of DICJ was merely 876 billion yen in 1994, which was only 0.155% of the total covered deposits of 555 trillion yen. In contrast, FDIC in the U.S. constantly holds reserve for the amount of 1.3% of covered deposits.[17] Therefore, Japanese banks believed that the government did not tolerate the fact that they were not rescued. They did not recognize the true cost of failure either. In this sense, MOF's policy caused moral hazard called "a gamble for bailout".

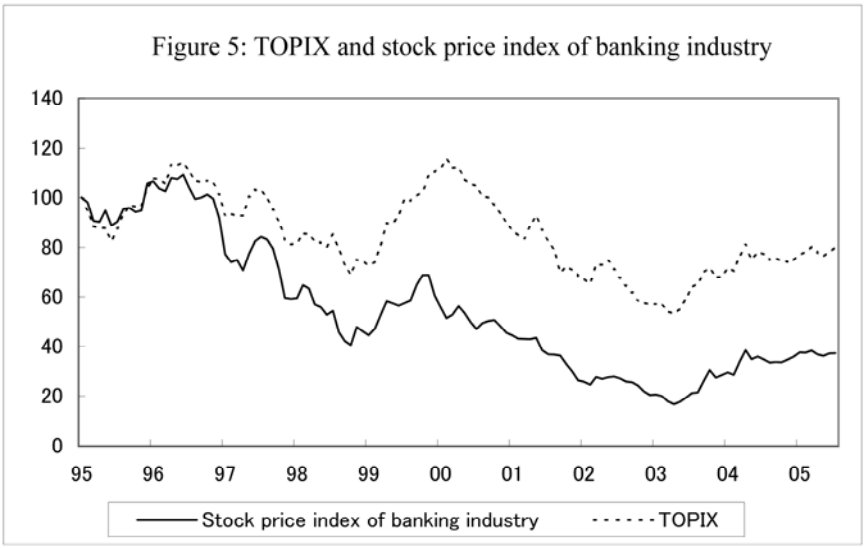
IV. Failure resolution policy of FSA

Facing the phenomena described above, the government drastically changed its attitude toward banks. In 1998, the government transferred the authority from the MOF to FSA (Financial Supervisory Agency or Financial Services Agency. Unless it is needed, we do not distinguish them strictly.) and introduced a PCA system as well as a self-assessment system. In 1999, the bank examination manual was developed to begin strict monitoring activities. This implies a complete change from the MOF's policy for maintaining reputation. The next subsection briefly analyzes why the government changed its attitude.

[17] In 1996, only two years after, the reserve became deficits by the amount of 400 billion yen because expenditure exceeded insurance income. See FDIC Annual Report for the U.S. figures.



(Source) Bank of Japan



(Source) Tokyo Stock Exchange

(Note) Normalized by the index of 1995 (base year), monthly

IV.1. Short-term and long-term contract

According to traditional economics, to establish a new market is to promote risk sharing. Market competition leads efficient allocation of resources by promoting the exits of inefficient firms. However, there are issues of time inconsistency for the cases that the standard of efficiency changes over time in the dynamic movement of economy. Efficient actions at present will not necessarily be efficient in the future. Furthermore, people who anticipate future policy changes have biased incentives to take inefficient actions at present. Therefore, it is valuable to commit to the future actions or policies in advance.

A long-term contract could be defined as a contract such that action is not dependent on the short-term performance or current reputation (von Thadden; 1995). Short-term contract is defined as one such that currently disclosed information is utilized as device screening bad firms. According to the structure of Figure 3 above, it is considered that a short-term contract terminates the business of firm whose performance is worsened at the interim phase. A long-term contract is not independent on current performance. It is well-known that people could make two kinds of errors. The first error is that people terminate the business of a good firm (type H) by mistake because of bad performance. The second error is that the bad firm (type L) survives by mistake because of good current performance.

Although the merit of short-term contract is to exclude the second type of error, the demerit is to cause the first type of error. Therefore, short-term contract or short-termistic behaviors of market investors would provide firms with incentive to take short-term biased investment whose performance is good in the short run, but is not in the long run. The benefit of long-term contract is to exclude the first type of errors. Its demerit is to cause the second type of errors.[18)]

Additional credit has a characteristic of long-term contracts in the sense that the second type error occurs. MOF's policy for maintaining reputation is also considered to have caused the second type error. Unfortunately, bailout attempts caused moral hazard to make inefficient banks survive.

Probably, such consideration could lead a drastic change of administration by FSA. FSA's resolution policy is characterized as short-term contracts in the sense that they decide whether to terminate the bank or not based on the short-term results of examination. Next subsection shows that such policies accelerated the failure of banks, contracted the loan amount suddenly, and eventually prolonged the crisis.

IV.2. FSA's policy and contraction of credit

FSA and tightening of examination

In June 1998, the Financial Supervisory Agency was founded and the inspection and supervisory authority was transferred from the Banking Bureau of the MOF. Financial Reconstruction Commission was also founded to

[18] Main bank relationships played the roles of excluding the first type error in the sense that main bank rescues the firm when the performance of borrower firm deteriorates in the short run. Hoshi, Kashyap, and Scharfstein (1990) provide evidence of the positive impact of the main bank on the investment of borrowing firm, using sample of listed Japanese firms during the period 1978–1985. The breakdown of main bank relationship during 1990s might suggest the bank found it difficult to build and continue the long-term relationship.

administer the failure resolution policy together with Financial System Planning Bureau of the MOF. In 2000, the Financial Services Agency was founded by integrating the Financial Supervisory Agency and Financial System Planning Bureau. When these FSAs were founded, the Commissioner presented the basic attitudes of policy and administration as "building fair and transparent supervisory policy", "strict and effective examination and productive monitoring", "fair and transparent administration based on explicit rule", and "principle of market discipline and accountability".

Reflecting these attitudes, the bank examination manual was developed in 1999 and Inspection Department of FSA has the upgrade of status to Bureau in 2001.[19] The number of inspectors increased from 364 in 1992 to 886 in 2000. FSA also increased the frequency of inspections from once a year to twice for major banks, and introduced follow-up inspections as well as special inspections. Thus, the FSA strengthened the inspection. The banks in Panel B of Table 4 failed one after another based on the results of inspection.

Temporary government control and prompt corrective action

Long-Term Credit Bank of Japan and Nippon Credit Bank failed first under administration of FSA. Both banks were placed under the special public management (or temporary government control) because FSA's inspection proved that its debt exceeded its assets.

PCA was introduced in April 1998 with a delay of a year for banks operating only in the domestic market. FSA issued an order for improvement of management toward banks whose capital asset ratio became lower than the standard. The order included (i) plan and improvement of recapitalization, (ii) prohibition or decrease of dividends or bonus to directors, and (iii) contraction of domestic or overseas subsidiary etc. The purpose of PCA was to prevent failures in advance in order to decrease the social costs of failure.[20]

However, contrary to the purpose, PCA promoted early failure of distressed banks.[21] Among twelve banks listed in Panel B of Table 4, PCA was taken for eight banks. Five banks (Kohuku, Niigata Chuo, Namihaya, Tokyo Sowa, and Chubu) failed several months after PCA was taken.[22] Other three banks did not follow by the failure. Senshu Bank was acquired by Sanwa Bank. Hokkaido Bank and Chiba Kogyo Bank were recapitalized by public funds. Later,

[19] According to Horiuchi (1998), Administrative Inspection Bureau of Management and Coordination Agency judged that inspection by the MOF was inferior in quality. For instance, it was said that information on a surprise inspection was leaked to the banks.

[20] Japanese PCA system was as follows; Section 1: lower than 8% (international standard), lower than 4% (domestic standard), Submission and implementation of management improvement plan including recapitalization. Section 2: lower than 4% (international standard), lower than 2% (domestic standard), Submission and implementation of recapitalization, prohibition or restraint of dividends or bonuses of directors, asset contraction or restraint of increase, prohibition or restraint of deposits with high interest rates, contraction or termination of business at offices, business contraction of domestic or oversea subsidiary. Section 2-2: lower than 2% (international standard), lower than 1% (domestic standard), replenishment of capital, drastic contraction of business, merger or abolition of banking business. Section 3 lower than 0% (both standards), partial or full suspension of operation.

[21] Although PCA could not prevent banks from failing, it might lower the cost of taxpayers by promoting early failure.

[22] In March 1999, it was proved that capital/asset ratio of Kohuku Bank which had previously rescued Kyoto Kyoei Bank became lower than 1% (0.31% for non-consolidated basis, 0.06% for consolidated basis) by FSA's inspection. FSA invoked PCA in May. Simultaneously, it was feared that Kofuku suspended repayment of deposits, and a receiver was appointed. FSA invoked PCA (Section 1) for Tokyo Sowa Bank. It was proved that net worth was negative, and a receiver was appointed. In June 1999, FSA invoked PCA (Section 2) for Namihaya Bank which was founded by merger of Fukutoku Bank and Naniwa Bank. In August, it was feared that it suspended repayment of deposits, and a receiver was appointed. In June 1999, FSA invoked PCA (Section 1) for Niigata Chuo Bank, for which the receiver was appointed in the next October. FSA invoked PCA (Section 1) for Chubu Bank in December 2001. A receiver was appointed in March 2002.

Hokkaido bank merged with Hokuriku Bank. Note that PCA was not taken to Kokumin Bank and Ishikawa Bank. [23)]

Thus, failures of these seven banks (LTCB, NCB, and five regional banks) were determined by FSA based on the results obtained through the inspection process. They were judged as inefficient banks, which extended credit to inefficient borrowers to exit from the market.

Credit contraction

While such administration destabilized the Japanese financial system further, they ceased inefficient lending behavior. As shown in Figure 1, real estate loan took a downward turn in 1998. The amount declined by 21.1% from ¥62 trillion as of 1998 to ¥49 trillion as of 2003. The total amount of loan also declined. The declining rate was 15.2% from 479 trillion yen to 406 trillion yen. The decline of real estate loan was not a unique cause of decline in the total loans. Manufacturing loans, which remained almost constant from 1997 to 2000, declined to 54 trillion yen by 18.2% in 2003.

Therefore, the FSA policy not only stopped inefficient credit, but also contracted the total credit by destabilizing the financial system. Bernanke (1983; pp.263–264) argues that an increase in the cost of financial intermediation might be the cause of prolonged serious depression. Since FSA's transparent policy exacerbated the belief of investors, the cost of financial intermediation rose remarkably and credit shrank. As Stiglitz and Weiss (1981) described, it became optimal for banks to stop extending newly loans as well as to contract credit.

Such credit contraction was an issue of public concern in Japan at that time. A newspaper reported that the credit crunch led small and medium sized firms to bankruptcy (Nikkei; 15.10.98) [24)] The total debt outstanding of bankrupt firms was 15 trillion yen in 1998, although it was 26 trillion yen as of 2000. Since the MOF's policy accumulated a huge amount of the non-performing loans, the counter-policy of FSA imposed heavy burden on the Japanese economy to prolong the crisis.

Monetary policy

Facing the aggregate credit contraction, Bank of Japan started to ease monetary policy further. Zero interest rate policy was taken for one and a half year from February 1999 to August 2000. The overnight call rate declined from 0.18% in February 1999 to 0.02% in October 1999. It was called zero interest rate because 0.02% was the fee of money market broker. Since the BOJ once terminated this policy, the call rate hovered around 0.25% in the period from September 2000 to February 2001. In March 2001, the BOJ introduced quantitative monetary easing policy, which maintained current account balances above 5 trillion yen. The call rate declined to 0.001%.

However, as Yoshikawa (2000, p284, in Japanese) argued, the aggregate demand remained low in spite of low interest rate during 1990s. Both zero interest rate policy and quantitative monetary easing policy were not effective easing policies. As he suggests, they only played the role of eliminating uncertainty. Since investors have no incentive to take investment of the long horizon when they face uncertainty increasing. Committing to supply funds at zero interest rate might mitigate this excessive bias for short-term investment by lowering the costs of long-horizon

[23] According to reports of FSA, the cause of failure of Kokumin Bank was difficulty of raising funds due to news by media. The path of Kokumin Bank to fail was similar to that of Hokkaido Takushoku Bank and Tokuyo City Bank. Ishikawa failed after it proved that its net worth was negative in settlement of accounts.

[24] Horiuchi and Shimizu (1998) and Ito and Sasaki (1998) analyze credit crunch of Japan.

investment. Thus, monetary policy of BOJ was effective to stabilize the financial system, although temporary termination was a failure. However, its role was limited in the sense that it only prevented liquidity crisis of firms in good health.

Recapitalization by public funds and Business Revitalization Plan

Another attempt to mitigate credit contraction was that the government recapitalized banks with public funds. Under Financial Function Early Strengthening Law enacted in 1998, the banks could be recapitalized if they provide a well-prepared Business Revitalization Plan (abbreviated as BRP hereafter) during the period 1999-2001.[25] The method for recapitalization was to issue preferred stocks and subordinated bonds/loans, which would be purchased by DICJ. They were forced to implement the BRP which specified the target amount of profits, capital/asset ratio, restructuring variables (number of directors, number of employees, staff cost, and property cost), and growth rate of loans for four years.[26]

Shimizu (2006, Table 1 in p123) reported the list of banks which was recapitalized with public funds. The government recapitalized fifteen major banks with public funds in March 1999.[27] The issued amount of preferred stocks was 6.16 trillion yen, that of subordinated bonds was 550 billion yen, and that of subordinated loans was 750 billion yen. The total amount was 7.46 trillion yen. Afterwards, the government recapitalized the seventeen banks (mostly regional banks). The total amount of public funds was 8.54 trillion yen in March 2003 and the total number of banks was thirty-two. Public funds occupied a large share of capital. In terms of the average, share of public funds to Tier I capital was 31.2% for fifteen major banks, as that Tier II capital was 9.5%. The total capital was 22.3%. Public funds raised capital/asset ratio by 2.7% on average.

Inconsistency of BRP

Recapitalization enabled banks to accelerate disposal of nonperforming loans. However, 7.46 trillion yen of public funds in 1999 was lower than the loss from disposal of nonperforming loans 8.34 trillion yen. As shown in Table 1, the amount of nonperforming loans did not decrease substantially. Thus, recapitalization had only limited effects on the disposal of nonperforming loans.

The purpose of BRP was to promote restructuring, to raise profits and capital/asset ratio, and to expand credit. However, since expanding credit lowered the bank profit as the cost of credit rose, it caused an increase in nonperforming loans and made banks become unhealthy. In this sense, the BRP system had inconsistency. Accomplishing the target on credit expansion made it difficult for banks to accomplish the target on capital/asset ratio.[28]

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[25] There were three recapitalization schemes other than Financial Function Early Strengthening Law. One is Financial Function Stabilizing Law in March 1998, which provided funds for recapitalization by the amount of ¥1.8 trillion for major 21 banks. Another is Organizational Restructuring Law in 2003, by which Kanto Tsukuba Bank was recapitalized by ¥6 billion. Resona Bank was recapitalized by revised the Deposit Insurance Law by the amount of ¥1.96 trillion in 2003. These amounted up to ¥12.39 trillion yen.

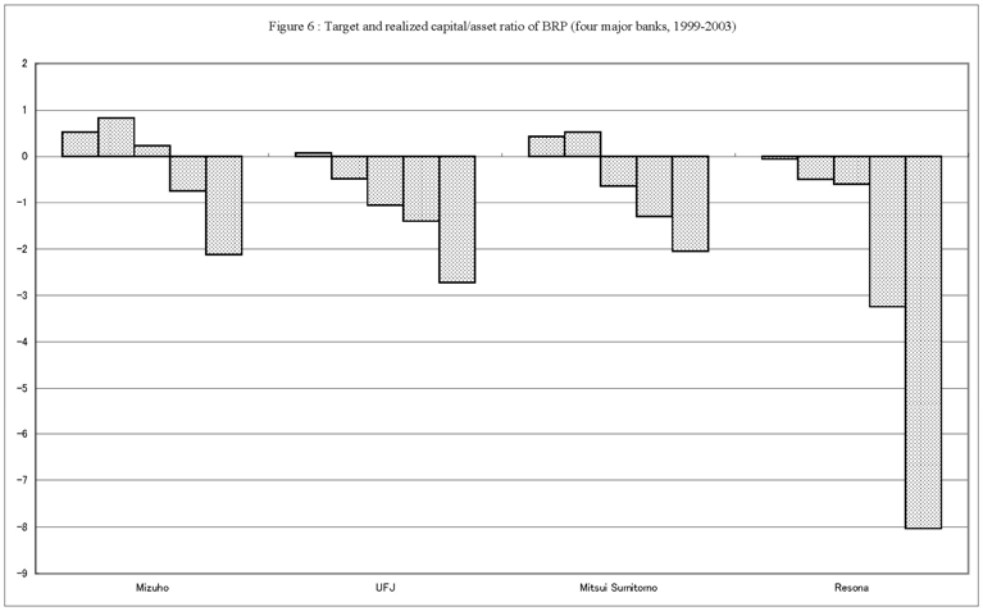
[26] If the bank could not fulfill numerical targets, it was penalized by management improvement order which suspended partial operation.

[27] Government recapitalized all the City Banks except Tokyo Mitsubishi Bank and all the Trust Banks except Yasuda Trust Bank and Nihon Trust Bank. Industrial Bank of Japan and Yokohama Bank were also recapitalized by the government in March 1999.

[28] Nikkei reported that the amount of loans to small and medium firms in September 2002 decreased by more than 9 trillion yen since March, suggesting the inconsistency between disposal of nonperforming loans and expanding credit to small businesses

Shimizu (2006) concludes that BRP succeeded in increasing the supply of loans, but lowered capital/asset ratio due to the accumulation of nonperforming loans, by utilizing financial data on banks from 1999 to 2001. This paper simply compares the target and realization of capital/asset ratio and credit growth of four major banks. Figure 6 describes the difference between the target and realization of capital/asset ratio. Since these banks experienced mergers, the figures of pre-merger are simply averaged. The realized ratio exceeded the target for Mizuho Bank from 1999 to 2001 and for Mitsui Sumitomo from 1999 to 2000. However, the target could not be accomplished for other banks in other periods. In FY 2003, the realized ratio of UFJ Bank was lower than the target by 3% and that of Resona Bank by 8%. The upper panel of Table 5 reports these figures.

The lower panel of Table 5 shows the target and the realized value of growth rate of loans.[29] Although the target was set as the amount of increase in loans, the Table shows the growth rate in order to compare the performance of these banks. These banks except Mitsui Sumitomo planned to increase the loan by 1% cumulatively. However, they could not accomplish these targets. Thus, as the purpose of BRP was inconsistent and incompatible, both failed.



(Source) FSA

(Note) Each bar indicates the value of difference from 1999 (the leftest) to 2003 (the rightest) .The target value is calculated as the simple mean of pre-merger value. % point.

(Nikkei; 26.12.2002).

[29] The figures for FY 1999 and 2000 are omitted because I could not confirm the consistency of data on increase in lending for these years from FSA's reports.

Table 5: Targets and realized values of BRP

Capita / asset ratio					
FY	1999	2000	2001	2002	2003
Target					
Mizuho	10.82	10.93	11.16	11.30	11.65
UFJ	12.42	12.68	12.57	12.44	12.68
Mitsui Sumitomo	11.21	11.54	11.77	11.75	12.15
Resona	12.37	12.31	11.83	11.78	11.81
Average	11.70	11.86	11.83	11.82	12.07
Realized					
Mizuho	11.35	11.77	11.39	10.56	9.53
UFJ	12.50	12.20	11.51	11.04	9.96
Mitsui Sumitomo	11.64	12.07	11.13	10.45	10.10
Resona	12.32	11.82	11.24	8.53	3.78
Average	11.95	11.96	11.32	10.15	8.34

Growth rate of loans				
FY	2001	2002	2003	Cumulated
Target				
Mizuho	0.88	2.09	-1.97	1.00
UFJ	0.33	0.10	0.82	1.26
Mitsui Sumitomo	0.89	0.44	-0.85	0.48
Resona	2.18	0.39	-1.07	1.51
Average	1.07	0.76	-0.77	1.06
Realized				
Mizuho	-0.30	-2.41	-9.01	-11.71
UFJ	4.11	-7.25	2.69	-0.45
Mitsui Sumitomo	-0.13	0.01	3.99	3.88
Resona	2.02	-6.75	1.51	-3.23
Average	1.42	-4.10	-0.21	-2.88

(Note) At the end of March. Growth rate of loans is calculated as the ratio to the base year 2001.

V. Concluding remarks

This paper emphasized that the reputation played an important role because investors could not obtain the true information on the banks. In particular, the author concludes that financial distress was prolonged and became serious because banks and the MOF were too concerned about current reputation while the FSA were not too concerned about it. The disadvantage of MOF's policy helped inefficient banks/firms to survive. The advantage was to maintain the stability of the financial system, at least in a short-run. The advantage of FSA's policy was to prevent inefficient banks/firms from surviving. The disadvantage was to destabilize the system and to cause inefficient credit contraction. The following further discusses the issue why Japanese financial system was destabilized in this way.

V.1. What financial system should we choose?

Adverse effect of financial liberalization

In 1988 when the Japanese economy was right in the midst of bubble economy, Mayer (1988, p1181) argues; "Intensification of competition in financial markets may be achieved at the expense of more fundamental objectives of promoting investment and risk taking. As we exhort the Japanese to open their markets to foreign competition we should therefore consider carefully whether we are wishing the plague of short termism on their house too. For this

may indeed be the economic basis of the widely cited deficiency of financial markets to take long term views. It is not in all probability a fundamental deficiency in pricing assets correctly (though this may indeed also be a feature of investors with limited information). Instead what underlies the short term concern is the lack of commitment of market investors."

This argument lead the following conjecture: Financial liberalization or intensification of competition caused destabilization of financial system through its short term concern. In the first place, Keynes pointed out the tendency toward short termistic bias in the capitalist economy;

"Investment based on genuine long-term expectation is so difficult to-day as to be scarcely practicable. He who attempts it must surely lead much more laborious days and run greater risks than he who tries to guess better than the crowd how the crowd will behave; and, given equal intelligence, he may make more disastrous mistakes. There is no clear evidence from experience that the investment policy which is socially advantageous coincides with that which is most profitable. It needs more intelligence to defeat the forces of time and our ignorance of the future than to beat the gun." (Keynes; 1936, Ch.12, p157)

Hellman, Murdock, and Stiglitz (2000) also argued that financial market liberalization which made the financial system destabilize because it lowered franchise values to lower incentives for making good loans through increased competition. Although they do not use the word "short-temistic" directly, they stress the bank's incentive to gamble rather than to survive for longer periods. We should not ignore the concerns expressed by these prominent economists. There is additional evidence consistent with these concerns. For instance, the profit of Japanese banks showed a declining trend, three long-term credit banks which played an important role of supplying long-term credit failed, or investors took speculative behavior during the bubble economy.

Role of rent

Long-term investment requires long-term rents. Investors and firms need rents in order not to fall into myopia and to invest in the long-term project, supply long-term funds, or build long-term relationship. It is generally considered that people take actions desirable from a long term view if a long term return exceeds a short term return. The idea that long-term rent is important is significantly opposed to deregulation or globalization with which many industrialized countries have forged. Japanese government has promoted competition of banks, competition between banks and security companies, or competition between domestic banks and foreign banks by revision of the Foreign Exchange and Foreign Trade Control Law in 1980 and 1998 as well as liberalization of bond market and interest rates. This paper raises a question whether the financial system was destabilized because Japanese investors, financial institutions, and firms had short-term concerns through reduction of rents by intensified competition.[30)] As Hellman et al. (2000) concludes that regulation on deposit interest rate is required in order to achieve efficiency, these considerations might lead to reconsideration of financial liberalization.

Role of competition

An alternative view is that the pervasive existence of rents is the cause of destabilization of the financial system.

[30] Some authors suggested that Japanese convoy system required rent. A bank could afford to rescue the failed bank because banks were provided with rents in normal times by regulation. The convoy system came to an end because of a decrease in rent.

This view is based on traditional idea of economics that market is reliable to allocate resources efficiently. Horiuchi (1998, p120 in Japanese) argues,

"Not the progress of financial liberalization, but its delay, together with entrenched management, weakened further the imperfect market discipline and brought Japanese economy the serious nonperforming loans problem."

As Horiuchi describes, it took fifteen years for Japan to complete the liberalization of deposit interest rate from the introduction of certificate of deposits in 1979 to liberalization of interest rate on demand deposits in 1994. Such gradual liberalization restricted effective competition of banks and allowed inefficient financial institutions to survive. Hanazaki and Horiuchi (2003) also argued that inefficiency came from that intercorporate shareholdings, and blanket guarantee allowed management to entrench themselves from the pressure of capital market. If the real world is the same as the textbook of economics, competitive market drives out rents to achieve the most efficient outcome. Keynes, Mayer, Stiglitz and above conjecture of this paper challenge this view.

Choosing financial system

We need to closely examine these issues to properly accomplish the purpose of stabilizing the financial system. If there is no plague of short termism within the capital market, it is not necessary to return to old circumstances. We will not experience the second financial crisis which lasts longer. If so, other countries, not only Japan, will also face the dramatic fluctuation of the economy.[31] In order to overcome this problem, we need a policy which expands the length of horizon of investors.

This paper provides little evidence to solve this problem. Empirical investigation of the hypothesis is a future task. This paper contributes to provide evidence, which suggests the existence of plague. The problem might not be a mechanism, but it might have a significant impact on the economy.

Finally, it might be important to draw attention to the role which the government should play concerning a long-term relationship. The government should carefully choose the policy for private institutions. Even if the government concludes that it is important to promote long-term investment, they should not commit to lowering the cost of such investment directly, of course. In particular, committing to bailout distorts the incentive of private institutions inefficiently, whether the investment horizon is long or short. Even if private institutions build a long-term relationship each other, the government should not build such relationship with private sectors. The limited role of the government to play is to construct the rules promoting long-term investment, such as the restriction on the abrupt increase in credit, competition restriction, and entry restricting regulation.

[31] This paper was written before the world financial crisis began in 2008.

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