

# Conflicts of Interest 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 conflicts of interest 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 and thus records substantial losses so as to encroach creditors' right severely, management, shareholders, creditors and employees need altogether to participate in corporate turnarounds to get it revived. In particular, creditors who have the keenest stakes by making advancing money with a fixed income contract are bound to initiate other relevant stakeholders to actively join the corporate restructuring in order to rescue their investments at the brink of default. Since a series of corporate restructuring processes have socio-political impacts as well as economic effects, the government tends to have an incentive to engage itself in the process. In particular, in the course of restructuring large corporations which address grave implications on politics, the distribution of income, regional economic conditions, etc., an expeditious compromise is pivotal so that the government is forced to feel a heavy duty and responsibility for mediating all stakeholders.

A corporate insolvency regime governing that delinquent corporations should be handled

quickly, efficiently and fairly is comprised of a private restructuring workout scheme and a formal in-court restructuring system such as court receivership. Even in the case of private restructuring, the depth of government intervention is sometimes neither negligible nor shallow as purely private agreements could spend invaluable time costs and entail huge unintended side-effects. In addition, the dexterity and the capacity of government agencies such as policy-based banks to rightly solve conflicts of interest often call for and justify public intervention in private restructuring processes.

This study attempts to analyze how much government-owned banks as government agencies have made political considerations and been exposed to moral hazard problems different from commercial creditors. In addition, as those industries having been a Korea's growth engine such as shipbuilding, shipping, steel, etc., have recently been in trouble, the government-owned banks are injected to rehabilitate these industries. Therefore, this study analyzes how much government-owned banks have achieved corporate restructuring performance compared in comparison to other commercial banks' restructuring scheme 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 and economic problems. In Chapter 4, we analyze the corporate restructuring performance of companies, whose main creditor banks are government-owned banks, compared with that of commercial banks' restructuring or court receivership while using the financial data of the restructuring companies. Chapter 5 concludes.

## **2. Taxonomy of Corporate Insolvency System in Korea**

While financially distressed companies with overdue debt payments are forced into corporate restructuring, those that, despite making a scheduled redemption, experience a drastic contraction in revenues are sometimes subject to externally driven turnarounds. The agents of the corporate restructuring are critical in the legal and practical contexts since, for example, the first-mover advantage is vital even when the new set of contracts meets all-party agreements. The overall performance of corporate turnarounds also hinges heavily on the leadership, which determines fairness and efficiency.

Corporate restructuring methods are classified largely into three types in terms of leadership: 1) court, 2) creditors, and 3) government. Varying in cost and benefit, all methods constitute effective insolvency regime in an economy. This chapter introduces Korea's insolvency system from an institutional approach, focusing on a comparison of the methods of corporate restructuring by leadership.

## 2.1 Court-led Corporate Restructuring

Undoubtedly it is the creditor who should assume the leadership in and be responsible for the restructuring of an indebted company. Restructuring a delinquent company tends to be simple if there is a single creditor. The debtor and creditor enter a private restructuring contract by making an agreement on a newly promised plan for debt relief and a schedule. Once the two parties reach a discord over the restructuring plans, they file for a corporate reorganization to the court. In this case the court takes a leadership in the corporate restructuring, which is called a court-led restructuring.

Prior to the 1997 financial crisis, Korea had three legal statutes on insolvency: the Bankruptcy Act, Composition Act, and Corporate Reorganization Act. These laws can be traced back to 1962 but were rarely used before the crisis in 1997. The crisis, however, brought much-needed momentum for change in Korea's formal insolvency system, which was too elementary and out-of-date to resolve corporate insolvency cases that rose dramatically both in number and size. Thus, 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 enforced by two fold. The first aimed to address the loopholes in the formal insolvency mechanism while the other was designed to introduce an economic criterion at the commencement stage of the insolvency proceedings. Changes were also made to expedite the process under court receivership. In April 2006, the new Act on the 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) unified and replaced four separate insolvency laws: the Corporate Reorganization Act; Composition Act; Bankruptcy Act and; the Individual Debtor Rehabilitation Act.

These revision efforts were all intended to facilitate the corporate restructuring process so that distressed firms could begin to rehabilitate. Thus, the new insolvency regime post-1997 crisis set out to prioritize efficiency over fairness.

## 2.2 Creditor-led Corporate Restructuring

Multi-creditor cases often demand relevant stakeholders for time, patience and costs. Conflicts between secured and non-secured creditors tend to rise when creditors negotiate over the terms of the rehabilitation plan. Even if non-secured creditors were to agree on the rehabilitation of insolvent firms to enhance the collective value that creditors would retrieve from the firms, they may still suffer from the counterparts' hold-out strategy, which could draw better terms for interests at the stake of the secured creditors as negotiation stalls. Such difficulties lead creditors to consider out-of-court settlements for corporate restructuring. Among the creditors, financial institutions have the comparative advantage and expertise on negotiation and planning for financial restructuring over indebted companies. In most cases, major banks tend to take the lead in the corporate restructuring process on behalf of the creditors, which is called a creditor- or bank-led restructuring. This type of restructuring is most famously exemplified by the corporate workout scheme.

The corporate workout scheme benchmarked the "London Approach," was essentially a voluntary agreement among financial creditors with a tacit awareness of the role of the Bank of England as facilitator and mediator in the actual restructuring processes.<sup>1</sup> The corporate workout program is beyond the jurisdiction of the court. Nonetheless, the workout scheme is closely related to insolvency laws for creditors could easily turn to in-court settlement

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<sup>1</sup> During the economic recession in the 1970s, the United Kingdom was unprepared to deal with the vast number of firms facing liquidity crunches. The Bank of England intervened to encourage creditor financial institutions to act upon agreements, streamlining the restructuring process.

procedures if they are dissatisfied with the scheme.

The Korean Corporate Workout Program was established in 1998 under the systemic crisis,<sup>2</sup> aimed at rescuing both distressed companies and financial institutions. Most financial institutions troubled with capital inadequacy as a result of corporate defaults, including major commercial banks, could not afford to execute in-court bankruptcy procedures against non-performing corporations. The banks needed time and the resources to reorganize themselves as well as to rehabilitate the debtor companies. The government found it too costly to apply the market principles and in-court restructuring methods to all distressed companies, which would have led to liquidation in many cases<sup>3</sup>.

### 2.3. Government-led Corporate Restructuring

Large delinquent companies often contain systemic concerns that cause many complications. The complex debt structures of such companies, in terms of the number of creditors, type of debt, etc., became obstacle to private and seamless restructuring plans. For instance, a series of large company defaults after the 1997 financial crisis in Korea posed a profound threat to the viability and resiliency of the national economy. The government invested heavily in individual corporate problems (ranging from debt rescheduling and corporate structuring to even the very fate of debtor companies, mostly cited as the Big Deal<sup>4</sup>) to alleviate the systemic risks, especially for major chaebols such as Daewoo, SK, Hyundai, LG, etc. This type of restructuring is called 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 the successor to the former Bankruptcy Respite Agreement.

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

4 The Big Deal was planned in October 1998 as a grand compromise among business leaders at the height of a crisis. This reminded of government-arranged restructuring under the name of industrial rationalization of the heavy and chemical industries in the 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, for other types of private restructuring arrangements, economists, lawyers, practitioners and relevant stakeholders hold varying perspectives in regards to balancing economic efficiency with legal justice. For example, while some interpret government-led restructuring for economic efficiency as inevitable measures during an economic crisis, reforms of this nature are also criticized as being violations of market principles; such programs enable the excessive bailouts of beneficiary firms and obscure government policy failures. The pursuit of efficiency may run counter to fairness, as it can inhibit opportunities for some relevant parties, especially minor creditors, to secure certain interests.

Furthermore, the legal background for government-led restructuring, says the Industrial Development Act in the 1980s, was found unconstitutional for excessively encroaching on the property rights of relevant stakeholders. In the Big Deal, the government acted as the deal arranger of merger and acquisitions (M&A) in industries afflicted with severe excess of capacity, presenting the guiding principles for grand deals: each business group must focus on the core competencies and deals with an M&A could enhance corporate competitiveness in the prisoner's dilemma situation. The government promised to offer tax and fiscal assistance upon the implementation of the deals. Indeed, faced with the enormous political pressure to produce visible outcomes, the authorities turned to the familiar strategy of intervening in private deals. However, government intervention, albeit seemingly benign, may distort incentives in the private sector.

Therefore, a sufficient insolvency mechanism must strike a balance between efficiency and fairness.

#### 3.2 Government Formal Engagement: Corporate Restructuring Promotion Act

For the aforementioned reasons, creditor-led corporate restructuring has drawn practical attention. In Korea, the main bank is the largest or core loan provider as well as the sole credit

examiner among the creditors. It is often engaged in reviewing and monitoring debtor companies and reports to other financial institutions on the companies' business prospects, financial health, credit rating and fund needs. Accordingly, due to the main bank's informational advantage, it is only reasonable and least costly for it to take the initiative in the corporate restructuring process. However, despite the efficiency, bank-led restructuring inevitably infringes upon small stakeholders' rights by repressing their vote. The absence of the legal grounds for this clam-down of votes may lead to more serious problems.

A similar issue has been raised as a fundamental weakness of the Korean Corporate Workout Program, which officially aimed for a market-led restructuring but was in reality abused by the government authorities and agencies that manipulated the main banks' roles and activities. Notwithstanding the relevant efforts to establish a voluntary system, the corporate restructuring scheme, led by financial institutions after the 1997 crisis, faced significant difficulties. For one, the corporate restructuring market was at the time not experienced enough to embrace the voluntary restructuring process. Also, some financial institutions had an incentive to free ride rather than to share the losses by participating. As a result, the system at its nascent stage only aggravated market uncertainties as financial institutions led the inefficient reforms.

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

The CRPA has raised many objections, mostly from legal practitioners. One controversy was that the CRPA violated the constitutional right of private property ownership. For example, a CRPA clause stipulated that financial institutions were required to defer collecting their claims without court intervention against part of credits' interests. As the CRPA was advocated by the government, this clause allowed financial institutions to request a buyback option, enabling them to collect claims based on the liquidation value. In addition, the CRPA was accused of violating the principle of private autonomy as it requested restructured companies to seek



approval from trustees appointed by the creditors' council for main business activities.

The shortfalls as a consistent statute to the constitution have made sun-sets and reenactments regular occurrences within the CRPA.<sup>5</sup> Currently, the fourth CRPA is in effect but will soon be subject to reassessment. The focal arguments regarding its operation are anticipated to question the scope and limit of the administrative engagements in corporate sector restructuring, as many anti-CRPA camp members criticize the excessive role of the financial authorities including the 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 the 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 thus far, public officials have been highly concerned about the linkage between corporate restructuring and financial performance. The corporate workout program and its follow-up institution, the CRPA, are the fundamental legacies of the 1997 financial crisis. In the face of the systemic crunch, the Korean government chose a semi-private and semi-public corporate restructuring system indirectly led by the Financial Supervisory Commission (FSC).<sup>6</sup> Such a path

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

6 The Financial Supervisory Commission (FSC), which was separated from the former Ministry of Finance and Economy, is the predecessor to the Financial Services Commission (FSC), later instituted in 2008 and the current financial authority. Inside the former FSC, the Restructuring and Reform Unit (RRU), whose head was the chairman of the FSC, functioned as the highest decision-making body in financial and

dependency caused systemic considerations even in a micro-judgement like corporate restructuring. Financial stability matters since large company defaults hamper the financial soundness of banks.

As the so-called “control tower of economic policymaking,” the Ministry of Strategy and Finance (MOSF), also has a keen interest in large corporate restructuring due to its potential impact on macroeconomic performance. The immediate side effects of corporate restructuring include an increase in unemployment and a decrease in GDP. Furthermore, depending on size, related financial institution and the fallout, the MOSF could inject public funds to absorb the direct or indirect losses. For example, policy-based financial institutions like the Korea Development Bank (KDB) and Korea Export and Import Bank (KEXIM) could become undercapitalized after recognizing large loan loss provisioning. The MOSF then needs to raise the capital to meet their prudential requirements. The increase in capital for public financial institutions, however, calls for the approval from the National Assembly, which endeavors to perform a thorough examination of public expenditure. Indeed, government authorities and agencies are not by any means free from the responsibilities for policy failures in addition to those for business failures.

Politicians who hold votes in high regard should monitor the local damage caused by corporate failures and restructuring in their constituencies. The number of jobs lost and businesses shut down are their primary concern. Accordingly, to rescue jobs and businesses, politicians urge government authorities to inject more funds, which can be counteractive to corporate restructuring. Such pressure is sometimes consistent with the policy makers’ incentive to conceal policy failures, which leads to excessive bail-outs as a first-aid treatment. The likelihood of a bailout, however, is undesirable in that it inflates fiscal costs and delays both macroeconomic and microeconomic recoveries. Nonetheless, most stakeholders in policy and political circles have enough reason to postpone full-scale corporate restructuring as much as possible.

A recent and salient example is the restructuring of the shipbuilding industry. Korea has long

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corporate sector restructuring. Thereafter, most recognized that restructuring tasks should be assumed by the FSC.

prospered in the shipbuilding industry since the 1990s. The three biggest shipyards, Hyundai, Daewoo and Samsung, are all Korean firms. Prior to the 2008 global financial crisis, the industry enjoyed an ever unprecedented boom thanks to a goldilocks economy and deepening globalization trend. The crisis, however, reversed business cycles, evoking domino failures of shipbuilders. Massive corporate restructuring was inevitable and required a strategy that differed from the one that followed the 1997 financial crisis. After the 2008 global financial crisis, the Korean corporate workout program changed to favor the reduced involvement of private sectors. Because of the risk build-up and liquidity crunch, most private banks that tried to protect themselves instinctively shrank their credit exposure to industries sensitive to business cycles like shipping, shipbuilding, construction, etc. During the business downturn, shipbuilders therefore became heavily dependent on policy-based financial institutions like the KDB and KEXIM. In addition, most private banks exercised options in order to collect claims based on the liquidation value, ending up with a complete withdrawal from the creditors' council of distressed shipbuilders. As a result, the KDB and KEXIM should bear much larger losses in the semi-public corporate restructuring regime. The next chapter will empirically examine creditor-led corporate restructuring.

#### 4. Empirical Assessments on Korea's Corporate Workout

In this section, we present the empirical analysis on corporate restructuring in Korea during the past decade. In particular, we show that the timing of the restructuring intervention or commencement of the workouts by government-owned banks is relatively later than commercial banks. Additionally, the restructuring intensity of the workouts of marginal companies whose main creditors are government-owned banks is relatively weaker compared to commercial banks. In recent years, as workout failures have risen, it has become evident that the workouts supervised by government-owned banks as the main creditor in the shipbuilding industry, steel industry, and shipping industry are more protracted compared to court receiverships.

In this study, it is difficult to directly analyze the factors for the delay of the workout by government-owned banks; the moral hazard in the general agency problem or the Korean government's political intervention by reserving the restructuring decisions in consideration of

the negative impact on the local economy due to 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' Behavior in Workout Programs

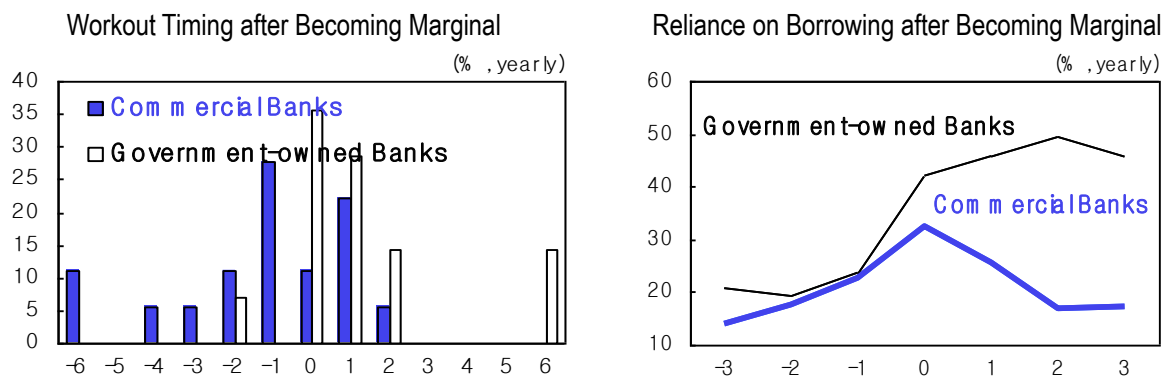
The KIS-Data is used to compare the commencement of the workout programs for non-performing companies supervised by government-owned banks<sup>7</sup> and commercial banks, and the intensity of their restructuring process which includes asset sales and downsizing the workforce. It was found that a total of 39 listed companies have been 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 a role in implementing the restructuring, meaning that whether the main creditor bank is government-owned or not is a significant factor in the 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 the company was recognized as marginal, while 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<sup>8</sup>. Additionally, it was found that government-owned banks provided marginal companies with increased financial support which delayed 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 than demanding a preemptive commencement of the restructuring, which is a moral hazard as a Korean government agency. Otherwise, there might be political intervention as explained before.

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7 KEXIM, Industrial Bank of Korea (IBK), KDB

8 Companies are recognized as marginal when its interest coverage ratio (ICR) records three consecutive years of below one.

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

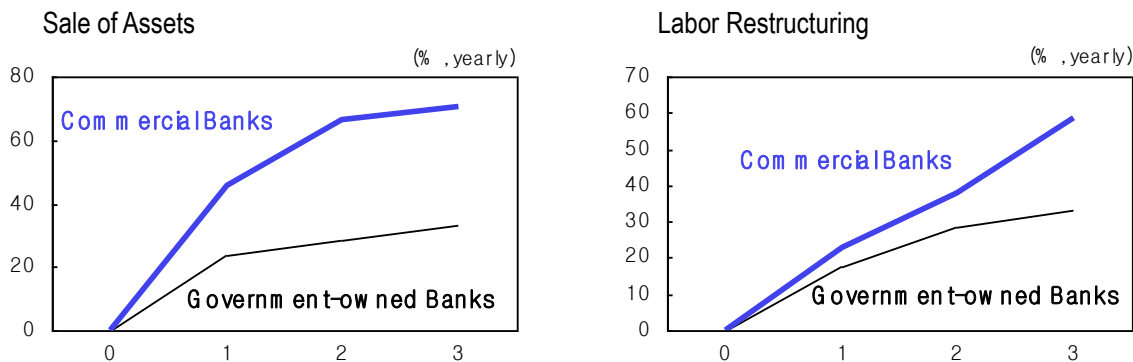


Note: 1) Distribution of the time when the workout commences after being recognized as marginal (0).  
 2) Weighted average (asset proportion) of the reliance on borrowing (borrowings/assets), after being recognized as marginal (0).

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

There is other empirical evidence that political intervention could occur during 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 study measures the degree of 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 their assets when the size of tangible assets declines by more than 15% after the workout, and they are assumed to be in 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. In the sale of assets, merely 33% of the former embarked on the proceedings after the workout had commenced while a staggering 70% of the latter did the same. In labor restructuring, the former was again found to be more passive than the latter. As shown in Figure 4-2, the difference in restructuring intensity between main creditors of government-owned banks and commercial banks are clear.

**Figure 4-2. Degree of 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 by more than 15% in the three-year period since the workout agreement (0).

2) Proportion of companies whose number of employees decreased by 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 study 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.

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

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, the gains are higher by a significance level of 5% when commercial banks are the main creditors compared to their counterpart. 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 is lower by 46.5%p and 47.5%p, respectively<sup>9</sup>.

**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 a 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 the 89 workout companies and 1,059 companies under court receivership that have undergone restructuring since 2008. Before analyzing the degree of business recovery, we analyze the extent of asset sales and labor adjustment of financially distressed companies under the corporate restructuring process; workout and court receivership. Figure 4-3 shows the cumulative distribution of companies that sold assets and restructured the workforce, respectively, until three years after the start of the restructuring process. First, the results of the analysis on all of the industries reveal that companies under court receivership were more active than workout firms in asset sales and labor restructuring. In particular, 92% and 99% of companies under court receivership sold their assets and restructured their labor force three years after restructuring began. This is more than

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

10%p higher than the 76% and 78% marked by workout companies. Additionally, the analysis of the listed companies shows that workout companies and companies under court receivership restructured their workforce in a similar manner to selling their assets. However, 70% of companies under court receivership were found to have restructured their workforce, which is more than the 52% of workout companies. In particular, in the analysis on restructuring companies belonging to the 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 proceeded further.

In fact, as explained earlier, the workout program is a private restructuring process which enables the workout company to 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 workout firms. However, it should be noted that the sluggishness in asset sales and labor restructuring may diminish the efficiency of the workout program. In other respects, regardless of the restructuring institution, it can be inferred that asset sales and labor restructuring proceed stronger 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 relationships.

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.

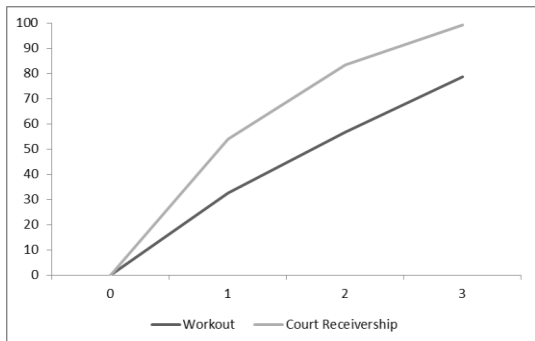
Figure 4-4 is an analysis of the degree of business recovery of workout companies and companies under court receivership that are listed; there are 31 of the former and 38 of the latter. As shown, the recovery performance of companies under court receivership is more effective than workout companies. In particular, the ROA and value added ratio of listed companies under court receivership have improved more compared to that three years prior to



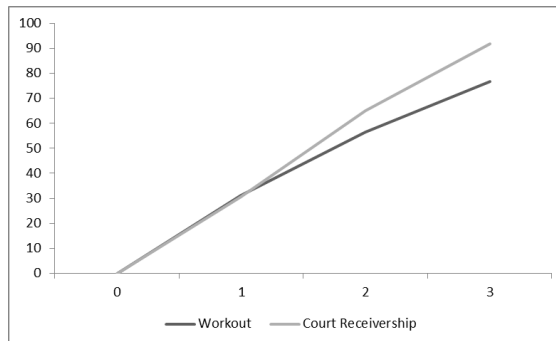
restructuring.

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

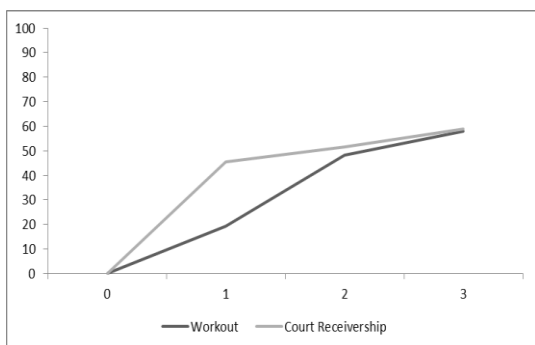
All: Sale of Assets (%)



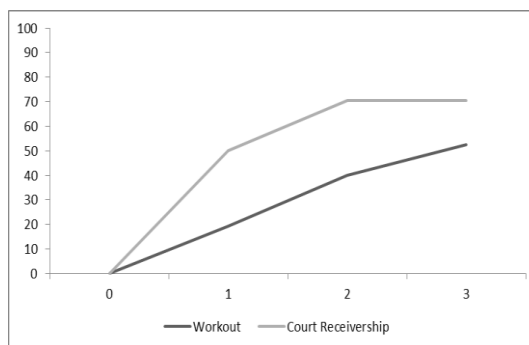
All: Labor Restructuring (%)



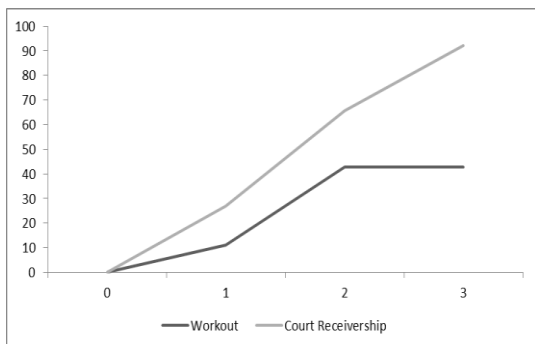
Listed Companies: Sale of Assets (%)



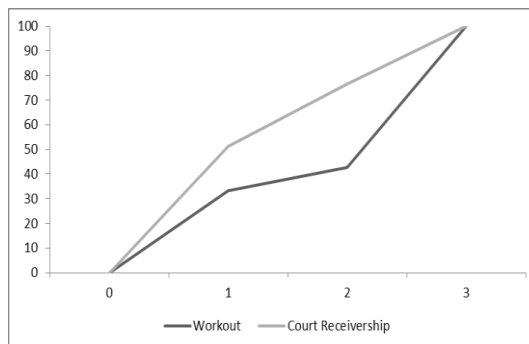
Listed Companies: Labor Restructuring (%)



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



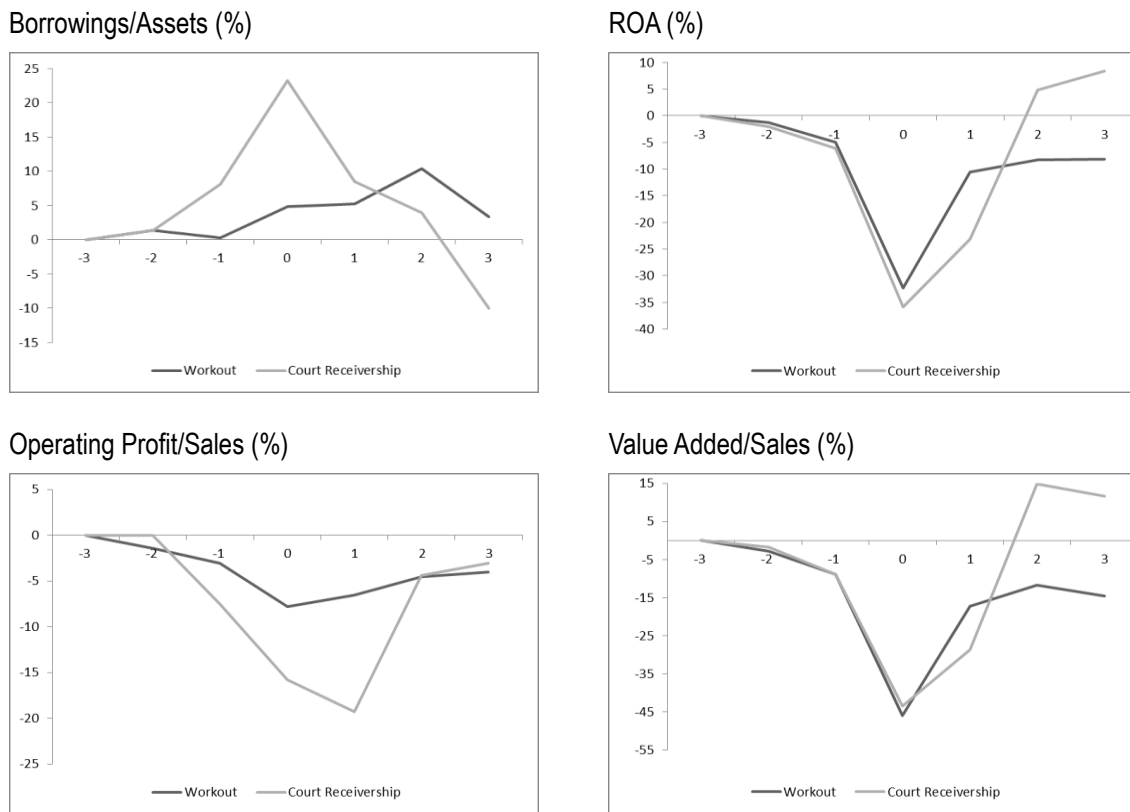
Shipbuilding, Shipping, Steel Industries:  
Labor Restructuring (%)



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

2) Proportion of companies whose number of employees decreased by 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**

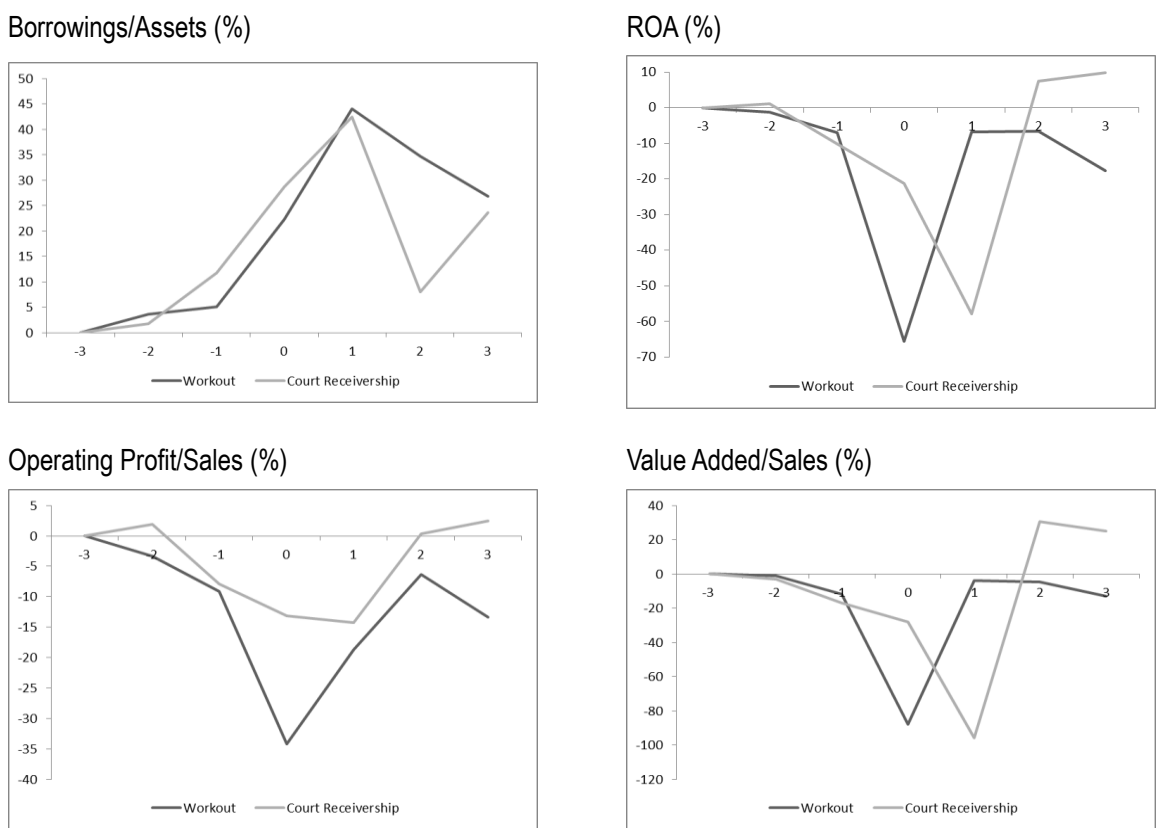


Note: Weighted average value for three years pre- and post-restructuring assignment

Figure 4-5 only shows restructuring companies related to the shipbuilding, steel and shipping industries. In particular, we analyze workout companies whose main creditors are government-owned banks, of which there are 5. Companies under court receivership are analyzed without distinction of main creditors, and the number of those companies totals 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 ROA, operating profit/sales and value added ratio were 65%p, 34%p, and 87%p lower for workout companies compared to normal times while the figures were 21%p, 13%p, and 27%p lower for companies under court receivership. As a result, it can be seen that companies supervised by government-owned banks as the main creditor in the shipbuilding, shipping and steel industries, despite the seriousness of the insolvency, went through the workout program or self-rescue plan without entering court receivership due to various factors. The majority of main creditor banks

for large companies in the shipbuilding, shipping and steel industries are government-owned banks whose loan loss provisions for such companies can become a severe burden. In particular, in the case of the shipbuilding industry, it should be noted that the restructuring of shipbuilders has proceeded through the workout program or self-rescue plan instead of court receivership due to fact that government-owned banks need to repay the advance payment to clients of shipbuilders if they are under court receivership.

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



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

The results of the previous analysis show that the degree of business recovery of restructuring companies is simply the weighted average of financial variables. This study analyzes how the business recovery of restructuring companies differs according to the restructuring institution through the logit analysis and regressions in order to obtain more rigorous empirical results.

Two variables were analyzed as dependent variables for 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 the 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 three 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 three years after the start of restructuring minus the value as of three years before the restructuring began. Figure 4-4 and Figure 4-5 show that a 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 before the crisis. In addition, in the preliminary analysis of this study, the graduation of the court receivership or termination of the workout takes an average of three years, so it is estimated that it will take at least three years for companies to recover from the business crisis.

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

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

The above formulas represent the logit analysis and regression analysis, respectively. We use various variables as explanatory variables. First, we use borrowings/assets and the ROA at the three-year period before the restructuring and when the restructuring commences. 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 when 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 on the performance of 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 an endogeneity problem because the sluggish performance of the company due to other factors could intensify asset sales and labor restructuring 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 shows that borrowings/assets of listed companies under the workout program are less likely to recover from a 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 borrowings/assets. As for the financial improvement effect, it can be confirmed that the workout program for listed companies is inferior to court receivership. However, the independent variables related to the intensity of restructuring show statistical insignificance.

Table 4-3 shows the results of the analysis on the recovery of the ROA in restructuring listed companies. In both logit analysis and regression analysis, the recovery of the ROA of listed workout 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 the ROA in a negative direction, that is, it can be interpreted to mean 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.<sup>10</sup> In particular, the recovery of the ROA of workout companies whose main creditor banks are government-owned banks is significantly more delayed than companies under court receivership. In the statistically significant model (3), (4) and (5), the recovery rate of the ROA of workout companies supervised by government-owned banks is 8.15% lower than those of companies under court receivership on average.

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<sup>10</sup> The reason for excluding the logit analysis is that there is no case where the dependent variable is 1 among workout companies whose main creditor is a government-owned bank.

**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 <sup>2</sup>                | 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 <sup>2</sup>                | 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 Restructuring 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 <sup>2</sup>                | 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 <sup>2</sup>                | 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 <sup>2</sup>                | 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 <sup>2</sup>                | 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.

Through the empirical analysis so far, it can be concluded that the workout program does not achieve the policy objective of rapidly and efficiently implementing corporate restructuring. In particular, as the performance of workout companies in the shipbuilding, shipping and steel



industries, where government-owned banks should play a crucial role, has been poor, it has been confirmed that there is the political economic effect of government-owned banks as agencies of the administration. This interpretation is because the purpose for the legislation of the workout program is to speed up corporate restructuring and to normalize operations quicker than court receiverships. 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 the empirical analysis, this study suggests that the workout cases since 2008 have failed to achieve the policy efficiency achieved at the initial stage of the program, revealing structural problems. In addition, it can be concluded that it is necessary to secure the independence of the restructuring role of government-owned banks.

## 5 Conclusions

As far as corporate restructuring goes beyond economics, we do not attain a unique solution which is both economically efficient and politically feasible. Large corporations, once distressed, which have systemic implications are mostly likely to be subject to government involvement because the outcome otherwise would be disastrous at least in the domain of financial stability and employment. As desirable as it is in terms of efficiency, private resolution emphasizes creditors' position and incentives too much that it would not be accepted by other stakeholders who demand for government mediation service. Government authorities, however, do not always behave as a benevolent arbitrator. They are also one of the stakeholders in that they are potentially the ultimate cost bears and have enough incentives to conceal their policy errors and failures. They are often pressed by politicians who do not welcome efficient resource allocation in the long run. Thus, government is tempted to choose a mixed solution of economic conformity but political feasibility under the premise of searching for the second best option rather than the first best one.

Currently, an inclusive growth framework draws much attention. This concept is also not chasing an only economically efficient solution. It insists that in much longer run it would be a better and more sustainable solution to incorporate generous incentive compatibility conditions. This

argument applies to corporate restructuring. In the restructuring cases of heavily entangled with regional economic shocks or industrial chain effects, the government's subsidy package targeting for extending unemployment benefits and regional economic assistance would be a practical solution than either bailing-out distressed firms as a stop-gap measure to deter massive unemployment or abiding literally by market disciplines. Obviously, such a compromise would lead government's arbitrary action which offers more room for politicians to get intervened. If better public expenditure is not yet incorporated to secure long run efficiency consistent to inclusive framework, a purely creditor-led corporate restructuring could be a choice to avoid the worst one. The worst case of scenario would be reckless government involvement to simply bail-out distressed but inviable companies in order to serve to politicians' incentives to win votes.

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