

DETERMINANTS OF THE CORPORATE GOVERNANCE OF KOREAN FIRMS

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Abstract

This paper investigates the determinants of the corporate governance of the firms listed on the Korea Stock Exchange. We find that ownerships by controlling shareholders tend to have negative effects on their corporate governance, and the negative effects are more significant on the board structure and the managerial transparency of the sample firms. On the other hand, foreign shareholders exercise positive effects while institutional investors are shown to be passive on the corporate governance issues. The empirical results suggest that investors' or regulator's effort to improve the corporate governance of Korean firms should be directed to the improvement of the board structure and managerial transparency.

Keywords: Corporate Governance, Board Structure, Managerial Transparency, Controlling Shareholders, Institutional investors, Foreign investors

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1. Introduction

In this paper, we investigate whether the block shareholders of Korean firms such as controlling shareholders or institutional investors exercise any influence on the corporate governance structure of those firms. We extend the existing research on the issue by analyzing the specific area of corporate governance mechanisms these block shareholders would exercise their influence on. We conjecture that major shareholders who maintain a certain level of ownership have economic incentives to affect the corporate governance of their firms, and would intervene in the decision on their corporate governance structure. Especially, we focus on the incentives of controlling shareholders, foreign investors and institutional investors as major shareholders.

For the analysis, we use the firms listed on the Korea Stock Exchange. Korean firms are the subject of interesting academic research since most of them have controlling shareholders, who actively participate in the management of their companies and as such are called 'owner-managers' (Jang, Kang and Park(2004)).

Korean firms also allow us to overcome the endogeneity problem in the analysis of the relationship between ownership and corporate governance as existing papers have shown (Lee, Park and Jang (2004)). While ownership structure generally affects governance structure, governance structure also affects ownership structure in a long run. For example, institutional investors would prefer to invest in companies with good corporate governance, which in

turn increases the ownership of outside investors. However, it has been less than a decade that corporate governance has attracted the attentions of policy makers and corporate managers in Korea, and the Korean data allows us to resort to one-direction empirical analysis.

For the convenience of analysis, we select several measures of corporate governance that can be easily identified and quantified. First one is the total corporate governance scores surveyed and prepared by the Korea Corporate Governance Service, a public entity under Korea Stock Exchange. We then divide the total scores into six categories such as shareholder rights, board structure, board operation, disclosure, audit system, and dividend policy. As conjectured, the empirical analyses show that insiders negatively affect the corporate governance of Korean firms and the negative effects are most significant in the area of shareholder rights and board structure.

After this introduction, Section 2 overviews existing literatures, Section 3 develops hypotheses for empirical tests, Section 4 describes the data and the empirical results, and Section 5 concludes with some policy implications.

2. Existing Literatures

Many papers have dealt with the determinants of corporate governance. Weisbach (1988) and Klein (2002) look into the incentives of insiders of US firms and show that there exists a negative correlation between the ownership of managers and the proportion

of outside directors on the boards of directors, or on audit committees. Shivdasani and Yermack (1999) claim that the CEOs of US firms exercise major influence on the selection of new directors when the ownership distribution of his firm is dispersed, while it is the controlling shareholder under concentrated ownership structures. Recently, Durnev and Kim (2003) show that firms with good investment opportunity, higher sales growth rates and higher dependency on external financing would maintain a better corporate governance not to lose those good investment opportunities.

For the papers that deal with Korean firms, Lee, Park and Jang (2004) analyze the role of controlling shareholder in his decision on board structure and the introduction of cumulative voting system in Korea companies. Lee, Park and Jang (2005) also analyze the incentive of controlling shareholders on the overall corporate governance of Korean firms. In both papers, they find that controlling shareholders have negative effect on the corporate governance of their firms.

In this paper, we analyze which part of the corporate governance the negative or positive effect of major shareholders are concentrated on. We use the corporate governance scores of the Korean companies listed on the Korea Stock Exchange during the period of 2001 through 2003. Compared with existing research on corporate governance of Korean firms, the data we use comprises more detailed information on the subcategories of corporate governance such as shareholder rights, board composition, managerial transparency, audit system, and cash payout policy of sample firms. Therefore, we can derive more specific policy implications on the role of insiders and outsiders in their decision on corporate governance.

As in Lee, Park and Jang (2004 and 2005), this paper tests two competing hypotheses regarding the relationship between ownership and corporate governance. First, it would be a natural choice for a firm to optimize on the use of governance mechanism since it is costly, and there would be a substitution effect between governance and the concentration of ownership. For example, institutional investors can be a good monitor on the management and as such they can substitute for other governance mechanism such as outside directors. Second, block shareholders who have major ownerships in their firms might prefer a stronger monitoring system to protect their stakes, in which case we would observe a positive correlation between block ownership and governance, which we term as a complement hypothesis. This paper tests whether specific types of investors tend to substitute for governance mechanisms or reinforce them.

The Korean economy is an interesting subject of analysis since it is dominated by chaebols and controlling families. The controlling shareholders of Korean chaebols maintain their control with the help of affiliated ownerships as well as their family ownerships, and no outsiders can possibly challenge their control, mainly due to the interlocking ownership

structures among affiliates, even though their capability and integrity as managers are in doubt.

3. Hypotheses and Variables

This section develops empirical hypotheses that relate corporate governance to firm characteristics based on existing theories and empirical results, and identifies variables that will be used to test the hypotheses.⁶

3.1. Ownership and Corporate Governance

Ownership structure is a part of corporate governance in its broad sense, and it also affects other elements of corporate governance. Controlling shareholders have a strong incentive to monitor the management of firms and can be the most important part of corporate governance. Existing theories and empirical studies that analyze ownership structure generally identify block shareholders such as corporate shareholders, institutional investors and financial institutions as monitors in addition to controlling shareholders.

In this paper, block shareholders are assumed to affect the corporate governance of a firm in two ways, which lead to two competing hypotheses. The first one, which we term the 'substitute hypothesis', assumes that higher ownerships of block shareholders would act as a substitute for other governance mechanisms as the latter incurred costs to companies. Firms thereby adjust the level of corporate governance given the monitoring role of block shareholders. This would be more the case if block shareholders actively monitored the management of their firm.

On the other hand, as Durnev and Kim (2003) have claimed, higher ownership may induce block shareholders to further improve the corporate governance of their firm as they will have a larger economic stake to protect. This is what we call the 'complement hypothesis'.

It is our conjecture that one of these hypotheses would more likely hold depending on who the block shareholders are. A controlling shareholder who usually participates in the management of his firm may not find it palatable to have a governance structure which monitors the management too tightly if he derives private benefit of control. This, however, would not be true for institutional investors who have no such control benefits and only seek higher firm value.

Therefore, we may observe a less strict monitoring mechanism with increasing ownership by controlling shareholders, which we may alternatively term the 'control hypothesis' to further differentiate it from the substitute hypothesis, as their purpose is not to save monitoring costs, but to secure more control. Of course, it is not easy to differentiate between these two

⁶ See Durnev and Kim (2003) and Lee, Park and Jang (2004) for more detailed derivation of empirical hypotheses and variables to be used in an empirical analysis of the determinants of corporate governance.

hypotheses empirically since we would observe the same direction of signs for the coefficients for the controlling ownership variable in both cases. We test diverse empirical models and use proxy variables to obtain a better understanding of the incentives of controlling shareholders.

We also analyze the role of ownership by affiliated companies, which provides interesting information about the incentives of controlling shareholders. As affiliated firms are under the control of controlling shareholders and usually do not intervene in the management of other affiliates, their existence would not substitute for the internal monitoring function. Therefore, if we observe a negative effect of affiliated ownership on the governance scheme, that is a strong indication that controlling shareholders exploit the affiliated ownership only to fortify their control by resisting outside monitoring.

La Porta, Lopez-de-Silanes, Shleifer and Vishny (1999) interpreted affiliated ownerships as representing the discrepancy between the cash rights and the control rights of controlling shareholders, which tends to lower firm value. We interpret the affiliated ownership as a device to resist the introduction of a new monitoring mechanism, thus eventually leading to lower firm value.

It would also make some difference if a block shareholder assumed a management position and so officially participated in the management of his firm. A dummy variable, which takes a value of 1 if the CEO has more than 5% ownership and 0 otherwise, would be used.⁷ We conjecture that its coefficient would be negative as the owner-manager would have a stronger incentive to resist outside monitoring since he is now more of a manager than a shareholder. On the other hand, controlling shareholders in Korean firms are supposed to have full control of the management even if they have no official positions. In this case, the CEO dummy may not have any effect on the governance of a firm.

One technical issue that needs to be resolved concerns the use of ownership variables in the empirical model. We have considered only the effect of ownership on corporate governance in the discussion. But, the truth is that governance can also affect ownership structure. A good example would be an investment strategy based on corporate governance, employed by some institutional investors in their portfolio management. In that case, firms with good corporate governance would have higher outside ownership and naturally lower inside ownership, and we would observe a positive correlation between institutional ownership and corporate governance, but a negative relationship between controlling ownership and corporate governance. This reversed causality would lead us to falsely accept the complementary

hypothesis for institutional investors and the control hypothesis for controlling shareholders.

Previous studies such as Mak and Li (2001) used simultaneous empirical models to tackle the endogeneity issue. One problem with using a simultaneous model is that we need an instrumental variable which is correlated with one dependent variable, but not with others. However, existing papers are not very thorough in this aspect mainly because identifying such a variable is not an easy task.

In this regard, our Korean samples offer a good solution to the endogeneity issue since the corporate governance mechanisms we are going to analyze were introduced mainly after the economic crisis, and so not much time has passed for them to affect the ownership structure of Korean firms. Even Mak and Li (2001) argued that it is ownership that affects corporate governance, but not the other way round. We also used lagged variables for ownership and other firm-specific variables to further minimize the endogeneity problem.

3.2. Business Structure and Corporate Governance

Another major factor that can affect the governance structure of a firm is business structure, and conglomerates have been a focus of interest since they offer a very comfortable environment for controlling shareholders to pursue their own benefits through transactions among affiliated firms. Tunnelling, as it is known in the literature, has been widely reported in European conglomerates by Johnson, La Porta, Lopez de Silanes and Shleifer (2002), and also in Korean conglomerates by Bae, Kang and Kim (2002). A conglomerate business structure also allows controlling shareholders to maintain their control through affiliated ownerships.

In this paper, we use a dummy variable which takes a value of 1 if a firm belongs to one of the 30 largest chaebols as defined by the Korea Fair Trade Commission for their regulatory purpose. We conjecture that those firms that belong to a chaebol suffer from the agency problem more than independent firms do, and therefore may have a more stringent monitoring mechanism as demanded by outsider investors. But, the dominance of controlling shareholders through affiliated ownership may also weaken it. This will be confirmed by empirical analysis.

3.3. Firm Size and Corporate Governance

Since governance mechanisms consume corporate resources, we expect that larger firms would have better corporate governance, and we include asset size as a control variable. Most of the monitoring system such as the board of directors, internal control system, and financial reporting and disclosure system incur financial costs, most of which are of a fixed component and can be borne more efficiently by larger firms. The more complicated business structure of

⁷ It would have been better if we had a dummy variable denoting whether the controlling shareholder has a position in his company or not.

large firms may also require better corporate governance.

We also use a dummy to accommodate the effect of regulatory requirements on corporate governance based on asset size.⁸ A dummy variable, which takes a value of 1 if the total asset size of a firm exceeds 2 trillion won, and 0 otherwise, is included.

3.4. Other Financial Characteristics and Corporate Governance

We also expect that some financial characteristics would affect the governance decision and need to be controlled. We include control variables that represent profitability, liquidity, financial structure and growth rates of firms. The effects of profitability on corporate governance may be two way. High profitability implies a good capability of management and so monitoring them may not be necessary. On the other hand, high profitability means the company can afford a better governance system. Outside investors may also demand better governance as they have a greater economic stake to lose.

Higher liquidity as measured by the amount of free cash flow would lead to a better governance mechanism since it can be appropriated by the management for their private benefit. It also allows firms to maintain a costly monitoring system. The growth potential would also be related to better governance since those firms with high growth rates have more to lose from a lack of investment capital, and would try to satisfy outside investors with better governance as Durnev and Kim (2003) have argued.

We also include the debt ratio and the bank loan ratio. A higher debt ratio implies a larger amount of interests and principals to be paid periodically, and the management would be under pressure to ensure enough cash flow to cover the debt payment, which can be done through more efficient management (Grossman and Hart (1982)). We expect the debt ratio to be negatively correlated with the corporate governance mechanism. Among the different types of debt, a bank loan is of particular interest since banks, as larger creditors with a long-term relationship with firms, are supposed have an incentive and capability to monitor their client firms.

4. Data and Empirical Models

4.1. Samples and Data

We analyze Korean firms listed on the Korea Stock Exchange (KSE) as of the end of 2001 through 2003. For the financial data, we use the data from the Korea Listed Company Association. Ownership data were

⁸ The Korean listing law requires one quarter of the boards of listed firms to be filled with outside directors with the minimum number being one. The minimum proportion is increased to one half for the firms with an asset size over 2 trillion won, with the minimum number being three.

collected using the Electronic Disclosure System of the KSE, and governance data were provided by the Korea Corporate Governance Service, which is an independent corporate governance scoring agency in Korea. We exclude financial companies from our samples, leaving 438 manufacturing companies listed on the KSE. <Table 1> shows the summary statistics of the major variables. The average corporate governance score during the analysis period is 42.79 points out of the total of 100 points, and the score on shareholder rights shows the highest level of 49.04 points while the composition of the board of directors shows the lowest level of 28.69 point. The average inside ownership, which is the sum of family ownership and affiliated ownership is 32.9%. Foreign ownership is 9.8% and institutional ownership is 8.28%.

[<Table 1> here]

<Table 2> shows the correlation coefficients of the variables. Controlling ownership is negatively correlated with the corporate governance score, and also with other subcategories of corporate governance scores while institutional and foreign ownerships are positively correlated with them, as expected.

[<Table 2> here]

4.2. Empirical Models

In this section, we set up empirical models and test our hypotheses. The dependent variable is the corporate governance scores of sample firms. Cross-sectional regressions are employed to test the hypotheses reviewed in the previous section.

4.2.1. Ownership and Corporate Governance Scores

A stylized fact in the corporate governance area is that there exists a positive correlation between corporate governance and firm value. As LLSV (1999), Mitton (2002), Durnev and Kim (2003) and Black, Jang and Kim (2003) have confirmed, corporate governance matters and affects firm value.

But if this is so, then why do firms not improve their corporate governance so that their shareholder value is further increased? One possible answer is that the current state of corporate governance is already optimal. That is, it is too costly for a firm to improve its corporate governance. However, Park and Lee (2004), who test the relationship between corporate governance score and the value of Korean firms, show that the difference in the average Tobin's Qs of those firms in the highest quartile of corporate governance scores and those in the lowest quartile is about 0.39. Considering that the average market value of those Korean firms is US\$0.8 billion, a potential increase in shareholder value due to improved corporate

governance would amount to US\$0.32 billion on average, which would well exceed any costs related to upgrading the corporate governance of those firms. Park and Lee (2004) even show that individual governance mechanism such as board composition or disclosure policy, which can be rather easily upgraded, also has a positive effect on firm value.

Below, we conjecture again that the private interests of controlling shareholders would deter firms from attaining optimal corporate governance. For the empirical analysis, we use the governance scores of Korean firms collected from 2001 through 2003.⁹ The annual surveys contain over 100 questions on the corporate governance of Korean firms, and evaluate, among other factors, shareholder rights, structure and operation of the boards; disclosure and managerial transparency, and the internal control system. According to the surveys, corporate governance in Korea differs widely between firms. The advantage of using the scores instead of the individual governance mechanism is that the governance scores are more comprehensive in evaluating the overall corporate governance of a firm than a specific governance mechanism, and also that it allows us to use a larger number of samples to increase the power of the models. <Table 3> and <Table 4> show the results of panel data analyses that cover 3 years of corporate governance scoring. In regression (1) of <Table 3>, the coefficients of family ownership and affiliated ownership are both negative and significant at the 1% level, confirming our conjecture that controlling shareholders do not like good corporate governance. The significance is maintained even if we add control variables in regression (2). Other financial variables also show expected signs and significance. Sales growth and Asset sizes are both positively related with corporate governance as expected.¹⁰

Regressions (3), (4), (5) and (6) confirm the negative influence of inside ownerships on the subcategory of shareholder rights or on the subcategory of board structure. On the other hand, their negative effects on the operation of the boards or on audit system are not statistically significant when we included the control variables in regression (8) or regression (12). Regressions (9) and (10) show the negative influence of inside family ownership on the managerial transparency of the sample firms. Dividend is not significantly correlated with the inside ownerships as shown in regressions (13) and (14). These results suggest that inside ownerships can have differential effects on the subcategories of corporate governance, and outside investors or regulatory agencies who want to improve the corporate

governance of Korean firms need to focus their effort on specific areas of corporate governance.

<Table 4> on the other hand show the influence of outside investors on the corporate governance of Korean firms. Regressions show again that the effects of outside ownership can be differential depending on the categories of corporate governance. Among outside investors, foreign investors are shown to be more influential than institutional investors in their influence on the corporate governance of Korean firms. In regressions (3), (4), (5) and (6), foreign ownership is positively and significantly correlated with shareholder rights or board structures, while institutional ownership show no significant relationship.

The interaction variables between foreign ownership and chaebol dummies show positive coefficients in most of the regression models, suggesting the monitoring effect of foreign ownership is more significant when the sample firms belong to one of the 30 largest chaebol groups. However, their significance is not maintained once we add other control variables. Unexpectedly, the interaction variable between institutional ownership and chaebol dummy shows negative significance in regression (3) and (4), suggesting that institutional investors in Korean economy is less concerned about the shareholder rights of those companies that belong to chaebol groups.

5. Conclusion

This paper analyzes the determinants of the corporate governance of Korean firms, focusing on inside and outside ownerships and their effects on the special area of corporate governance. Using the data on corporate governance scores of Korean firms over the period of 2001 through 2003, the paper shows that controlling shareholders of Korean firms tend to have negative effect on corporate governance of Korean firms. We ascribe the result to the fact that the controlling shareholders of Korean firms assume a managerial role, and naturally, they try to maximize their private benefit of control by lowering the level of monitoring by outside investors.

This paper contributes to the existing literature on corporate governance by showing the special areas of corporate governance mechanisms the negative or positive effects of major shareholders are more significant. It shows that controlling shareholders tend to intervene in the decision on the board structure or the managerial transparency of their firms, while foreign investors have positive effects on the shareholder rights and the board structures of Korean firms. On the other hand, institutional investors are shown to be very passive on the issue of corporate governance of Korean firms. From a policy point of view, the paper shows that investors or regulators need to pay more attention to improving the board structures or managerial transparency, and need to seek for methods to require institutional investors to be more

⁹ The KSE initially, and then the Korea Corporate Governance Service (KCGS), a subsidiary of the KSE, has been in charge of evaluating the corporate governance of listed companies in Korea.

¹⁰ We did not use the asset size dummy in the model since the evaluation process already reflects the size factor in the scoring.

active in protecting the shareholder rights of their customers.

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Appendices

Table 1. Summary Statistics

The table shows the average values of firm specific variables for the sample firms that include 217 non-financial firms listed on the Korea Stock Exchange between 2001 and 2003. Governance variables are measured as of the end of each year, while the ownership and financial variables are measured as of the end of previous years.

	Average	Minimum	Maximum
Family ownership	0.2159	0	0.6991
Affiliated ownership	0.1148	0	0.7596
Foreign ownership	0.0980	0	0.8583
Institutional ownership	0.0828	0	0.8456
corporate governance score	42.79	20.42	82.70
Shareholder Rights	49.04	25.32	80.95
Board of Directors	37.44	7.00	88.00
Composition of the Board of Directors	28.69	0.00	92.50
Operation of the Board of Directors	43.06	9.68	91.94
Disclosures	43.87	19.35	83.87
Audit Systems	36.49	0.00	100.00
Dividend	32.06	0.00	100.00
Chaebol dummy	0.2523	0	1
Cash flow from operation	0.0734	-0.3118	0.3467
Sales growth rates	0.0732	-0.5389	1.9807
Asset size (billion won)	1,464	15	56,469
Debt to asset	0.4653	0.0621	1.1851
EBIT to asset	0.0605	-0.3811	0.3702
Operation risk	0.0280	0.0011	0.2944

Table 2. Correlation Coefficients

The sample includes 217 non-financial firms listed on the Korea Stock Exchange between 2001 and 2003. The governance-related statistics are as of the end of year, while the financial statistics are as of the end of previous year. The numbers in parentheses are p-values, and ***, ** and * denote significance at the 1%, 5% and 10% levels respectively.

	Family ownership	Affiliated ownership	Foreign ownership	Institutional ownership	Chaebol dummy	Cash flow	Sales growth rates	Asset size	Debt to asset	EBIT to asset	Operation risk
Affiliated ownership	-0.4052*** (0.0001)										
Foreign ownership	-0.3194*** (0.0001)	-0.0481 (0.2236)									
Institutional ownership	-0.2740*** (0.0001)	0.0519 (0.1893)	0.0933** (0.0181)								
Chaebol dummy	-0.3899*** (0.0001)	0.2403*** (0.0001)	0.1753*** (0.0001)	0.2665*** (0.0001)							
Cash flow	-0.0514 (0.1933)	0.0504 (0.2026)	0.2754*** (0.0001)	0.1081*** (0.0061)	0.0984** (0.0126)						
Sales growth rates	0.0569 (0.1492)	-0.0789** (0.0455)	0.1444*** (0.0002)	-0.0973** (0.0147)	-0.0675* (0.0872)	0.1350*** (0.0006)					
Asset size	-0.4088*** (0.0001)	0.1635*** (0.0001)	0.5053*** (0.0001)	0.3190*** (0.0001)	0.5032*** (0.0001)	0.2209*** (0.0001)	0.0461 (0.2439)				
Debt to asset	-0.3016*** (0.0001)	0.0569 (0.1493)	-0.0761* (0.0539)	0.0997** (0.0115)	0.2894*** (0.0001)	-0.0187 (0.6364)	0.0086 (0.8270)	0.2428*** (0.0001)			
EBIT to asset	0.0063 (0.8743)	-0.0163 (0.6799)	0.2950*** (0.0001)	0.1115*** (0.0047)	0.0554 (0.1608)	0.5368*** (0.0001)	0.2616*** (0.0001)	0.0772* (0.0507)	-0.0942** (0.0169)		
Operation risk	-0.0397 (0.3152)	-0.0605 (0.1258)	-0.0327 (0.4082)	0.0377 (0.3403)	0.0192 (0.6272)	-0.0973** (0.0137)	-0.1227*** (0.0018)	-0.0074 (0.8517)	0.0416 (0.2925)	-0.1662*** (0.0001)	
corporate governance score	-0.2790*** (0.0001)	0.0297 (0.4531)	0.3299*** (0.0001)	0.0692* (0.0797)	0.2572*** (0.0001)	0.2101*** (0.0001)	0.1477*** (0.0002)	0.5246*** (0.0001)	0.1089*** (0.0057)	0.1999 (0.0001)	-0.0182 (0.6461)

Table 3. Inside Ownership and Corporate Governance Scores (3-year panel data analysis)

The sample includes 217 non-financial firms listed on the Korea Stock Exchange during the period. The dependent variable is the categorized corporate governance scores of Korean firms over the 3-year period between 2001 and 2003, and we use the random effect model for the control of firm-specific effects. The numbers in parentheses are t-values, and ***, ** and * denote significance at the 1%, 5% and 10% levels respectively.

Specifications	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable	CGS	CGS	Shareholder Rights	Shareholder Rights	Composition of BOD	Composition of BOD	Operation of BOD	Operation of BOD
Constants	4.7816*** (45.87)	-2.2567*** (-3.59)	5.3921*** (65.62)	5.6855*** (8.79)	3.8061*** (21.07)	-7.3968*** (-5.74)	4.7001*** (28.49)	-4.6144*** (-4.16)
Family ownership	-1.9733*** (-6.20)	-0.8476*** (-3.01)	-1.2743*** (-5.06)	-1.4589*** (-5.05)	-3.5959*** (-6.52)	-1.5178*** (-2.62)	-2.1833*** (-4.32)	-0.3065 (-0.62)
Affiliated ownership	-0.6645** (-1.97)	-0.5793** (-2.13)	-1.8604*** (-6.90)	-1.8826*** (-6.74)	-1.3999** (-2.36)	-1.1329** (-2.02)	0.6694 (1.24)	0.7708 (1.61)
Chaebol dummy		-0.0208 (-0.19)		-0.0392 (-0.35)		-0.0892 (-0.41)		0.2229 (1.18)
Cash flow		0.5219 (0.96)		0.0124 (0.02)		1.6514 (1.38)		0.0465 (0.05)
Sales growth rate		0.7929*** (3.24)		-0.0253 (-0.10)		1.9822*** (3.80)		0.7799* (1.78)
Asset size		0.3382*** (10.77)		-0.0067 (-0.21)		0.5264*** (8.19)		0.4367*** (7.90)
Debt ratio		-0.1208 (-0.59)		-0.2914 (-1.39)		0.3629 (0.87)		0.1932 (0.54)
EBIT		1.4167** (2.05)		0.8594 (1.21)		-2.0289 (-1.38)		1.1561 (0.94)
Risk		2.3258* (1.82)		-0.9148 (-0.70)		5.8069** (2.14)		3.5388 (1.55)
R-Square	0.0573	0.2879	0.0776	0.0832	0.0626	0.2001	0.0441	0.1845

Specifications	(9)	(10)	(11)	(12)	(13)	(14)
Dependent Variable	Disclosures	Disclosures	Audit Systems	Audit Systems	Dividend	Dividend
Constants	4.7637*** (42.75)	-2.6667*** (-3.84)	4.2642*** (17.97)	-12.871*** (-9.07)	2.9926*** (13.75)	0.8951 (0.56)
Family ownership	-1.5871*** (-4.69)	-0.6396** (-2.10)	-3.1558*** (-4.38)	-0.4975 (-0.80)	0.9055 (1.38)	0.3849 (0.57)
Affiliated ownership	-0.2994 (-0.85)	-0.2046 (-0.70)	0.5822 (0.77)	0.5733 (0.95)	0.1589 (0.23)	-0.1933 (-0.30)
Chaebol dummy		-0.1690 (-1.41)		-0.0536 (-0.22)		-0.1873 (-0.67)
Cash flow		-0.2223 (-0.44)		0.6669 (0.63)		0.0786 (0.08)
Sales growth rate		0.2085 (0.86)		-0.6552 (-1.30)		0.2383 (0.49)
Asset size		0.3686 (10.60)		0.8428*** (11.87)		0.1676** (2.09)
Debt ratio		-0.3993* (-1.81)		0.1024 (0.23)		-2.0275*** (-4.15)
EBIT		2.4016*** (3.49)		-0.1997 (-0.14)		1.9009 (1.36)
Risk		3.7861*** (2.98)		3.3922 (1.29)		-6.9121** (-2.35)
R-Square	0.0354	0.2354	0.0408	0.2690	0.0032	0.0583

Table 4. Outside Ownership and Corporate Governance Scores (3-year panel data analysis)

The sample includes 217 non-financial firms listed on the Korea Stock Exchange during the period. The dependent variable is the categorized corporate governance scores of Korean firms over the 3-year period between 2001 and 2003, and we use the random effect model for the control of firm-specific effects. The numbers in parentheses are t-values, and ***, ** and * denote significance at the 1%, 5% and 10% levels respectively.

Specifications	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable	CGS	CGS	Shareholder Rights	Shareholder Rights	Composition of BOD	Composition of BOD	Operation of BOD	Operation of BOD
Constants	4.0818*** (9.56)	-2.767*** (-3.88)	4.7377*** (28.22)	5.3556*** (7.24)	2.4824*** (2.24)	-7.193*** (-4.95)	4.9271*** (6.51)	-5.1466*** (-4.17)
Foreign ownership	1.2086*** (4.07)	0.3651 (1.34)	0.9193*** (2.81)	0.9769*** (2.71)	2.3107*** (4.53)	1.1817** (2.46)	1.1589** (2.13)	-0.1204 (-0.23)
Institutional ownership	0.3252 (0.86)	-0.0788 (-0.23)	1.7279*** (3.62)	1.7929*** (3.65)	0.2709 (0.39)	-0.3736 (-0.58)	0.0548 (0.07)	-0.8129 (-1.13)
Foreign ownership*Chaebol dummy	1.7115*** (3.64)	0.1824 (0.43)	-0.3146 (-0.62)	-0.1456 (-0.27)	2.8716*** (3.59)	0.4458 (0.60)	2.9152*** (3.43)	0.6023 (0.74)
Institutional ownership*Chaebol dummy	-0.2922 (-0.60)	-0.4356 (-0.99)	-1.6418*** (-2.70)	-1.6135*** (-2.59)	0.9864 (1.12)	0.4032 (0.50)	1.6024* (1.65)	1.2468 (1.37)
Cash flow		0.1599 (0.47)		-0.2306 (-0.43)		0.8923 (1.32)		-0.1276 (-0.16)
Sales growth rate		0.0125 (0.07)		0.2830 (1.09)		0.2319 (0.69)		-0.4046 (-1.07)
Asset size		0.3597*** (11.50)		-0.0397 (-1.02)		0.5070*** (9.60)		0.4858*** (8.40)
Debt ratio		-0.3016* (-1.71)		0.2353 (1.06)		-0.0577 (-0.19)		-0.2414 (-0.73)
EBIT		1.5907*** (3.14)		0.5314 (0.73)		-1.2225 (-1.29)		1.4882 (1.39)
Risk		1.3566 (1.49)		-0.2593 (-0.19)		2.5685 (1.49)		1.8149 (0.88)
R-Square	0.0934	0.2992	0.0354	0.0412	0.1194	0.2718	0.0749	0.1921

Specifications	(9)	(10)	(11)	(12)	(13)	(14)
Dependent Variable	Disclosures	Disclosures	Audit Systems	Audit Systems	Dividend	Dividend
Constants	4.1248*** (26.09)	-2.6230*** (-3.57)	3.3285*** (22.41)	-13.8221*** (-9.37)	3.0625*** (9.03)	1.8991 (1.18)
Foreign ownership	1.4726*** (4.08)	0.4573 (1.31)	1.5673** (1.96)	-0.2657 (-0.37)	0.9192 (1.28)	0.0986 (0.14)
Institutional ownership	0.7015 (1.42)	0.0075 (0.02)	-0.0590 (-0.05)	-0.8943 (-0.93)	1.3116 (1.41)	1.0089 (1.10)
Foreign ownership*Chaebol dummy	1.7113*** (3.03)	0.0449 (0.08)	5.2553*** (4.15)	1.1665 (1.04)	0.5019 (0.44)	0.1596 (0.14)
Institutional ownership*Chaebol dummy	-0.0765 (-0.12)	-0.2299 (-0.39)	-0.5310 (-0.38)	-1.6784 (-1.35)	-2.1457* (-1.79)	-1.5252 (-1.31)
Cash flow		-0.5103 (-1.05)		0.6708 (0.64)		0.5824 (0.65)
Sales growth rate		0.0478 (0.20)		-0.9018* (-1.78)		0.2024 (0.43)
Asset size		0.3563*** (9.24)		0.8909*** (11.22)		0.1129 (1.34)
Debt ratio		-0.3649* (-1.66)		0.2432 (0.54)		-2.1226*** (-4.48)
EBIT		1.9373*** (2.82)		-0.0355 (-0.02)		2.5811* (1.92)
Risk		3.7205*** (2.98)		3.8889 (1.47)		-6.0626** (-2.50)
R-Square	0.0918	0.2255	0.0654	0.2663	0.0097	0.0721