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CORPORATE GOVERNANCE AND COST OF CAPITAL: EVIDENCE FROM ASIAN MULTINATIONAL COMPANIES

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ABSTRACT

This research aimed to examine relation of governance practices with cost of capital for multinationals in 24 Asian countries from 2011-2020 for 372 top multinationals of the world as these giant companies has significant contribution in economic growth of Asian countries. The dependent variable of this study is WACC, whereas, the independent variable is the quality of corporate governance practices (QCG). The 2SLS regression technique has been employed to examine endogeneity issue in QCG variable and findings show that better governance quality significantly reduces the cost of capital. Moreover, control variables namely ROA, leverage, stock volatility and sales growth significantly and positively affect cost of capital, whereas, firm size significantly and negatively affect cost of capital. This study contributes in empirical literature as according to the best of authors' knowledge, it if the first empirical investigation of correlation between governance practices and cost of capital for top multinationals in Asia. The results of this study are supported by theories of agency and stewardship and decisional makers, top management, and regulatory institutes need to improve governance systems for attracting further investors and creditors globally in their multinationals.

INTRODUCTION

This study explores connection of governance mechanisms and cost of capital for Asian giant multinationals. The cost of capital has been measured through WACC because it includes both cost of debt and equity, therefore, it is believed that WACC will be more useful in providing the valid results as compared to use of cost of debt or equity only as proxies for the cost of capital. Many theories have pointed a connection of governance mechanisms with shareholders' wealth. The empirical literature has given preference to Agency and Stewardship theories in explaining corporate governance association with firms' capital cost (Anwar et al., 2019). The agency theory argues that stockholders' wealth maximization objective could be accomplished by alignment of managers and shareholders' interests. Conversely, stewardship theory points out that managers implement better corporate governance mechanisms to reflect being the reliable stewards of their controlling assets which results in boosting wealth of stockholders thus indicates the connection of corporate governance with stockholders' wealth. Whereas, the capital cost is a critical element in creation of wealth.

This study observes this matter for Asian multinationals due to lesser available literature on this topic for Asian economies and existence of gap in literature for impact of governance mechanisms on organizational cost of capital. So, there is a stronger motivation of this study for bridging these literature gaps. The research examined whether improved governance would lower capital cost for Asian giant multinationals of 24 countries from 2011-2020.

This study analyzed connection of governance mechanisms with capital cost along with some control variables. Following are the objectives of this research:

(1) Are there financial benefits for better governance practices in Asian Countries?

(2) Whether Better Governance Practices Result in Lowering Cost of Capital.

The rest of the study is organized as following: literature review is described in section 2; research methods is presented in section 3. Research findings are presented in section 4, whereas, conclusion is given in section 5.

LITERATURE REVIEW

Many studies have analyzed connection of governance practices with capital cost e.g. (Bagnani et al., 1994) discovered that more managerial ownership increases debt cost at lower level but decreased it at higher level. Ashbaugh et. al. (2004) described that better governance system reduces agency cost and also significantly affect organization's equity cost; this study also indicated that improved financial information of the company had negative impact on cost of equity. Francis et. al. (2005) provided direct evaluation regarding incentives related to disclosure and impact on organizations' capital cost. The authors argued that businesses in industries which require more external financing have more voluntary disclosures in order to differentiate their companies for obtaining external financing at a lower cost. The researchers found that an

extended disclosure policies for these corporations' results in decreased cost for both debt and equity. Chen et al. (2007) determined impact of governance system on equity's liquidity and stated that organizations having weaker informational transparency and disclosure bear high cost of equity's liquidity. Shah & Butt (2009) analysed association of board's size, independent audit committee, governance score, managerial ownership and board independence with equity cost for Pakistani listed 114 firms from 2003 to 2007 through OLS and fixed effect techniques. The findings depicted that managerial ownership and board size has significant and negative impact, whereas, governance score and independent auditors have positive and significant impact on equity cost. Gupta et al. (2010) determined impact of country level legal and financial developments, and company level governance characteristics on cost of equity for 7,380 observations from 22 developed nations during 2003 to 2007. The study concluded that governance characteristics affect the equity cost only in Common Law counties with more financial developments.

Furthermore, Bozec & Bozec (2011) analysed association of governance levels with relevant WACC in Canada from 2002 to 2005 and found a significant association between these variables. The authors used ROB index for measurement of governance variable and they inferred that improved governance reduces the WACC. The ROB index includes several important governance indicators related to effective governance system including board independence and composition; and also, the committees for nomination, remuneration and audit. Aslan & Kumar (2012) also demonstrated that concentration of ownership will affect the debt cost. Keshtavar et al. (2013) verified correlation of governance characteristics with financial decisions and equity cost for listed firms of Tehran during 2007 to 2011 and showed that governance characteristics has significant and positive correlation with cost of capital. Zhu (2014) analysed 22 countries data and suggested that governance practices at firm level can substitute for protection at country level. They also found that cost of equity has been lesser for organizations in countries having stronger legal systems. These findings are similar to past research that debt and equity cost are lesser for businesses having better governance practices. Singhal (2014) checked impact of governance system on organizational performance for larger Indian businesses for 10 years period and concluded that board's independence, insiders' ownership, and institutional block-holdings causes a decrease in perceived risk and investors' required return also decreases consequently. This research highlights the governance characteristics diminishes the financing cost and increases the stockholders value.

Bradley & Chen (2014) investigated impact of board independence on debt cost for 2002-2006 and stated that board independence decreased debt cost in existence of lesser leverage, whereas, the debt cost increases due to more leverage. The authors also suggested that independent directors implement the policies for taking more risk, therefore, they are in better interest of shareholders and will cost more to bondholders because of increased agency cost between shareholders and bondholders. Nikkar & Azar (2015) explored impact of governance index along with control variables on cost of capital for 110 companies in Tehran from 2009 to 2013. The findings depicted that governance index negatively and significantly affect the capital cost. Teti et al. (2016)

inspected influence of governance characteristics on firm's equity cost in Latin America and depicted governance quality negatively influence the equity cost. Specifically, the variable of disclosure was found as the more influential for equity cost. Pham et al. (2012) analyzed the Australian economy for the period of 1994 to 2003 and reported that higher insider ownership, smaller independent boards and existence of more institutional block-holders results in lowering overall capital cost. Other researchers focused on both debt and equity costs.

Allam (2018) indicated that larger boards enhance firm value, whereas, the effect of other governance characteristics changes with state of economic conditions for companies in UK. Assenga et al. (2018) stated that separation of CEO and board chairman roles improves financial performance for businesses in Tanzania. Asante-Darko et al. (2018) found that board characteristics does significantly affect firm value in Ghana.

Anwar & Aziz (2019) studied link of governance practices with business performance for multinational companies in Asian region and concluded that the governance practices positively affect the business performance. Anwar et al. (2019) investigated the impact of governance practices on cost of debt for multinationals in Asia and showed that governance index and the individual variables also significantly reduce the cost of debt for the companies. Anwar et al. (2019) evaluated the effect of governance practices on cost of equity for the multinational businesses for Asian countries and depicted that governance variables significantly reduce the cost of equity for the firms. Asghar et al. (2021) determined the relationship of governance practices with performance of Asian multinationals based on accounting and market measures. They concluded that better governance performance leads to better business performance.

We can conclude that limited research has been conducted to examine impact of governance mechanisms on organizations' capital cost for Asian economies generally and Asian giant multinationals particularly. To the best of author's information, very few studies in Asia has determined the association of governance with capital cost, whereas, there is no study which investigated the association of governance with capital cost by focusing on the weighted average cost of capital for Asian giant multinationals. The empirical literature also depicted mixed results as few researchers found positive, whereas, others found a negative association for governance mechanisms and capital cost. Therefore, this study aimed to determine correlation of governance mechanisms with capital cost for Asian giant businesses for 2011 to 2020. As investors consider that firms with improved governance practices have lesser risk, so they will perceive that investment in those companies would be exposed to decreased risk. Therefore, the investors will demand lesser rate of return for these organizations. Consequently, the following hypothesis is formulated:

H1: Better Governance Practices Results in Lowering the Cost of Capital.

MATERIALS AND METHODS

The figure 1 shows the theoretical framework employed in this study on the basis of Stewardship and Agency as follows:

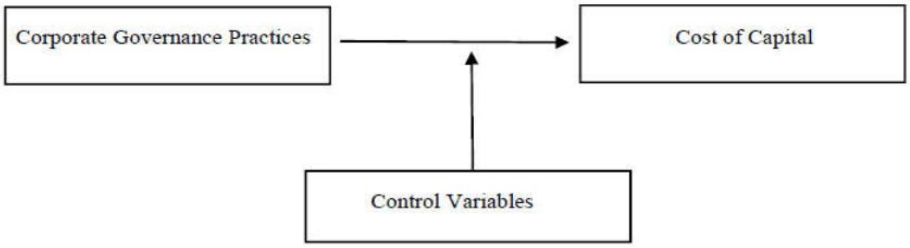

Fig. 1. Theoretical Framework of the Study

This section presents regression models and framework of this study. The methods employed for determining the relationship between governance mechanisms with capital cost in Asian firms has also presented, whereas, the conceptual framework is described in Fig. 2.

The governance mechanisms variables for Asian firms are depicted on left side which include: Quality of Corporate Governance, Board Independence, Ownership Concentration, Audit Committee Independence and CEO Duality. The proxy for organizations' capital cost is specified on right hand side that is WACC which is measured through combination of equity and debt costs. The control variables include: Firm Leverage, Firm Size, ROA, Sales Growth and Firm's leverage.

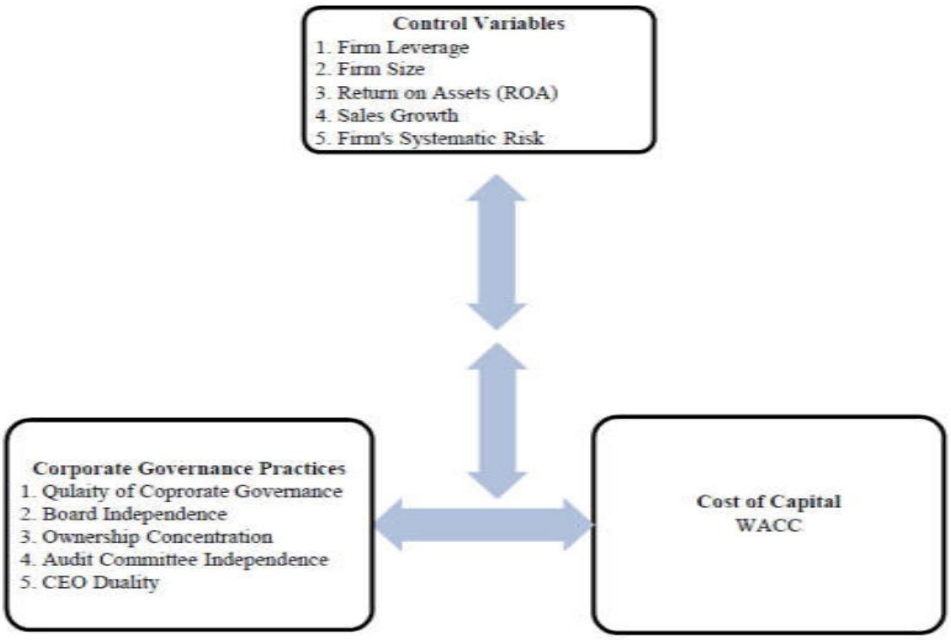

Fig. 2. Potential Association of Characteristics for Governance Practices and Cost of Capital

Data and Selection of Sample

This study employed quantitative technique for examining connection between governance mechanisms and capital cost for Asian giant companies. This study

has a sample of giant multinationals in 24 Asian economies covering the time period of 2011-2020 and excluded the financial sector firms and the businesses not having complete dataset. The dataset is gathered from audited reports, concerned stock exchanges and websites of concerned firms. A final sample of 372 nonfinancial multinationals covering different sectors of the Asian countries is used as dataset of this study for representation of largest multinationals in Asian economies.

Variables

According to Miles & Ezzell (1980), WACC includes the organizations debt and equity costs, tax rate, capital structure, amount of equity and debt as shown in balance sheet.

The following equation can be formed to calculate WACC:

$$WACC = \frac{Equity}{Total\ Assets} * R_e + \frac{Debt}{Total\ Assets} * R_d * (1 - T_c) \dots (1)$$

$$WACC = \frac{Equity}{Total\ Assets} * R_e + \frac{Debt}{Total\ Assets} * R_d * (1 - T_c) \dots (1)$$

Where:
R_e denotes the equity cost and
R_d signifies the debt cost.

The common methods for calculating equity cost include CAPM (Lintner, 1975; Sharpe, 1964 and Treynor, 1962), Three Factor Model (Fama & French, 1993) and Dividend Discount Model (Soha, 2011). Although, it is still unclear which method is more useful (Soha, 2011), the popular technique employed in previous research is CAPM as mentioned by Bozec & Bozec (2011). The CAPM technique can be depicted as follows:

$$R_e = R_f + \beta(R_m - R_f) R_e = R_f + \beta(R_m - R_f) \dots\dots\dots \textbf{(2)}$$

Where:
R_f is risk free return,
β is beta, organization's variability in relation to market, and
R_m is market rate.
$(Rm - R_f)$ is risk premium.

The risk-free rate will be calculated based on 10-year Government Treasury bond which is supported by Sörensson (2011). The coefficient of beta will be calculated manually based on stock price returns as follows:

$$Beta = \frac{COV(R_m; R_e)}{Var(R_m)} Beta = \frac{COV(R_m; R_e)}{Var(R_m)} \dots\dots\dots\dots \textbf{(3)}$$

This research employs the CAPM model as it the most widely used method employed in the empirical research to calculate equity cost. The techniques of calculating debt cost are much complex as compared to equity cost. The debt cost represents payments a business should pay against debts. The debt cost is

calculated as rate on a risk-free bond. The commonly used measure for debt cost is yield spread as indicated by the prior studies, which represents average debt yield to maturity above risk free rate e.g., Blom & Schauten (2008); Bradley & Chen (2014) and Soha (2011). Francis et al. (2005) and Zhu (2014) stated that debt cost can be estimated through dividing interest payments with debt outstanding. This research calculates debt cost as annual interest expense divided by debt.

The independent variables employed in this research and the methods of their estimation have been presented in Table 1 as follows:

Table 1. Explanation of Variables

Variables	**Method of Measurement**
Dependent	
WACC	Weighted Average Cost of Capital
Independent	
QCG	Quality of Corporate Governance calculated as: QCG = f (BI, AI, OWN & DUAL)
BI	% of independent directors to total directors
OWN	% of five biggest stockholders to total stock
AI	% of independent directors to total audit committee's directors
DUAL	Value of 1 for CEO duality or zero, otherwise
SIZE	Total assets' natural log
VOLA	Stock Prices' volatility for one year
LEV	% of total debt with total assets
ROA	Net income divided by the total assets
SALESGROW	Log of sales growth

RESEARCH METHODOLOGY

This study has estimated panel regression models. Firstly, the impact of QCG on WACC variable is estimated and then, robustness for regression estimates is tested through regressing WACC against individual governance factors. The 2SLS Regression has been used for checking problem of endogeneity for independent variables. As the post estimation tests for 2SLS depict that endogeneity issue does exist in data of this research, therefore the results for 2SLS models have been reported accordingly. As the data used in this study comprises of twenty different countries which may vary based on country specific characteristics. Therefore, for controlling country specific effects, twenty dummy variables namely D1, D2, D3……..D20 have been included in 2SLS model. The base regression model for testing this association is stated below.

$$\mathbf{WACC_{i,t} = \beta 0 + \beta 1\ QCG + \beta 2\ LEV + \beta 3\ SIZE + \beta 4\ ROA + \beta 5\ SALEGROW + \beta 6\ VOL + U_t \ldots\ldots\ldots\ (4)}$$

RESULTS AND DISCUSSIONS

In order to examine endogeneity issue in QCG, the 2SLS regression is employed. The QCG is considered as endogenous, whereas, the variable of board size is taken as instrumental variable and results are described in Table 2.

Table 2. The 2SLS Regression Model

2 SLS Regression Model		
WACC	**Coef.**	**Std. Err.**
Panel I		
QCG	-0.328***	0.124
LEV	4.695***	0.385
SIZE	-0.489***	0.174
ROA	0.277***	0.186
SALESGROW	0.567***	0.052
VOLA	3.542***	0.253
D1	-4.126**	1.101
D2	-1.793	2.153
D3	-1.432	1.394
D4	-1.267	2.264
D5	-1.543	1.094
D6	-2.435	2.027
D7	-3.198	4.320
D8	0.386	4.509
D9	0.354	1.285
D10	0.548	2.524
D11	0.652	1.863
D12	0.178	2.390
D13	2.761	1.274
D14	2.942	2.098
D15	-2.518	1.291
D16	0.483	2.381
D17	0.518	1.510
D18	0.283	2.614
D19	0.369	1.281
D20	0.736	2.318
_cons	13.471	3.510
Instrumented: QCG		
Instruments: LEV SIZE ROA SALESGROW VOLA D1 D2 …….. D19 D20 BSIZE		
Panel II		
BI	-7.916***	1.916
OWN	-1.318**	0.547
AI	-0.519	0.760
Dual	-0.462*	0.416
LEV	4.716***	0.374
SIZE	-0.517***	0.385
ROA	0.169***	0.105
SALESGROW	0.441***	0.201
VOLA	2.619***	0.275

_cons	7.610	2.482
Instrumented: BI		
Instruments: OWN AI Dual LEV SIZE SALESGROW VOLA BSIZE		
*****Significant at 1%; **Significant at 5%; *Significant at 10%**		

The panel I of Table 2 depicts that the variable of QCG negatively and significantly affect the WACC which means that improved quality of governance mechanisms results in decreased capital cost which is similar to results of Nikkar & Azar (2015). Thus, based on these finding, this study concludes that better governance mechanisms result in lowering the capital cost for Asian agricultural firms which is in accordance to recommendations of agency and stewardship theories. Moreover, the control variables of leverage, ROA, SALESGROW and VOLA significantly and positively influence the WACC variable which means that higher leverage, ROA, sales growth and volatility results in higher capital cost for Asian businesses.

Furthermore, the variable of size significantly and negatively affects the WACC variable which means that agricultural businesses have lesser capital cost in Asian countries.

The results also depict that all the country dummy variables which controlled for country specific characteristics have insignificant values except for D1 which represent Japanese economy has significant and negative value. It means that cost of capital for only Japan is significantly different from other economies, whereas, the capital cost difference for all other countries is insignificant. Based on results for country specific dummy variables, this research concludes that findings of this study are valid and country specific differences in data have insignificant impact on findings of this study (Nwagwu et al., 2021; Nwagwu et al., 2022)

ROBUSTNESS OF REGRESSION RESULTS:

After acceptance of first hypothesis, robustness for regression findings is examined through regressing individual governance variables along with control variables against WACC and results are shown in 2nd panel of Table 2. The panel II depicts that variables of BI, OWN, DUAL and SIZE have negative and significant impact on WACC for Asian countries which means that more independence of boards, ownership concentration, and existence of CEO duality and larger size of firms will result in decreased WACC for Asian multinationals. These findings are similar to Blom & Schauten (2008); Bozec & Bozec (2011); Bradley & Chen (2014); Singhal (2014) and Teti et al. (2016). The results have also found that the variable of audit committee independence has insignificant association with WACC. The results also show that the variables of leverage, ROA, sales growth and stock price volatility positively affect WACC for Asian multinational companies. So, this study concludes that improved governance results in lesser cost of capital for Asian multinationals which is in accordance with recommendations of agency and stewardship theories. Thus, based on these results, the decision regarding acceptance of hypothesis 1 has been verified and this study concludes that enhancement in governance practices have positive impact on Asian multinational companies in terms of lessening cost of capital.

For testing the endogeneity of board independence, the Durbin and Wu-Hausman techniques are employed which have p-value of 0.0040 and 0.0040 respectively. Therefore, the alternate hypothesis that variables are not exogenous is accepted. This research concludes that board independence has endogeneity issue and 2SLS regression is more suitable for analyses. The First Stage Regression Summary Statistics is used and finding show that the eigenvalue value is 187.211 which is greater than all the critical values, so the alternate hypothesis that instrumental variables are not weak is accepted.

Then, the test of Overidentifying restrictions is employed. The Sargan Test and Basmann Test have p-values of 0.2278 and 0.2485 respectively, so the null hypothesis that instruments set are valid and model has corrected specification is accepted.

CONCLUSIONS

The 2SLS model is used in this study and the QCG variable is considered as endogenous variable, whereas, board size is taken as the instrumental variable and the results depict that the variable of QCG significantly and negatively affect cost of capital for Asian multinationals. Moreover, the findings for individual corporate governance variables also show that ownership concentration, independent boards and CEO duality have negative correlation with WACC. Specifically, the implementation of better corporate governance mechanisms results in lessening the WACC which ultimately decreases the overall capital cost. These findings are significant for the policy makers and provide evidence that investors and creditors around the world assign higher weight for better governance while taking decisions to invest their capital in terms of equity or debt. This significant finding also points out that increased number of creditors and investors will invest in those companies which depict lesser capital cost.

Thus, it is extremely important for the companies to strengthen their corporate governance structures to obtain equity and debt financing at lesser cost (Nwagwu, 2015, Nwagwu, 2021). The results have showed that the control variables of leverage, firm size, ROA, sales growth and volatility were found significantly affecting capital cost. The potential researchers can extend this research as follows:

Firstly, this study focused on agricultural firms only, whereas, the future research can also examine this relationship in other sectors. Secondly, conducting the same investigations in other economies would assist in clarifying the precise role of governance practices on capital cost. Therefore, the association of governance practices with capital cost should be determined in other economies also. Thirdly, country wise analyses should be performed. Fourthly, utilization of more specific periods in future research would assist in developing new insights of governance practices. By focusing on the crisis periods and evaluating the board performance and comparing the board performance with other times periods can clarify the board dimensions in a better way.

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