

Effects of the Bankruptcy Laws Reform on Banks: The examination of recent Japanese experience*

Sumio Hirose

Associate Professor, Shinshu University

Abstract

Making the legal system more advantageous to debtors could contribute to improvement in efficiency. For example, under DIP, the existing management team would be allowed to remain and obtain incentives to start the reconstruction of their companies through bankruptcy proceedings before the company's value is significantly damaged. On the other hand, the revisions favorable to debtor could incur inefficient outcome. The revisions, favorable to debtors, could be unfavorable to creditors. It subsequently could reduce the amount expected to be recoverable by financial institutions upon bankruptcy. Consequently, the revisions could make financial institutions more reluctant to lend.

This paper attempts to examine whether the above possible effects are caused by the recent reform of the bankruptcy laws in Japan, focusing especially on the introduction of the Civil Rehabilitation Law. The reform was intended to encourage reconstruction of distressed firms. For this purpose, the Civil Rehabilitation Law applies the provisions supporting incumbent managers to stay in business at the expense of creditors' benefits.

Firstly, the possibility of the efficiency improvement is analyzed using the technique of an event study, focusing on the share price changes of main banks of bankrupt firms at the time when legal procedures were applied for. Secondly, the possible inefficient effect is examined by comparing borrowing amounts from financial institutions before and after the enforcement of the Civil Rehabilitation Law.

The results of the event study show that applications for legal bankruptcy procedures had a significant negative impact on share prices before the enforcement of the Civil Rehabilitation Law. After the Law came into effect, however, the negative impact on the share price of main banks is no longer observed, therefore, the market did not necessarily perceive of filing legal reorganization as a negative factor any more. Moreover, after the second half of FY2001, applications for legal bankruptcy procedures turned to a significantly positive impact on the share price of the main banks. This was when the Financial Services Agency made bank inspections more rigor than before. Particularly, they carefully inspected lending to large borrowers, which could have an impact on the soundness of main banks. At least, the main banks enjoy the effects of improved efficiency caused by the revisions of bankruptcy laws together with more rigor bank inspections by the supervisory authority. On the other hand, the comparison of

* This article is based on a study first reported in the Hirose (2006), 'Tousan Shori Housei no Kaikaku to Kinyuu Shisutemu', *Financial Review*, Vol.86, pp.44-69 (in Japanese).

corporate borrowing from financial institutions before and after the enforcement of the Civil Rehabilitation Law shows a decrease in ratios of borrowing amounts from financial institutions against total debt amounts, mainly among smaller firms with a capitalization of 10 million to 1 billion yen. Thus, it is possible that lending by financial institutions has become passive.

In this way, the amendments to bankruptcy proceeding legislation led conflicting effects. Therefore, the system needs to be designed in awareness of this kind of trade-off.

I. Introduction

In Japan, the reform of the bankruptcy laws was made recently. The representatives are the enforcement of the Civil Rehabilitation Law in April 2000 and the amendment of the Corporation Reorganization Law in 2003. The Civil Rehabilitation Law is strongly influenced by procedures in Chapter 11 of the US Bankruptcy Code, and is expected to guarantee the effectiveness of corporate reconstruction.

The revisions were motivated by necessities to reconstruct a lot of financially distressed firms in a quick and efficient manner¹. After the collapse of the Bubble Economy, Japanese economy was affected by a serious economic slump in 1990s. During the depression, many firms fell into financial distress and a spate of corporate bankruptcies further aggravated the condition of the economy. Representatively, a number of bankruptcies damaged the soundness of financial institutions. Accordingly, banks' lending activities did not function properly. Such nonperforming loan problems disturbed much more corporate activities.

According to reports by Teikoku Databank, Ltd., one of Japanese credit agencies, the number of bankruptcies with debts amount of more than 10 million yen was 20,052 in FY 2001, the second highest level since 1966² is as shown in Table 1.

In the wave of corporate bankruptcies in 1990s, it was pointed out that Japanese bankruptcy laws were obstacle to efficient corporate restructuring. The criticism was one of the primary engines to promote the above reforms of the bankruptcy laws.

As mentioned above, the Civil Rehabilitation Law is representative of the reforms. The Civil Rehabilitation Law was enacted in 2000 in order to substitute for the Composition law. The composition law was designed to help financially distressed small firms emerge from bankruptcy. However, this law had been criticized for having some serious shortcomings to promote efficient restructuring of distressed firms. Therefore, devices to improve shortcomings of the Composition law were incorporated in the Civil Rehabilitation Law³. For example, the requirements to file bankruptcy protection were eased. The approval requirements for proposed

¹. In order to encourage reconstruction of distressed firms, the government implemented several measures other than the reform of bankruptcy laws. In September 2001, the guideline for private workout was formulated. The guideline is intended to encourage efficient private workouts. Furthermore, the Industrial Revitalization Corporation of Japan (IRCJ) was established in April 2003. The assignment of IRCJ was to help banks clear nonperforming loans and to support financially troubled firms under reconstruction.

². The bankruptcy cases reported by Teikoku Data include not only the cases filed under the law but also the cases of suspension of bank transaction and of private liquidation.

³. The details are given in Section 3.

reorganization plans were also relaxed.

Consequently, the number of filing bankruptcy protection markedly increased after the enactment in 2000. According to the above Teikoku Data report, as far as bankruptcies with debt amounts of more than 10 million yen, the number of filing the Composition law from fiscal 1994 to fiscal 1999 is merely 1,197 cases. Under the Civil Rehabilitation Law, the number of cases from fiscal 2000 to fiscal 2005 is 4,697 as shown in Table 2 and Table 3.

Then, what effects could the reform of the bankruptcy laws brought on banks? The legal system for bankruptcy proceedings includes various rules that restrict the rights of creditors during the process of bankruptcy proceedings. Since any alterations to these rules would change the incentives for those involved in bankruptcy processing, the alternation would also shift the stance on legal bankruptcy procedures. Furthermore, the system amendments should change the expected results of legal bankruptcy procedures, namely, the expected payments to creditors from the bankrupt firms. Therefore, the amendments could affect lending behaviors of financial institutions (i.e. the main creditors).

This paper reviews what role the bankruptcy law could perform in corporate reconstruction in Section 2. In Section 3, we introduce the development of the bankruptcy law in Japan. Finally, in Section 4, we examine the effects on banks caused by the recent reform of the bankruptcy law in Japan. Section 5 concludes the paper.

Table 1 The Trend in Bankruptcy in Japan

Fiscal Year	The Number of Bankruptcy Case		The Aggregate Indebtedness of Bankruptcy Case	
		year-to-year percentage change (%)	(¥ million)	year-to-year percentage change (%)
1966	6,492	16.1	416,882	▲ 5.8
1967	9,232	42.2	615,075	47.5
1968	9,455	2.4	697,734	13.4
1969	8,432	▲ 10.8	571,638	▲ 18.1
1970	10,001	18.6	771,415	34.9
1971	8,596	▲ 14.0	621,747	▲ 19.4
1972	6,926	▲ 19.4	470,606	▲ 24.3
1973	9,389	35.6	897,007	90.6
1974	11,736	25.0	1,687,914	88.2
1975	13,223	12.7	2,077,850	23.1
1976	16,603	25.6	2,409,381	16.0
1977	17,987	8.3	3,234,927	34.3
1978	15,409	▲ 14.3	2,044,519	▲ 36.8
1979	16,535	7.3	2,358,106	15.3
1980	18,212	10.1	2,862,302	21.4
1981	17,397	▲ 4.5	2,456,488	▲ 14.2
1982	17,351	▲ 0.3	2,354,162	▲ 4.2
1983	19,959	15.0	2,897,659	23.1
1984	20,363	2.0	3,451,155	19.1
1985	18,319	▲ 10.0	4,340,488	25.8
1986	16,886	▲ 7.8	3,503,026	▲ 19.3
1987	11,853	▲ 29.8	1,857,647	▲ 47.0
1988	9,415	▲ 20.6	1,879,421	1.2
1989	6,653	▲ 29.3	1,146,337	▲ 39.0
1990	7,157	7.6	3,500,007	205.3
1991	11,767	64.4	7,773,783	122.1
1992	14,441	22.7	7,445,738	▲ 4.2
1993	14,019	▲ 2.9	6,650,228	▲ 10.7
1994	14,164	1.0	6,374,603	▲ 4.1
1995	15,006	5.9	8,417,043	32.0
1996	14,859	▲ 1.0	9,189,624	9.2
1997	17,439	17.4	15,120,314	64.5
1998	17,497	0.3	15,182,023	0.4
1999	16,887	▲ 3.5	11,261,099	▲ 25.8
2000	18,926	12.1	25,981,206	130.7
2001	20,052	5.9	16,140,896	▲ 37.9
2002	18,928	▲ 5.6	13,309,993	▲ 17.5
2003	15,790	▲ 16.6	10,687,839	▲ 19.7
2004	13,276	▲ 15.9	7,042,868	▲ 34.1

from TDB Bankruptcy Report by Teikoku Databank

The bankruptcy cases reported by Teikoku Data include not only the cases filed under the law but also the cases of suspension of bank transaction and of private liquidation.

Table 2 The Trend in the Number of Each Bankruptcy Procedure

Fiscal Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
The Corporate Reorganization Law	13	17	16	27	50	45	15	67	22	66	21	17
The Corporate Arrangement	25	31	22	11	18	8	0	2	6	0	0	2
The Civil Rehabilitation Law							754	992	902	829	615	603
The Composition Law	160	161	179	254	271	172	3					
The Bankruptcy Law	1,493	1,605	1,775	2,164	2,527	2,317	3,203	4,484	5,297	5,350	4,980	7,762
Special Liquidation	48	64	65	93	135	275	272	255	315	258	271	373
suspension of bank transaction and private liquidation	12,425	13,128	12,802	14,890	14,496	14,070	14,679	14,252	12,386	9,287	7,389	
Total	14,164	15,006	14,859	17,432	17,497	16,887	18,926	20,032	18,928	15,790	13,276	8,760

from TDB Bankruptcy Report by Teikoku Databank

Table 3 The Year-to-year Percentage Change of Each Bankruptcy Procedures

Fiscal Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	%
The Corporate Reorganization Law	▲ 62.9	30.8	▲ 5.9	68.8	85.2	▲ 10.0	▲ 66.7	346.7	▲ 67.2	200.0	▲ 68.2	▲ 19.0	
The Corporate Arrangement	0.0	24.0	▲ 29.0	▲ 50.3	63.6	▲ 55.6	▲ 100.0	-	200.2	▲ 100.0	-	-	
The Civil Rehabilitation Law								31.6	▲ 9.1	▲ 8.1	▲ 25.8	▲ 1.6	
The Composition Law	▲ 40.3	0.6	11.2	41.9	6.7	▲ 36.5	▲ 98.3						
The Bankruptcy Law	7.2	7.5	10.6	21.9	16.8	▲ 8.3	38.2	40.0	18.1	1.0	▲ 6.9	55.9	
Special Liquidation	118.2	33.3	1.6	43.1	45.2	103.7	▲ 1.1	▲ 6.3	23.5	▲ 18.1	5.0	37.6	
suspension of bank transaction and private liquidation	1.2	5.7	▲ 2.5	16.3	▲ 2.6	▲ 2.9	4.3	▲ 2.9	▲ 13.1	▲ 25.0	▲ 20.4		

from TDB Bankruptcy Report by Teikoku Databank

II. What role the bankruptcy law could perform

III. Ex post efficiency in bankruptcy procedures

It is well known that debt contract play an important role to discipline corporate managers. Aghion and Bolton (1992) pointed out the importance of debt contracts as disciplinary devices. Default on obligation triggers transfer of control right on the firm from the incumbent managers to their creditors. If the managers fail to make adequate efforts to earn a profit which is indispensable to fulfill their repayment obligations, they are unable to repay their debt. In a sense, they would face an event of default and would be removed from their positions. Therefore, managers would devote enough managerial efforts to avoid default for fear of dismissal and other likely drawbacks.

However, in the event of actual bankruptcy, control right is seldom transferred automatically to creditor as is assumed in the theoretical model. One reason is that bankruptcy laws have the provisions allowing incumbent managers to stay in business. Such a bankruptcy procedure is called Debtor in Possession, in short, DIP which is stipulated in Chapter 11 of U. S. bankruptcy law (hereinafter called Ch. 11), or the Civil Rehabilitation Law in Japan.

Furthermore, Ch. 11 permits the absolute priority rule violation. When the absolute priority rule is applied to the bankruptcy procedure, repayment from bankrupt firms is made in descending order of seniority of credit. As a matter of course, creditors are senior than shareholders. So, if liabilities of the bankrupt firms exceed the assets, all would be distributed to the creditors, and nothing would be left to be paid to the shareholders. However, if the absolute priority rule is violated in the process of bankruptcy, the shareholders could get something, although the amount paid to the creditors would be less than aggregate liability of the bankruptcy firm.

In sum, the creditors do not necessarily obtain control right of a bankrupt firm, and they may be infringed on their rights as creditors. Put it another way, bankruptcy laws could exert an influence on the outcome of a negotiation between a bankrupt firm and their creditors.

As noted above, there are provisions favorable to managers of bankrupt firms. Several studies allege that such provisions improve efficiency in restructuring bankrupt firms. Those studies focus on what actions managers would take when their firm is on the brink of bankruptcy.

If the bankruptcy procedure is performed pursuant to the absolute priority rule, incumbent managers and shareholders would get nothing. On the other hand, there might be chances of recovery from distressed conditions, if the distressed firm avoid default in any way and survive. Thus, for purposes of avoiding default, they would make every effort which would violate the value of their firm.

In order to secure funds to pay their debt, they could sell out their inventories at far below cost, or divest essential assets. Otherwise, they could gamble on some risky attempts to get over the difficulties. Then, they wait and pray for recovery.

In the aim of escaping from distressed situations, managers are willing to take a risk instead of filing bankruptcy, even though such an action will further aggravate the condition. Conversely, if it is tolerated to violate the absolute priority rule, managers' risky behaviors could be reduced.

Gertner and Scharfstein (1991) point out such a favorable characteristic of bankruptcy laws. In addition, they insist that the provisions favorable to debtor firms could reinforce the debtors' bargaining power against their borrowing banks. This effect would enable the distressed debtors to secure necessary funds to make some valuable investment.

Besides, Berkobitch and Israel (1998) show that favorable treatment for distressed debtors in bankruptcy laws could cultivate managers to file bankruptcy earlier. Managers' wait and pray strategy would deteriorate the financial condition further. Considering that managers' behavior to avoid default would deteriorate their firms' condition further, it is desirable to file bankruptcy as soon as they face financial difficulties and to enter negotiation with their creditors to seek a way to recovery, instead of postponing bankruptcy procedures with the hope of recovery by good fortune.

However, if the bankruptcy procedure is performed pursuant to the absolute priority rule, managers of distressed firms have little incentives to filing bankruptcy because they would get nothing in the bankruptcy procedures. To induce them file bankruptcy earlier, there should be some incentives. Violating the absolute priority rule or employing DIP procedure could function as such incentives.

II.2. The possible effect to impair the disciplinary function of debt contracts

On the other hand, such incentive devices could harm the disciplinary effects brought by debt contracts. Bebchuck (2002) criticizes that those devices would invite moral hazard of managers because they would reduce threats to bankruptcy. Jensen (1989) appeal that Chapter 11 would spoil managers incentives to run a business adequately since they could stay in their positions and could secure certain benefits even though they fall into default. He also insists that bankruptcy procedures should not be uniformly set out by laws but should be differently

stipulated in each contract depending on specific characteristics of parties concerned.

There is another serious problem caused by favorably treated debtor in the bankruptcy procedures. If bankruptcy laws allow the absolute priority rule violation, creditors could get fewer amounts than they should expect. Additionally, under DIP, creditors would not conquer a control right of the bankrupt firms so that they could arbitrarily formulate a corporate restructuring plan. Such unfavorable treatments for creditors would discourage them from lending actively and make banks reluctance to lend. This problem would have more serious effects on small firms because they have few alternative ways to raise fund other than borrowing from banks. Consequently, small firms would face banks' reluctance to lend.

Scott and Smith (1986) empirically examine such effects focusing on the Bankruptcy Reform Act of 1978 in U.S. The reform contains several provisions that treat debtor more favorably than before and can affect the cost of producing loans for financial intermediaries. They suppose that the additional monitoring and expected foreclosure costs imposed by the change in the bankruptcy laws should be passed on to the borrower in a competitive lending market. Using survey data from a sample of small business loans from commercial banks, it provides the evidence that the enactment of the new law resulted in higher contract rates of interests.

Berkowitz and White (2002) also investigate effects caused by favorable treatment for debtors. Specifically, they test how personal bankruptcy laws would affect small firms' access to credit. They focus on differences of the exemption level between the states. When a firm is unincorporated, its debts are personal liabilities of the firm's owner, so that lending to the firm is legally equivalent to lending to its owner. If the firm fails, the owner has an incentive to file personal bankruptcy, since the firm's debts will be discharged. The higher is the exemption level, the greater is the incentive to file bankruptcy. They find that if small firms are located in the states unlimited rather than low homestead exemptions, they are more likely to be denied to credit. When loans are made, they are smaller and interest rates are higher.

As for Japan, Seshimo and Yamazaki (2004) indicated that there have been lots of cases of the absolute priority rule violation through abuse of tenancy for a short term in Japan.

Based on these observations, they theoretically show that the possibility of the abuses makes banks reluctant to lend.

Yanagawa, Hirose and Akiyoshi (2007) point out that bankruptcy laws would weaken the disciplinary effects of debt contracts and consequently lead moral hazard of managers. Moreover, they insist that the weakening effects would make banks reluctant to lend.

Povel (1999) describes optimal bankruptcy laws in a framework with asymmetric information. His key idea is that the financial distress of a firm is not observed by its lenders for quite a while. Given that early rescues are more efficient than late rescues, it would be desirable for the creditors to forgive debts by bankruptcy, to put it plainly violation of the absolute priority rules or DIP procedures, thereby inducing the distressed debtors to reveal their difficulties as early as possible. That is "ex post" efficiency enhancement effects brought by favorable treatment for distressed debtors. On the other hand, it is true that the absolute priority rules are helpful from the view point of the disciplinary effects through debt contract. Therefore, bankruptcy laws should be designed in consideration of the trade-off between the conflicting effects.

III. Japanese bankruptcy laws and its operation

III.1. Problems of the system before the reform

In Japan, before the enforcement of the Civil Rehabilitation Law in April 2000 and the amendment of the Corporate Reorganization Law in 2003, most financially distressed firms had been usually reconstructed or liquidated through private workouts under the control of their main banks. It had been rare cases to file bankruptcy under the bankruptcy laws at the initiative of bankrupt firms themselves. It was virtually left to main banks to decide to keep bankrupt firms in business or liquidate them⁴. Some Japanese attorneys have criticized that the reason could be attributed to the way to administer the bankruptcy laws by Japanese courts.

The Corporation Reorganization Law is designed to be effective in reconstructing distressed large firms⁵, and is seemed the most pro-debtor system. It involves provisions that protect bankrupt firms from their creditors. For example, it restricts secured creditors to foreclose in order to avoid important and essential business properties being scattered and lost. However, those favorable treatments for distressed debtors at the expense of their creditors' rights had been a principal reason that Japanese courts had hesitated to accept bankruptcy petitions until the amendment of the law in 2003.

Japanese courts concerned about criticisms for permitting wicked debtors to abuse privileges granted by the Corporation Reorganization Law. Therefore, the courts had seldom permitted a bankruptcy protection except for the few cases filed by the large and well-known firms, reconstruction of which would preserve employment, prevent chains of bankruptcies and consequently obtain public consensus to support the bankrupt firms under the Corporation Reorganization Law.

Additionally, the courts also hated being criticized for failure of reconstructions, in which the courts allowed bankrupt firms to enjoy bankruptcy protections. So, their concern deprived bankrupt firms without surefire restructuring measures a chance of access to bankruptcy protections under the bankruptcy laws. For instance, the courts required a bankrupt firm to obtain full support from its main-bank as a prerequisite for enjoying bankruptcy protections.

The Composition law was designed to mainly facilitate rehabilitation of financially troubled small firms in a smooth manner, while the Corporation Reorganization Law was intended to reconstruct a rather large firm successfully. The Composition law had the same problems as the Corporation Reorganization Law, which is that the courts' hesitation to allow bankrupt firms to enjoy bankruptcy protections and aversion to failure of reconstruction with protections from creditors under the law. For example, it was often pointed out that, under the Composition law, the conditions under which a company could seek bankruptcy protection from creditors were too strict to file.

⁴. Helwege and Packer(2003) empirically examine whether close bank-firm relations (*keiretsu*) mitigate the negative consequences of a bankruptcy regime without Chapter 11-type protections for management. They assume that creditors control the fate of the bankrupt firm in Japan, which may be costly if managers destroy firm values to avoid bankruptcy or, alternatively, if creditors liquidate too often. The results of their analysis show that bankrupt firms affiliated with *keiretsu* (group) banks are neither subject to excessive liquidation by overly powerful banks nor slower to be liquidated. Moreover, they found that *keiretsu* banks liquidate via the courts often, perhaps to avoid political repercussions and organized crime.

⁵. The Corporate Reorganization Law applies only to joint-stock corporations, while the Civil Rehabilitation Law covers all type of companies

As a result, distressed firms could not file bankruptcy until they fell into excessively serious financial condition and stood little chance of recovery.

Additionally, unlike the Corporate Reorganization Law, the Composition law did not regulate repossession by creditors. This means that when crown jewels of bankrupt firms had been offered as collateral, disposition of those was at the mercy of creditors although those were essential to stay in business.

Therefore, there was no alternative but for bankrupt firms to reconstruct their business through private workout under the supervision of their main banks in Japan. Consequently, it was indispensable for bankrupt firms to obtain consensus of their main banks for reconstruction and was next to impossible to seek ways of revivals by their own initiatives without the consent of the banks. In some cases, the main banks might force liquidation of the bankrupt firms at convenience of the banks even though the going concern value exceeds the liquidation value. There was nothing the bankrupt firms could do.

III.2. The unattractive system not only for debtors but also for creditors

Considering what mentioned above, Japanese courts seemed to excessively emphasize prevention of abuses of bankruptcy protections under the bankruptcy laws. However, it is not necessarily the case that the courts had placed more emphasis on benefits of creditors as their stance. Because of the courts' excessive consideration for ensuring success in reconstruction with bankruptcy protections, they obliged creditors to make significant concession, specifically, to forgive substantial portion of their claims.

Yanagawa, Hirose, and Akiyoshi (2007) point out that Japanese banks hesitated to agree with their financially distressed borrowers about filing bankruptcy under the bankruptcy laws because they would have been forced to write off a certain amount of their claims. For example, how were collateralized-loans treated in bankruptcy proceeding under the bankruptcy laws? The amount which creditor could recover as their secured claims was limited to value of assets offered as collateral. In evaluating the value, the going concern value of bankrupt firms was counted. The going concern value was determined by considering earning of a few years preceding the filing for bankruptcy protection.

As a matter of course, earnings to precede bankruptcy are usually not so good. Consequently, the going concern value should be evaluated too low, and then banks recovered a slight amount of their claims although their claims were secured. Banks needed to prepare themselves for horrendous losses when their borrower filed bankruptcy under the Corporate Reorganization Law or the Composition law.

Judging from the above, reconstruction under the Corporate Reorganization Law or the Composition law was unlikely to be attractive both to creditors (banks) and to debtor firms. In addition, banks' reluctance to force its troubled borrower to file bankruptcy might cause inefficient lending practice. As mentioned above, a bank were reluctant to force its troubled borrower to file bankruptcy, since a bankruptcy proceeding under the bankruptcy laws would entail serious losses on the bank's balance sheets. The banks' reluctance should be one of their motivations to extend additional credits to their troubled borrowers in order to avoid defaults, even though it should be desirable to begin reconstruction through a bankruptcy procedure under the bankruptcy laws. This unfavorable lending practice is commonly known as forbearance lending. Such a practice would allow incumbent managers of troubled firms to

stay and would hinder drastic management reforms or restructuring efforts although incumbent managers were the principal cause of bankruptcy.

Peek and Rosengren (2005) made one of the representative empirical studies confirming the practice of forbearance lending by major Japanese banks during the 1990s. They show that troubled Japanese banks allocated credit to severely impaired borrowers primarily to avoid the realization of losses on their own balance sheets. Hosono and Sakuragawa (2003) also point out that bank managers have an incentive to disguise true losses by extending bad loans to poorly performing borrowers.

Occasionally, the extent of borrowers' financial distress is so acute that mere forbearance lending is not enough to avoid their bankruptcy. In such cases, banks reduce the debt burdens through debt restructuring, in which the lending banks suffer a reduction in interest payments and principal. This is termed as debt forgiveness.

Akiyoshi and Hirose (2006) examine the evidence of the inefficient practice in debt forgiveness in Japan by applying an event study methodology to private workout cases with debt forgiveness for the period from January 1993 to January 2004. They assume that a bank would make concession to its troubled borrower as it fears the borrower files bankruptcy and then it suffers from serious loss. As a result, the parties would reach a debt relief agreement in a manner favorable to the borrower but unfavorable to the main bank. Specifically, a bank reduces the debt burden of its distressed borrower to the extent that the borrower survives temporarily, instead of implementing the necessary practices for the successful reorganization, in order to avoid incurring severe damage to the lending bank's balance sheets. Such inefficient debt restructuring would transfer a portion of risks against additional financial loss from the debtor to its main bank.

The result of their study shows that, in the case where the main bank's risk exposure to the debtor was high, the share price of the debtor significantly increased and that of the main bank significantly decreased upon the debtor's request for debt forgiveness. This indicates that the market is already anticipating that a debt relief agreement would be reached in a way favorable to the shareholders of the debtor in the form of transferring portions of risks against additional future loss from the debtor to its main bank.

Hoshi and Kashyap (2008) describes how Japanese banks often engaged sham loan restructurings that kept credit flowing to otherwise insolvent borrowers. They call such borrowers *zombies*. They insist that this Japanese banking practice had misallocated funds by keeping many insolvent firms in business. They emphasize that this phenomenon badly affected the macro economy, i.e., these inefficient zombie firms crowded out potentially profitable ones and worsened the macroeconomic stagnation. Caballero, Hoshi, and Kashyap (2004) empirically confirm that zombie dominated industries exhibited more depressed job creation and job losses, and lower productivity.

III.3. *The reform of the bankruptcy laws with an aim of encouraging efficient reconstruction*

In the previous decade, the Japanese economy has faced a severe crisis, so called 'lost decade'. In this period, lots of firms fell into a financially distressed situation. The situation brought about a massive amount of nonperforming bank loans and caused significant dysfunction in the financial system. Reconstruction of those distressed firms in a quick and efficient manner was considered to be one of policy issues to deal with non-performing loans and thus to recover the economy.

The reform of the bankruptcy laws was one of measures to facilitate the reconstruction of financially troubled firms. The reform was intended to give distressed firms incentives to file bankruptcy as soon as they faced financially difficult conditions. Delaying formal bankruptcy is known to be harmful to distressed debtor firms. Povel (1999) points out that “early rescues of a firm are typically cheaper than late rescues, and are more likely to be successful. Delays cause opportunity costs because the assets of the firm cannot be brought to their most efficient use.”

The reform began with the enforcement of the Civil Rehabilitation Law in April 2004. The law replaced the Composition Law, which is similarly designed to help small firms emerge from bankruptcy. It is well known that the law allows incumbent managers of bankrupt firms to remain in their positions and to begin a process of rehabilitation, so-called, Debtor in Possession (DIP).

Incidentally, the Composition Law, the preceding law of the Civil Rehabilitation Law, did not force incumbent managers to resign. However, there are several arrangements to ensure the feasibility of reconstruction for the purpose of mending the problems inherent in the Composition Law.

Firstly, as mentioned above, conditions under which a firm can seek bankruptcy protection from creditors are easier under the Civil Rehabilitation Law than in the Composition Law. Therefore, troubled debtors may seek a way of reconstruction before they fall into a serious financial condition, which allows early rescues.

Treatment of secured loans was other serious problem of the Composition Law. As we have mentioned, the Composition law did not regulate repossession by creditors. The only way to extinguish the security rights was clear off the secured debt. It was next to impossible for bankrupt firms.

To improve the situation, the Civil Rehabilitation Law stipulated the order for stay of attachment (injunction of foreclosure), and moreover, claim for extinction of security rights. The court should issue the order for stay as long as the order (injunction) will serve the general benefits of the all concerned creditors and the benefits of the secured creditors having rights in the property will not suffer unreasonable loss.

The intention of the order (injunction) is similar to ‘automatic stay’ in Chapter 11 of the U.S. Bankruptcy Code, to restrain secured creditors from foreclosing collateral which is essential for the bankrupt firm to stay in business. However, the order of stay needs the judgment from the court, and is not automatically issued as ‘automatic stay’.

The requirement for extinction of security rights is to pay amount of a current price of the asset offered as collateral. To pay the amount is usually expected to be easier than clearing off the debt secured by the asset⁶.

In addition, other important reform is relaxation of approval requirements for proposed reorganization plans compared to those in the Composition Law. The number of necessary affirmative votes is reduced from three quarters under the Composition Law to a majority of the total amount of the claims as to unsecured creditors.

Those contents of the reform should contribute to increase feasibility of reconstruction. Not only allowing DIP but also providing those amendments is expected to heighten expectations of successful reconstruction under the law and to encourage managers of financially troubled firms to file bankruptcy before the firms fall into unreconstructible conditions.

Following the enforcement of the Civil Rehabilitation Law, the revised Corporate Reorganization Law came into

⁶ In an actual bankruptcy procedure under the Civil Rehabilitation Law, it is rare for a bankrupt firm to ask court the above order (injunction) of stay or the extinction of security rights. Instead, they are used as bargaining tools in negotiation with secured creditors for concessions, for instance, to commit to make repayment of a secured claim by lengthy install repayment of secured claims in return for suspend of foreclosure.

force in 2003. The intent of the revised law is similar to that of the Civil Rehabilitation Law⁷.

For one thing, the requirement for commencement of reorganization proceeding was loosened. Before the amendment, a court had to detect feasibility of reconstruction of the debtor which filed bankruptcy under the Corporate Reorganization Law. If there seemed no prospect for the reorganization, the court should dismiss the petition. It is difficult for a court to judge whether there is a prospect for the reorganization because detecting feasibility of reconstruction of a certain bankruptcy firm is a problem of management and require business expertise. Therefore, a court had been overcautious about commencing reorganization proceeding and spend excessive lots of time to examine prospect for the reorganization. Consequently, it took a fair amount of time from bankruptcy filing to commence of proceeding.

The revised law has the requirements amended. A court has only to judge prospect for approval of proposed reorganization plan. The petition should be dismissed only when there is no prospect for the approval. The court is relieved a burden to make a decision requiring managerial expertise and is expected to issue a decision swiftly.

Besides, under the revised law, incumbent managers are allowed to engage in reconstruction as one of reorganization trustees appointed by a court as long as they are not responsible for any mismanagement⁸. The approval requirements for proposed reorganization plans are also relaxed in the amendment. For example, the number of necessary affirmative votes is reduced from a two-thirds majority to a majority of the total amount of the claims as to unsecured creditors.

According to a report released by Teikoku Databank the number of newly filing bankruptcy under the Civil Rehabilitation Law was 4,092 cases from April 2000, when the Civil Rehabilitation Law took effect, to March 2005⁹. The aggregate debt burden of those cases amounted to 25,115.2 billion yen. During that period, there were 86,972 bankruptcy cases including cases of suspension of bank transaction and those of private liquidation. The aggregate amount of debt totaled 73,162.8 billion yen. Therefore, the bankruptcy cases under the Civil Rehabilitation Law accounted for 4.7% in number and 34.3% in terms of debt amounts.

Other than the 4,092 cases, there were another 165 bankruptcy cases filed under the Civil Rehabilitation Law after going through other bankruptcy procedures. So, the total number of the cases during that period came to 4,257.

Teikoku Data bankruptcy report released in April 2005 showed that there were 2,841 cases, which is about two-thirds of total, the above 4,257 cases, gained court approval for carrying out their rehabilitation plans. Until the end of March 2005, 879 cases out of 2,841 got out of bankruptcy proceedings under the Civil Rehabilitation Law and returned to normal.

On the other hand, 920 cases gave up the ideas of reconstruction. These bankrupt firms which gave up their reconstruction under the Civil Rehabilitation Law, in principle, shifted to procedures for liquidation, likewise Chapter 7 bankruptcy under the U.S. Bankruptcy Code. The number of giving up exceeds those of successful reconstruction and seems too many slightly.

⁷. Under the Civil Rehabilitation Law, not only a small firm but also a large listed firm can file bankruptcy. However, a bankruptcy procedure under the Corporate Reorganization Law is seemed to be more efficient for a large listed firm. Firstly because, as mentioned before, it bind secured creditors. Moreover, it is allowed to change articles of incorporation, to redeem or to issue stocks, and to decide corporate divestiture, merger, establishment of a new company, or other important corporate actions without approval at a general meeting of stockholders. These provisions are desirable to implement reconstruction swiftly and effectively.

⁸. Until the revision, in principle, all incumbent managers had been forced to resign although there was no explicit provision.

⁹. As mentioned before, reports by Teikoku Data paid attention only to bankruptcy cases with more than 10million yen in debt.

The report interprets the point as follows. Based on the lessons and reflections from the above mentioned problems under the former Corporate Reorganization Law or the Composition Law, the court changed their attitude toward handling of filing bankruptcy from that with hesitation to allow bankrupt firms to enjoy bankruptcy protections under the law. Now, the court in principle allows bankrupt firms to enjoy bankruptcy protections under the laws and to seek to formulate corporate restructuring plans. Consequently, some seriously troubled firms could file bankruptcy even though it is hopeless for them to recover from financial difficulties. Therefore, we may say that the court's change in the overly cautious attitude is demonstrated by the fact that quite a number of bankrupt firms have given up their reconstruction after filing under the Civil Rehabilitation Law.

Hirose and Akiyoshi (2004) examined whether managers of financially troubled firms file bankruptcy at the earlier stage of financially distressed condition after the enforcement of the Civil Rehabilitation Law in April 2004. As mentioned above, one of the intentions of the Civil Rehabilitation Law is to give incentives to the managements of troubled firms to file bankruptcy before falling into unrecoverable state.

Specifically, they investigate length of time elapsing from suffering from a serious downturn to filing bankruptcy and compare changes of the length before and after the enforcement of the Civil Rehabilitation Law in April 2004. As a measure of serious downturn, they take an abnormal performance advocated by Barber and Lyon (1996)¹⁰.

As for sample firms filing bankruptcy before the enforcement of the Civil Rehabilitation Law in April 2004, they confirm a significantly negative averaged abnormal performance for the fiscal year preceding the event of bankruptcy by five years.

On the other hand, a significantly negative averaged abnormal performance among sample firms filing after the enforcement is confirmed for the fiscal year immediately before the year when the event takes places. In other words, before April 2000, it took about five years to file bankruptcy from experiencing significant deterioration of business conditions. On the contrary, after the enforcement of the Law, managers of financially troubled firms have filed bankruptcy just after the year when they suffered from serious downturns. They insist that the result of their study implies that, after the enforcement of the Civil Rehabilitation Law, the managers become to file bankruptcy earlier in the course of worsening business conditions.

Most Japanese practitioners engaging in bankruptcy procedures have impressions that the change of filing is attributed by DIP and the shift in the court's attitude toward handling of filing bankruptcy.

Yanagawa, Hirose, and Akiyoshi (2007) make an event study to examine an effect of the Civil Rehabilitation Law on behaviors of managers facing financial distress. As mentioned above, one of the intents on revising the bankruptcy laws is to ease conditions under which a company can seek bankruptcy protection from creditors. They assume that probability of filing bankruptcy should increase if the reform serves the purpose. During the process of the reform, if the market participants expected that the reform would actually bring such an effect, their expectations should also be reflected in stock prices of firms under threat of bankruptcy at that time, or in stock prices of candidates for bankrupt firms.

What effects would the increase of the probability of filing bankruptcy cause on stock prices of firms under threat

¹⁰. This is one of accounting-based measures of operating performance. Barber and Lyon (1996) suggest that the test statistics are only well specified when sample firms are matched to control firms of similar pre-event performance in cases where sample firms have performed either unusually well or poorly.

of bankruptcy? Filing bankruptcy usually harms shareholders' benefits in a form of capital reduction. When the debt amount of bankruptcy firm exceeds its total assets, the shareholders lose all their claims, while the managers might stay in their positions as DIP. They presume that the enactment of the reform bill should bring negative effects on stock prices of firms under threat of bankruptcy at that time.

As sample firms which were under threat of bankruptcy during the process of the reform, they pick up firms which actually filed bankruptcy after the enforcement of the Civil Rehabilitation Law in 2000 and examine changes of their stock prices during Diet discussion on the reform bill using an event study method. The result is as expected. They confirm a significantly negative impact on stock prices of the sample firms¹¹.

IV. Examining the impacts caused by the reform on banks

In this section, we show the results of our empirical studies relating to impacts brought by the reform of the bankruptcy laws in Japan. In our study, we paid attention to the impacts on banks. As noted above, the Civil Rehabilitation Law includes provisions favorable to debtors in order to reconstruct financially distressed firms in a quick and efficient manner, specifically, in order to give managers of distressed firms incentives to file bankruptcy as soon as they face financially difficult conditions. For example, under DIP, the existing management team could be given incentives to start the reconstruction of their companies through bankruptcy proceedings before the company's value is significantly damaged.

On the other hand, the revisions, which would give favorable treatments to debtors, could give unfavorable treatments to creditors and subsequently could reduce the amount expected to be recoverable by financial institutions upon bankruptcy. Consequently, the revisions could make financial institutions more reluctant to lend.

Therefore, we attempted an analysis on the effects caused by the introduction of the Civil Rehabilitation Law. Firstly, the possibility of the efficiency improvement was analyzed using the technique of an event study, focusing on the share price changes of main banks when legal procedures were applied for. The impact brought by the law is investigated by examining the difference of abnormal return between before and after the enforcement of the Civil Rehabilitation Law.

Secondly, the possible inefficient effect is investigated by examining the difference of borrowing amounts from financial institutions between before and after the enforcement of the Civil Rehabilitation Law using Financial Statements Statistics of Corporations by Industry¹².

IV.1. *The possibility of the efficiency improvement of reconstruction for banks*

Making the bankruptcy laws more advantageous to debtors could bring two opposite effects on banks which are

¹¹. They also investigate the effect caused by the reform using other sample firms. As candidates for bankrupt firms during Diet discussion on the reform bill, they take firms which received the debt waiver after the enforcement of the Civil Rehabilitation Law in 2000. The result is unchanged. Therefore, the negative impact caused by the reform prevailed in all firms under threat of bankruptcy at that time. After the enforcement of the law, some of them actually filed for bankruptcy and others received debt forgiveness in the process of private workout.

¹². The statistics are compiled by the Policy Research Institute.

main creditors of bankrupt firms. One is a negative effect caused by enhanced bargaining power of debtors. Under the bankruptcy law which is favorable to debtors, a bank should be forced to make a concession.

On the other hand, there might be a positive effect brought by improvements of efficiency in bankruptcy procedures. Giving favorable treatments to debtors could encourage managers to file bankruptcy as soon as they face financially difficult conditions. Filing before their firms fall into serious financial conditions would contribute to an increase in gains from bankruptcy procedures and therefore to an increment in recoveries of credits¹³.

The above possible negative effect may be trivial. As we have mentioned before, a court had obliged creditors to make significant concession, specifically, to forgive substantial portion of their claims in order to ensure success in reconstruction with bankruptcy protections. That could mean that the banks always have weak bargaining power in bankruptcy proceedings under the law even before the reform.

In the meantime, a magnitude of the possible positive effect might vary depending on banks. When a bankrupt firm is a major borrower of a bank, the degree of improvement brought by filing earlier could be greater. Namely, the larger loan outstanding a bank hold, the higher the degree of improvement would be in the form of an increase in an amount the bank could recover through bankruptcy proceedings. Then, in the case of a major borrower, the positive effect could exceed the negative effect. So, restricting our attentions to bankruptcy cases of major borrowers, we should confirm the positive impact on stock prices of banks at the time of filing bankruptcy.

In the fact follows, we show results of an event study focusing on changes in stock prices of bankrupt firms' main banks at the time of filing bankruptcy and compare differences in the market responses to filing before and after the enforcement of the Civil Rehabilitation Law.

IV.1.1. Data Description

In our study, we apply a standard event study methodology using daily stock price data. We calculate the expected return using the market model which assumes a stable linear relation between the market return and the security return¹⁴. The estimation window to estimate the parameters of the market model ranges from 116 trading days before the event day, to 11 trading days before the event day. The Tokyo Stock Exchange Stock Price Index (TOPIX) is employed as a market index.

We define a date of filing bankruptcy as an event day. Sample events are identified from TDB Bankruptcy Report by Teikoku Databank¹⁵. We pick up bankruptcy cases filed by listed companies from January 1997 to August 2004. Among those, as sample cases, we employ 84 cases in which daily stock prices data of bankrupt firms' main banks is available. A date of filing is identified by use of NIKKEI TELECOM 21, one of Japanese newspaper article retrieval services. We perceive a main bank of a bankrupt firm as one satisfying following two criteria in an accounting

¹³. The improvement of the availability of bankruptcy procedures under the Bankruptcy Laws could contribute to the increase in benefits for a main bank of a bankrupt firm. In Japan, it was assumed to be a matter of course that a main bank of a bankrupt firm should incur a greater share of loan loss than other banks would bear. Therefore, when a bankruptcy case was settled out of court, the main bank of the bankrupt firm had to bear a significantly larger share of total losses although the amount that main bank lend accounted for a much smaller share in the total amount borrowed by the bankrupt firm. On the other hand, in bankrupt proceedings under the law, creditors share the burden in proportion to the share of their claims in the total claims.

¹⁴. An event study methodology using a market model is detailed in MacKinlay (1997).

¹⁵. We include not only bankruptcy cases filed under the Civil Rehabilitation Law but also those filed under all other bankruptcy laws, such as the Corporate Reorganization Law, the Bankruptcy Law which is similar to Chapter 7 in U.S. Bankruptcy Law, and so on.

report in the year just before the year when the firm files bankruptcy. One is having the largest share in a loan outstanding of a bankrupt firm. The other is having the largest shareholding ratio among banks.

For capturing the impact of the event, it is usual to employ the standard two-day event window (the event day and the day after the event day). Sometimes, the market reaction to an announcement appears after the date of the announcement because the announcement is made after 3 p.m. For this reason, in order to capture the event's impact, we should examine the two-day event window from the date of filing to the date after the event day.

As we have mentioned before, we pay attention to examine if the impact caused by filing differs depending on whether the bankruptcy firm is a major borrower. For differentiating bankruptcy cases of a major borrower from other cases, we calculate the following risk exposure ratio for each main bank j to a bankrupt firm k :

$$\text{Exposure ratio}_{jk} = \frac{\text{the main bank } j \text{'s lending amount to the bankruptcy firm } k}{\text{the main bank } j \text{'s holding amount of capital}}$$

The main bank's lending amount means the total lending amount as reported for the fiscal year immediately prior to that in which the event (i.e. filing bankruptcy) happens. The main bank's holding amount of capital is the amount of capital that the Basel Capital Accord permits counting in and is reported for the fiscal year immediately prior to that in which the event take place. We divide each sample into two subsamples based on this ratio: higher risk exposure cases in which the ratio is higher than the median of each sample, and lower risk exposure cases in which the ratio is lower than the median.

Sources of data on bank and borrower characteristics, including the main bank's lending amount to the bankruptcy borrower, are taken from Nikkei financial quest and "eol DB" tower service.

In Table 4, we document the characteristics of our sample bankrupt firms. Statistics on the amount of assets and the amount of sales show that the mean value of the bankrupt firms filing before 2000 are larger than that after 2000. The mean value of above risk exposure rate is also higher for the bankrupt firms filing before 2000¹⁶.

Table 4 The Characteristics of the Bankrupt Firms: Comparing before and after the Enforcement of the Civil Rehabilitation Law

	Bankrupt Firms Filing Before April 2000		Bankrupt Firms Filing After April 2000		Bankrupt Firms Filing After September 2001	
	mean	standard deviation	mean	standard deviation	mean	standard deviation
The Amount of Assets (million yen)	123897.1	149478.7	84964.9	211784.7	91383.6	224843.4
The Amount of Sales (million yen)	104879.5	179082.8	63894.0	143815.3	67649.5	152404.1
The Number of Sample Cases	23		57		50	
The Risk Exposure ratio of The Main Bank	0.025	0.039	0.015	0.036	0.017	0.039
The Number of Sample Cases	23		50		42	

¹⁶ We try t-test to examine the difference in the mean values between before and after 2000. For each statistic, the difference of the statistics is not significant.

IV.1.2. *The results on the event study*

IV.1.2.1. *Examining the difference in the market response before and after April 2000*

Table 5 shows the results on the event study. In the case of whole 84 sample firms, any significant abnormal return is not observed.

However, when we divide this sample into two subsamples based on whether the bankruptcy case is filed before or after the enforcement of the Civil Rehabilitation Law, we find different aspects of the impact caused by filing bankruptcy. As for the 24 cases filed before the enforcement of the law, the average abnormal return for the event day (filing day) is -1.614%, which is a significant difference from zero at the 1% level (t -statistic = -3.138¹⁷). Focusing on the two-day event window from the event day to the following day, the sample average abnormal return is -1.868%, which is significant at the 5% level (t -statistic = -2.537). The result means that the market participants regard that a borrower's filing bankruptcy would damage its main bank's corporate value before the enforcement of the Civil Rehabilitation Law.

On the other hand, as for the 60 cases filed after the enforcement of the law, we find no significant abnormal return. We should notice that, shortly after the enforcement, it should take some time to clarify the impact of the reform partly because actual operations of the law would be revealed not by specific provisions in the law but by actual decisions of a court.

Considering that, we restrict the sample cases to the 52 cases filed after September 2001. The result of the study using this restricted sample shows the positive effect is caused on the stock price of the main banks of the bankrupt firms. The abnormal return for the event day is 0.895% (t -statistic = 2.455) and that for the two-day event window from the event day to the following day is 1.246% (t -statistic = 2.204). Both are significant at the 5% level. The result could suggest that there is a positive effect brought by improvements of efficiency in bankruptcy procedures in the form of filing before bankrupt firms fall into serious financial conditions.

However, there would be another factor which could bring a positive effect on the main banks of the bankrupt firms. In October 2001, Financial Services Agency (FSA) announced execution of Advanced-Reform Program. In that program, they revealed their policy to more closely supervise Japanese major banks in order to encourage handling of non-performing loans in the efficient and appropriate manner. Especially, through their bank inspection, FSA intended to urge the banks to assure proper handling of their borrowers which were suspected of being on the brink of bankruptcy.

Through tightening of asset assessments at major banks, they were under pressure to set aside adequate reserves to cover bad loans or write off non-performing loans. As a result, in the case where it should be desirable to begin reconstruction through a bankruptcy procedure under the bankruptcy laws, it became too expensive for major banks to extend additional credits to their troubled borrowers as forbearance lending, or to reduce the debt burdens through debt restructuring as debt forgiveness aiming at avoiding defaults.

¹⁷ t -statistic is calculated from standardized abnormal return of sample firms, and is asymptotically standard normal. We can test the null hypothesis using t . If the event has no impact on the behavior of security prices, we would expect that t is not significantly different from zero. For further details, see MacKinlay (1997).

Then, major banks made positive use of bankruptcy proceedings under the reformed bankruptcy laws under the intense pressure from FSA to write off non-performing loans. As we have mentioned, the reformed laws were expected to function more smoothly and efficiently than before.

What it comes down to is that FSA's policy to more closely supervise Japanese major banks, coupled with the reform of the bankruptcy laws, brought improvements of efficiency in bankruptcy procedures, such as the form of filing before bankrupt firms would fall into serious financial conditions.

IV.1.2.2. Considering the bankruptcy cases of major borrowers

Next, we examine the impact of exposure levels on the magnitude of the main bank's stock price change. As mentioned before, when a bankrupt firm is a major borrower, the degree of improvement brought by filing earlier could be greater, and the positive effect on its main bank could exceed the negative effect.

To confirm this point, we divide the sample firms into two sub-samples depending on the risk exposure ratio. The result for each sub-sample is shown in Table 6. Firstly, as for 36 cases with higher risk exposure rate, we confirm a negative effect on the stock prices of the bankrupt firms' main banks around the event day (the date of filing bankruptcy).

For example, for the three-day event window beginning the day before the event day and lasting until the day after it, the average abnormal return is -1.113%, which is significant at the 5% level (θ -statistic = -2.200).

Secondly, we divide this sub-sample with higher risk exposure ratio into two depending on whether filed before or after the enforcement of the Civil Rehabilitation Law. In the 15 cases before the enforcement, the abnormal return for the event day (filing day) is -2.691%, which is significant at the 1% level (θ -statistic = -4.382) and that for the two-day event window from the event day to the following day is -3.446%, which is also significant at the 1% level (θ -statistic = -3.631).

To the contrary, as for the 21 cases after the enforcement, we do not find any significant abnormal return around the event day. Additionally, considering what is argued in section 4.1.2.1, we restrict the cases in this sub-sample to the 18 cases filed after September 2001. The abnormal return for the day after the event day is 1.368%, which is significant at the 5% level (θ -statistic = 2.424) and that for the two-day event window from the event day to the following day is 1.653%, which is also significant at the 5% level (θ -statistic = 2.103).

On the other hand, Table 7 shows the results for the sub-sample with lower risk exposure ratio. We find no significant abnormal returns around the event day.

Regardless how to divide the sample cases, depending on whether filed before or after the enforcement of the law, the result remains unchanged.

The point is, as expected, that the shift in the effect on stock prices of main banks caused by the reform is more obvious in the cases of major borrowers which could severely damage the soundness of the banks.

IV.1.2.3. Focusing only on the laws aiming at reconstruction

(The Civil Rehabilitation Law and The Corporate Reorganization Law)

The sample cases of the above analysis include the cases filed for the purpose of liquidation, such as the cases filed under the Bankruptcy Law which is similar to Chapter 7 in U.S. Bankruptcy Code. In this section, we limit our attentions only to the cases filed for the purpose of reconstruction, namely, the Civil Rehabilitation Law and the Corporate Reorganization Law, because the principal intent of the reform is to encourage reconstruction of financially troubled firms.

The Corporate Reorganization Law

The amended Corporate Reorganization Law went into effect in April 2003. However, Japanese practitioners point out that the court stance to handling of filing bankruptcy under the Corporate Reorganization Law had already changed after the enforcement of the Civil Rehabilitation Law. It is also said that the court had become not to hesitate to allow bankrupt firms to enjoy bankruptcy protections under the law, probably because of making an allowance for the intents of the reform begin with the enforcement of the Civil Rehabilitation Law. Therefore, we assume that there are two turning points, i.e., the enforcement of the Civil Rehabilitation Law and that of the amended Corporate Reorganization Law, as for the Corporate Reorganization Law.

The results are shown in Table 8. In the 14 cases filed before the enforcement of the Civil Rehabilitation Law, the abnormal return for the event day is -2.179% , which is significant at the 1% level (θ -statistic = -3.716) and that for the two-day event window from the event day to the following day is -2.743% , which is also significant at the 1% level (θ -statistic = -3.221).

On the other hand, in the 11 cases filed after that, the abnormal return for the two-day event window from the event day to the following day is 3.779% , which is significant at the 5% level (θ -statistic = 2.117).

However, among the above 11 cases, the market responses differ depending on whether the case is filed before or after the enforcement of the amended Corporate Reorganization Law. In the 8 cases filed after the enforcement of the Civil Rehabilitation Law but before that of the amended Corporate Reorganization Law, we find no significant abnormal returns around the event day. On the other hand, as for the 3 cases filed after the enforcement of the amended Corporate Reorganization Law, the abnormal return for the two-day event window from the event day to the following day is 7.244% , which is significant at the 5% level (θ -statistic = 2.075) though the sample size is small.

Table 5 The result on the event study: Examining the difference in the market response between before and after April 2000

The distribution of the test statistic θ is asymptotically standard normal.
 N indicate the number of sample cases.

	whole sample N:84	the cases filed before April 2000 N:24	the cases filed after April 2000 N:60	the cases filed after September 2001 N:52
Event Window	abnormal return (%)	θ statistic	abnormal return (%)	θ statistic
the day before the event day	0.111 (-1)	-0.318	0.224	0.393
the event day	-0.172 (0)	-0.785	0.405	0.662
the day after the event day	0.254 (+1)	0.834	0.458	2.465 **
the two-day event window from the day before the event day to the event day	-0.060 (-1, 0)	-0.780	0.630	0.746
the two-day event window from the event day to the following day	0.083 (0, +1)	0.035	0.863	2.204 **
three-day event window from the day before the event day to the day after it	0.194 (-1, +1)	-0.155	1.087	2.026 **

*, **, and *** denote significantly different from zero at the 10 percent, 5 percent and 1 percent, respectively.

Table 6 The result on the event study: The cases filed by major borrowers

The distribution of the test statistic θ is asymptotically standard normal.
 N indicate the number of sample cases.

	whole sample N:36	the cases filed before April 2000 N:15	the cases filed after April 2000 N:21	the cases filed after September 2001 N:28
Event Window	abnormal return (%)	θ statistic	abnormal return (%)	θ statistic
the day before the event day	0.016 (-1)	-1.295	0.008	0.114
the event day	-1.020 (0)	-2.424 **	0.173	0.550
the day after the event day	-0.109 (+1)	-0.091	0.353	2.424 **
the two-day event window from the day before the event day to the event day	-1.005 (-1, 0)	-2.630 ***	0.181	0.470
the two-day event window from the event day to the following day	-1.129 (0, +1)	-1.779 *	0.525	2.103 **
three-day event window from the day before the event day to the day after it	-1.113 (-1, +1)	-2.200 **	0.534	1.783 *

*, **, and *** denote significantly different from zero at the 10 percent, 5 percent and 1 percent, respectively.

Table 7 The result on the event study: The cases filed by firms other than major borrowers

The distribution of the test statistic θ is asymptotically standard normal.
 N indicate the number of sample cases.

	whole sample	N=56	the cases filed before April 2000	N=8	the cases filed after April 2000	N=28	the cases filed after September 2000	N=23
Event Window								
the day before the event day	abnormal return (%)	-0.206	θ statistic	0.066	abnormal return (%)	-0.587	θ statistic	-0.254
		(-1)				-0.097		0.211
the event day	abnormal return (%)	-0.119	θ statistic	0.063	abnormal return (%)	0.183	θ statistic	-0.215
		(0)				-0.205		-0.928
the day after the event day	abnormal return (%)	0.148	θ statistic	0.601	abnormal return (%)	1.002	θ statistic	0.261
		(+1)				-0.096		0.275
the two-day event window from the day before the event day to the event day	abnormal return (%)	-0.325	θ statistic	0.091	abnormal return (%)	-0.404	θ statistic	-0.003
		(-1, 0)				-0.302		-0.952
the two-day event window from the event day to the following day	abnormal return (%)	0.029	θ statistic	0.469	abnormal return (%)	1.185	θ statistic	0.033
		(0, +1)				-0.301		-0.462
three-day event window from the day before the event day to the day after it	abnormal return (%)	-0.177	θ statistic	0.421	abnormal return (%)	0.598	θ statistic	0.148
		(-1, +1)				-0.398		-0.618

*, **, and *** denote significantly different from zero at the 10 percent, 5 percent and 1 percent, respectively.

Table 8 The result on the event study: The cases filed under the Corporate Reorganization Law

The distribution of the test statistic θ is asymptotically standard normal.
 N indicate the number of sample cases.

	whole sample	N=25	the cases filed before April 2000	N=14	the cases filed after April 2000	N=11	the cases filed after September 2000	N=10
Event Window								
the day before the event day	abnormal return (%)	-0.833	θ statistic	-1.889 *	abnormal return (%)	-0.832	θ statistic	-1.587
		(-1)				-0.834		-1.040
the event day	abnormal return (%)	-0.451	θ statistic	-1.718 *	abnormal return (%)	-2.179	θ statistic	1.888 *
		(0)				2.237		2.173 **
the day after the event day	abnormal return (%)	0.260	θ statistic	0.037	abnormal return (%)	-0.564	θ statistic	1.106
		(+1)				1.542		1.455
the two-day event window from the day before the event day to the event day	abnormal return (%)	-1.284	θ statistic	-2.550 **	abnormal return (%)	-3.011	θ statistic	0.600
		(-1, 0)				1.403		2.110
the two-day event window from the event day to the following day	abnormal return (%)	-0.191	θ statistic	-1.189	abnormal return (%)	-2.743	θ statistic	2.117 **
		(0, +1)				3.779		3.969
three-day event window from the day before the event day to the day after it	abnormal return (%)	-1.024	θ statistic	-2.061 **	abnormal return (%)	-3.574	θ statistic	1.128
		(-1, +1)				2.945		3.565

*, **, and *** denote significantly different from zero at the 10 percent, 5 percent and 1 percent, respectively.

Table 8 The result on the event study: The cases filed under the Corporate Reorganization Law (continued)

	the cases filed after April 2000 and before April 2003	N=8	the cases filed after April 2003	N=3
abnormal return (%)	-1.260		0.017	0.170
θ statistic	-1.394			
abnormal return (%)	1.335	0.951	4.042	1.925 *
θ statistic	0.712	0.640	3.202	1.010
abnormal return (%)	0.075	-0.313	4.058	1.481
θ statistic	2.046	1.126	7.244	2.075 **
abnormal return (%)	0.786	0.114	7.261	1.793 *

Table 9 The result on the event study: The cases filed under the Civil Rehabilitation Law

The distribution of the test statistic θ is asymptotically standard normal. N indicate the number of sample cases.

	whole sample	N=45	the cases filed after September 2001 before April 2003	N=38	the cases filed after April 2000 and before April 2003	N=29	the cases filed after April 2003	N=16
Event Window								
the day before the event day	(-1)	0.413	0.618	0.374	0.517	0.919	-0.506	-1.183
the event day	(0)	-0.089	0.104	-0.244	-0.443	0.498	-1.097	-1.206
the day after the event day	(+1)	0.200	0.556	0.721	1.842	-0.035	0.626	0.983
the two-day event window from the day before the event day to the event day	(-1, 0)	0.344	0.510	0.130	0.062	1.417	-1.602	-1.689 *
the two-day event window from the event day to the following day	(0, +1)	0.131	0.467	0.477	0.989	0.463	-0.471	-0.156
three-day event window from the day before the event day to the day after it	(-1, +1)	0.544	0.738	0.851	1.106	1.362	-0.976	-0.812

*, ** and *** denote significantly different from zero at the 10 percent, 5 percent and 1 percent, respectively.

The Civil Rehabilitation Law

Table 9 shows the result of the study about the cases filed under the Civil Rehabilitation Law. We find no significant impact on the stock prices of the main banks at the time of filing bankruptcy under the Civil Rehabilitation Law. However, we confirm a significant abnormal return when restricting to the cases which are classified as bankruptcy filed by a major borrower in Section 4.1.2.2¹⁸.

Among those cases, there are the 17 cases filed after September 2001. As for the 17 cases, the abnormal return for the day after the event day is 1.166%, which is significant at the 5% level (t -statistic = 2.215) and that for the two-day event window from the event day to the following day is 1.080%, which is significant at the 10% level (t -statistic = 1.695).

Let's summarize the main points. As for the Corporate Reorganization Law, the bankruptcy cases filed before the enforcement of the Civil Rehabilitation Law are regarded as the cause of the negative impacts on stock prices of bankrupt firms' main banks. That can be interpreted as follows. The market participants would see that filing under the Corporate Reorganization Laws meant an attempt to reconstruct through private workout under control of a main bank was stuck in a dead-end situation.

As we mentioned before, once a court allowed bankrupt firms to enjoy bankruptcy protections under the Corporate Reorganization Laws, the bankruptcy procedure used to be devastating event for a bankrupt firm's main bank. Therefore, filing under the Corporate Reorganization Laws brought the negative impact on the stock prices of the main banks.

The efficiency in bankruptcy procedures was improved by the series of the reform of the bankruptcy laws beginning with the enforcement of the Civil Rehabilitation Law, coupled with the change in the court stance to handling of filing bankruptcy under the law. For example, managers of bankrupt firms would start to file before they fall into serious financial conditions. Consequently, after the enforcement of the Civil Rehabilitation Law, the negative impact on the main banks is not observed around the date of filing bankruptcy.

Moreover, FSA's policy could have encouraged the major banks to make positive use of bankruptcy proceedings under the reformed bankruptcy laws. In October 2001, FSA announced execution of Advanced-Reform Program in that FSA declared to more closely supervise Japanese major banks with the aim of urging the banks to assure proper handling of their borrowers which were suspected of being on the brink of bankruptcy.

As a result, the banks were under pressure to set aside adequate reserves to cover bad loans or write off non-performing loans. Consequently, the above FSA's policy, coupled with the reform of the bankruptcy laws, brought improvements of efficiency in bankruptcy procedures.

The inference is partly supported by the significant positive abnormal return observed in the bankruptcy cases of the major borrower after September 2001, those filed under the Corporate Reorganization Law after the enforcement of the amended law, or those filed under the Civil Rehabilitation Law after September 2001.

IV.2. Examining the possible negative effect on lending behavior

Finally, we examine what effect the reform causes on banks' lending behavior. Of course, it is desirable for the

¹⁸. The result is omitted from the Table.

analysis to use micro data including detailed loan conditions for individual firms. Unfortunately, such a detailed data covering before and after the reform is unavailable. Alternatively, we use annual Financial Statements Statistics of Corporations by Industry compiled by the Policy Research Institute and try to examine the impact to the extent possible.

Table 4, shown before, indicates that the mean size of bankrupt firms measured by a total amount of assets or of sales become smaller after the enforcement of the Civil Rehabilitation Law. The fact implies that, after the enforcement, smaller firms become to make active use of bankruptcy proceedings under the bankruptcy laws. Conversely, the possible negative influence on borrowing fund could be more serious for smaller firms which rarely file bankruptcy before the reform.

Financial Statements Statistics of Corporations is classified by categories of industries.

The industry-classified data is classified according to an amount of capital. Firstly, we classify each industry-classified data into three classes depending on an amount of capital, specifically, one is less than 10 million yen, other is over 10 million yen and under one billion yen, and the last is more than one billion yen. We take each class in each industry-classified data as one sample. And then we calculate means and standard deviation of some statistics for each fiscal year.

The date of the enforcement of the Civil Rehabilitation Law is April 1st, 2000. Therefore, the data at the end of March 1999 is just one year before the enforcement and that at the end of March 2001 is just one year after. We compare statistics of these two points and try to test statistical differences for the purpose of examining changes after the enforcement.

Table 10 shows the ratio of amounts of loan from financial institutions to total amounts of assets. The last column denotes p-value of t-test to examine the difference in the mean values between before and after the enforcement. Table 11 shows the ratio of amounts of loan from financial institutions to total debt amounts.

In the case of whole sample, the mean values of the both ratios before the enforcement are statistically higher than those after the enforcement. It means loans from banks decreased after the enforcement.

Moreover, among the three classes classified depending on amount of capital, only the medium class, over 10 million yen and under one billion yen, shows the same results. Namely, as expected, the decrease in loans from banks is typically found among smaller firms.

As other channel of finance, we pay attention to trade credit. We take account payable as an index of trade credit. Table 12 shows the ratio of amounts of account payable to total amounts of assets. Table 13 shows the ratio of amounts of account payable to total debt amounts. We find no significant changes in trade credit among the both ratios.

Additionally, we examine a change in debt ratio in the same way. Table 14 shows the ratio of debt amounts to total amounts of assets and any significant change is not found. Therefore, we find no changes in indices relating liability except those relating loans from banks.

Judging from the above, after the enforcement of the Civil Rehabilitation Law, banks perceive the negative effects brought by the reform and take a less active stance toward lending behaviors. This change is representatively observed in lending to smaller firms (amount of capital ranges from 10 million yen to one billion yen). However, to properly confirm the above inference, we should attempt further investigations with more detailed data.

Table 10 The ratio of amounts of loan from financial institutions to total amounts of assets

an amount of capital	the end of March 1999			the end of March 2001			p-value
	mean	standard deviation	the number of sample	mean	standard deviation	the number of sample	
whole sample	0.393	0.160	135	0.358	0.159	135	0.038
less than 10 million yen	0.455	0.136	33	0.436	0.154	33	0.294
over 10 million yen and under one billion	0.432	0.141	68	0.387	0.135	68	0.032
more than one billion yen	0.254	0.135	34	0.223	0.127	34	0.171

p-value indicates the result of t-test to examine the difference in the mean values between the end of March 1999 and the end of March 2001

Table 11 The ratio of amounts of loan from financial institutions to total debt amounts

an amount of capital	the end of March 1999			the end of March 2001			p-value
	mean	standard deviation	the number of sample	mean	standard deviation	the number of sample	
whole sample	0.488	0.142	135	0.450	0.144	135	0.015
less than 10 million yen	0.498	0.134	33	0.467	0.122	33	0.160
over 10 million yen and under one billion	0.537	0.107	68	0.499	0.124	68	0.029
more than one billion yen	0.380	0.154	34	0.336	0.139	34	0.113

p-value indicates the result of t-test to examine the difference in the mean values between the end of March 1999 and the end of March 2001

Table 12 The ratio of amounts of account payable to total amounts of assets

an amount of capital	the end of March 1999			the end of March 2001			p-value
	mean	standard deviation	the number of sample	mean	standard deviation	the number of sample	
whole sample	0.132	0.074	135	0.134	0.078	135	0.419
less than 10 million yen	0.106	0.056	33	0.105	0.060	33	0.483
over 10 million yen and under one billion	0.155	0.079	68	0.156	0.084	68	0.484
more than one billion yen	0.110	0.067	34	0.117	0.071	34	0.339

p-value indicates the result of t-test to examine the difference in the mean values between the end of March 1999 and the end of March 2001

Table 13 The ratio of amounts of account payable to total debt amounts

an amount of capital	the end of March 1999			the end of March 2001			p-value
	mean	standard deviation	the number of sample	mean	standard deviation	the number of sample	
whole sample	0.176	0.103	135	0.185	0.112	135	0.265
less than 10 million yen	0.116	0.059	33	0.119	0.075	33	0.427
over 10 million yen and under one billion	0.203	0.104	68	0.212	0.114	68	0.328
more than one billion yen	0.181	0.113	34	0.194	0.116	34	0.320

p-value indicates the result of t-test to examine the difference in the mean values between the end of March 1999 and the end of March 2001

Table 14 The ratio of debt amounts to total amounts of assets

an amount of capital	the end of March 1999			the end of March 2001			p-value
	mean	standard deviation	the number of sample	mean	standard deviation	the number of sample	
whole sample	0.788	0.207	135	0.769	0.188	135	0.225
less than 10 million yen	0.945	0.239	33	0.935	0.164	33	0.425
over 10 million yen and under one billion	0.791	0.135	68	0.766	0.129	68	0.132
more than one billion yen	0.628	0.177	34	0.616	0.178	34	0.390

p-value indicates the result of t-test to examine the difference in the mean values between the end of March 1999 and the end of March 2001

V. Conclusion

Delays of formal bankruptcy are known to be harmful to distressed debtor firms. For this reason, the bankruptcy law more advantageous to debtors could contribute to improvement in efficiency. Giving favorable treatments to debtors should encourage managers to file bankruptcy as soon as they face financially difficult conditions.

The recent reform of the bankruptcy laws in Japan was intended to give distressed firms incentives to file bankruptcy before the company's value is significantly damaged. Filing before their firms fall into serious financial conditions would contribute to an increase in gains from bankruptcy procedures and therefore to an increment in recoveries of credits. Therefore, the recent reform would contribute to the increase in benefits for a main bank of a bankrupt firm. We partly confirm this possible effect on a main bank using the technique of an event study, focusing on the stock price changes of main banks at the time when legal procedures were applied for.

On the other hand, the revisions, which would give favorable treatments to debtors, could give unfavorable treatments to creditors. Banks should expect that the revision would make amounts to be recoverable upon bankruptcy less than before. As a result, financial institutions would take a less active stance toward lending behaviors. We confirm this possibility through the rough analysis to examine a change in the ratio of amounts of loan from financial institutions to total amounts of assets, or to total debt amounts between before and after the enforcement of the Civil Rehabilitation Law.

In this way, the amendments of the bankruptcy laws could produce conflicting effects. Therefore, bankruptcy laws should be designed in consideration of the trade-off between the conflicting effects.

References

- Aghion, Philippe and Patrick Bolton (1992) "An incomplete contracts approach to financial contracting," *Review of Economic Studies*, Vol. 59, No. 3, pp473-494.
- Akiyoshi, Fumio and Sumio Hirose (2006) "Bank's Exposure and Private Workout Negotiations Between the Creditor Bank and the Debtor Company: An empirical study using event study methodology," (in Japanese) Discussion Papers (Japanese) 2006/04 06-J-037
- Bebchuk, Lucian Arye (2002) "Ex ante costs of violating absolute priority in bankruptcy," *Journal of Finance*, Vol. 57, No. 1, pp445-460.
- Berglof, Erik and Gerard Roland (1997) "Soft budget constraints and credit crunches in financial transition," *European Economic Review* Volume 41, pp807-817.
- Berkovitch, Elazar and Ronen Israel (1998) "The Bankruptcy Decision and Debt Contract Renegotiations," *European Finance Review*, Vol. 2, pp. 1-27.
- Berkovitch, Elazar and Ronen Israel (1999) "Optimal Bankruptcy Laws across Different Economic Systems," *Review of Financial Studies*, Vol. 12, pp. 347-77.
- Berkovitch, Elazar, Ronen Israel and Jaime F. Zender (1997) "Optimal bankruptcy law and firm-specific investments," *European Economic Review*, Vol. 41, Number 3, pp. 487-497
- Berkovitch, Elazar, Ronen Israel and Jaime F. Zender (1998) "The Design of Bankruptcy Law: A Case for Management Bias in Bankruptcy Reorganizations," *Journal of Financial and Quantitative Analysis*, Vol. 33, pp. 441-64
- Berkowitz, Jeremy and Michelle J. White (2002) "Bankruptcy and small firm's access to credit," *NBER Working Paper Series* No. 9010.
- Caballero, Ricardo J., Takeo Hoshi and Anil K. Kashyap (2008) "Zombie lending and depressed restructuring in Japan," *American Economic Review*, Vol. 98, pp1943-77.
- Campbell, John Y., Andrew W. Lo, and A. Craig MacKinlay (1997) *The Econometrics of Financial Markets*, Princeton University Press.
- Gertner, Robert and David Scharfstein (1991) "A Theory of Workouts and the Effects of Reorganization Law," *Journal of Finance*, Vol. 46 Issue 4, pp1189-1222,
- Helwege, Jean and Frank Packer (2003) "Determinants of the choice of bankruptcy procedure in Japan," *Journal of Financial Intermediation*, Vol. 12, pp96-120.
- Hirose, Sumio and Fumio Akiyoshi (2006) "The impact caused by the recent reform of the bankruptcy law in Japan: confirming the fact that managers become to file earlier in the course of worsening business conditions," (in Japanese) The Financial Research and Training Center (FRTC) in the Financial Services Agency (FSA) Discussion Papers (Japanese), Vol. 13.
- Hoshi, Takeo and Anil K. Kashyap (2004) "Japan's Financial Crisis and Economic Stagnation," *Journal of Economic Perspectives*, Vol. 18, Iss. 1, pp. 3-26.
- Hosono, Kaoru and Masaya Sakuragawa (2003) "Soft Budget Problems in the Japanese Credit Market," *Discussion Papers in Economics* No.345, Nagoya City University,
<http://www.econ.nagoya-cu.ac.jp/~oikono/dp/pdfdp/dp345.pdf>

- Jensen, Michael C. (1991) "Corporate Control and the Politics of Finance," *Journal of Applied Corporate Finance*, Vol. 4, No. 2, pp. 13-33.
- MacKinlay, A. Craig (1997) "Event Studies in Economics and Finance," *Journal of Economic Literature* 35, 13-39.
- Peck, Joe and Eric S. Rosengren (2005) "Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan," *American Economic Review*, Vol. 95(4), pages 1144-1166, September.
- Povel Paul (1999) "Optimal "Soft" or "Tough" Bankruptcy Procedures," *Journal of Law, Economics and Organization*, Vol. 15, No. 3, pp659-684.
- Scott, Jonathan A. and Terence C. Smith (1986) "The effect of the bankruptcy reform act of 1978 on small business loan pricing," *Journal of Financial Economics*, Vol. 16 pp119-140.
- Seshimo, Hiroyuki and Fukuju Yamazaki (2004) "Perverse Incentives of Loan Supply and the Violation of Absolute Priority Rule in Japan—Credit Crunch and Excessive Additional Loan—," (in Japanese) CIRJE Discussion Papers (Japanese), 2004-CJ-103.
- White, Michelle J. (1989) "The corporate bankruptcy decision," *Journal of Economic Perspectives*, Vol. 3, No. 2, pp129-151.
- Xu, Peng (2003) "Bankruptcy resolution in Japan: Corporation Reorganization vs. Civil Rehabilitation," Microeconomics Workshop at Center for International Research on the Japanese Economy, Faculty of Economics, The University of Tokyo.
- Yanagawa, Noriyuki, Sumio Hirose, and Fumio Akiyoshi (2007) "The institutional design for the bankruptcy law and business reconstruction: incentive problems of management turnover," (in Japanese) *Empirical analysis and design of the economic institution* Vol. 3, edited by Fumio Hayashi, Keiso Shobo.