

**Analysis on Takeover Defense and Treasury
Stock Holding**

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Contents

1. Introduction	1
2. Status of Treasury Stock-related Regulations	1
A. Treasury Stock-related Regulations in Korea	1
B. Treasury Stock-related Regulations in Foreign Countries	2
3. Literature	2
A. Motivation behind Treasury Stock Repurchase	2
B. Domestic Studies	3
4. Empirical Analysis	4
A. Analytical Framework	4
B. Data	5
C. Result	8
5. Concluding Remarks	13
References	16

1. Introduction

In 1994, stock repurchase related regulations were alleviated to allow all listed companies to acquire their own stocks in their own names. Furthermore, the amendment of the Securities and Exchange Law and the Commercial Law in 1997 has increased the possibility of hostile takeover. As a result, it follows that the amount of treasury stock holding by domestic companies has been increasing ever since.

Alleviating regulations on treasury stock repurchase and holding was, at first, for stabilizing or boosting stock market. However, recent increase in the potential threat on corporate control posed by foreign investors has brought more public interest to the stock repurchasing as a defensive measure against hostile takeover.

In Korea, such attention is generally focused on large business groups due to the potential conflicts of interests between controlling shareholders and other minority shareholders. In a situation where the hostile takeover could be more desirable to the majority of shareholders, a few controlling shareholders might attempt to reduce the chance of acquisition by adopting various defensive measures, and stock repurchase can be a highly effective method in this case.¹

There are, of course, many motivations other than the above mentioned, and it is not easy to figure out the hidden intention in advance. However, in order to revise and streamline existing regulations on stock repurchases, holdings, and sales, it is still essential to analyze the incentives of the companies behind such activities. In other foreign countries, many attempts were made to determine the effect of stock repurchase effect on stock price and company performance, along with its motivation, but no single unified conclusion has been reached thus far in this matter.² Moreover, it is also hard to expect any conclusions in foreign countries to be exactly applicable to domestic cases.

Therefore, this paper intends to verify the common argument that companies increase their treasury stock holding as a defensive measure against hostile takeover. To that end, the paper reviews regulations related to treasury stock holding of Korea as well as foreign countries, examines existing literature, and conducts empirical analysis on the relationship between companies' ownership structure and treasury stock holdings utilizing different methodology and data from previous studies. Lastly, the paper concludes with proposition for the future direction of reforms in relevant regulations.

2. Status of Treasury Stock-related Regulations

A. Treasury Stock-related Regulations in Korea

According to Article 341 of the Korean Commercial Law, a company may not acquire its own shares on its own account, except in the following cases:

1. In the case of the retirement of shares;
2. In the case of a merger of companies or an acquisition of the entire business of another company;

¹ According to the research result by the Korea Exchange for top ten business groups in terms of asset size, the total amount of treasury stock reached 11,667.9 billion won, or 5.60% of the aggregate market value of listed stocks as of June 23, 2005.

² Not many countries comprehensively allow holdings of treasury stocks, and stronger regulations are imposed on stock disposal than on stock repurchase. Therefore, most foreign studies have mainly focused on stock repurchase.

3. Where it is necessary to do so for achieving the objective in the course of exercising the rights of the company;
4. Where it is necessary to deal with the fractional shares; and
5. Where a shareholder exercises the right to request the company to purchase his shares.

For the listed companies, however, the Securities and Exchange Act allows fairly unrestricted repurchase and holding of its own stocks.

With the amendment of Securities and Exchange Act and its Enforcement Decree in 1994, listed companies are allowed to repurchase its own stocks up to 5% of the total number of stocks issued. The figure went up to 10% two years later, and in Feb. 1998, both the enforcement decree and the Securities and Exchange Act raised the figure to a third of the total number of issued stocks. Then only 3 months later, the phrase regarding the limit on stock repurchase, included in No.2 of Article 189 of the Stocks and Exchange Act was deleted. Finally in 1999, the ratio stated in the enforcement decree was deleted as well.

Also, in the case when the purpose of stock acquisition is the retirement of shares, if the articles of incorporation allow stock extinguishment for the benefit of shareholders, the resolution by the board meeting alone is entitled to the decision of stock repurchase followed by retirement, pursuant to Article 189 of the Securities and Exchange Act.

When the retirement is not the case, relatively free repurchase and holding are allowed pursuant to the same Article as long as the stated limit and reporting regulations are followed.

B. Treasury Stock-related Regulations in Foreign Countries³

The U.S. regulation has been quite generous regarding treasury stock, while Europe has adopted stringent regulations. The regulation in Japan seems to be following that of the European system in the past, but it has been changed recently moving towards the U.S. system.

While it is true that some countries like Japan have alleviated relevant regulations because of the practical needs in corporate management or strong request from the business circle, it is still a rare occasion that a country completely deregulated decisions regarding treasury stock repurchase. On the other hand, there lies the case of Switzerland. While Switzerland does not have any tight regulations regarding treasury stock, it is still very hard to observe related transactions due to a number of sophisticated tax provisions.

As shown from the foregoing examples, alleviation of regulations on stock repurchase is not a universal phenomenon as claimed in some domestic literature. Many countries, including EU nations, still have several stringent regulations on the decision-maker of acquisition, financial resource for acquisition, acquisition limits, acquisition and disposal procedures, and holdings. It is highly unlikely that we can reach a simple but meaningful conclusion regarding institutional setting in Korea through a simple observation on a subset of countries.

3. Literature

A. Motivation behind Stock Repurchase

The question of what are the motives of company's repurchasing stocks had been at the

³ More detailed information on the status of treasury stock related regulation in foreign countries are available in Kim, Varaiya, and Schremper (2004), ISCO (2004), Jaehyeong Lee (1999), Byeongyeon Kim (2005).

center of relevant studies, and it still is. To understand the motives, several explanations were developed, including undervaluation hypothesis, free cash flow hypothesis, leverage hypothesis, and hostile takeover defense hypothesis. This paper mainly focuses on the last argument.

The hostile takeover defense hypothesis argues that stock repurchase can be used as a tool to defend corporate control. Stulz (1998), and Harris and Raviv (1988) pointed out that in the case when a company finances the funds to buy back more shares through debt, the management will be able to control higher proportion of shares without additional investment. In other words, in order to have the management under control, higher shareholding percentage will be required, and the control premium will be raised with stock repurchase. This will eventually make hostile takeover more difficult. They also commented on the possibility that newly issued debts might undermine firm value and that it might also make the company look less attractive to hostile takeover.

On the other hand, Bagnoli et al. (1989) suggest a signaling model, according to which, stock repurchase serves as a defensive measure against hostile takeovers by signaling private information on firm value owned by the management. The expected share value of the firm, in this case, will rise, but at the same time, the level of risks will rise as well. This model does not recognize the role of debt, which has generally been used to explain stock repurchase as a defensive measure as shown in the argument by Stulz (1998), and Harris and Raviv (1988).

According to another theoretical model laid out by Bagwell (1991), in the case where shareholders have mixed expectations toward firm value, stocks from the shareholders with lower expectation will first be purchased, leading to an increase in the number of shareholders with higher expectation, which will in the end raise the takeover costs.

As pointed out by Dittmar (2000), Bagwell's hypothesis means companies, under threat of hostile takeover, will tend to buy back its own shares.

B. Domestic Studies

In Korea, most studies on treasury stock have focused their attention to empirical analysis on the motive and effect of stock repurchase. The followings are reviews on the empirical analyses on the motivation behind stock repurchase.

Most commonly used methodology for empirical analysis is the event study approach, in which the study first draws the cumulative abnormal return (CAR) caused by stock repurchase and then attempts to identify potential factors that affect the size of the return by using a cross-sectional regression analysis. However, as Jung et al. (2005) indicated, since both stock repurchases and disposals have been minimally regulated in Korea, it is necessary to pay attention to the potential distortion from considering only the stock repurchase in the analysis.

Another approach is the analyses by Yoon (2004), and Lee and Chu (2005) who used limited dependent variable models. In order to examine the repurchase motivation, Yoon (2004) used logit and probit models that take into consideration whether the company bought back its shares or not as the dependent variable, while Lee and Chu (2005) used the Tobit model that considers the repurchase ratio⁴ itself as the dependent variable. Result of Yoon (2004) shows that the shareholding ratio of controlling shareholders has statistically significant and positive effect on stock repurchase announcement. According to Lee and Chu (2005) on the other hand, major stockholders' shareholding percentage does not affect the decision on stock repurchase. In this regard, it can be said that both studies conclude

⁴ To be specific, the paper uses REP, which equals to the amount of money spent to buy back shares divided by the share's market price valued as of the last day of the previous year.

that the hostile takeover defense hypothesis is not applicable in explaining the motives behind domestic companies' stock repurchase.

However, there are still limitations in both studies since they do not deal with treasury stock sales, and therefore both studies have failed to fully reflect characteristic features of Korean companies' behavior and regulatory systems.

4. Empirical Analysis

This paper aims to investigate the relation between companies' ownership structure and treasury stock holdings. To that end, empirical analyses are conducted to determine the relationship between companies' shareholding percentage and various variables from the previous year. The analyses also utilize diverse financial and non-financial variables, but main focus is still on the variables of ownership structure.

A. Analytical Framework

a) Selection of Model and Variables

Since the analysis in this paper mainly focuses on whether the hostile takeover defense hypothesis can be applied in Korea or not, and intends to elaborate on treasury stock holdings instead of simple repurchase event. The dependent variable adopted in the analysis is, therefore, the ratio of treasury stock holdings to total shares issued as of the year end.⁵

Given the fact that the ratio is confined to the value of 0 or greater than 0, the estimation using Tobit model is considered to be the most appropriate approach. Therefore, this paper adopts the fixed effect panel Tobit model based on Honoré (1992) to analyze data.

In this paper, variables that show companies' ownership structure at the year end of the previous year are used as core explanatory variables, and various financial and non-financial variables from existing studies are also included as control variables. In this way, the paper attempts to examine whether the relationship between the characteristics of ownership structure and the ratio of treasury stock holdings are statistically significant.

First, the analysis on all Korean Stock Market listed companies uses the shareholding ratio of the largest shareholder and related parties as the major explanatory variable representing the ownership structure. While Woodruff et al. (1995) use the ratio of shareholding by the management to the total issued and outstanding shares as the explanatory variable, considering the situation in Korea, it would be more appropriate to understand hostile takeover in Korea as a conflict between controlling shareholders and other shareholders rather than between the management and shareholders for most of the companies. This implies that companies with higher shareholding by the controlling shareholders would have less incentive to hold treasury stocks as a takeover defense measure.⁶

⁵ True, in dealing with stock repurchase cases, it is noteworthy that in some cases the stock repurchase plan presented by a company at the time of announcement was not consistent with the actual amount of stock the company purchased later. This paper, however, does not deal with the announcement case itself and only concerns the amount at the year end.

⁶ Yoon (2004), based on the free cash flow hypothesis, estimated that it is highly likely that the more shareholding percentage the controlling shareholders have, the more benefit they will receive from stock repurchase.

In addition to the ratio of shareholding by the largest shareholder and related parties, the study also includes the ratio of total shareholding by other major shareholders whose shareholding account for 5% or more as well.⁷ In doing so, by dividing domestic and foreign shareholders into two different variables, this paper further attempts to verify the argument that foreign shareholders serve to increase the threat of hostile takeover, leading to a subsequent increase in treasury stock holdings.

This paper also uses 'control contribution index' that measures the importance of each affiliate company in the whole business group control structure. The concept was first used in Kim, Lim and Sung (2004), and most current studies use contribution index brought by Lim and Cho (2005), that used sales as weight. To obtain the index it is required to utilize the Korea Fair Trade Commission (KFTC) data on business groups that are subject to the Prohibition of Cross-Shareholding clause hence, the conducted analysis using relevant variables was confined to use only a subset of the whole listed company data.⁸

This paper also adopted additional variables that are used in previous studies as control variables. Detailed information on the definition of those variables are provided in <Table 1> below.

B. Data

Most of the variables used in the analyses were drawn from the financial and non-financial data provided by WISEFn Corp., and the control contribution indices were drawn from Lim and Cho (2005). Dummy variable which shows whether each company is under the "ceiling on total amount of shareholding in other domestic companies" regulation is also generated on the basis of the data provided by KFTC.

As shown in <Table 1>, most of the variables, except the ratio of treasury stock holdings which is the dependent variable, are set as of the end of previous year. Some of the data that are based on KFTC data, such as the ceiling on shareholding regulation dummy variable and control contribution indices, use figures made at the end of April in the same year. In other words, the goal of this empirical study is to investigate the relationship between various variables of the early period of the year or the end of the previous year, and the ratio of treasury stock at the end of the year.

The full set of the finally drafted data is made of balanced panel constructed with 458 listed companies from 2002 to 2004.⁹ Also, the paper uses another balanced panel of a subset of original data comprised of 81 companies that are subject to the Prohibition of Cross-Shareholding for additional analysis. <Table 2> and <Table 3> provide a summary on the descriptive statistics for the variables included in both datasets.

⁷ For example, Shivdasani (1993) and Weisbach (1993) demonstrated that specially related persons with shares of 5% or more of the total issued shares and unrelated persons with shares of 5% or more have positive and negative effect, respectively.

⁸ For further explanation and definition, refer to Lim and Cho (2005).

⁹ As explained earlier, variables of previous year are figures as of the end of 2001 to the end of 2003.

<Table 1> Definition of Dependant Variable and Explanatory Variables

Variable	Definition
Ratio of treasury stock ¹⁾	Number of treasury stocks as of the year end \div total number of stocks issued as of the year end
Ratio of shareholding by the largest shareholder and related parties ²⁾	Shareholding percentage of the largest shareholder and his related parties (including affiliate companies) \div total number of stocks issued as of the year end
Ratio of total shareholdings by major domestic shareholders ²⁾	Total number of shares held by domestic shareholders who are neither the largest shareholder nor the related party and have shares of 5% or more of the total issued shares \div total number of stocks issued as of the year end
Ratio of total shareholdings by major foreign shareholders ²⁾	Total number of shares held by foreign shareholders who are neither the largest shareholder nor the related party and have shares of 5% or more of the total issued shares \div total number of stocks issued as of the year end
Control Contribution Index 1 ³⁾	Control contribution, i.e., the importance of each company in control rights of a specific business group calculated based on shares of other affiliated companies held by the company in question
Control Contribution Index 2 ³⁾	Control contribution, i.e., the importance of each company in control rights of a specific business group calculated based on the shares of the company in question held by other affiliated companies
Foreign shareholding ratio ²⁾	Total number of shares held by foreigners \div total number of stocks issued as of the year end
Ceiling on shareholding regulation ¹⁾	Whether the company is subject to the regulation on the ceiling on total amount of shareholding in other domestic companies (not subject: 0, subject: 1)
Current asset ratio ²⁾	Current asset \div total asset
Age ²⁾	Current year - year of establishment
Ln Asset size ²⁾	Natural logarithm of total asset of the company
Tobin's Q ²⁾	(Aggravated market value of the stocks issued + total debt) \div liquidation value of the asset
Market price dividend rate ²⁾	Cash dividend for common stocks \div aggregate value of listed stocks
Debt ratio ²⁾	Total debt \div total asset

Note: 1) As of the same year-end

2) As of the previous year-end

3) As of April-end in the same year.

<Table 2> Descriptive Statistics for Main Variables (n=1374)

	Average	Standard deviation	Minimum	Maximum
Ratio of treasury stock	0.0317	0.0577	0	0.4049 ¹⁰
Ratio of shareholding by the largest shareholder and related parties	0.3592	0.1664	0.0180	0.9136
Ratio of total shareholdings by major domestic shareholders	0.0458	0.0910	0	0.5500
Ratio of total shareholdings by major foreign shareholders	0.0183	0.0525	0	0.3481
Ceiling on shareholding regulation	0.1332	0.3399	0	1
Current asset ratio	0.4290	0.1781	0.0140	0.9194
Age	34.5764	11.9653	2	86
Ln Asset size	26.1994	1.4625	22.6490	31.6647
Tobin's Q	0.8406	0.4125	0.2163	7.5824
Market price dividend rate	0.0419	0.0735	0	0.8678
Debt ratio	0.5271	0.3385	0.0437	7.4871

¹⁰ Of companies analyzed, the company with the largest treasury stock was Kumho Petrochemical, who is the holding company for Kumho Asiana Group. Due to the exercise of appraisal right during the process of acquiring the Kumho Chemical, its holding of treasury stock reached the record 47.52% in 2001 from 21.08% one year earlier. The figure went down to 40.49% in 2002, as it sold 2.06 million shares. Two years later, the figure returned to 22.2%.

<Table 3> Descriptive Statistics for Main Variables (companies subject to the Prohibition of Cross-Shareholding Clause, n=243)

	Average	Standard deviation	Minimum	Maximum
Ratio of treasury stock	0.0339	0.0604	0	0.4049
Ratio of shareholding by the largest shareholder and related parties	0.3743	0.1747	0.0612	0.8866
Ratio of total shareholdings by major domestic shareholders	0.0307	0.0614	0	0.3732
Ratio of total shareholdings by major foreign shareholders	0.0336	0.0651	0	0.3481
CCI 1	0.8984	0.1593	0.1890	1
CCI 2	0.9344	0.1116	0.4275	1
Current asset ratio	0.3179	0.1503	0.0479	0.8139
Age	35.4568	11.7305	16	70
Ln Asset size	27.9372	1.2696	25.2484	31.2998
Tobin's Q	0.8704	0.3539	0.2163	2.7135
Market price dividend rate	0.0356	0.0371	0	0.2500
Debt ratio	0.5613	0.1927	0.0897664	1.8266

C. Result

The outlined result of the fixed effect panel Tobit estimation is presented from <Table 4> to <Table 6>.¹¹ The column I of each table presents results estimated by including ownership structure-related variables only.¹² The remaining three columns, II, III, and IV present results drawn from the estimation with additional controlling variables that were used in previous studies to raise the level of strictness associated with the estimation.

¹¹ Based on the result by chi square test, the hypothesis that the coefficients for all variables are equal to zero was rejected at a usual significance level.

¹² <Table 4> also includes dummy variable that shows whether the company is under the 'ceiling on total amount of shareholding' regulation.

According to <Table 4> that summarizes the result of empirical analysis on the relationship between ownership structure and treasury stock holdings for all listed companies, no ownership structure-related variables appear to have statistically significant effect on the status of treasury stock holdings. This appears to be consistent with the results from previous domestic studies that rejected the hypothesis that share repurchase is used as a defensive measure against hostile takeovers.

<Table 4> Ownership Structure and Treasury Stock Holdings (All listed companies)

	Dependent variable: Ratio of treasury stock holdings			
	I	II	III	IV
Shareholding of the largest shareholder and related parties	0.0939 (0.0868)	0.0855 (0.0854)	0.0869 (0.0881)	0.0933 (0.0816)
Ratio of total shareholdings by major domestic shareholders	-0.0659 (0.0939)	-0.0695 (0.0870)	-0.0652 (0.0908)	-0.0667 (0.0865)
Ratio of total shareholdings by major foreign shareholders	-0.1172 (0.1058)	-0.1373 (0.1038)	-0.1267 (0.1053)	-0.1107 (0.1047)
Ceiling on shareholding regulation	0.1600* (0.0922)	0.1583* (0.0920)	0.1630* (0.0915)	0.1683* (0.0875)
Current asset ratio		-0.0052 (0.0414)	-0.0066 (0.0422)	-0.0014 (0.0424)
Age		0.0036* (0.0021)	0.0034 (0.0022)	0.0029 (0.0022)
Ln Asset size			0.0085 (0.0164)	0.0123 (0.0150)
Tobin's Q			-0.0179 (0.0157)	-0.0116 (0.0114)
Market price dividend rate				0.0990*** (0.0357)
Debt ratio				-0.0276 (0.0463)
χ^2 statistics [p-value]	19.8 [0.000]	23.8 [0.000]	27.1 [0.000]	33.8 [0.000]
Number of samples	1374	1374	1374	1374

Note : 1) Result of the fixed effect panel Tobit estimation

2) Figures in brackets are standard errors.

3) *, **, and *** represent the coefficients that are statistically significant at 10%, 5%, and 1% level, respectively.

<Table 5> Ownership Structure and Treasury Stock Holdings (Companies under Prohibition of Cross-shareholding Clause)

	Dependent variable: Ratio of treasury stock holdings			
	I	II	III	IV
Shareholding of the largest shareholder and related parties	-0.1592 (0.1135)	-0.1729 (0.1101)	-0.1147 (0.1165)	-0.1461* (0.0785)
Ratio of total shareholdings by major domestic shareholders	0.2280*** (0.0581)	0.2657*** (0.0739)	0.3291*** (0.1030)	0.3381*** (0.1155)
Ratio of total shareholdings by major foreign shareholders	-0.1814** (0.0750)	-0.1429** (0.0644)	-0.1266 (0.0854)	-0.1343 (0.0821)
Current asset ratio		0.0624 (0.0992)	0.0710 (0.1014)	0.0589 (0.0975)
Age		-0.0076 (0.0067)	-0.0074 (0.0065)	-0.0079 (0.0070)
Ln Asset size			0.0382 (0.0350)	0.0374 (0.0312)
Tobin's Q			-0.0663* (0.0353)	-0.0711** (0.0324)
Market price dividend rate				-0.2699 (0.1776)
Debt ratio				-0.0077 (0.0938)
χ^2 statistics [p-value]	23.3 [0.000]	35.4 [0.000]	19.8 [0.006]	25.6 [0.002]
Number of samples	243	243	243	243

Note : 1) Result of the fixed effect panel Tobit estimation

2) Figures in brackets are standard errors.

3) *, **, and *** represent the coefficients that are statistically significant at 10%, 5%, and 1% level, respectively.

<Table 6> Ownership Structure and Treasury Stock Holdings (Companies under Prohibition of Cross-shareholding Clause)

	Dependent variable: Ratio of treasury stock holdings			
	I	II	III	IV
Shareholding of the largest shareholder and related parties	-0.1585 (0.1323)	-0.1626* (0.0938)	-0.1311 (0.0931)	-0.1269** (0.0614)
Ratio of total shareholdings by major domestic shareholders	0.2605*** (0.0660)	0.2823*** (0.0690)	0.3484*** (0.0964)	0.3528*** (0.0946)
Ratio of total shareholdings by major foreign shareholders	-0.1745** (0.0779)	-0.1349** (0.0680)	-0.1260 (0.1115)	-0.1348 (0.1150)
CCI 1	0.0744 (0.1275)	0.0296 (0.1481)	0.0598 (0.1044)	0.0406 (0.1028)
CCI 2	0.1590** (0.0797)	0.2087** (0.0866)	0.2452* (0.1433)	0.2441* (0.1255)
Current asset ratio		0.0915 (0.1304)	0.0797 (0.1507)	0.0807 (0.1131)
Age		-0.0092 (0.0076)	-0.0087 (0.0070)	-0.0093 (0.0073)
Ln Asset size			0.0497 (0.0664)	0.0437 (0.0316)
Tobin's Q			-0.0661* (0.0349)	-0.0720** (0.0328)
Market price dividend rate				-0.2611 (0.1952)
Debt ratio				-0.0112 (0.0978)
χ^2 statistics [p-value]	34.4 [0.022]	40.3 [0.000]	27.0 [0.001]	32.7 [0.000]
Number of samples	243	243	243	243

Note : 1) Result of the fixed effect panel Tobit estimation

2) Figures in brackets are standard errors.

3) *, **, and *** represent the coefficients that are statistically significant at 10%, 5%, and 1% level, respectively.

This paper also conducted analyses that include other variables such as ratios of total shareholding by domestic and foreign major shareholders that have shares of 5% or more respectively. The reason for including shareholdings of major domestic investors is as follows. Shivdasani (1993) and Weisbach (1993) empirically demonstrate that the shareholdings of major shareholders with shares of 5% or more tend to positively affect the chances of being a target to hostile takeover. If a company facing threat of hostile takeover tends to buy back more stocks as Dittmar (2000) pointed out, it is probable that a company

with higher shareholding by major shareholders has a relatively high ratio of treasury stocks.

Nevertheless, the result of the analysis on all listed companies indicates that these newly added variables do not have any noticeable significance, verifying that the hostile takeover defense hypothesis does not hold. In particular, the ratio of total shareholding by major foreign shareholders was shown to have no statistically meaningful significance. Although the growth of shareholding by foreign investors followed by the rise in the (perceived) threat of hostile takeover are often claimed to be the cause of share repurchase in these days, the results shown in this paper do not support the argument, at least, for 'all' listed companies.

Unlike these variables directly showing ownership structure itself, the ceiling on total amount of shareholding regulation dummy variable is found to be associated with a significant coefficient for some degree. Indeed, the result shows that the sign and significance of the coefficient on the dummy variable have remained unaffected by the estimation setting.

The fact that the shareholding regulation dummy variable and the ratio of treasury stock holding have statically significant relationship can imply that the companies or controlling shareholders of the companies under the regulation may experience restrictions in maintaining the control rights and therefore, try to circumvent such restrictions through raising the ratio of treasury stock holdings. It is somewhat paradoxical in that the regulation on shareholdings attempts to regulate the control right of controlling shareholders on one hand, but it is allowed for the controlling shareholders to solidify its controlling status through stock repurchase on the other hand. Such regulatory conflict implies that the effect of shareholding regulations may be mitigated by allowing the treasury stocks to be used as a takeover defensive measure, and at the same time that the level of treasury stock holdings by the companies may be off the socially desirable level. This provides the reason why the study attempts to further examine the case of companies that belong to large business groups.

In this regard, the paper performed additional empirical analyses on the firms subject to the regulation¹³ by the KFTC and the results are presented in <Table 5> and <Table 6>.

<Table 5> summarizes the result from the analysis utilizing the same ownership structure related variables used in the analysis of all listed firms, and it turns out to be quite different from the result shown in <Table 4>. One of the main differences is that the coefficient for the ratio of total shareholding by major domestic shareholders appears to be positive and statistically significant, and this appears to hold for all settings of estimating equation. There is number of possible explanations for what the result implies. One possibility is that the major domestic shareholders are actually considered as a threat to the corporate control, and their shareholdings cause the company or the controlling shareholder to repurchase its stocks and thereby raise the level of treasury stock holdings. Another possibility is that considering the fact that most of the major domestic shareholders are the non-related party institutional investors and they are likely to work as to benefit the controlling shareholders, therefore the positive and statistically significant coefficient should not be interpreted in terms of corporate control. But then again, it is known that the domestic institutional investors are becoming increasingly aware of and keen to the corporate governance issues and it is not proper to simply assume away that they are pro-controlling shareholders anymore. It is also difficult to exclude the possibilities that the institutional investors might be simply asking to repurchase more shares, or just

¹³ Considering the limited number of samples for analysis, the paper prepared data based on the Prohibition of Cross-Shareholding regulation instead of the shareholding regulation.

investing in companies that hold or tend to hold large treasury stocks.

Nevertheless, as for potential challengers to corporate control, negotiation with the major shareholders who has shares of 5 % or more is simpler than to acquire these shares in the tender offer. This will lead the controlling shareholders to the idea that higher shareholding by non-related party major stockholders is more likely to pose as a potential threat to corporate control. This can be also confirmed in recent examples of domestic disputes over corporate control, most of which arose from struggles between existing major shareholders and the controlling shareholder. As mentioned earlier, Shivdasani (1993) and Weisbach (1993) have already shown that the existence of these major shareholders might exercise positive and significant influence on the possibility of the firm being the target for hostile takeover attempt. In this regard, the possibility that the controlling shareholders take the increase in the ratio of shareholding by major stockholders as potential threat against maintaining the corporate control and therefore, trying to raise the level of treasury stock holdings cannot be denied.

<Table 6> summarizes the empirical result that used existing ownership structure related variables – shareholding of the largest shareholder and related parties, and ratios of total shareholding by domestic and foreign shareholders, along with the control contribution indices (CCI) derived by Lim and Cho (2005). The index represents the importance of each company in control rights of a specific business group. The study adopts two of those indices; CCI 1 is calculated based on the shares of other affiliated companies held by the company in question and CCI 2 is calculated based on the shares of the company in question held by other affiliated companies. Both of the indices are calculated using the sales as the weights.

The result of the analysis on existing explanatory variables shows almost no difference from that of <Table 5>, while of the two newly added variables, CCI 2 turned out to be associated with statistically significant and positive coefficient. This implies that companies for which the controlling shareholder of the business group has stronger incentive to maintain his control, i.e., companies with larger amount of equity investment from affiliates tend to maintain higher ratio of treasury stocks, and thereby to facilitate a readily available takeover defense measure for these companies.

On the other hand, it is found that CCI 1, which is based on the holding of other companies' stocks bears no particular significance. The index can be understood as a measure that shows the usefulness of a certain company in terms of controlling structure for the whole business group. Therefore, the controlling shareholder would like to maintain its control rights over the companies with higher CCI 1 through more direct and safe measures instead of through indirect and thereby less secure methods including the stock repurchase.

5. Concluding Remarks

This section attempts to provide a comprehensive review of the empirical result and the status of treasury stock regulations in other countries, and then come up with policy suggestions for related regulations in Korea.

In the past, when the probability of actual hostile takeover was low, the purpose of stock repurchases was mostly to stabilize stock price or to boost up the stock market. However, after the capital market opening and the financial crisis, which was followed by active inflow of foreign capital, increasing number of Korean companies came to recognize the potential threat of hostile takeover, which has subsequently brought out the increase in stock repurchase as a measure to defend corporate control, regardless of publicly disclosed

purpose of the trade.

There have been a number of inconsistent arguments regarding the motivation behind the increased stock repurchase in Korea. Some argue that foreign investors have demanded to buy back more shares in order to maximize their return to the shareholders, while others argue that stock repurchase as a defensive measure to maintain corporate control is leading to the decrease in plant and equipment investment. Some even argue that for those companies under a hostile takeover threat, the voting rights should be granted for the treasury stocks.

It is neither realistic nor plausible, of course, to perceive all stock repurchase activities to be takeover defensive measures to protect corporate control. Generally, stock repurchase is considered to be good news since it serves to mitigate agency problems by returning free cash flows to shareholders.

However, many companies buy back shares claiming they are to stabilize their share price, and yet it is easily expected that many of them are actually aiming to secure their takeover defense measure different from the publicly stated purposes. It is noteworthy that stock repurchasing activities as defensive measures might not necessarily be considered as good news. This is due to the fact that stock repurchase actually fortifies the concentration of controlling power to the current management or the current controlling shareholder. It will serve the purpose of takeover defense even better if the repurchased shares need not be retired. In a situation where the controlling shareholders and the management have run the business in the most transparent way and have placed the interest of other investors before everything else, and further such behaviors are expected to last, then the stock repurchase can be almost certainly considered as a benefit to all shareholders. However, there is always the possibility of exactly opposite happening in reality.

According to the empirical result of this paper, in the case of large business group affiliated companies in Korea under the large business group related regulations, their holdings of treasury stocks is closely related with the ownership structure variables, showing that hostile takeover defense hypothesis is maybe applicable in Korea to some extent. In other words, companies with higher control contribution index or higher ratio of total shareholding by major domestic investors tend to hold higher ratio of treasury stocks, which implies that the purpose of share repurchase is likely to be to fortify its takeover defense measure.

In addition, this paper verifies, to some extent, that the commonly argued statement that foreign shareholding itself is a threat to corporate control or that foreign shareholding itself is closely related to the rise in holding ratio of treasury stock is not supported by the actual data.

In this regard, it is first required to clarify the purpose of alleviating the regulations on stock repurchase and even further encouraging it. There seems to be several mixed views regarding the policy goals to be achieved through such reforms, for example providing a takeover defensive measure and stabilizing the stock market. Depending on which purpose is more important, the settings of regulatory details could be formed differently.

In most countries, except for the U.S. followed by Japan, regulations regarding open market share repurchase are considered to be very strict. The U.S. setting is especially less intense in disclosure-related regulations. Kim and Varaiya (2003) suggest evidence that disclosure being not mandatory for stock repurchase in the U.S. may cause the conflict of interest problem between insider shareholders and others. It is possible that a company buys back its own stocks in the market and thereby maintain its share price while the inside shareholders sell their own shares to the market. But for other shareholders, there is no way for them to find out whether the company repurchases stocks or not if the company chooses to not disclose this information via public announcement. Kim and Varaiya (2003) also provide evidences that during the quarter of the year when the companies actively

repurchase stocks, inside shareholders indeed show tendency to sell their stocks, or at least their net purchase decreases.

Given the fact that in Korea, conflicts of interest usually develops between controlling shareholders and other shareholders, and that Korea is hardly at a stage where hostile takeovers are prevalent phenomenon, it is too early to alleviate regulatory levels on stock repurchase and disposal in the open market and holdings of treasury stocks. It seems to be proper to strengthen the disclosure requirements on treasury stock as well.

If stock repurchase is to eventually increase firm value, to have the decision made at the general meeting of shareholders would be proper as EU countries in which the resolution by the general meeting of shareholders is required.

Now, the question remains whether the regulatory reform should direct its attention to all listed companies or only be confined to limited number of companies as many Chaebol-specific regulations do. This is because, in particular, the analysis on all listed companies shows that there is almost no significant relationship between the ratio of treasury stock holdings and corporate governance related variables. The rationale behind stricter regulation on treasury stock based its logic on the relationship between stock repurchase and corporate control. A stronger regulation on Chaebol affiliates might work for improved social efficiency. When all listed companies are under the same strict regulation, however, there could be more loss than gains due to procedural inefficiency and strict restraint on capital usages.


Another possibility is to apply stronger regulation only onto Chaebol affiliates, because the relation between treasury stock and ownership structure appears to exist only among Chaebol affiliates. However, introducing additional regulations on Chaebol regarding the treasury stock will be quite challenging considering the recent trend of liberalizing Chaebol specific regulations.

In this regard, based on several cases from foreign countries, more meaningful attempts will be to strengthen the mandatory disclosure or to reinforce the decision making process so that the decision is to be made through resolution by the general meeting of shareholders for share repurchase and disposal and holding of treasury stocks. In the case where a company faces inevitable situation and needs emergent actions, the board meeting should be entitled to adopt emergency resolution regarding the treasury stocks and then later receive ratification by the general meeting of shareholders. Then, other shareholders should be allowed to file a suit and claim their loss that occurred during this process, if any.

References

- Bagnoli, M., R. Gordon and B. Lipman, "Stock Repurchase as a Takeover Defense," *The Review of Financial Studies*, Vol.2, 1989, pp.423~443
- Bagwell, L., "Share Repurchase and Takeover Deterrence," *Rand Journal of Economics*, Vol.22, 1991, pp.72~88
- Byeongyeon Kim, 『Disposal of Treasury Stock and Application Measures』, Korea Companies Info study paper 2005-3, 2005
- Cheolgyo Kim, "An Empirical Analysis on the Impact of Treasury Stock Management on the Korean Stock Market," *Journal of Finance*, vol.13, 1997
- Cook, D., L. Krigman, and C. Leach, "An Analysis of SEC Guidelines for Executing Open Market Repurchases," *Journal of Business*, Vol.76, 2003, pp.289~315
- Dann, L. Y. and H. DeAngelo, "Corporate Financial Policy and Corporate Control: A Study of Defensive Adjustments in Asset and Ownership Structure," *Journal of Financial Economics*, Vol.20, pp.87~127
- Dittmar, A. "Why Do Firms Repurchase Stock," *Journal of Business*, Vol.73, 2000, pp.331~355
- Ginglinger, E. and J-F. L'Her, "Ownership Structure and Open Market Stock Repurchases in France," EFMA 2002 London Meetings, 2002
- Grossman, S.J. and Hart, O.D., "Takeover Bids, the Free Rider Problem, and the Theory of the Corporation," *Bell Journal of Economics*, Vol.11, 1980, pp.42~64
- Grullon, G. and R. Michaely, "Dividends, Share Repurchases, and the Substitution Hypothesis," *Journal of Finance*, Vol.57, 2002, pp.1649~1684
- Harris, M. and Al Raviv, "Corporate Control Contests and Capital Structure," *Journal of Financial Economics*, Vol.20, 1988, pp.55~86
- Hirshleifer, D. and Titman, S., "Share Tendering Strategies and the Success of Hostile Takeover Bids," *Journal of Political Economy*, Vol.98, No.2, pp.
- Honoré, "Trimmed LAD and Least Squares Estimation of Truncated and Censored Regression Models with Fixed Effects," *Econometrica*, Vol.60, 1992, pp.533~565
- Ilgye Lee and Sangryong Chu, "A Study on Stock Repurchase Financial Management," Korean Financial Management Association, 2005, pp.243~273
- International Organization of Securities Commissions(IOSCO), "Report on Stock Repurchase Programs," 2004
- Jaehyeong Lee, 『Companies' Ownership Structure: Treasury Stock, Shares in Mutual Ownership, Holding companies』, Study Material 99-11, 1999
- Jung, S., Y. Lee, J. and Thornton Jr., "Mixed Signals: Stock Repurchases Followed by Stock Offerings in Korea," mimeo, 2005
- Kim, J. and N. Varaiya, "Disclosure on Open Market Repurchase Transactions in the U.S.: Does It Create a Conflict of Interest?," Working Paper, San Diego State University, 2003
- Kim, W., Y. Lim and T. Sung, "What Determines the Ownership Structure of Business Conglomerates? On the Cash Flow Rights of Korea's Chaebol," ECGI Finance Working Paper No. 51/2004, 2004

- Korea Chamber of Commerce & Industry, 『International Comparison of M&A Defense Environment and its Lesson for Policy Direction』, 2004
- Medury, P., L. Bowyer and V. Srinivasan, “Stock Repurchases: A Multivariate Analysis of Repurchasing Firms,” *Quarterly Journal of Business and Economics*, Vol.31, 1992, pp.21~44
- Schleifer, A. and R. W. Vishny, “Large Shareholders and Corporate Control,” *Journal of Political Economy*, Vol.94, No.3, pp.
- Seongmin Yoon, “Motivation behind Stock Repurchase,” Spring Conference, Korean Securities Association, 2004
- Shivdasani, A., “Board Composition, Ownership Structure, and Hostile Takeovers,” *Journal of Accounting and Economics*, Vol.16, 1993, pp.167~198
- Shoven, J. B. and L. B. Simon, “Share Repurchases and Acquisitions: an Analysis of Which Firms Participate,” NBER Working Paper, No.2243, 1987
- Stulz, R., “Managerial Control of Voting Rights: Financing Policies and the Market for Corporate Control,” *Journal of Financial Economics*, Vol.20, 1988, pp.25~54
- Walsh, J. P. and Seward, J. K., “On the Efficiency of Internal and External Corporate Control Mechanisms,” *Academy of Management Review*, Vol.15, 1990, pp.421~458
- Weisbach, “Corporate Governance and Hostile Takeovers,” *Journal of Accounting and Economics*, Vol.16, 1993, pp.199~208
- Woodruff, C., K. Torabzadeh and J. Ross, “Ownership Structure and Returns to Defensive Stock Repurchase,” *Journal of Economics and Finance*, Vol.19, 1995, pp.171~186



International Conference

**Analysis on Takeover Defense
and Treasury Stock Holdings**

August 10, 2007

Youn, Taehoon

Korea's Leading Think Tank



C O N T E N T S

Introduction

Regulatory Status

Literature Review

Empirical Analysis

Concluding Remarks

Part-01 | Introduction

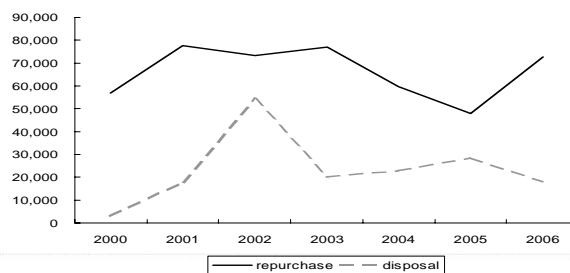
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General Trend

In general, stock repurchase and treasury stock holdings have been increasing in Korea.

- ❑ Share/Stock repurchase: corporations' buying back their own stock.
- ❑ Treasury stock/Share: stock bought back by the issuing company.

Repurchase and disposal of own stock (KSM, in 100 mil won)



Treasury Stock Holdings by Listed Companies

	2001	2002	2003	2004	2005	2006 1q
Value of shares hold*	8,204	13,659	18,132	16,416	30,519	31,223
Number of shares hold**	449,908	611,882	679,834	664,409	618,147	645,446
Ratio of number of shares hold***	3.88	3.90	7.41	9.90	5.98	9.05
Number of firms	247	297	321	392	387	382

Note : 1) * in Billion Won, ** in thousand, *** in %

2) Value of shares hold = no. of treasury stock * price

3) Ratio of number of shares hold = (no. of treasury stock / no. of all listed stock) * 100

Source : KSE

2



Rise in stock repurchase/holdings due to deregulation and increase in (perceived) takeover threat.

- Alleviation of regulations regarding stock repurchase and disposal, and holding of treasury stocks during '90s.
 - Stabilizing/boosting stock market
 - Provision of anti-takeover devise
- Removal of most regulations against the hostile M&A (and foreign investment) after the crisis.
 - To invite foreign capital in the face of financial difficulty and restructure faltering enterprises

3



Hostile takeover in Korea as conflicts between controlling shareholders and other shareholders

- ❑ Talk on stock repurchase is focused on large business conglomerates affiliated company cases.
 - Disputes over corporate control for these firms can be considered as conflicts between controlling shareholders and other (including potential) shareholders.
 - Problem lies in hostile takeovers good for general shareholders and other stakeholders but bad for the controlling shareholders.
 - Since managements and controlling shareholders behind them may attempt to reduce the chance of acquisition with defense measures including the treasury stocks.

4

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Anti-takeover measures in Korea

Stock repurchase/treasury stock (combined with White Knights) is a very popular defense measure.

- ❑ Also, pyramidal shareholding structure among affiliated companies is the most powerful defense measure.
 - It becomes even stronger when combined with un-listed companies.
 - Cash holdings of these companies is also can be used to as a group-wide defense measure.
- ❑ Other measures are also available.
 - Some shark repellents are utilized by a number of firms.
 - There is a lot of talk on the possibility of introducing Poison Pill.

5

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Shark Repellent in Korea (2005)

	KSE	KOSDAQ
Supermajority vote for dismissal of board member	14 (2.11%)	33 (3.60%)
Supermajority vote for merger decision	2 (0.30%)	25 (2.73%)
Private convertible preferred stock provision	1 (0.15%)	14 (1.53%)
Staggered Board Provision	451 (68.13%)	402 (43.89%)
Golden Parachute Provision	9 (1.36%)	39 (4.26%)

Source : Corporate Governance of Korea: White Paper, CGS (2006)

Part-02 | Regulatory Status



Regulations in Korea

Korean Commercial Law heavily regulates stock repurchases.

- Article 341 of the Korean Commercial Law dictates that a company may not acquire its own shares on its own account, except;
 - to retire shares.
 - for M&A.
 - when needed to achieve the objective in the course of exercising the rights of the company.
 - to deal with the fractional shares.
 - when shareholder exercises the right to request the company to purchase his shares.

7

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Securities and Exchange Act is very generous with stock repurchases of list companies.

- Starting with the amendment in 1994, allowance of repurchase for the listed companies have been increased.
5%(1994) → 10%(1996) → 1/3(1998) → 100%(1999)
- When the purpose of stock acquisition is the retirement of shares, if the articles of incorporation allow stock extinguishment for the benefit of shareholders, the resolution by the board meeting alone is entitled to the decision of stock repurchase followed by retirement.
- For cases other than the retirement, relatively free repurchase and holding are allowed.

8

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Regulations in Foreign Countries

Alleviation of regulations on stock repurchase is not universal as claimed in some domestic literature.

- ❑ EU countries, and HKSE have fairly stringent regulations on stock repurchase.
 - Requires approval by the general shareholders' meeting.
 - Up to 10% (15% for UK) of issued and outstanding shares.
- ❑ U.S., Canada, and Japan have very generous regulations.
 - U.S.: Decision by BOD, no report to the authority, no disclosure requirements.
- ❑ In Swiss, stock repurchase is rare, not because of tight regulations but due to due to sophisticated tax provisions. (up to 53.85%)

9

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Kim and Varaiya (2003)

Kim and Varaiya (2003) showed too loose a regulation may be detrimental to general shareholders.

- ❑ Not requiring disclosure in the U.S. may cause the conflict of interest problem between insider shareholders and others.
 - A company may buy back its own stocks in the market and thereby maintain its share price while the inside shareholders sell their own shares to the market.
 - Other shareholders, not knowing it, will be harmed.
 - Evidence: During the quarter of the year when the companies actively repurchase stocks, inside shareholders indeed show tendency to sell their stocks, or at least their net purchase decreases.

10

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Part-03 | Literature

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What motivates stock repurchase?

Hostile takeover defense hypothesis argues that Stock repurchase can be used to defend corporate control.

- ❑ Stulz (1998), Harris and Raviv(1988)
 - Repurchase financed by debts fortifies control without additional investment.
- ❑ Bagnoli et al. (1989)
 - Raises expected share value as well as associated risks.
- ❑ Bagwell (1991)
 - Increase in number of shareholders with higher expectation.
- ❑ There are other hypotheses such as undervaluation hypothesis, free cash flow hypothesis, leverage hypothesis.

Domestic Studies

In the face of the financial crisis and severe business depression, enhancement of corporate governance.

- Event study approach
- Regression approach
 - Yoon (2004) using logit and probit, repurchase decision positively affected by shareholding of controlling shareholder.
 - Lee and Chu (2005) using Tobit, repurchase decision not affected by shareholding of major shareholders.
 - Both rejects hostile takeover defense hypothesis.
- Need to consider not only the stock repurchase, but also holding of treasury stock and its disposal.

12

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Part-04 | Empirical Analysis

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Analytical Framework

Using treasury stock holding as dep. var., this study tests whether the takeover defense hypothesis hold.

- A significant relationship between the ownership structure and the treasury stock holding supports the hypothesis.
 - Shareholding by the controlling shareholders
 - Also need to consider the need for defensive measure for a company from a business group-wide point of view.
- Using fixed effect panel Tobit based on Honoré (1992)
- Dep. Var.: ratio of treasury stock holdings to total shares issued
- Balanced panel of '02~'04 Korea Stock Market listed companies

13

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Various ownership structure variables are used as core explanatory variables.

- Ownership structure
 - Ratio of shareholding by the largest shareholder and related party
 - Ratio of total shareholdings by major domestic shareholders
 - Ratio of total shareholdings by major foreign shareholders
 - Control Contribution Indices from Cho and Lim (2005)
- Others
 - Ceiling on shareholding regulation dummy
 - Other financial and non financial variables including Tobin's Q

14

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Case I : All Listed Companies

<Ownership Structure and Treasury Stock Holdings>
(All listed companies)

	Dependent variable : Ratio of treasury stock holdings			
	I	II	III	IV
Shareholding of the largest shareholder and related parties	0.0939 (0.0868)	0.0855 (0.0854)	0.0869 (0.0881)	0.0933 (0.0816)
Ratio of total shareholdings by major domestic shareholders	-0.0659 (0.0939)	-0.0695 (0.0870)	-0.0652 (0.0908)	-0.0667 (0.0865)
Ratio of total shareholdings by major foreign shareholders	-0.1172 (0.1058)	-0.1373 (0.1038)	-0.1267 (0.1053)	-0.1107 (0.1047)
Ceiling on shareholding regulation	0.1600* (0.0922)	0.1583* (0.0920)	0.1630* (0.0915)	0.1683* (0.0875)
Tobin's Q			-0.0179 (0.0157)	-0.0116 (0.0114)
χ^2 statistics (p-value)	19.8 (0.000)	23.8 (0.000)	27.1 (0.000)	33.8 (0.000)
Number of samples	1374	1374	1374	1374

Note: 1) Result of the fixed effect panel Tobit estimation

2) Figures in brackets are standard errors

3) *, **, and *** represent the coefficients are statistically significant at 10%, 5%, and 1% level respectively



15

Case II-1: Business Group Affiliates

<Ownership Structure and Treasury Stock Holdings>
(Companies under Prohibition of Cross-Shareholding Clause)

	Dependent variable : Ratio of treasury stock holdings			
	I	II	III	IV
Shareholding of the largest shareholder and related parties	-0.1592 (0.1135)	-0.1729 (0.1101)	-0.1147 (0.1165)	-0.1461* (0.0785)
Ratio of total shareholdings by major domestic shareholders	0.2208*** (0.0581)	0.2657*** (0.0739)	0.3291*** (0.1030)	0.3381*** (0.1155)
Ratio of total shareholdings by major foreign shareholders	-0.1814** (0.0750)	-0.1429** (0.0644)	-0.1266 (0.0854)	-0.1343 (0.0821)
Tobin's Q			-0.0663* (0.0353)	-0.0711** (0.0324)
χ^2 statistics (p-value)	23.3 (0.000)	35.4 (0.000)	19.8 (0.006)	25.6 (0.002)
Number of samples	243	243	243	243

Note: 1) Result of the fixed effect panel Tobit estimation

2) Figures in brackets are standard errors

3) *, **, and *** represent the coefficients are statistically significant at 10%, 5%, and 1% level respectively



16

Case II -2: Business Group Affiliates

<Ownership Structure and Treasury Stock Holdings>
(Companies under Prohibition of Cross-Shareholding Clause)

	Dependent variable : Ratio of treasury stock holdings			
	I	II	III	IV
Shareholding of the largest shareholder and related parties	-0.1585 (0.1323)	-0.1626* (0.0938)	-0.1311 (0.0931)	-0.1269** (0.0614)
Ratio of total shareholdings by major domestic shareholders	0.2605*** (0.0660)	0.2823*** (0.0690)	0.3484*** (0.0964)	0.3528*** (0.0946)
Ratio of total shareholdings by major foreign shareholders	-0.1745** (0.0779)	-0.1349** (0.0680)	-0.1260 (0.1115)	-0.1348 (0.1150)
CCI1	0.0744 (0.1275)	0.0296 (0.1481)	0.0598 (0.1044)	0.0406 (0.1028)
CCI2	0.1590** (0.0797)	0.2087** (0.0866)	0.2452* (0.1433)	0.2441* (0.1255)
Tobin's Q			-0.0661* (0.0349)	-0.0720** (0.0328)
χ^2 statistics (p-value)	34.4 (0.022)	40.3 (0.000)	27.0 (0.001)	32.7 (0.000)
Number of samples	243	243	243	243

Note: 1) Result of the fixed effect panel Tobit estimation

2) Figures in brackets are standard errors

3) *, **, and *** represent the coefficients are statistically significant at 10%, 5%, and 1% level respectively

17



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Part-05 | Concluding Remarks



The best way to preserve corporate control is to maintain transparency and maximize corporate value.

- Using treasury stock as a anti-takeover measure may not always serve the interest of general shareholders, especially if the dispute is between controlling shareholders and other (potential) stakeholders.
 - A stock repurchase that is good for the shareholders in the short run due to a increase in stock price, may be detrimental to the overall return to the shareholders if it is used to block a potentially value increasing takeover attempt.
- This study have shown that holding of treasury stock is likely to be related to the need for a defensive measure not at a company level but at a group wide level.

18

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The Crisis and Corporate Governance

Fortifying stock repurchase, holding and disposal related regulations may serve the public interest.

- Decisions on repurchase, holding, and disposal of own stocks need to be made at the general shareholders meeting.
 - It maybe is allowable to have the decision made at the BOD when prompt decision is needed.
 - This decision, however, needed to be ratified at the general shareholders meeting.
 - Any damage to the general shareholders due to such actions need to be compensated through class action suits or similar.
- Disclosure requirements for stock repurchase, holding and disposal need to be reinforced, and insider trading needs special attention.

19

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