Conflict of Interests between Government and Creditors in Corporate Restructuring: Case of Korea

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Abstract

We examine the political economy problems that may arise in the major worst-performing industries that cause the low growth in the Korean economy in recent years. In particular, the issue of conflict of interests in the corporate restructuring system, in which the government can intervene through government-owned banks, is examined historically. In addition, the empirical analysis shows that government intervention through government-owned banks can reduce the efficiency of corporate restructuring by using financial data of companies that went into workout program and court receivership.

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1 Introduction

If a company fails to function properly due to internal or external problems such as macroeconomic shocks or decline in productivity of the company and fails to generate profits to distribute to not only shareholders and creditors, but also workers, then the management, shareholders, creditors, workers will participate in the corporate restructuring process to improve the business operation. In particular, creditors who have lent money for a certain amount of revenue, encourage the management, shareholders, and workers to actively participate in the corporate restructuring in order to defend the risk of loss of their funds due to corporate default. Since this series of corporate restructuring processes has social and political effects as well as economic consequences, the government always has incentives to engage in the restructuring process. In particular, in the restructuring of large corporations, which have a significant impact on politics, society and the economy, social compromise is urgent and the government is given a heavy duty to mediate companies, workers and creditors.

In fact, corporate restructuring systems that legally stipulate that corporate restructuring can be done quickly and smoothly include a private restructuring workout system and a public or statutory restructuring system, court receivership (or court-led restructuring, rehabilitation procedure). In the case of private restructuring, the extent of restructuring might depend on how much the government actually intervenes, which in turn causes political economy problems. In addition, how well the government can solve the conflicts of interest of stakeholders in the corporate restructuring process can be clearly correlated to how well the government governs the government-owned banks as agencies of the government. This study attempts to analyze how much the government-owned banks, as agencies of the government, can have different political considerations or moral hazard than commercial creditors. In addition, as industries that led Korea's growth, such as shipbuilding industry, shipping industry, and steel industry recently have been sluggish, the government-owned banks are leading the restructuring of these industries concerned. Therefore, this study analyzes how much government-owned banks are achieving corporate restructuring performance compared to other commercial banks or court receivership.

This study is composed as follows. First, Chapter 2 explains Korea's restructuring system. Chapter 3 explains how the Korean government intervened in the past restructuring process, and derives political economy problems. In Chapter 4, we analyze the corporate restructuring performance of companies, whose main creditor banks are government-owned banks, compared to commercial banks or court receivership while using the financial data of the restructuring companies. Chapter 5 explains the conclusions of this study.

2. Taxonomy of Corporate Insolvency System in Korea

While financially distressed companies failing to service debt payments after long overdue are forced to corporate restructuring, those that, despite meeting scheduled redemption, experience drastic shrinkage in revenues are sometimes subject to externally driven turnarounds. Legally and practically, it is pivotal who takes an initiative in corporate restructuring since, for example, first mover advantages matter gravely even under the condition of requiring all other parties' agreement on a new set of contracts. Overall performance of corporate turnarounds also hinges

heavily on the leadership, because fairness and efficiency are taken into account by its choice.

Corporate restructuring methods are classified largely into three types in terms of leadership: 1) court, 2) creditors, and 3) government. Each leadership has its own strengths and weaknesses, so that all methods constitute effective insolvency regime in an economy. This chapter introduces Korea's insolvency system from an institutional approach, focusing on making a comparison among the methods of corporate restructuring by leadership.

2.1 Court-led Corporate Restructuring

Undoubtedly it is the creditor who should assume leadership in and be responsible for restructuring an indebted company. If there is a single creditor, restructuring against a delinquent company tends to be simple. The debtor and creditor enter into a private restructuring by making an agreement on a newly promised plan for debt relief and schedule. Once both parties pose a discrepancy over restructuring plans, they file for corporate reorganization to court. In this case the leader of corporate restructuring gets turned into the court, which is called a court-led restructuring(or court receivership).

Prior to the 1997 financial crisis, Korea had three legal statutes on insolvency: the Bankruptcy Act, the Composition Act, and the Corporate Reorganization Act. These laws were traced back to 1962 but rarely used before the crisis broke out in 1997. The crisis, however, brought a much-needed momentum for changes in the formal insolvency system in Korea because the existing system turned out to be too simple and out-of-date to cope with corporate insolvency cases which rose dramatically both in number and size. Thus, the insolvency laws dictating principles and procedures of the court - receivership program were revised to reduce the moral hazard on the part of incumbent managers and to deal with the potential hold-out problem of non-secured creditors.

Insolvency laws were revised in February 1998 and December 1999. Reforms on the formal corporate insolvency mechanism were taken in two folds. The first was to fix the loopholes in the formal insolvency mechanism. The other was to introduce an economic criterion at the commencement stage of the insolvency proceedings. Changes were also made to speed up the

process under court receivership. Then, in April 2006 the new Act on Rehabilitation and Bankruptcy of Debtors (so-called Unified Insolvency Law) became effective. The new legislation regulating corporate and individual insolvency proceedings (including both liquidation and rehabilitation) unifies and replaces four separate insolvency laws; the Corporate Reorganization Act, the Composition Act, the Bankruptcy Act and the Individual Debtor Rehabilitation Act.

This revision efforts were all intended to facilitate the corporate restructuring process so that distressed firms could have earlier chance to rehabilitate themselves. Thus, the new insolvency regime after the crisis incorporates a flavor of moving from fairness to efficiency.

2.2 Creditor-led Corporate Restructuring

Multi-creditor cases often demand relevant stakeholders for time, patience and costs. Potential conflicts between secured creditors and non-secured creditors may be surfaced vividly when creditors negotiate over the terms of rehabilitation plans. Even if non-secured creditors agree on rehabilitation to insolvent firms for enhancing the value of creditors retrieved collectively from the subject firms, they may still face a holdout strategy with an expectation to draw better terms of interests, recognizing that secured creditors would have more to lose as negotiation delays. Such difficulties lead creditors to consider out-of-court settlement procedure of corporate restructuring. Among the creditors, then, financial institutions have comparative advantages and expertise on negation and planning for financial restructuring over the indebted companies. In most cases, one of the major banks tends to play a leading role in every step of corporate restructuring on behalf of the entire creditors, which is called a creditor- or bank-led restructuring. The corporate workout scheme is the most renowned example.

This corporate workout scheme benchmarked the so-called London Approach, which is basically a voluntary agreement between financial creditors with a tacit awareness about the role of the Bank of England as a facilitator and mediator in actual restructuring processes.[1] The corporate

1 During the economic recession of the 1970s, the United Kingdom was not ready to deal with a vast number of firms facing liquidity crunches. The Bank of England stepped in to encourage the creditor financial institutions to act upon agreements, streamlining the restructuring processes.

workout program is beyond the jurisdiction of the court so as not to be subject to insolvency laws. Nonetheless, the workout scheme is closely related with the insolvency laws, as creditors could turn to in-court settlement procedure dictated whenever they found it unworkable.

The Korean Corporate Workout Program was born in 1998 under the systemic crisis,[2] aimed at rescuing both distressed companies and financial institutions. Most financial institutions troubled with capital inadequacy caused by a massive number of corporate defaults, including major commercial banks, could not afford to take in-court bankruptcy procedures against the non-performing corporations. The banks needed time and resources in order to reorganize themselves along with rehabilitating the debtor companies. From the government perspective, it would be too costly to apply market principles and in-court restructuring methods to all the distressed companies, which could lead to liquidations in many cases.[3]

2.3. Government-led Corporate Restructuring

Large companies that, if delinquent, contain systemic concerns bring about many complications. The complex debt structure of such companies in terms of the number of creditors, type of debts, etc., makes it difficult to arrange a harmonious restructuring plan privately. For instance, a series of large company defaults after the 1997 financial crisis in Korea posed a profound threat to the viability and resilience of national economy. Especially in the case of major companies often called Chaebol such as Daewoo, SK, Hyundai, LG, etc, the government concerned about entailed systemic risks got deeply involved in individual, corporate problems from debt rescheduling to corporate structure and even to the very fate of the debtor companies mostly cited as Big Deal.[4] This type of restructuring is called a government-led restructuring.

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2 The Korean Corporate Workout Program was initiated by the Financial Institutions Agreement for Promotion of Corporate Restructuring signed by the 210 creditor financial institutions in June 1998, as a successor to the former Bankruptcy Respite Agreement.

3 According to World Bank (1999), more than 80 percent of corporate restructuring is known to follow the private agreements among the relevant stakeholders rather than the court decisions under crisis situations.

4 The Big Deal was planned in October 1998 as a grand compromise among business leaders at the height of crisis. This reminded of government-arranged restructuring under the name of industrial rationalization on heavy and chemical industries in 1980s.

3. Political Economics Surrounding Corporate Restructuring

3.1 Role of Government in Corporate Restructuring

The court-led restructuring shall be based on the insolvency laws so as not to need for its justification. In contrast, as for the other types of private restructuring arrangement, divergent opinions with respect to the priority between economic efficiency and legal justice have been raised by not just economists, lawyers and practitioners but relevant stakeholders. For example, the government-led restructuring targeting for economic efficiency could be understood as inevitable measures under the circumstances of economic crisis, but such an argument is frequently reputed because it provides a room for excessive bailouts to beneficiary firms and concealment of government policy failures. Basically, it is blamed for violating market principles. The pursuit of efficiency may run counter to fairness, as it may harm opportunities for some relevant parties, especially minor creditors, to secure their interests.

Furthermore, the legal background for government-led restructuring, say the Industrial Development Act in the 1980s, was found unconstitutional for excessive encroachment upon the property rights of relevant stakeholders. In the Big Deal, the government played the role of a deal arranger of M&A in the industries afflicted with severe excess capacity problems. The government suggested the guiding principles for grand deals: each business group needs to focus on core competence and each deal with merger and acquisition (M&A) could enhance corporate competitiveness in the prisoner's dilemma situation. The government promised to offer tax and fiscal assistances in the process of implementation of deals. Facing enormous political pressure of meeting public expectations of earliest possible delivery of visible outcome, the authorities were forced to turn to the old trick of intervening which seemed supposed to be private deals. However, government intervention, albeit looked benign, may distort incentives in the private sector.

Therefore, striking a right balance between efficiency and fairness is a challenge in designing a proper insolvency mechanism.

3.2 Government Formal Engagement: Corporte Restructuring Promotion Act

For the aforementioned reasons, the creditor-led corporate restructuring has drawn practical attention. In Korea, a main bank among creditors, is a largest or core loan provider as well as a virtually sole credit examiner. Besides financial supervisory authorities, it reviews and monitors debtor companies and reports to other financial institutions on their business prospects, financial health, credit rating and fund needs. Accordingly, owing to informational advantages over other creditors, it is quite natural and least costly for the main bank to take an initiative on corporate restructuring. Despite its efficiency, the bank-led restructuring inevitably tends to infringe small stakeholders' rights by clamming down their votes. The more serious problem lies in the absence of legal grounds for the clam-down.

The similar issue has been raised as one of the fundamental weaknesses of the Korean Corporate Workout Program, which aimed at formally a market-led restructuring but the government authorities and agencies sit down behind the scene, manipulating main banks' roles and activities. Despite relevant efforts to establish voluntary system, the corporate restructuring scheme led by financial institutions pursuant to the Corporate Workout Program after the 1997 crisis faced significant difficulties. The corporate restructuring market was yet very inexperienced to embrace the voluntary restructuring process. Also, there were incentives for some financial institutions to free ride rather than to share losses by taking part in the corporate restructuring. In fact, the system was still at the primitive stage so that the inefficient process of the restructuring led by the financial institutions only caused market uncertainties to worsen.

To remedy the situation, the Corporate Restructuring Promotion Act (CRPA) was enacted in July, 2001 and effective in September 2001. Firms with total credit exposure of more than KRW 50 billion become subject to the CRPA, and those with the exposure of less than KRW 50 billion are subject to creditor bank's voluntary agreement when undergoing credit risk evaluations and restructuring.

The CRPA has brought about many objections mostly from the legal practitioners. One of the controversies was that the CRPA violates the constitutional right of private property ownership. The clause of the CRPA that financial institutions are required to defer collecting on their claims

without court intervention against part of credits' interests was seen as a possible violation of the constitutional right. As for such a claim, the CRPA is advocated by the government, allowing for the financial institutions to request a buy back option enabling them to collect claims based on liquidation value. In addition, the CRPA was accused of violating the principle of Private autonomy. For example, it was interpreted as a possible violation of the principle that the CRPA requests the restructured companies to seek an approval of the trustee appointed by the creditors' council on main business activities.

The shortfalls as a consistent statute to the constitution have made the CRPA experience repeated sunsets and reenactments.[5] Currently the forth CRPA is now in effect but will be soon at the juncture of reassessment on its operation. The focal arguments will be anticipated to stage on the scope and limit of administrative engagements in corporate sector restructuring because many anti-CRPA camp members criticize excessive roles of financial authorities like Financial Services Commission (FSC) and Financial Supervisory Service (FSS) in the de facto process of the CRPA. Government officers, however, insist that the CRPA is still necessary, at least for the next several years, in efficiently restructuring distressed companies belonging to heavily leveraged industries such as construction, shipbuilding, chemical, etc. They argue that financial institutions are not ready for abolishment of the CRPA in terms of risk management.

3.3 Political Economics around Corporate Restructuring

Why has the government so often tried to get involved in corporate restructuring? At least in Korea and so far, public officials have been highly concerned about the linkage of corporate restructuring and financial performance. The corporate workout program and its follow-up institution, the CRPA, are basically one of the legacies of the 1997 financial crisis. In the face of systemic crunch, Korean government chose a semi-public and semi-public corporate

5 The original CRPA was about to expire by the end of 2005 and became repealed as scheduled. The second version of CRPA with a expiration date by the end of 2010 was legislated with an consensus on its necessity for dealing with large company failure in November 2007. After its scheduled second sun-set, the CRPA revived in May 2011 under the economic sluggishness after the global financial crisis. The third CRPA was supposed to expire by the end of 2013, but rolled over until the end of 2015. Finally, the forth CRPA was relegislated in March 2016, being effective only to the end of June 2018.

restructuring system indirectly led by the Financial Supervisory Commission (FSC).[6] Such a path dependency caused systemic considerations even in micro judgement like corporate restructuring. Financial stability matters since large company defaults hamper financial soundness of banks.

The so called control tower of economic policy making, the Ministry of Strategy and Finance (MOSF), also shows interests in large corporate restructuring because of potential impacts on macroeconomic performance. Immediate side effects of corporate restructuring are increase in unemployment and decrease in GDP. Furthermore, depending on the size, related financial institutions and aftermath, the MOSF may inject public funds to absorb losses incurred directly or indirectly. For example, the policy-based financial institutions like the Korea Development Bank (KDB), the Korea Export and Import Bank (KEXIM), etc., may be undercapitalized after recognizing large loan loss provisioning. Then the MOSF should raise capital for meeting their prudential requirements. The increase of capital on public financial institutions, however, asks for an approval from the National Assembly, which try to make a thorough scrutinization on public expenditure. The government authorities and agencies are not at all free of responsibilities for policy failures beyond business failures.

Politicians who think highly of votes ought to watch closely the regional deleterious effects caused by corporate failures and restructuring in their constituencies. The number of jobs disappeared and the businesses closed down are their keenest concerns. In order to rescue jobs and businesses they push government authorities to inject more funds which might be often counteractive to desirable corporate restructuring. Such a pressure is sometimes consistent with policy makers' incentives to conceal policy failures, which leads to excessive bail-out as a first-aid treatment. The likelihood of a bailout, however, turns out to be undesirable in the sense that it enlarges fiscal costs and delays both macroeconomic and microeconomic recoveries. Nonetheless, most stakeholders in the policy and political circle have enough reason to

6 The Financial Supervisory Commission (FSC) which was separated from the old Ministry of Finance and Economy is a predecessor of the Financial Services Commision (FSC), a current financial authority, later instituted in 2008. Inside the former FSC the Restructuring and Reform Unit (RRU) whose head was the chairman of FSC functioned as a highest decision making body in financial and corporate sector restructuring. Afterwards most recognized that restructuring tasks should be assumed by the FSC.

postpone full-scale corporate restructuring until they can.

A recent and salient example is the case of shipbuilding industry restructuring. Korea has long prospered in the shipbuilding industry since 1990s. The three biggest shipyards, Hyundai, Daewoo and Samsung, are all Korean firms. Prior to the 2008 global financial crisis this industry enjoyed an ever unprecedented boom thanks to economic Goldilocks and deepening globalization trend. The crisis, however, reversed business cycles, entailing domino failures of shipbuilders. Massive corporate restructuring became inevitable, but this time was different from the one after the 1997 financial crisis. After the 2008 global financial crisis the Korean corporate workout program changed in the direction of much less involvement of private sectors. Because of the risk build-up and liquidity crunch, most private banks, which tried to protect themselves instinctly shrank credit exposures to the industries sensitive to business cycles like shipping, shipbuilding, construction, etc. During the period of business downturn, thus, the shipbuilders became heavily dependent on the policy-based financial institutions like the KDB and the KEXIM. In addition, most private banks have exercised put options in order to collect claims based on liquidation value, ending up with complete withdrawal from creditors' council of distressed shipbuilders. As a result, the KDB and the KEXIM should bear much larger losses in the semi-public corporate restructuring regime. The next chapter will look into creditor-led corporate restructuring empirically.

4 Empirical Assessments on Korea's Corporate Workout

In this section, we present the empirical analysis of corporate restructuring in Korea during the past decade. In particular, we show that the time for restructuring intervention or the commencement timing of workouts by government-owned banks as the agencies of the Korean government is relatively later than commercial banks. Additionally, the restructuring intensity of workouts of marginal companies whose main creditors are government-owned banks is relatively weak compared to commercial banks. In recent years, as workout failures have risen, it is shown that the workouts supervised by government-owned banks as main creditors in the shipbuilding industry, the steel industry, and the shipping industry are sluggish rather than the court receivership.

In this study, it is difficult to directly analyze factors for the procrastination of workout commencement by government-owned banks; the moral hazard in general agency problem or the Korean government's political intervention by reserving the restructuring decisions in consideration of negative effects on the local economy affected by an insolvent large enterprise. Nevertheless, as the restructuring intervention of government-owned banks in major non-performing industries is delayed, the possibility for success of the workout program will surely decline.

4.1 Impact of Government-owned Banks' Behaviors in the Workout Program

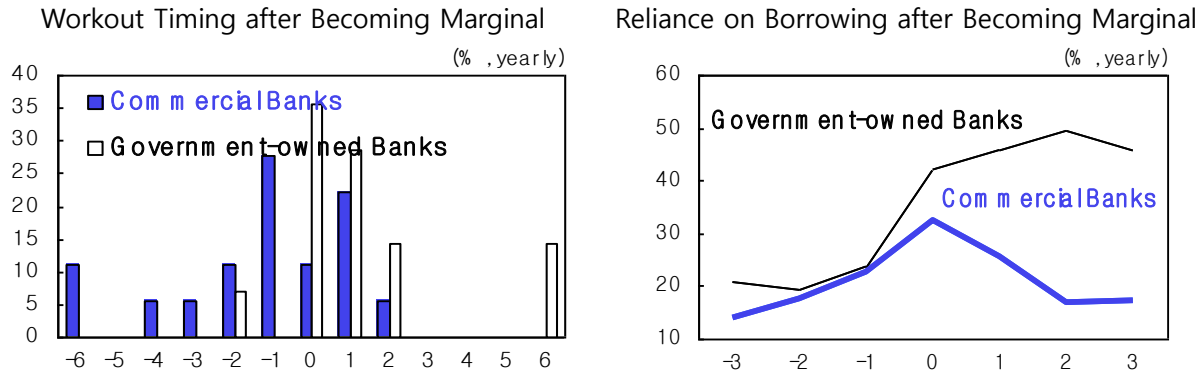
We use the KIS-Data to compare the commencement timing of workout programs for non-performing companies supervised by government-owned banks[7] and commercial banks, and the intensity of their restructuring process such as the asset sale and the downsizing of the workforce. We find 39 listed companies subject to the workout program since 2008. Our analysis reveals that government-owned banks initiated the workouts later than commercial banks, but provided comparatively more financial support to companies showing signs of distress. According to the Corporate Restructuring Promotion Act, the main creditor bank can not only submit an application for the workout agreement but also play the role in administering the restructuring, meaning that whether the main creditor bank is government-owned or not has been a significant factor in affecting the workout timing and substantial restructuring proceedings. Since 2008, the workout agreement of a company whose main credit is from a commercial bank was found to be 1.2 years earlier on average from the time when the company is recognized as marginal, whereas that by government-owned banks was later by 1.3 years on average, contributing to an estimated average delay of 2.5 years in restructuring[8]. Additionally, it is found that government-owned banks provided marginal companies with increased financial support, delaying the workout. The results imply that government-owned banks are inclined to delay the restructuring of distressed companies, rather relying on optimistic projections of corporate rehabilitation, the moral hazard problem as the Korean government agencies, instead

[7] Export-Import Bank of Korea (KEXIM), Industrial Bank of Korea (IBK), Korea Development Bank (KDB)

[8] Companies are recognized as marginal when its interest coverage ratio (ICR) records a third straight year of less than 1.

of demanding them to commence preemptive restructuring. Otherwise, there might be the political intervention as explained before.

Figure 4-1. Workout Timing and Financial Support of Government-owned and Commercial Banks

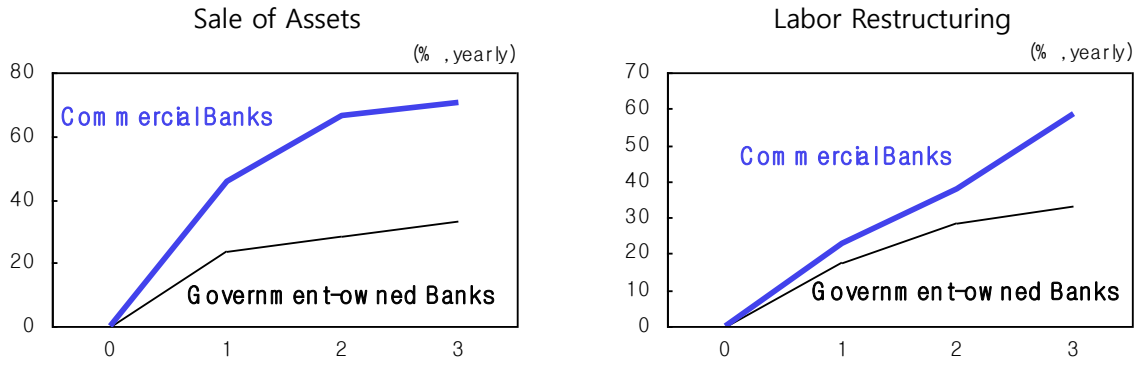


Note: 1) Distribution of the time when the workout commences, after becoming recognized as marginal (0).
2) Weighted average (asset proportion) of the reliance on borrowing (borrowings/assets), after becoming recognized as marginal (0).
Source: Financial statements (KIS-Data) of individual listed companies under workout programs including voluntary agreements, as of June 2015.

We can see other empirical evidence that the political intervention might happen while making the restructuring process. Our analysis of the impact on the substantial restructuring of companies under workout programs indicates that government-owned banks negatively influence corporate restructuring. This paper measures the degree of the adjustment of production factors including capital and labor following the workout agreement in separate terms of government-owned and commercial banks as the main creditor bank, and then compares the differences in adjustment. Companies are assumed to be in the process of selling its assets when the size of tangible assets declines by more than 15% after the workout. Moreover, companies are assumed to be in the process of labor restructuring if the number of employees falls by more than 20% (Atanassov and Kim [2009]). According to the results, companies with government-owned banks as the main creditor banks are inclined to be more passive in the sale of assets and labor restructuring than those with commercial banks as their main creditor banks. In the sale of assets, merely 33% of the former embarked on the proceedings after the workout had commenced, whereas 70% of the latter did the same. In labor restructuring, the former is found to be more passive than the latter. As you see Figure 4-2,

the difference of restructuring intensities between main creditors of government-owned banks and commercial banks are clear.

Figure 4-2. Degree of the Adjustment of Capital and Labor after the workout agreement: Government-owned Banks vs. Commercial Banks



Note: 1) Proportion of companies whose tangible asset size decreased more than 15% in the three-year period since the workout agreement (0).
2) Proportion of companies whose number of employees decreased more than 20% in the three-year period since the workout agreement (0).
Source: Financial statements (KIS-Data) of individual listed companies under workout programs, including voluntary agreement, as of June 2015.

In addition, government-owned banks' passive attitude towards the restructuring of companies under workout can be observed through a more rigorous regression analysis. The varying size and borrowings/assets of companies can influence the degree of restructuring. So with these factors controlled, this paper attempts a regression analysis using a logit model in order to estimate the different degree of restructuring in 'workout' companies by government-owned banks. Companies in asset sales or labor restructuring are defined as Y with 1 value, and is applied to the logit model below for regression analysis.

$$\Pr(Y=1) = F(dummy\ of\ main\ creditor\ bank\ \beta_1 + \log(assets)\,\beta_2 + \left(\frac{borrowings}{assets}\right)\beta_3 + \epsilon)$$

The regression analysis found that the degree of restructuring in companies whose workout is driven by government-owned banks is weaker than in the case of commercial banks. According to the outcome of asset sales and labor restructuring, commercial banks as the main creditor bank are found to have more gains than their counterparts at a 5% significance level. Provided that the control variables remain the same, the above results imply that the possibility of asset sales and labor restructuring in 'workout' companies whose main creditor bank is government-

owned would be lower by 46.5%p and 47.5%p, respectively[9].

Table 4-1. Impact of Government-owned Banks on Capital and Labor Restructuring in Workout Companies

	Impact of Government-owned Banks after Company Characteristics are Controlled	Government-owned Banks	Log (Asset Size)	Borrowings/Assets
Asset Selling	-46.5%	-2.01**	-0.16	-0.008
Labor Restructuring	-47.5%	-2.27**	1.01	0.01

Note: 1) Probability difference between asset sales and labor restructuring by government-owned banks and that by commercial banks under the premise that the control variables are kept at their sample average,

2) Companies whose tangible asset size decreased by more than 15% within three years after the workout agreement is Y=1, or Y=0.

3) Companies whose number of employees decreased by more than 20% within three years after the workout agreement is Y=1, or Y=0.

4) In the case the principal creditor is government-owned bank, the government-owned bank is a dummy variable of 1.

5) ** denote the statistical significance at a 5% level.

Source: Financial statements (KIS-Data) of individual listed companies under workout programs, including voluntary agreement, as of June 2015.

4.2 Low Performance of Corporate Workouts By Government-owned Banks

The restructuring companies used in this study are 89 workout companies and 1,059 companies under court receivership that have undergone restructuring since 2008. Before analyzing the degree of business recovery of restructuring companies, we analyze the extent of asset sales and labor adjustment of financially distressed companies under the corporate restructuring processes; workout and court receivership. Figure 4-3 shows the cumulative distribution of companies that have sold assets and the restructuring of the workforce, respectively, by three years after the start of the restructuring process. First, as a result of analyzing all industries, it is found that the companies under court receivership were more active than the workout firms in asset sales and restructuring of the workforce. In particular, 92% and 99% of companies under court receivership have sold assets and restructured their labor force three years after the restructuring began. This is more than 10%p higher than 76% and 78% of workout companies. As a result of analyzing listed companies, it seems that workout companies and companies under court receivership have restructured their assets with similar manner in asset sales.

[9] Similar results were obtained in the empirical analysis with dummy variables that take into account industrial characteristics of construction and shipbuilding industries.

However, in the restructuring of the workforce, 70% of companies under court receivership were found to have done so, which was much higher than 52% of the workout companies. In particular, in the analysis of restructuring companies belonging to shipbuilding, shipping, and steel industries, labor restructuring was similarly carried out by workout companies and companies under court receivership. However, in the case of asset sales, it appears that companies under court receivership have proceeded further.

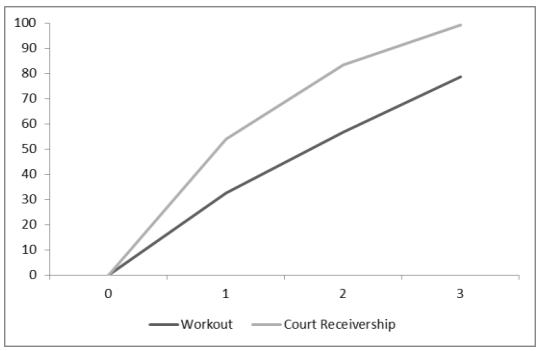
In fact, as explained earlier, the workout program is a private restructuring so that the workout company can reimburse the commercial receivables with new funding from the creditors. However, since the court receivership is a forced restructuring, it may be natural for companies under court receivership to be more robust in asset sales and workforce restructuring than the workout firms. However, it should be noted that the sluggishness in asset sales and the labor restructuring may deteriorate the efficiency of the workout program. In other respects, regardless of the restructuring institution, it can be inferred that the asset sales and labor restructuring have progressed strongly under court receivership because the insolvency of companies under court receivership is relatively severe. Therefore, this study empirically analyzes the degree of business recovery of workout companies and companies under court receivership while keeping in mind these mutual relations.

In addition, it is important to analyze which financial variables are used to compare the degree of business recovery of workout companies and companies under court receivership. In this study, we analyze four variables: borrowings/assets, return on assets (ROA), operating profit/sales, and value added/sales.

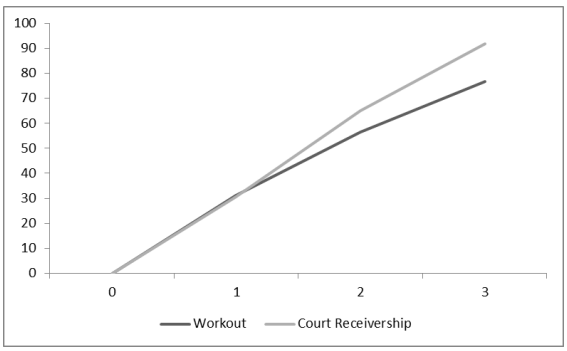
Figure 4-4 is an analysis of the degree of business recovery of workout companies and companies under court receivership that are listed companies. In listed companies, the number of workout companies is 31 and the number of companies under court receivership is 38. As shown in the figure, the recovery performance of companies under court receivership is more effective than workout companies. In particular, the ROA and value added ratio of listed companies under court receivership are more improved than three years before the restructuring began.

Figure 4-3. Degree of the Adjustment of Capital and Labor under Workout and Court Receivership

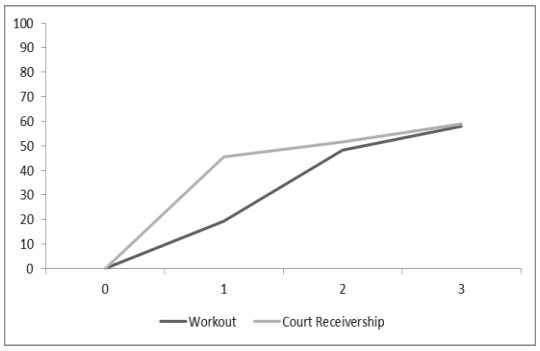
All: Sale of Assets(%)



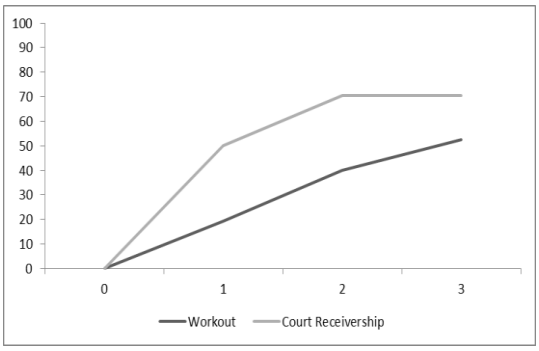
All: Labor Restructuring (%)



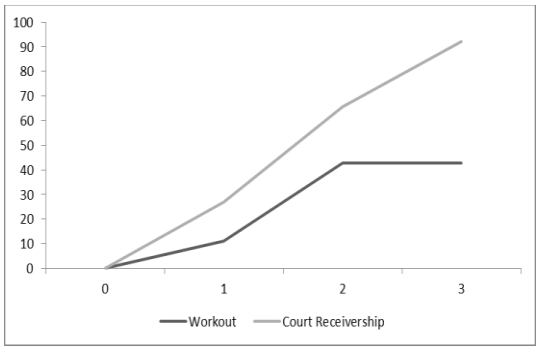
Listed Companies: Sale of Assets(%)



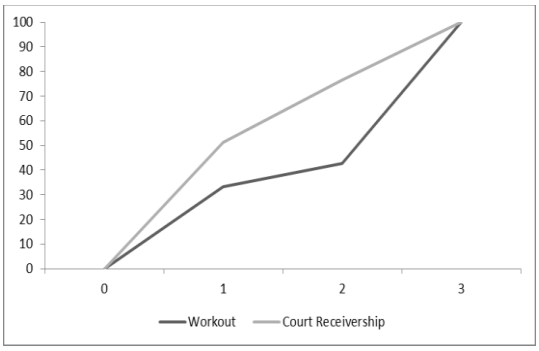
Listed Companies: Labor Restructuring (%)



Shipbuilding, Shipping, Steel Industries: Sale of Assets(%)



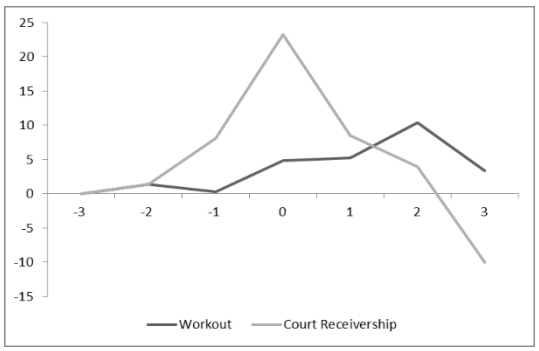
Shipbuilding, Shipping, Steel Industries: Labor Restructuring (%)



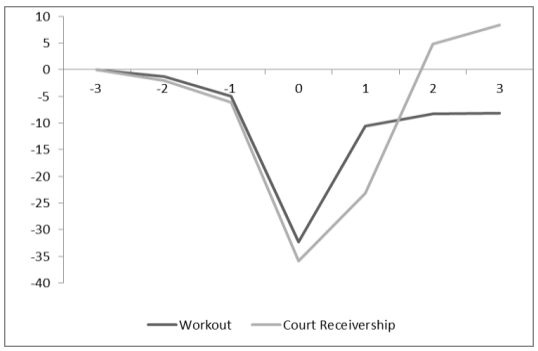
Note: 1) Proportion of companies whose tangible asset size decreased more than 15% in the three-year period since the workout agreement (0).
2) Proportion of companies whose number of employees decreased more than 20% in the three-year period since the workout agreement (0).

Figure 4-4. Listed Companies: Degree of Business Recovery under Workout and Court Receivership

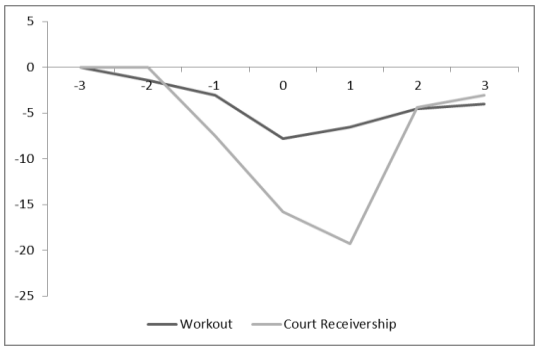
Borrowings/Assets(%)



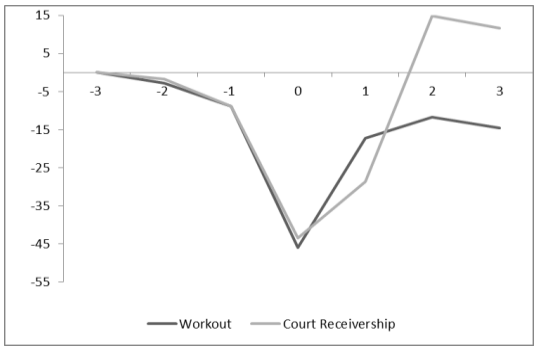
ROA(%)



Operating Profit/Sales(%)



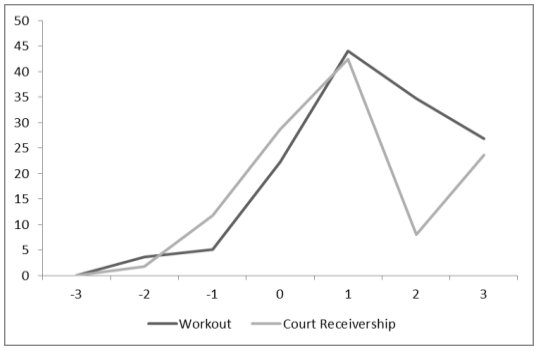
Value Added/Sales(%)



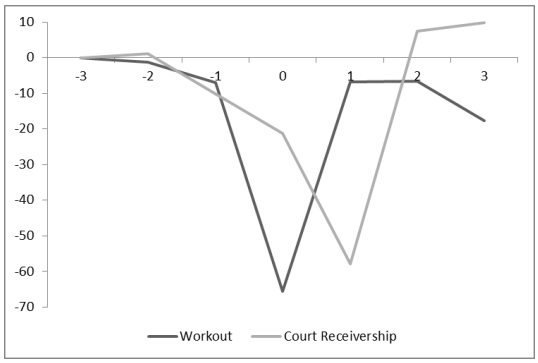
Note: Weighted average value for three years before and after the restructuring assignment

Figure 4-5. Shipbuilding, Shipping and Steel Industries: Degree of Business Recovery under Workout and Court Receivership

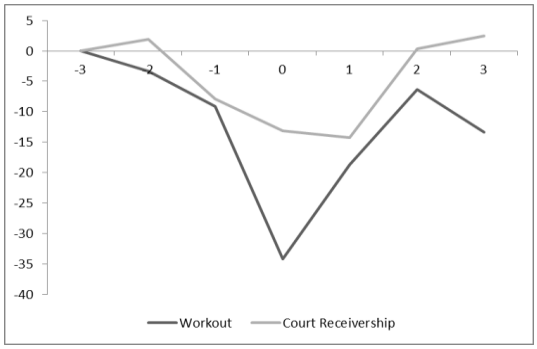
Borrowings/Assets(%)



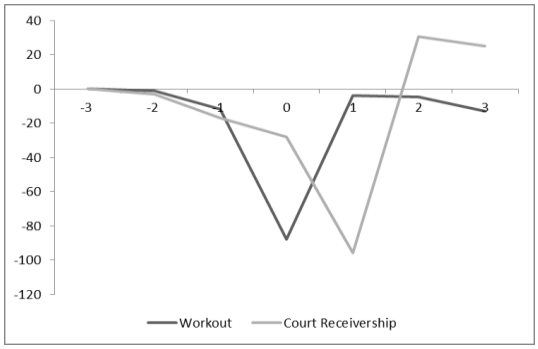
ROA(%)



Operating Profit/Sales(%)



Value Added/Sales(%)



Note: Weighted average value for three years before and after the restructuring assignment

Figure 4-5 shows only the restructuring companies related to shipbuilding, steel, and shipping industry. In particular, we analyze the workout companies whose main creditors are government-owned banks, and the number of those companies is 5. The companies under court receivership are analyzed without the distinction of main creditors, and the number of those companies is 45. As shown in the figure, unlike general insolvent companies, the intensity of the insolvency of workout companies whose main creditors are government-owned banks is much more severe than that of companies under court receivership. In particular, at the start of restructuring, the workout companies were 65%p, 34%p, and 87%p lower in ROA, operating profit/sales, and value added ratio than when they were normal, respectively. And, companies under court receivership were 21%p, 13%p, and 27%p lower than when they were normal, respectively. As a result, it can be seen that companies supervised by government-owned banks as main creditor banks in shipbuilding, shipping and steel industries, despite the seriousness of the insolvency, went through the workout program or the self-rescue plan without entering the court receivership due to various factors. Most main creditor banks for large companies in shipbuilding, shipping and steel industries are government-owned banks whose loan loss provisions for those companies severely burden them. In particular, in the case of the shipbuilding industry, it should be considered that the restructuring of the shipbuilders has been proceeded by the workout program or the self-rescue plan instead of the court receivership due to the problem the government-owned banks should repay the advance payment to clients of shipbuilders if they were under the court receivership.

The results of the previous analysis show that the degree of business recovery of the restructuring companies is simply the trend of the weighted average of the financial variables. This study analyzes how the business recovery of restructuring companies differs according to

the restructuring institutions through the logit analysis and regressions in order to obtain more rigorous empirical results. This study analyzes two variables as dependent variables for the business recovery. First, the dependent variable for logit analysis is 1 if the value (+3) of borrowings/assets after 3 years from the start of restructuring is lower than the value of borrowings/assets as of 3 years before restructuring (-3), or 0 otherwise. And, for ROA, the dependent variable is 1 if the value (+3) after 3 years from the start of restructuring is higher than the value as of 3 years before restructuring (-3), or 0 otherwise. In the regression analysis, the business recovery rate as the dependent variable is estimated using the value as of 3 years after the start of restructuring minus the value as of 3 years before the restructuring began. Figure 4-4 and Figure 4-5 show that the corporate debt crisis starts on average from two years before the restructuring. In the empirical analysis, there may be some controversy as to what the completion of the business recovery should be defined as, but it should be at least as close as possible to the level as of the time before the occurrence of crisis. In addition, in the preliminary analysis of this study, the graduation of the court receivership or the termination of the workout takes an average of 3 years, so that it is estimated that it will take at least 3 years for companies to recover from the business crisis.

$$\Pr\left(Y_{i,+3,-3}=1\right)=F(dummy\ of\ workout\ \beta_1+X_i\beta\quad+\epsilon_{i,+3,-3}),$$

$$Y_i(\equiv y_{i,+3}-y_{i,-3})=dummy\ of\ workout\ \beta_1+X_i\beta\quad+\epsilon_{i,+3,-3}.$$

The above formulas represent the logit analysis and regression analysis, respectively. We use various variables as explanatory variables. First, we use borrowings/assets and ROA at three years before the restructuring and the time the restructuring commences, respectively. In order to control the size and credit risk of the company, we use the log of total assets, trade payables/sales, and financial expenses/ total expenses at the time the restructuring begins according to Nam (2013). In addition, we use dummy variables that represent the intensity of asset sales and labor restructuring according to Atanassov and Kim (2009). Last, for the comparison of the performance of the corporate restructuring institutions, the analysis is conducted using the dummy variables for the workout companies. However, dummy variables for asset sales and labor restructuring, and financial performance variables can have the endogeneity problem because the sluggish performance of the company due to other factors could entice the asset sales and labor restructuring to be more intense during the restructuring process. However, this study does not use the instrument variables because we could not reject the null of the exogeneity in the preliminary Wald test.

Table 4-2. Analysis for Recovery of Borrowings/Assets according to Restucturing Institutions: Listed Companies

	Logit				
	(1)	(2)	(3)	(4)	(5)
Borrowings/assets (−3)	0.082 **	0.084 ***	0.088 ***	0.085 ***	0.09 **
Borrowings/assets (0)	−0.009	−0.015	−0.018	−0.021	−0.02
ROA(0)		−0.05	−0.036	−0.044	−0.037
Trade payables/sales(0)				0.003	0
Financial expenses/total expenses(0)				0.021	0.057
Log(assets)(0)			−0.245	−0.231	−0.248
Dummy of asset sales					−0.502
Dummy of labor restructuring					0.72
Workout dummy	−1.9 **	−1.69 *	−1.67 *	−1.55	−1.67 *
Pseudo R^2	0.22	0.23	0.25	0.25	0.27
Obs.	36	36	36	36	36
	Regression				
Borrowings/assets (−3)	−1.01 ***	−1 ***	−1 ***	−1.01 ***	−0.955 ***
Borrowings/assets (0)	0.129	0.212 *	0.218 **	0.208	0.161
ROA(0)		0.983	0.952	0.828	0.708
Trade payables/sales(0)				−0.128	−0.121
Financial expenses/total expenses(0)				1.71	1.74
Log(assets)(0)			0.604	0.68	0.524
Dummy of asset sales					6.76
Dummy of labor restructuring					−2.74
Workout dummy	14.5 **	9.13	8.75	10.2	9.84
Pseudo R^2	0.44	0.48	0.48	0.5	0.52
Obs.	36	36	36	36	36

Note: 1) Number of ( ) is the lag of independent variable from the starting time (0) of restructuring.

2) ***,**,* denote the statistical significance at 1%, 5% and 10 % level, respectively.

Table 4-3. Analysis for Recovery of ROA according to Restucturing Institutions: Listed Companies

	Logit				
	(1)	(2)	(3)	(4)	(5)
ROA(−3)	−0.25	−0.538 **	−0.427 *	−0.568 *	−0.674 **
Borrowings/assets (0)		0.081 **	0.08 **	0.082 **	0.074 *
ROA(0)	0.104 *	0.344 *	0.385 **	0.381 **	0.396 **
Trade payables/sales(0)				−0.034 *	−0.043
Financial expenses/total expenses(0)				0.034	0.1
Log(assets)(0)			−0.621	−0.57	−0.743
Dummy of asset sales					0.584
Dummy of labor restructuring					−2.32 **
Workout dummy	−1.62 *	−2.95 *	−2.75 *	−2.97 *	−3.39 **
Pseudo R^2	0.15	0.39	0.44	0.47	0.56
Obs.	36	36	36	36	36
	Regression				
ROA(−3)	−0.832 ***	−0.771 ***	−0.721 ***	−0.787 ***	−0.822 ***
Borrowings/assets (0)		0.054 ***	0.048 ***	0.052 ***	0.039 **
ROA(0)	0.2 **	0.32 ***	0.36 ***	0.356 ***	0.29 ***
Trade payables/sales(0)				−0.016	−0.015
Financial expenses/total expenses(0)				0.12	0.127
Log(assets)(0)			−0.721 *	−0.702 *	−0.552
Dummy of asset sales					1.25
Dummy of labor restructuring					−2.58 *
Workout dummy	−3.87 **	−4.03 **	−3.59 **	−3.65 **	−3.64 **
Pseudo R^2	0.43	0.51	0.54	0.55	0.62
Obs.	36	36	36	36	36

Note: 1) Number of ( ) is the lag of independent variable from the starting time (0) of restructuring.

2) ***,**,* denote the statistical significance at 1%, 5% and 10 % level, respectively.

Table 4-4. Analysis for Workout Performance of Government-owned Banks: Shipbuilding, Shipping and Steel Industries

	Regression on borrowings/assets				
	(1)	(2)	(3)	(4)	(5)
Borrowings/assets (−3)	0.81	1.12	1.01	2.75	1.61
Borrowings/assets (0)	−0.89	−0.32	−0.29	−0.45	0.34
ROA(0)		−2.13	−1.89	−3.39	−2.27
Trade payables/sales(0)				0.97 ***	1.26 **
Financial expenses/total expenses(0)				0.09	−1.62
Log(assets)(0)			−1.40	10.0	4.14
Dummy of asset sales					57.5
Dummy of labor restructuring					6.64
Workout * GOB dummy	−13.6	−22.5	−20.0	−8.18	39.7
Pseudo R^2	0.05	0.07	0.07	0.24	0.31
Obs.	22	22	22	22	22
	Regression on ROA				
ROA(−3)	0.38	0.39	−0.33	−0.99	−0.86
Borrowings/assets (0)	0.16	−0.01	−0.02	−0.07 *	−0.07 **
ROA(0)		0.11	0.05	−0.18	−0.16
Trade payables/sales(0)				−0.08 ***	−0.10 ***
Financial expenses/total expenses(0)				0.72 *	0.78 **
Log(assets)(0)			1.38	1.76 **	1.90 *
Dummy of asset sales					−2.96
Dummy of labor restructuring					2.96 *
Workout * GOB dummy	−1.94	−2.66	−5.40 **	−8.06 ***	−11.0 ***
Pseudo R^2	0.15	0.17	0.26	0.53	0.58

Obs.	23	23	23	23	23

Note: 1) Number of ( ) is the lag of independent variable from the starting time (0) of restructuring.

2) ***,**,* denote the statistical significance at 1%, 5% and 10 % level, respectively.

Table 4-2 shows that borrowings/assets of listed companies under workout program is less likely to recover from the business crisis compared to companies under court receivership. In particular, in model (3) of controlling the size of the company, it seems that workout companies are less likely to normalize their their borrowings/assets. As for the financial improvement effect, it can be confirmed that the workout program for listed companies is inferior to the court receivership. However, the independent variables related to the intensity of restructuring show statistically insignificant.

Table 4-3 shows the results of analyzing the recovery of ROA in restructuring listed companies. In both logit analysis and regression analysis, the recovery of ROA of workout listed companies from financial distress is significantly slower than those of listed companies under court receivership. In addition, the dummy variable of labor restructuring significantly affects the recovery rate of ROA in the negative direction, that is, it is interpreted that the business recovery of companies with severe intensity of labor restructuring is inferior.

Table 4-4 shows the results of the performance of workout companies, whose main creditors are government-owned banks, in the shipbuilding, shipping, and steel industries since 2008[10]. In particular, the recovery of ROA of workout companies whose main creditor banks are government-owned banks is significantly more sluggish than companies under court receivership. In the statistically significant model (3), (4) and (5), the recovery rate of ROA of workout companies supervised by government-owned banks is 8.15% lower than those of companies under court receivership on average.

Through the empirical analysis so far, it is concluded that the workout program does not achieve the policy objective of performing corporate restructuring quickly and smoothly. In particular, as the performance of workout companies in shipbuilding, shipping and steel industries where government-owned banks should play crucial roles has been poor, it is confirmed that there is the political economy effect of government-owned banks as agencies of

[10] The reason for not doing the logit analysis is that there is no case where the dependent variable is 1 among the workout companies where the government-owned bank is the main creditor bank.

the administration. This interpretation is because the purpose for the legislation of the workout program is to speed up corporate restructuring and to normalize the operations more quickly than the court receivership. However, the sluggishness of the workout program seems to have been caused by more complicated factors, which were not observed in the analysis, rather than the asset sales or labor restructuring. Therefore, based on the results of empirical analysis, this study suggests that the workout cases since 2008 has failed to achieve the policy efficiency achieved at the initial stage of the program introduction, revealing structural problems. In addition, it is concluded that it is necessary to secure the independence of the restructuring role of government-owned banks.

5 Conclusions

Basically, all governments are willing to implement benevolent policies. However, such compassion can lead to a deterioration in economic efficiency, which may lead to the loss of the power of mid- and long-term economic growth. In Korea, after the financial crisis, the government legislated a corporate restructuring system in which that the government can intervene the corporate restructuring process through the government-owned banks. Although the government's intervention in the early 2000s achieved some degree of success in the corporate restructuring, the restructuring performance in the shipbuilding, shipping and steel industries has been sluggish since the global financial crisis. In particular, when the government-owned banks intervene in corporate restructuring, the restructuring timing seems to be delayed, indicating that there might be moral hazard problems. Therefore, it is necessary for the government to refrain from intervening in the private restructuring of individual companies and to allow the restructuring of companies to proceed autonomously in the capital market. Finally, if it is necessary, it is more important for the government to implement various welfare policies that mitigate the negative effects that will occur after the corporate restructuring is completed.

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