

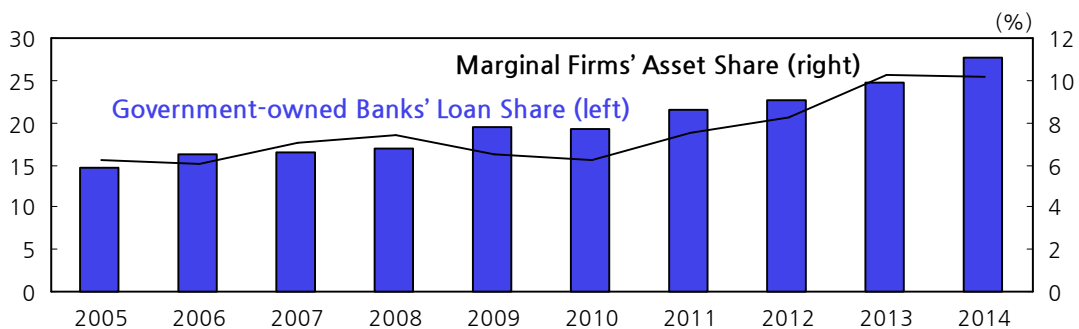
# Impact of Government-owned Banks on the Restructuring of Marginal Large Enterprises

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## 1. Issues

- Concerns are being raised about the necessity to **reexamine government-owned banks' role in corporate restructuring** as they (Korea Development Bank (KDB), Export-Import Bank of Korea (KEXIM), and Industrial Bank of Korea (IBK)) have expanded corporate loans, particularly to marginal firms (interest coverage ratio (ICR) below 1 for three consecutive years).
  - Government-owned banks serve to provide financial support to distressed large enterprises, taking into account financial market stability and industrial policy factors. From 2010 onwards, the proportion of corporate loans by government-owned banks has been on a constant rise.
  - However, as the distress of large enterprises exacerbates, concerns are growing that government-owned banks' restructuring capabilities of large enterprises may be weakened due to moral hazard and independency issues.

### Government-owned Banks' Loan Share and Marginal Firms' Asset Share



Note: 1) Government-owned banks' loan share refers to the proportion of corporate loans by KDB, KEXIM, and IBK in total corporate loans.  
2) Poorly-performing firms' asset share refers to the proportion of assets held by firms below 1 ICR in total corporate asset for three consecutive years.  
Source: Small & Medium Business Association; Statistics Korea; Bank of Korea (BOK); KDB; KEXIM; IBK; KIS-Data.

- In this regard, this paper, using firm-level micro data, tries to analyze the impact of government-owned banks on corporate restructuring and draw on policy implications for their role in corporate restructuring.
  - In particular, this paper attempts to empirically analyze the differences between commercial and government-owned banks in terms of the timing of restructuring and degree of business reorganization after the workout.

## 2. Current Status of Marginal Firms and Government-owned Banks' Financial Support

- The share of assets held by marginal firms continues to rise mainly among large enterprises.
  - Calculated using financial statements of individual companies in KIS-Data, poorly-performing firms' asset share has risen continuously from 2.6% of total corporate assets in 2010 to 10.2% as of end-2014.
  - The share of assets held by marginal small and medium enterprises (SMEs) has risen 3.3% in 2014, up by 0.35%p from 3.0% in 2010, whereas that by marginal large enterprises has sharply expanded to 6.9% from 3.2% during the same period.
    - The fact that the number of marginal companies has increased mostly among large enterprises since 2010 in the post-global economic crisis era suggests that efforts on the restructuring of large enterprises have been relatively tepid.

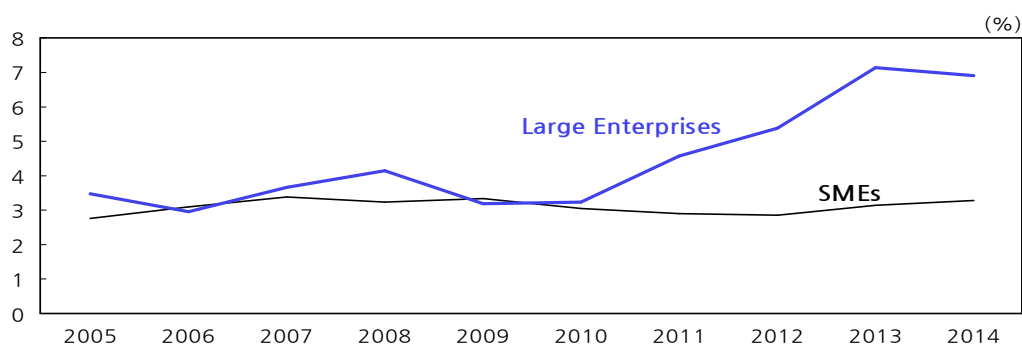
### Share of Assets Held by Marginal Firms by Size

(%)

	2010 (A)	2014 (B)	Change (B-A)
Large Enterprises	3.2	6.9	3.7
SMEs	3.0	3.3	0.3
Total	6.2	10.2	4.0

Note: The classification of SME and large enterprises is based on KIS-Data.  
Source: KIS-Data.

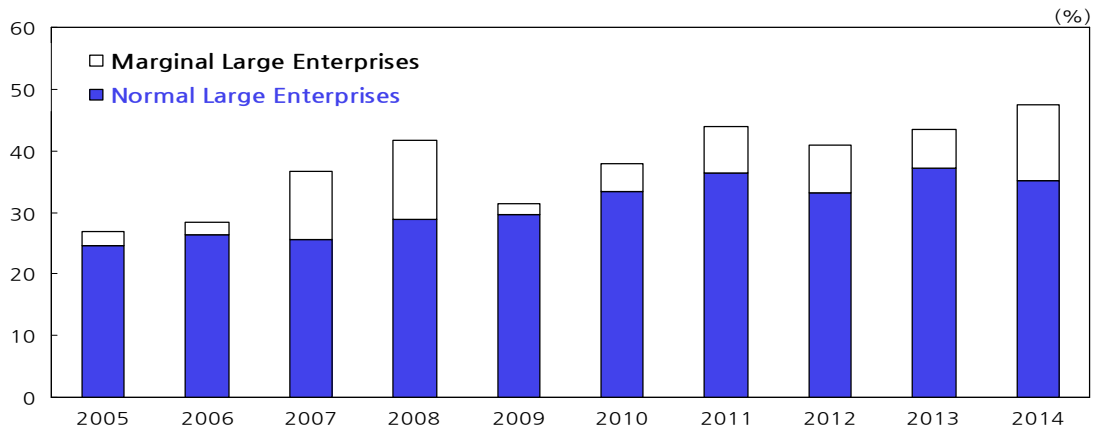
### Asset Share Changes in Marginal Large Enterprises and SMEs



Source: KIS-Data.

- Meanwhile, government-owned banks' financial support to large enterprises has been on a steady upward trajectory since 2010, with growing support to large marginal enterprises.
- This paper recognizes 'maturity extension' and 'interest subsidy' as forms of 'financial support,' and uses information on companies' main bank to discern the existence of 'support from government-owned banks.'
  - ※ Refer to 'Negative Effect of Depressed Restructuring' in KDI Economic Outlook (2014-2nd half) for further details on the statistical definition of maturity extension and interest subsidy.
  - ※ Financial reports from individual companies do not provide precise information on whether a specific company is given direct financial support from government-owned banks. But, this paper deems those that have government-owned banks as the main bank as recipients of financial support from government-owned banks.
- In terms of corporate debt, large enterprises account for 47.5% of the total debt of companies that received financial support from government-owned banks in 2014, up from 37.9% in 2010, of which financial support to large marginal enterprises soared from 4.6% to 12.4%.
  - This suggests that the government-owned banks' lukewarm attitude towards the restructuring of large marginal enterprises may have delayed the restructuring of large enterprises.

### Government-owned Banks' Financial Support to Large Enterprises



Note: Proportion of government-owned banks' financial support to large enterprises = Financial support to non-marginal (marginal) large enterprises/Government-owned banks' financial support.  
Source: KIS-Data.

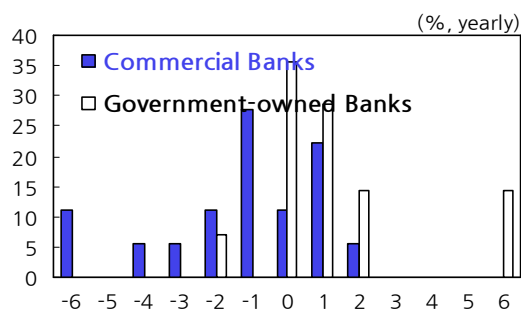
### 3. Impact of Government-owned Banks on Workout Timing and Restructuring Degree

- The analysis of 39 listed companies subject to workout program after 2008 reveals that **government-owned banks initiated the workouts later than commercial banks, but provided comparatively more financial support to those showing signs of distress** (See Appendix).
  - 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.

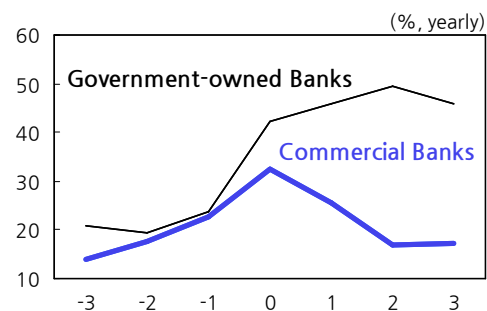
- Companies are recognized as marginal when its ICR records a third straight year of less than 1.
- Additionally, it was found that government-owned banks provided marginal companies with increased financial support, delaying the workout.
- The results imply that government-owned banks are inclined to delay the restructuring of distressed companies, rather relying on optimistic projections of corporate rehabilitation, instead of demanding them to commence preemptive restructuring.

### Workout Timing and Financial Support of Government-owned and Commercial Banks

Workout Timing after Becoming Marginal<sup>1)</sup>



Reliance on Borrowing after Becoming Marginal<sup>2)</sup>



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.

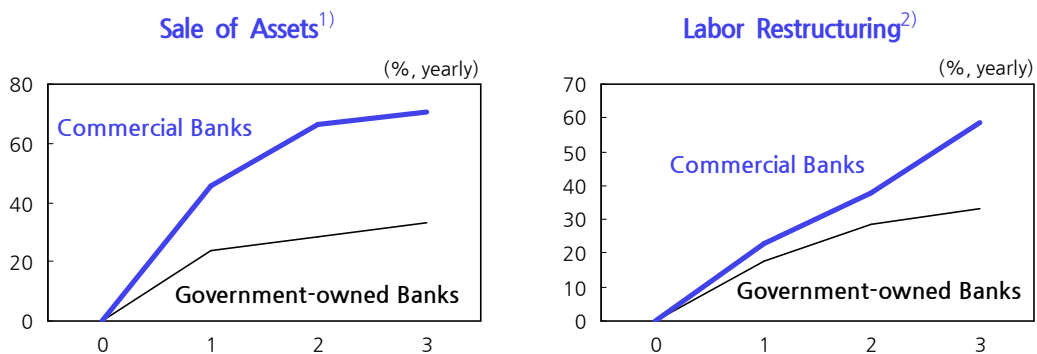
- Analysis of the impact on the substantial restructuring of companies under workout programs indicates that **government-owned banks negatively influence corporate restructuring.**
- This paper measures the degree of the adjustment of production factors including capital and labor following the workout 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% (Refer to Atanassov and Kim (2009)<sup>1)</sup> for further details).

● 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.

### 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.

1) J. Atanassov and E. H. Kim, "Labor and Corporate Governance: International Evidence from Restructuring Decisions," *Journal of Finance*, vol. 64, 2009.

■ 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 reliance on borrowing 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.

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

● 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.
- ※ Similar results were obtained in the empirical analysis with dummy variables that take into account industrial characteristics of construction and ship-building industries.

### Impact of Government-owned Banks on Capital and Labor Restructuring in Workout Companies

	Impact of Government-owned Banks after Company Characteristics are Controlled <sup>1)</sup>	Government-owned Banks	Log (Asset Size)	Reliance on Borrowing
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. Summary and Policy Implications

- Government-owned banks have been unsuccessful in making effective progress in the restructuring of marginal large enterprises over the past few years.
  - Government-owned banks have a tendency to inefficiently allocate financial support by delaying the workout timing and expanding the support.
  - Moreover, ‘workout’ companies with government-owned banks as the main creditor bank are passive in asset sales and labor restructuring.
  - The results indicate that government-owned banks are in the position wherein they have to reflect factors other than economic feasibility in the process of restructuring marginal companies.
- In this context, **measures to implement corporate restructuring more effectively must be sought** when defining the role of government-owned banks.

- The financial authority should encourage corporate restructuring in the market by allowing government-owned banks to sell marginal companies to independent corporate restructuring firms who are free from conflicts of interest between lenders to manage the asset sale proceedings.
  - In the case of large enterprises or listed companies with a complex and diverse group of creditors, government-owned banks might not only lack the capacity to elicit an agreement on restructuring but also fall into a moral hazard trap.
- Furthermore, the financial authority should work to gradually reduce government-owned banks' financial support that has been too large so that the efficiency of financial support allocation could be enhanced.
- Meanwhile, government-owned banks need to identify non-viable firms through a rigorous due diligence process and promptly induce them to file with the courts for corporate rehabilitation while concentrating their policies on providing restructuring support to SMEs experiencing market failure.
  - SMEs that become marginal usually have a more simple group of creditors; their restructuring entails less economic repercussions, and there is no market existent for the sale of distressed companies, which demands the role of government-owned banks in the restructuring.
  - Accordingly, of the measures recently released by the financial authority for the role reorganizing of government-owned banks, policies to encourage prompt corporate restructuring and support SMEs experiencing market failure must have the topmost priority.

## Appendix

■ Samples analyzed above (in No. 3) contain 31 companies under a workout program, including voluntary agreement, since 2008, and 8 companies that were delisted on the stock market after the workout agreement.

● Among the samples, 14 listed and 3 delisted companies have government-owned banks as their main creditor bank.

– Data on the main creditor banks of ‘workout’ companies were accumulated from their audit papers and/or business reports.

### Listed Companies under a Workout (including Voluntary Debt Agreement) since 2008

	Average Asset Size <sup>1)</sup>	Sum of Assets <sup>1)</sup>	Average Total Borrowings/Assets <sup>1)</sup>	Average ICR <sup>1)</sup>	Number of Companies
Companies with Government-owned Banks as the main Creditor bank	7,467 trillion won	12.7 trillion won	67.6%	-1.28	17
Companies with Commercial Banks as the main Creditor bank	8,804 trillion won	19.4 trillion won	48.7%	-1.22	22

Note: 1) Calculated based on the time of workout agreement in individual companies.

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