

The Relationship between Corporate Governance and Firm Value -A Comparative Study-

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Abstract

This paper mainly discuss about that explain if there exists any relationship between corporate governance and firm value. Based on the prior research that corporate governance would play a role reducing the agency cost producing by the separation of ownership, this study to verify that corporate governance would reduce the firms' financing cost. Specifically, the firms with high corporate governance are predicted to have higher profitability and firm value measured by Tobin's Q. This study examined theses hypotheses, using a sample of 5,785 on Korean firms over ten-year period (2004-2013) and a number of 7,777 for the Chinese sample data over. An index published by Korean Corporate Governance Service (KCGS) and a RKS of China were used as the measure of corporate governance. The results of this paper find that the good corporate governance enhance the firm value measured by Tobin's Q.

Keyword : Corporate Governance, Firm Value, Tobin's Q

1. Introduction

Recent study corporate collapses in the world have concerned with questions about the roll of corporate governance. It is argued that firms should pay attention to their governance and it may enhance their firm value. Corporate governance can be defined as "a mechanism of rules monitoring a business of corporate". The importance of corporate governance is expected to reduce the agency cost produced by the separation of ownership. Organization for Economic Cooperation and Development(OECD) has revealed the standard rules of corporate governance in 2004. Regulators worldwide have responded with requirements for corporations to adopt improved corporate governance practices [1]. Corporate governance improves management oversight and increases disclosure and quality of reported financial information and reduces the information asymmetry between managers and capital providers [2]. More specifically in the debt contracting context, increased corporate governance via the information effects reduces the cost of debt for companies [3]. Prior research find that firm value is

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positively associated with the rights of minority shareholders [4]. Other research found that S&P 500 inclusion has a positive impact on Tobin's Q and this impact increased during the 1990s [5].

This global trend toward emphasizing on corporate governance has also affected the business environment for the firms in Korea. Since 2004, Korean corporate governance service (KCGS) has been publishing the corporate governance index. The purpose of this study is to test whether the firms with higher corporate governance would be higher financial performance for Korean firms and Chinese Firms. Our study is different from previous research in the following ways. First, we used a CGI variable as a proxy of corporate governance performance, while previous studies used managers, foreign and great owner's stocks ratios. Second, there are a sample of firms on recent period. We have found that corporate governance is positively related to financial performance as measured by accounting profitability (return on assets: ROA) and firm value (Tobin's Q).

This study has contributed in the following respects: As China's industrial structure is changing innovatively due to the development of IT technology, research on social responsibility activities is needed. In addition, regression analysis is adopted as an analysis method, which uses both spss and stata, the statistical package, to enhance robustness.

The remainder of this paper is organized as follows. In the next section, the study reviews prior research, describe the theoretical relation between corporate governance and financial performance, and develop research hypotheses. Section three contains research design including sample selection, measurements of variables and methodology. The empirical results are presented in section four. A summary of the results and some suggestions for future research appear in the last section.

2. Theoretical Framework and Hypotheses

2.1 Literature Review

These days, firms operate in an environment surrounded by many interest groups such as employees, customers, suppliers, and local communities. Therefore, it is argued that firms should reduce the agency cost produced by the separation of ownership of corporate governance. Prior research show that the relationship between CEO share ownership and Tobin's Q is positive between 0 and 1 percent, negative between 1 and 5 percent, positive between 5 and 20 percent, and negative beyond and confirmed that Tobin's Q was a function of managerial ownership [6]. Specifically, Q rises when managerial ownership is between 0 and 5 percent; it falls as the ownership increases to 12 percent.

However, prior research conducted a meta-analysis of the relationship between executive ownership and

firm performance [7]. They identified 43 studies containing 97 useable samples. It is not necessary that the relationship be the focus of an article to be included for the analysis; it is only necessary that a Pearson correlation between these variable in the paper, or derivable from it. The analysis suggests that managerial shareholdings have no effect on accounting and market performance indicators. Other research examined the relation between ownership structure and Tobin's Q [8]. They find that a curvilinear relationship only for a sub-sample of larger firms with a turning point of around managerial shareholdings of 50 percent. Another research using a small sample of 50 Australian listed companies for the years 2002-2003, identified a negative relationship between managerial ownership and Tobin's Q, when they treated leverage as an endogenous variable. They found a negative impact of managerial shareholdings on Tobin's Q using simple linear regression model [9].

The other perspective is based on the premise that firms should make efforts to satisfy their stakeholders (e.g., employees, customers, suppliers and local communities) so much as to maximize stockholders' wealth because firms facing conflicts with stakeholders would suffer from additional expenses and increased risks (stakeholder theory perspective). Therefore, it is argued that corporate governance will eventually have positive effects on the firm values by mitigating the conflicts between the firms and their stakeholders [10].

Thus, the relation between the proportion of outside directors, a proxy for board independence, and firm performance is mixed. The purpose of this study examines whether there is the useful of Korean firms' corporate governance on the financial performance.

2.2 Hypotheses

As suggested by previous section, corporate governance systems make contributions to preventing the crisis of fraud accounting by monitoring the firm's stakeholders. Through the improvement of corporate governance system, corporate governance can affect the firms' financial performance enhanced profitability and firm value. These impacts of corporate governance system on financial performance are elaborated below and corporate governance can affect the firms' profitability in the following ways.

Hypothesis 1: Accounting profitability (ROA) is higher for the firms with high corporate governance performance than for those with low corporate governance performance.

Hypothesis 2: Tobin's Q is higher for the firms with high corporate governance performance than for those with low corporate governance performance.

3. Research Design

3.1 Sample Selection

[Table 1] presents a number of sample firms tested this study. It is consisted of a sample of 5,343 on Korean firms for which Korean Corporate Governance Service(KCGS) published indices that measure the performance of their governance system(KCGS index). To be included in the sample, the firm must satisfy the following criteria: (1) each firm had to be ranked in KCGS index over 9-year period (2004-2012); (2) sufficient financial data was available in KIS-VALUE database to calculate financial performances and other variables.

[Table 1] a number of sample firms

	Item	Number of sample
Korea	a number of listed company in 2003-2012year	16,230
	unsufficient CGI & financial data	(10,887)
	Total	5,343
China	a number of listed company in 2011-2013year	1,651
	unsufficient RKS & financial data	(164)
	Total	1,487

3.2 Measurement of Variables

3.2.1 Corporate Governance Index (CGI) and RKS

CGI was measured by KCGS index. KCGS has published the index for the firms listed in the Korean Stock Exchange since 2004. CGI is a score based on the evaluation of a firm's governance system using five components- the right protection of stockholder, board directors, disclosure, auditing system, management performance- with different weights.

The CSR evaluation scores in China used the evaluation scores provided by RKS. RKS was established in 2007 as an organization that evaluates corporate social responsibility activities objectively and professionally in China and has reported evaluation scores since 2008 on its website (<http://www.rksratings.com>).

3.2.2 Firm Value (Tobin's Q)

Our valuation measure is Tobin's Q, which is able to create positive net present value projects. These are projects whose value, as reflected in the market price of the company's securities, exceeds the cost of the assets needed to undertake them. The market-to-book ratio tries to measure this price/cost relationship, but it does so imperfectly. There were the problems in measuring book value per share when inflation and other price changes combine to change the market value of the firm's debts. Tobin's Q deals with the problem of inflation by using the market value of debts when measuring the value created by the firm. Tobin Q measures the total value and total liabilities of common and preferred stocks by dividing them by their total assets.

3.2.3 Control Variables

In an attempt to investigate this “correlated omitted variables” problem, we repeat the analysis with the inclusion of firm size (SIZE) and financial leverage(LEV). The variables, SIZE and LEV, have been shown to affect financial performance[11]. The Wilcoxon tests reported in previous section indicate that there are significant differences in these variables between pre-change and post-change period, with an exception of BETA. Hence, the results expect that controlling for these variables will not alter significantly earlier findings.

4. Empirical Results

4.1 Descriptive Statistics

Descriptive statistics for financial performance, CGI and control variables are reported in [Table 2]. The mean and median of the corporate goverance variable, CGI, is 0.3728 and 0.3600, respectively. Tobin's Q, TQ, ranges from 0.1883 to 2.6278, with mean (median) value of 0.9458(0.8722). Furthermore, minimum and maximum financial performance as measured by return on assets (ROA) is -3.4778 and 3.3636, respectively.

As reported in [Table 2], the control variables used in this study are financial leverage(LEV), SIZE, GROWTH, BETA, Foreign Ownership(FORE), BETA and Unqualified Opinion(OPI).

[Table 2] Descriptive Statistics of Variables

		Mean	Median	Std Dev	Min	Max
Korea	TQ	0.9458	0.8722	0.3510	0.1883	2.6278
	ROA	0.0241	0.0345	0.1299	-3.4778	3.3636

	CGI	0.3728	0.3600	0.0841	0.0000	0.8667
	SIZE	11.5227	11.3943	0.6622	9.8652	14.1247
	LEV	0.4453	0.4516	0.1985	0.0005	2.0337
	GROWTH	-0.0004	0.0005	0.1451	-4.3263	3.0893
	FORE	0.0993	0.0317	0.1469	0.0000	0.9297
	BETA	0.7308	0.6995	0.3690	0.0023	3.0974
	OPI	1	1	0.0335	0	1
China	TQ	1.5697	0.7174	1.1120	1.7921	1.5610
	RKS	0.2066	0.1800	0.1921	0.2640	0.1287
	SIZE	11.5849	11.1866	11.4811	11.8588	0.6158
	LEV	0.4530	0.2633	0.4455	0.6148	0.2387
	CFO	0.0530	0.0321	0.0691	0.0981	0.076
	GROWTH	0.1971	0.1462	0.1758	0.2003	0.4510
	ROA	0.0522	0.3252	0.0453	0.0712	0.0520
	BETA	0.7165	0.4341	0.6854	0.9404	0.3861

TQ(Tobin-Q) : (Equity price) + Total Debts / Total Assets

ROA(Return on Assets) : Operating Income/Total Assets

CGI(China-RKS) : Corporate Governance Index

SIZE : Natural Log of Total Book Value Assets

LEV : Book Value of Debt/Book Value of Equity

GROWTH : (NIt - NIt-1)/Total Assets

FORE : Foreign Ownership/Total Ownership

BETA : Systematic Risk

OPI : Unqualified Opinion = 1, or 0

ΣID : Industry Dummy

ΣYD : Year Dummy

4.2 Regression Analysis

[Table 3] presents the sample mean of selected variables of interest: financial leverage (LEV), firm size (SIZE), Corporate Governance Index(CGI). The mean and st.dev of these variables are reported on classification in high and low group during the 2004-2012 year in which financial performance occurred. Also reported are Wilcoxon Z-statistics which test differences in these variables between high-mean and low-mean.

[Table 3] Sample Mean of Selected Variables

		Mean(Std Dev)	t	Wilcoxon Z-value
SIZE	High	11.6422(0.7654)	13.753***	-11.702***
	Low	11.4031(0.5125)		
LEV	High	0.4953(0.2044)	19.079***	-17.824***
	Low	0.3952(0.1790)		
CGI	High	0.3863(0.0994)	12.191***	-9.970***
	Low	0.3594(0.0626)		

The rationale for selecting and comparing these particular variables is their association with financial performance. Previous research provide empirical evidence indicating that SIZE and LEV are important determinants of the variation in financial performance. The Wilcoxon signed-ranks tests of LEV, SIZE and CGI between high-mean and low-mean are significant at less than 0.01 level.

[Table 4] Correlations

		ROA	CGI	SIZE	LEV	GROWTH	FORE	BETA	OPI
Korea	TQ	0.014 (0.302)	0.206 (0.000)	0.207 (0.000)	0.219 (0.000)	0.044 (0.001)	0.304 (0.000)	0.262 (0.000)	-0.014 (0.291)
	ROA		0.163 (0.000)	0.158 (0.000)	-0.259 (0.000)	0.580 (0.000)	0.172 (0.000)	-0.023 (0.100)	0.086 (0.000)
	CGI			0.595 (0.000)	-0.102 (0.983)	0.005 (0.693)	0.424 (0.000)	0.168 (0.000)	0.021 (0.131)
	SIZE				0.166 (0.000)	0.009 (0.527)	0.477 (0.000)	0.335 (0.000)	0.028 (0.039)
	LEV					-0.025 (0.063)	-0.124 (0.000)	0.225 (0.000)	-0.030 (0.030)
	GROWTH						0.018 (0.178)	-0.026 (0.056)	0.064 (0.000)
	FORE							0.092 (0.000)	0.012 (0.399)
	BETA								0.004 (0.761)

		CSR	SIZE	LEV	CFO	GROWTH	ROA	BETA
China	TQ	0.202 **	0.534 **	0.411 **	0.246 *	0.347 **	0.119 *	-0.198 **
	CSR	1	0.451 **	-0.245 *	0.401 **	0.304 *	0.173 **	-0.227 *
	SIZE		1	0.411 **	-0.178 *	0.087 *	0.217 *	-0.032 *
	LEV			1	0.119 **	0.301 *	-0.109 *	0.168 **
	CFO				1	0.147 **	-0.226 *	-0.139 *
	GROWTH					1	0.311 *	-0.297 *
	ROA						1	-0.125 *
	BETA							1

() = p-value

Pearson correlation coefficients between variables to be used in the regression analysis are displayed in [Table 4]. Tobin's Q is positively correlated with corporate governance ($\rho=0.206$), while ROA is

negatively correlated with financial leverage(LEV)($\rho=-0.259$). As shown in [Table 4], there is not a significant correlation between TQ and ROA or OPI, but ROA is positively related to CGI and FORE.

The purpose of this paper is to examine whether there is any significant shift in corporate governance on the financial performance. Two hypotheses posit that corporate governance is positively related to ROA and Tobin's Q. Two regression models are estimated to test the relationships between corporate governance and the two financial performances as presented in [Table 5]. The first model relates Tobin's Q to corporate governance and it shows that corporate governance is positively related to Tobin's Q at the 1% significance level. This implies that an increase in corporate governance results in a increase in Tobin's Q. Additionally, Tobin's Q is positively related to FORE at the 1% significance level which indicates that corporate governance is also decreased when ROA is reduced.

[Table 5] Effect of CG on the Financial Performance(Tobin-Q, ROA)

[Korea]

Variables	Financial Performance					
	Tobin-Q			ROA		
	β	t	VIF	β	t	VIF
CGI	0.173	10.487***	1.868	0.035	2.511**	1.868
SIZE	0.188	10.433***	2.239	0.173	11.283***	2.239
LEV	0.252	19.487***	1.145	-0.268	-24.456***	1.145
GROWTH	0.051	4.183***	1.006	0.568	55.403***	1.006
FORE	0.340	23.552***	1.427	0.029	2.387**	1.427
BETA	0.201	15.419***	1.168	-0.011	-1.015	1.168
OPI	-0.017	-1.376	1.006	0.037	3.594***	1.006
Σ ID	Included			Included		
Σ YD	Included			Included		
adj R2	0.22			0.44		
Durbin-Watson	1.808			1.938		
N	5,343			5,343		

[China]

Variables	Financial Performance			
	Tobin-Q		ROA	
	β	t	β	t
RKS	0.268	2.316**	0.290	2.334**
SIZE	0.114	2.465*	0.143	3.472*
LEV	-0.157	-6.212***	-0.163	-7.312***
CFO	0.048	2.834*	0.062	2.941*
GROWTH	0.001	1.221	0.002	1.331
BETA	-0.022	-2.561	-0.019	-2.611
Σ ID	Included		Included	
Σ YD	Included		Included	
adj R2	0.136		0.129	
Durbin-Watson	1.987		1.884	
N	1,487		1,487	

The second model tests the relation between ROA and corporate governance. The results show that ROA is positively related to corporate governance at 5% significance level which indicates that an increase in corporate governance results in a increase in ROA. Furthermore, ROA is positively related to OPI at the 1% significance level which suggests that OPI is also decreased when ROA is reduced.

This study supports two hypothesis which state that corporate governance is positively related to Tobin's Q and ROA. Corporate governance mitigates the agency conflict between managers and other stakeholder, and it also increase financial transparency and disclosure, thereby highering Tobin's Q and ROA. This is consistent with prior US research that finds corporate governance increase Tobin's Q (Morck and Yang(2001). This is also consistent with the findings of (Devinny et al. 2005) which state that increased corporate governance practices increase ROA as measured by financial performance.

The residuals of the diagnostic tests appear to be approximately normally distributed and the Durbin-Watson statistic (dw) was close to 2. Outliers were examined by eliminating observations containing value of GROWTH and LEV greater in absolute value of the 10 percent. The results were not significantly different from those reported. The Hausman and RESET tests for general mis-specification seemed again to indicate the existence of possible underlying weaknesses in the model. The RESET test produced a coefficient on the proxy variable that was significantly different from zero at the one significance level. In the Hausman test, the relevant F-value of 6.235 on the unrestricted equation exceeded the critical F-value (2.561).

Overall, these results provide a direct support to two hypotheses, even after controlling for other factors.

5. Conclusion

The purpose of this study is to test whether there is any systematic relation between corporate governance and financial performance. Prior research provide that corporate governance can reducing the agency cost because producing the separation of ownership, we first develop a theoretical framework for the CGI-firm value relation. Using this framework, we then derive the hypotheses that firms with higher CGI would have higher profitability and higher firm values than those with lower CGI. These hypotheses were examined using a sample of 5,758 over ten-year period (2004-2013) on Korean firms. An index published by Korean Corporate Governance Service (KCGS) was used as the measure of CGI.

We have found that corporate governance is positively related to financial performance as measured by accounting profitability (return on assets: ROA) and firm value (Tobin's Q). Our findings have some

implications for business practices. First of all, the positive relation between corporate governance and ROA/Tobin's Q suggests that corporate governance performance would reduce the agency cost and increase in firm value. Second, our results would provide the firms' CEOs new insights about corporate governance and encourage them to engage in corporate governance system as a business strategy.

Several related issues are left for future research. First, it has not been fully examined whether corporate governance and financial performance have any causal relationship. For example, financially sound firms may be more active in corporate governance performance, which in turn would bring even better financial results. Second, although CGI appears to be most reliable data source, its reliability as a proxy for corporate governance is an open question. Therefore, it is necessary to conduct more research on the development of a comprehensive corporate governance measure or the comparison of existing corporate governance measures. Finally, firm characteristics variables such as CEO's management philosophy and degree of foreign exposure may affect the firm's corporate governance system. Hence, investigation into the effects of these factors on corporate governance and its relationship with financial performance will provide further insights into the relation between corporate governance and financial performance.

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