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# CORPORATE GOVERNANCE AND FIRM PERFORMANCE IN KOREA

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*We investigate how firm performance is related to corporate governance in Korea. We find that the adoption of an audit committee itself does not significantly improve the level of firm performance. However, we find that there is positive relationship between the outside directors' activity level and firm profitability. This suggests that outside directors can play a role of reducing agency conflicts between management and external shareholders so that the profitability is positively with their activity. Furthermore, we also find that for the firms where audit committees are voluntarily adopted, increased activities by minority shareholders and higher ownership by foreign investors tend to affect the profitability positively.*

*Overall, our results partially support the hypothesis that corporate governance and firm performance are positively related.*

**Keywords:** *corporate governance, firm performance, audit committee, minority shareholders.*

## Introduction

In this study, we examined whether corporate governance affects firms' performance differently for Korean firms. Even after decades of extensive research, the question of how firms choose their governance structures for improving firms' performance remain unresolved. The notion of corporate governance is used in two different contexts: a "performance enhancing mechanism" for enhancing corporate prosperity and performance and a "misbehavior control mechanism" for stopping fraud or inactive disclosure process by corporate managers. While corporate governance in the latter sense is important, this study emphasizes the former notion of corporate governance.

Is 'good' corporate governance associated with better performance? If there is a relationship between corporate governance and firm performance, what is the 'good' corporate governance structure? It might be the case that firms with good performance have more financial resources available to improve their corporate governance.

From a theoretical point of view, agency problems may affect the value of firms through the expected cash flows accruing to investors and/or the cost of capital. First, good corporate governance decreases agency problems and makes investors optimistic about future cash flows. La Porta, Lopez-de-Silanes, Shleifer (2002) argue that investors bid up stock prices because, 'with better legal protection, more of the firm's profits would come back to them as interest or dividends. Second, good corporate governance lowers the cost of capital to the extent that it reduces shareholders' monitoring and auditing costs (e.g., Lombardo and Pagano, 2002). Countries that have developed institutional mechanisms to reduce the agency costs of investment tend to utilize assets more effectively and realize higher economic growth than those with highly inefficient institutional mechanisms.

Since the financial crisis in 1997, there has been a wide range of reforms in the areas of accounting systems, investor protection, and corporate governance in Korea. And, we have witnessed accordingly major improvements in corporate governance practices. Corporate governance attributes have generated significant public, media, and regulatory attention with respect to firm performance. However, we still have a long way to go in terms of enhancing the overall quality and implementation of these practices. We do not have appropriately established system of evaluation of corporate governance practices in Korea. We conduct this study in the spirit of La Porta's admonition and provide evidence from a market that differs from the United States in many ways including the legal system,<sup>1</sup> corporate ownership structure and market development.

In this study, we investigate how Korean corporate governance affects firm performance using a sample of 622 firm-year observations of the Korea Stock Exchange from the two-year period of 2004 and 2005. We examine the relation between key corporate governance variables and firm performance using multiple regression models. The key corporate governance variables include the establishment of audit committees, the voluntary adoption of audit committees, and the participation of outside directors in the board meetings. We believe that audit committee and outside directors can influence or monitor the behavior of management directly. Therefore, we use audit committee and outside directors' activity as our main corporate variables. Minority shareholder activism and foreign ownership are used as indirect corporate governance variables since minority shareholders and foreign shareholders cannot directly influence the decision making process of management.

We find that there exists no difference in firm performance between firms which established an audit committee and firms which did not do so during the same time period. This result suggests that the adoption of an audit committee itself does not significantly affect the level of firm performance. This result suggests that the benefit of the adoption of audit committees has not exceeded its cost yet or that we fail to detect the effect of audit committee because of its long-term influence.

We also investigate the effect of the voluntary establishment of an audit committee on firm profitability.<sup>2</sup> The result shows that the voluntary introduction of an audit committee is related to firm performance positively when we take into account the interaction effects

between voluntary audit committee and minority shareholder activism, and foreign ownership. We also find that the participation of outside directors in the board meetings is positively related to firm performance. This result is consistent with La Porta et al. (2002).

Our results only partially support the hypothesis of a positive relationship between corporate governance and firm profitability, i.e. firms with more active participation by outside directors in the board meetings accomplish higher operating performance. We expect that the results of this study are very timely and useful for regulators as well as academics and business practitioners.

The study proceeds as follows. In Section 2, we discuss how our study compares to previous studies of corporate governance in Korea. Section 3 presents our sample and methodology. Section 4 provides the results of our tests, and Section 5 concludes.

## Prior Studies

A Korean corporate governance study by Lee and Sohn (2005) examines the relationship between corporate governance and corporate disclosure practices. They find the relationship between corporate governance and corporate disclosure practices for Korean firms is highly sensitive. Lee and Lee (2003) examine the effect of an audit committee on earnings management. They find that the introduction of an audit committee itself does not significantly mitigate the degree of earnings management. The audit committee's independence, however, lowers the degree of earnings management. Jeon, Choi and Park (2004) also investigate the relationship between audit committee and earnings management. They also find that there exists no difference in earnings management between firms which established an audit committee and firms which did not do so during the same time period. Sohn, Choi and Lee (2004) examine the relationship between the frequency of reporting accounting errors and the different characteristics of the audit committee such as independence, expertise and activity level. They find that among all the characteristics of the audit committee, the activity level alone is related to the frequency of reporting accounting errors. While all of these studies add to our knowledge of corporate governance in Korea, none of these studies investigate the relationship between corporate governance and firm performance; This is what we do in the study.

A limitation of many of these studies is that they use data gathered at a time just after Korean firms were required to establish an audit committee on their board of directors. As a result, these studies have to rely on less precise approximation techniques for key variables.

In this study, we elaborate on the distinction between major corporate governance variables and indirect corporate governance variables based on their degree of influence on the decision making process of management or directness of monitoring process. Furthermore, we also elaborate on sample dichotomization, which will be explained later in the methodology. Corporate governance variables are more carefully designed to add

precision. For example, instead of using the simple proportion of outside directors in the board composition, we use actual involvement of outside directors in the board meetings to measure outside directors' real activity.

## Sample and Methodology

### Sample Selection

We began our sample with all of the firms contained in the KIS-FAS database<sup>3</sup> as of the end of 2005. We manually collected all data regarding board of directors and audit committees from the FSS's electronic disclosure system, DART<sup>4</sup>, and equity ownership information from the KIS-LINE<sup>5</sup> database. We deleted observations due to missing information on board of directors' composition, those with no ownership data and firms with missing and insufficient financial data. The final sample consists of 662 firm observations from the two-year period of 2004 and 2005<sup>6</sup>.

### Methodology

Most previous studies that estimate the valuation impact of corporate governance concentrate on specific aspects of corporate governance in isolation, for example, takeover defense (Gompers, Ishii and Metrick, 2003), executive compensation (Loderer and Martin, 1997), blockholdings (Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001), board size (Yermack, 1996; Eisenberg, Sundgren and Wells, 1998) or board composition (Hermalin and Weisbach, 1991; Bhagat and Black, 2002). However, the existence of alternative corporate governance mechanisms may lead to 'omitted variables' problems and spurious correlations. We, therefore, use an extensive set of governance mechanisms simultaneously.

In order to test the relationship between corporate governance and corporate performance, we use multiple regression analyses. The power of regression analyses depends on the choices of proxies for corporate governance and exogenous control variables. Several studies have examined the impact of corporate governance attributes on firm performance after controlling for some important firm characteristics. Based on previous literature, we develop and test the following factors.

- **Audit Committee**<sup>7</sup>: One of the key roles of an audit committee is to ensure the quality of financial reporting and control systems. Audit committee is one component of the set of monitoring mechanisms available for reducing information asymmetry between insiders and outsiders. While the presence of outside directors can be expected to increase the quality of monitoring, there are limits to how far the level of monitoring can be improved. While the board may have numerous mechanisms to monitor the financial reporting process of a firm, the audit committee is a subcommittee of the board with the primary responsibility for this monitoring. Since an audit committee consists mainly of outside directors, it can be an effective mechanism when it comes to reducing the amount of information asymmetry. Forker(1992) argued that the

existence of audit committees may improve internal control and consequently, regarded them as an effective monitoring device for improving firm value. Hence, we hypothesize that companies with an audit committee are more likely to accomplish a higher level of firm performance.

- **Outside Directors' Activity**<sup>8</sup>: The research on the role of outside directors on the board of directors is related to the better monitoring of management decisions and activities by corporate boards (Fama 1980). Sohn et al. (2004) investigate the effectiveness of audit committee by examining the relationship between the frequency of reporting accounting errors and the differential characteristics of the audit committee like independence, expertise and activity level. They argue that the activity level measured by the number of meetings of the committee is related to accounting transparency. Monitoring by the board of directors is one of several mechanisms that have developed in modern corporations to resolve the agency problem between top management and shareholders. However, the effectiveness of the board in fulfilling this monitoring role is not clear. To examine the relationship between outside directors and corporate performance, we use the proportion of participation by outside directors in the board meetings as an independent variable.
- **Minority Shareholders**: Committing the firm to the protection of minority shareholders' interest increases the expected cost to managers of extracting private benefits. It, therefore, reduces agency cost and improves firm performance. Recent empirical studies support this proposition. La Porta et al. (2002) documents higher valuation of firms in countries with better protection of minority shareholders. Therefore, we use the existence of minority shareholder activism as an independent variable. The rights of the minority shareholders in Korea include class-action law suit, cummulative voting, injunction, etc.
- **Foreign Ownership**: The opening of national economies to foreign trade and investment has significant implications on corporate governance practices in these economies. The entry of foreign financial institutions into developing economies has implications on two levels. Firstly, foreign financial institutions as privately owned and managed entities have higher incentives to monitor corporate managers to ensure higher returns on their investment than the public financial institutions. Secondly, these institutions possess more efficient tools for monitoring managers than do local private financial institutions in developing economies (Khanna and Palepu, 1999; Rapaczynski, 1996).

As our main corporate governance variables, we used the adoption of audit committees and outside directors' activity in the board meetings. We also investigate two other corporate governance variables of minority shareholder activism and foreign ownership. We believe that audit committee and outside directors' activity are more meaningful since they can actively involve in the decision making or monitoring activities. Minority shareholder activism and foreign ownership are less influential because minority shareholders and foreign investors cannot influence the behavior of managers directly. In this study, we use three control variables based on prior literature. They are firm size, leverage ratio and growth rate of sales.

Large firms usually face severe agency problems because of wide diversification of ownership and as a result may voluntarily choose stricter governance rules (e.g., Jensen, 1986). Therefore, we use firm size as the first control variable. Firm size is measured as the natural logarithm of total assets.

Jensen (1986, 1993), Stulz (1990), and Hart and Moore (1995), among others, suggest that debt helps to discourage over-investment of free cash flow by self-serving managers. Debt can also create value by giving the management an opportunity to signal its willingness to distribute cash flows and to be monitored by lenders. Empirically, McConnell and Servaes (1995) find that book leverage is positively correlated with firm value when investment opportunities are scarce, which is consistent with the hypothesis that debt alleviates the overinvestment problem. Agrawal and Knoeber (1996) and Beiner, Drobetz, Schmid and Zimmermann (2004) find no relationship between leverage and firm performance and argue that leverage is employed optimally in conjunction with other governance mechanisms. However, Murali (2006) and Pornsit (2006) find negative relationship between debt ratio and firm profitability, implying that the higher the debt to net assets for firms, the worse is their performance. Murali (2006) argues that firms which rely more on debt capital are restrained from investing in assets with a high degree of non-redeployability properties by banks.

A measure of growth opportunities is used as the third control variable. Firms with growth opportunities need to raise external financing and may find it optimal to improve their performance and to reduce their cost of capital. We follow Klapper and Love (2004) and use the average annual sales growth over the past three years as a measure of growth opportunities.

Prior literature provides evidence indicating a positive relationship between the good corporate governance and firm performance. The improvement of corporate governance seems to force managers to behave in the interest of outside shareholders by monitoring their behavior. If this is the case, then the better corporate governance should reduce the agency costs and presumably lead to higher firm performance. This section empirically explores whether firm performance is related to the corporate governance mechanism.

Firm performance is measured in three alternative ways. The first proxy of firm performance is the firm profitability as measured by the net income on beginning total assets (ROA). The second proxy is the cost of capital<sup>9</sup> (COC) as measured by the ratio of the sum of interest expenses and cash dividends over sales revenue of the same period. The third proxy is the annual abnormal stock returns as measured by the market model.

To investigate the effectiveness of audit committees and the corporate governance mechanism on firm performance, we first dichotomize the sample into the full sample and the sub-sample with assets less than two trillion won, for which audit committee is not mandated. Then, we run separate regressions for the full sample and the sub-sample with the corporate governance variables as main variables of interests and three control variables. The corporate governance variables include the adoption of audit committee (AC for the entire adoption group and VAC for the voluntary adoption group), the

participation of outside directors in the board meetings (OUT), the existence of minority shareholder's activism (MINOR), and foreign ownership (FOR). In addition to the corporate governance variables as our main variables of interests, we use three control variables of firm size, leverage and sales growth rate. In addition to the audit committee, some corporate governance mechanisms may be applied simultaneously to ensure the effectiveness of the overall corporate governance system. Therefore, we need to take into account the interaction effects between audit committee and other corporate governance variables. Accordingly, we run an additional regression for each group of firms with interaction terms between audit committee and other corporate governance variables. The two sets of regressions are described as follows:

Model 1-1 (For the full sample without interaction effects):

$$\text{ROA (or COC or RET)} = b_0 + b_1\text{AC} + b_2\text{OUT} + b_3\text{MINOR} + b_4\text{FOR} + b_5\text{SIZE} + b_6\text{LEV} + b_7\text{GROW} + e$$

Model 1-2 (For the full sample with interaction effects):

$$\text{ROA (or COC or RET)} = b_0 + b_1\text{AC} + b_2\text{OUT} + b_3\text{MINOR} + b_4\text{FOR} + b_{12}\text{AC*OUT} + b_{13}\text{AC*MINOR} + b_{14}\text{AC*FOR} + b_5\text{SIZE} + b_6\text{LEV} + b_7\text{GROW} + e$$

Model 2-1 (For the firms for which audit committee is not mandate without interaction effects):

$$\text{ROA (or COC or RET)} = b_0 + b_1\text{VAC} + b_2\text{OUT} + b_3\text{MINOR} + b_4\text{FOR} + b_5\text{SIZE} + b_6\text{LEV} + b_7\text{GROW} + e$$

Model 2-2 (For the firms for which audit committee is not mandate with interaction effects):

$$\text{ROA (or COC or RET)} = b_0 + b_1\text{VAC} + b_2\text{OUT} + b_3\text{MINOR} + b_4\text{FOR} + b_{12}\text{VAC*OUT} + b_{13}\text{VAC*MINOR} + b_{14}\text{VAC*FOR} + b_5\text{SIZE} + b_6\text{LEV} + b_7\text{GROW} + e$$

The variables used in the analyses are defined as follows:

■ **Dependent Variables (Firm performance proxies)**

ROA (return on assets) = net income scaled by beginning total assets

COC (cost of capital) = (interest expense + cash dividends)/revenue

RET (abnormal returns) = annual abnormal returns from the market model =  $r_{it} - b_{oi} - b_{1i}r_{mt}$

■ **Independent Variables**

AC = a dummy variable with a value of 1 when a firm has an audit committee and a value of 0 otherwise

VAC = a dummy variable with a value of 1 when a firm with total assets less than 2 trillion won has an audit committee and a value of 0 otherwise

OUT = the proportion of participation by outside directors in the board meetings<sup>10</sup>

MINOR = a dummy variable with a value of 1 when a firm has at least one case of minority shareholder activism reported a year

FOR = the percentage of equity ownership by foreign investors

### ■ Control Variables

SIZE = natural logarithm of the total assets of a firm

LEV = financial leverage measured as the ratio of total liabilities to total assets

GROW = the average annual growth of sales over the past three years (Stefan, Wolfgang, Markus and Heinz, 2006)

## Empirical Results

### Descriptive Statistics

Table 1 shows the descriptive statistics of the variables used in our study. About one fifth of the sample firms have audit committees, of which less than half are established voluntarily. This indicates that considerable proportion of firms with audit committees somehow establishes them even though they are not mandated. Outside directors' participation in the board meetings averages 71.38%. This implies that outside directors actively participate in the board meetings. Average ownership of the Korean listed firms by foreign investors is about 14% with maximum foreign ownership is as high as 80%.

Table 1: Descriptive Statistics (n = 662)

Variables	Mean	S. D.	Minimum	Median	Maximum
AC	0.2058	0.4046	0.0000	0.0000	1.0000
VAC	0.0949	0.2933	0.0000	0.0000	1.0000
OUT	0.7138	0.2821	0.0000	0.8000	1.0000
MINOR	0.0209	0.1432	0.0000	0.0000	1.0000
FOR	0.1382	0.1793	0.0000	0.0487	0.8000
SIZE	19.5304	1.5186	16.2028	19.2025	24.8444
LEV	0.4336	0.1817	0.0289	0.4394	0.9000
GROW	0.0930	0.2125	-0.4300	0.0770	0.9600
ROA	0.0370	0.0795	-0.3800	0.0450	0.2558
COC	0.0263	0.0208	0.0002	0.0206	0.1220
RET	0.2555	0.6746	-1.0068	0.1222	2.6800

For those firms included in our sample, average leverage measured as the ratio of total liabilities over total assets is 43.36% while growth rate of sales is about 9.3%. Return on assets averages 3.7%, while the cost of capital averages 2.63% of revenue. Abnormal stock return during the two-year period is quite high at 25.55%.

### Results of the Correlation Analysis

Table 2 shows correlation coefficients between pairs of variables for our sample observations. The correlation analysis indicates that audit committee (AC) has a positive relationship with the participation of outside directors in the board meetings (OUT), foreign equity ownership (FOR), return on assets (ROA) and the cost of capital (COC). However, it does not have significant relationship with stock returns (RET). As for the

Table 2: Correlation Coefficients Between Variables

	AC	VAC	OUT	MINOR	FOR	SIZE	LEV	GROW	ROA	COC
VAC	0.636									
OUT	0.129	0.035								
MINOR	0.092	-0.009	0.060							
FOR	0.340	0.021	0.112	0.071						
SIZE	0.593	0.092	0.140	0.115	0.548					
LEV	0.220	0.085	-0.061	-0.080	-0.144	0.177				
GROW	0.036	0.014	-0.058	-0.009	0.014	0.047	0.084			
ROA	0.125	0.009	0.132	0.042	0.287	0.297	-0.263	0.186		
COC	0.118	0.001	0.023	0.095	0.050	0.098	0.180	-0.131	-0.110	
RET	-0.010	0.037	-0.079	-0.064	-0.173	-0.024	0.189	0.063	0.082	-0.017

relationship between AC and control variables, AC has positive relationship with firm's size (SIZE) and leverage (LEV) but not with growth rate of sales (GROW). In contrast, the voluntary adoption of audit committees (VAC) does not have any statistically significant relationship with the corporate governance variables and the control variables.

The participation of outside directors in the board meetings (OUT) has a positive relationship with firm size (SIZE) and profitability (ROA). However, it has no significant relationship with the cost of capital (COC) and the abnormal stock returns (RET). It also has no noticeable relationship with other control variables. Minority shareholder activism (MINOR) has no significant relationship with most of the variables except for firm size. Foreign equity ownership (FOR) has positive relationship with firm size and profitability, but negative relationship with leverage and stock returns.

Large firms tend to have more audit committees, more outside directors represented in the board of directors and/or more active participation in the board meetings, more frequent activities by minority shareholders and more owned by foreign investors. In addition, large firms seem to enjoy more profit. Leverage ratio affects profitability negatively as is normally expected, and has positive relationship with the cost of capital and stock returns. However, growth rates of sales (GROW) does not seem to influence the corporate governance variables, while it affects profitability and the cost of capital.

## Results of the Regression Analysis

Our primary interest lies in investigating the impact of corporate governance variables on firm performance. The firm performance is measured in alternative ways: return on assets, the cost of capital and stock returns. Tables 3 through 5 respectively report the results of regressing the three performance proxies on corporate governance variables and control variables.

Model 1-1 employs the adoption of audit committees (AC) as an independent variable, together with other explanatory variables. No interaction effects between audit committee and other corporate governance variables are included in Model 1-1. Model 2-1 is the same as Model 1-1 except for the fact that the voluntary adoption of an audit committee

Table 3: Regression Results - Profitability as Firm Performance

Independent Variables	Model 1-1	Model 1-2	Model 2-1	Model 2-2
	Dependent Variables: ROA			
	Coeff.(t-ratio)	Coeff.(t-ratio)	Coeff.(t-ratio)	Coeff.(t-ratio)
Constant	-0.2521(-5.19)	-0.2412(-4.86)	-0.3201(-5.44)	-0.3144(-5.38)
AC	-0.0062(-0.71)	-0.0015(-0.06)		
VAC			-0.0052(-0.51)	-0.0539(-1.73)
OUT	0.0220( 2.18)	0.0233( 2.16)	0.0278( 2.60)	0.0238( 2.16)
MINOR	-0.0135(-0.68)	-0.0388(-1.46)	-0.0151(-0.59)	-0.0393(-1.45)
FOR	0.0305( 1.56)	0.0240( 1.10)	0.0288( 1.34)	0.0169( 0.75)
AC*OUT		-0.0156(-0.51)		
VAC*OUT				0.0399( 1.02)
AC*MINOR		0.0567( 1.42)		
VAC*MINOR			0.2015( 2.59)	
AC*FOR		0.0003( 0.81)		
VAC*FOR				0.0011( 1.92)
SIZE	0.0166( 6.29)	0.0160( 5.99)	0.0199( 6.28)	0.0199( 6.32)
LEV	-0.1386(-8.27)	-0.1377(-8.20)	-0.1358(-7.52)	-0.1367(-7.63)
GROW	0.0008( 5.74)	0.0748( 5.65)	0.0007( 5.16)	0.0720( 5.11)
Adjusted R <sup>2</sup>	0.2303	0.2317	0.2087	0.2226
No. of Firms	622		552	

(VAC) is used instead of AC. Model 1-2 is an augmentation of Model 1-1 with the interaction effects between audit committee and other corporate governance variables. Likewise, Model 2-2 is an augmentation of Model 2-1.

If the adoption of audit committees affects firm performance positively, AC and VAC should have positive coefficients for ROA. Table 3 shows that both AC and VAC fail to affect ROA significantly. Table 3 also shows that the participation of outside directors in the board meetings (OUT) affects the profitability positively. Other corporate governance variables including MINOR and FOR do not affect the profitability significantly. When interaction effects are included in the regressions, VAC\*MINOR and VAC\*FOR affect the profitability positively. This indicates that for the firms where audit committees are voluntarily adopted, increased activities by minority shareholders and higher ownership by foreign investors tend to affect the profitability positively. The impact of control variables on the profitability shows that profit is higher for larger firms, firms with lower debt ratios and higher growing rates as can be expected normally.

Table 4 reports the regression results with the cost of capital (COC) as the dependent variable<sup>11</sup>. The argument here is that if the corporate governance variables lower the cost of capital, audit committee and outside directors' activity will have a negative relationship with the cost of capital. The explanatory variables are the same as in Table 3.

The results of the regressions reveal that the corporate governance variables fail to lower the cost of capital. The only occasion with statistical significance is the minority

Table 4: Regression Results - The Cost of Capital as Firm Performance

Independent Variables	Model 1-1	Model 1-2	Model 2-1	Model 2-2
	Dependent Variables: COC			
	Coeff.(t-ratio)	Coeff.(t-ratio)	Coeff.(t-ratio)	Coeff.(t-ratio)
Constant	0.0173( 1.23)	0.0229( 1.61)	0.0412( 2.68)	0.0411( 2.67)
AC	0.0027( 1.08)	0.0053( 0.75)		
VAC			0.0006( 0.24)	0.0031( 0.38)
OUT	0.0006( 0.20)	0.0011( 0.36)	0.0007( 0.26)	0.0012( 0.41)
MINOR	0.0146( 2.55)	-0.0051(-0.67)	-0.0047(-0.70)	-0.0047(-0.66)
FOR	0.0068( 1.19)	0.0240( 1.10)	0.0097( 1.72)	0.0083( 1.39)
AC*OUT		-0.0065(-0.74)		
VAC*OUT				-0.0058(-0.57)
AC*MINOR		0.0001( 0.65)		
VAC*MINOR				0.0026( 0.13)
AC*FOR		0.0003( 0.81)		
VAC*FOR				0.0001( 0.81)
SIZE	-0.0001(-0.12)	-0.0004(-0.51)	-0.0014(-1.74)	-0.0014(-1.75)
LEV	0.0228( 4.69)	0.0236( 4.90)	0.0269( 5.72)	0.0270( 5.72)
GROW	-0.0146(-3.80)	-0.0154(-4.05)	-0.0147(-3.97)	-0.0147(-3.96)
Adjusted R <sup>2</sup>	0.0628	0.0820	0.0675	0.0639
No. of Firms	622		552	

shareholder activism in Model 1-1. However, the case of minority shareholder activism is reported only occasionally. Therefore, it is hard to attach any economic significance to the coefficient when all the other corporate governance variables do not show statistical significance across all the models. Leverage and sales growth rate have expected signs with statistical significance across all the models. Namely, when debt ratio is high, firms pay more cost of capital. Likewise, when firms enjoy good sales growth, they incur less cost of capital since they will generate sufficient internal cash flows from operation.

Table 5 reports the regression results with stock returns as the dependent variables. It can be argued that stock market will respond positively to firms with good corporate governance. Therefore, we can expect a positive relationship between stock returns and audit committee, and outside directors' activity. We are not sure what relationship would be expected between stock returns and minority shareholders' activism and foreign ownership.

The regression results show that stock returns are not significantly affected by audit committees whether they are mandated or voluntarily adopted. Furthermore, outside directors' activity does not affect stock returns either. Minority shareholder activism, as in the previous two tables, fails to affect stock returns. However, foreign ownership is negatively related with stock returns. One plausible reason for the negative relationship between foreign ownership and stock returns is that foreign investors generally prefer more stable stocks, namely large firms with less risk and more dividends from sufficient

Table 5: Regression Results - Stock Returns as Firm Performance

Independent Variables	Model 1-1	Model 1-2	Model 2-1	Model 2-2
	Dependent Variables: RET			
	Coeff.(t-ratio)	Coeff.(t-ratio)	Coeff.(t-ratio)	Coeff.(t-ratio)
Constant	-0.3533(-0.77)	-0.4127(-0.88)	-0.8425(-1.54)	-0.8184(-1.49)
AC	-0.0182(-0.22)	-0.0574(-0.25)		
VAC			0.0126( 0.13)	-0.3917(-1.34)
OUT	-0.1255(-1.32)	-0.1396(-1.37)	-0.0939(-0.95)	-0.1354(-1.31)
MINOR	-0.2020(-1.08)	-0.2277(-0.91)	-0.2575(-1.08)	-0.0071(-0.89)
FOR	-0.6610(-3.59)	-0.5719(-2.79)	0.5874(-2.93)	-0.6115(-2.90)
AC*OUT		0.1452( 0.50)		
VAC*OUT				0.5275( 1.45)
AC*MINOR		0.0610( 0.16)		
VAC*MINOR				-0.3219(-0.44)
AC*FOR		-0.0037(-1.05)		
VAC*FOR				0.0014( 0.25)
SIZE	0.0283( 1.14)	0.0314( 1.25)	0.0515( 1.75)	0.0521( 1.77)
LEV	0.5337( 3.38)	0.5361( 3.39)	0.5836( 3.48)	0.5735( 3.41)
GROW	-0.1516( 1.22)	0.1512( 1.21)	0.1386( 1.05)	0.1440( 1.09)
Adjusted R <sup>2</sup>	0.0554	0.0527	0.0502	0.0490
No. of Firms	622		552	

cash flows from operation. Since prior literature documents that there is a strong positive relationship between return and risk, we can infer that foreign ownership may be negatively related to stock returns.

The interaction terms also do not show any statistical significance. The only control variable that has statistically significant relationship with stock returns is the leverage ratio. It has a significant positive relationship with stock returns. This is somewhat puzzling since it has a negative relationship with the profitability and a positive relationship with the cost of capital. Normally, it should have a negative relationship with stock returns to be consistent with two other firm performance proxies. However, we can also apply the same analogy of positive relationship between stock return and risk. In other words, the leverage ratio can have a positive relationship with stock returns since highly levered firms are high risk firms. Therefore, highly levered firms, being the riskier firms, may give higher stock returns.

Overall, the results of regression analyses with three different performance proxies reveal that the corporate governance variables fail to affect firm performance except for the outside directors' activity when performance is measured by the profitability. There can be many reasons for our failure to detect relationship between firm performance and the corporate governance variables. Maybe, we need to include more years so that we can capture the long-term effect of the corporate governance on performance. However, it is

certain that at least short-term firm performance is not enhanced by audit committees. However, the outside directors' activity is positively related to the profitability. This may suggest that outside directors' monitoring or oversight function may reduce the agency costs and, as a result, increase firm's profitability.

## Concluding Remarks

Since the financial crisis in 1997, Korea has continuously worked on building systematic soundness of corporate governance in order to improve accounting transparency and fair financial reporting. In this paper, we investigate a relationship between corporate governance and corporate performance using a sample of 662 firm-year observations of public firms listed on the Korea Stock Exchange from the two-year period of 2004 and 2005.

To proxy for firm performance, we used three alternative performance measures of firm profitability, the cost of capital and stock returns. Corporate governance is expected to have a positive relationship with profitability and stock returns but a negative relationship with the cost of capital. As our main corporate governance variables, we used the adoption of audit committees and outside directors' activity in the board meetings. We also investigate two other corporate governance variables of minority shareholder activism and foreign ownership. We believe that the first two corporate governance variables are more meaningful since they are internalized system in the sense that audit committees and outside directors can actively involve in the decision-making or monitoring activities. The other two corporate governance variables are less influential because minority shareholders and foreign investors cannot influence the behavior of managers directly.

In running the regressions, we included not only the four corporate governance variables but also three control variables of firm size, leverage ratio and growth rate of sales. Furthermore, we note the possibility of using multiple corporate governance mechanisms to ensure the effectiveness of the entire corporate governance system. Therefore, we included interaction effects between audit committee and other corporate governance variables in a separate regression.

In addition, we dichotomized our sample into the full sample and a sub-sample with firms having total assets of less than two trillion won, for which audit committee is not mandated. For the sub-sample, we investigated whether the voluntary adoption of audit committee has any association with firm performance.

The results of our study fail to show evidence that audit committee itself has any systematic relationship with firm performance. In contrast, the outside directors' activity seems to positively affect firm profitability. However, the outside directors' activity affects neither the cost of capital nor stock returns. Our results also show that for the firms where audit committees are voluntarily adopted, increased activities by minority shareholders and higher ownership by foreign investors tend to affect the profitability positively.

Overall, our results partially support the hypothesis that corporate governance positively affects firm performance, i.e. firms with better corporate governance accomplish higher performance. We expect that the results of this study are very timely and useful for regulators as well as academics and business practitioners.

## Notes

1. According to the classification system of La Porta, Lopez-de-Silanes and Shleifer (1999), the origin of the Korean legal system is German civil law, whereas the origin of the legal system in the United States is British common law.
2. Firms with total assets of less than two trillion won are not mandated to establish an audit committee.
3. KIS-FAS (Korea Investors Service - Financial Accounting Service) is the Korean Compustat database.
4. FSS (Financial Supervisory Service) is the Korean Securities and Exchange Commission. DART stands for Data Analysis, Retrieval and Transfer system.
5. KIS-Line provides online access to company information.
6. Our sample is scattered across 34 industries. The highest proportion of our sample composition is chemical products industry with 135 observations. We do not believe there is any industry concentration problem in the sample selection process.
7. According to the Commercial Law of Korea, the board of directors may, under the conditions set forth in the articles of incorporation, establish committees within the board that consist of two or more directors. The board of directors may delegate to the committees its power, other than in matters set forth as follows:
  - (a) Proposal of matters subject to the approval of the general shareholders' meeting;
  - (b) Appointment or dismissal of the representative director;
  - (c) Establishment of committees and appointment or dismissal of their members;
  - (d) Any other matters as set forth by the articles of incorporation.

While the Commercial Law allows companies to choose between the statutory (internal) auditor system and audit committee system, the Securities Exchange Act requires the adoption of the audit committee for large listed companies with assets over two trillion won, large financial institutions, and large financial holding companies.

8. The Securities Exchange Act uses a term 'independent director' for outside directors. The Securities Exchange Act defines an independent director as a non-executive director who is elected and qualified in accordance with the Act. The requirements for listed companies are as follows:
  - (a) At least one independent director should be on the board and the total number of independent directors should amount to one quarter of the board at a minimum.
  - (b) For companies with assets more than two trillion Korean won, at least three independent directors should be on the board and the total number of independent directors should be half of the board at a minimum.
9. The cost of capital is the weighted-average of debt capital and equity capital. Therefore, we used interest expense as a proxy for debt capital and dividends as a proxy for equity capital.

10. Outside director participation ratio = (Number of outside directors attending the board meetings / Total number of board members) x (Number of board meetings attended by outside directors / Number of board meetings in a year)
11. The cost of capital includes not only interest expenses but also dividends. We note that the two components may have different implications as a proxy for firm performance. When we use the cost of capital as a proxy for firm performance, reduced cost of capital should be regarded as improvement. The interest expense, therefore, may have a negative relationship with corporate governance improvement. However, increased dividends can have a positive relationship with corporate governance improvement. When interest expense is used as a sole proxy for the cost of capital, the regression results show that the adoption of audit committee has a positive relationship with the interest expense, which is counter-intuitive at a glance. However, this abnormal relationship might have been caused by multicollinearity among leverage ratio, audit committee and the cost of capital. They are all positively related among themselves.

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