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An Examination of the Impact of Corporate Governance on Corporate Investment Decisions

Dan Lin[1], Lu Lin[2]

[1] *Department of Banking and Finance, Takming University of Science and Technology, Taiwan*

[2] *Department of Public Finance and Taxation, Takming University of Science and Technology, Taiwan*

Abstract

Investment decisions are one of the most important financial decisions made by firms' managers. A wrong decision may threaten the survival of a firm. However, due to agency problems, managers do not always act in the best interest of the shareholders or make investments decisions that maximize shareholders' wealth. While existing literature has shown that good corporate governance practices can reduce the agency problem, it is the aim of this study to examine if corporate governance mechanisms can increase the investment allocative efficiency and ensure that scarce funds are transferred to investment projects that generate high returns. Based on a sample of non-financial Canadian listed companies, this study documents an inverse relationship between corporate governance and investment decisions. The results confirm that rigorous corporate governance practices can prevent managers from overinvestment

Keywords: Corporate governance; Investment decisions

1. Introduction

Investment opportunities indicate future growth potential of a firm and are highly associated with shareholders' wealth. Corporate investment decisions are one of the important financial management decisions made by the board of directors on behalf of company's shareholders. Investment decisions are concerned with the allocation of funds into different investment opportunities. Investment decisions are critical to attaining the long-term goal of the company (such as company development, retaining leadership or sustaining market share). These decisions have long-term implications on the company's growth rate and earning potential, and typically involve large investment of funds and long-term commitment of funds. Additionally, these decisions are irreversible in nature and carry a high degree of risk. From the Corporate Finance perspective, corporate investment decisions should ultimately enhance the company's value and therefore, maximize shareholder's wealth.

The Chartered Governance Institute (2021) defines corporate governance as "the system of rules, practices and processes by which a firm is directed and controlled". As a mechanism available to shareholders, corporate governance can ensure that firms have appropriate decision-making processes and controls in place. Corporate governance can therefore help minimize agency problems and ensure that the interests of shareholders are looked after. The objective of this study is to examine how corporate governance affects corporate investment decisions. Previous research have investigated how individual board characteristics such as board size, board diversity, managerial ownership, board independence and CEO duality influence the firms' investment decisions (Mirza et al., 2020; Nazar, 2021). This study contributes to the literature by utilizing a corporate governance index that encompasses four dimensions of governance, including board composition, shareholding and compensation, shareholder rights, and disclosure, to examine the impact of corporate governance on corporate investment decisions.

Based on a sample of Canadian companies between 2009 and 2012, the results from panel regression and two-stage least squares regression analyses show an inverse relationship between corporate governance and investment decisions. Better governance is associated with lower level of investment. The result suggests that rigorous corporate governance practices can prevent managers from overinvestment.

The organization of the paper is as follows. The next section reviews prior research which forms the basis for our hypothesis tested in this study. Section 3 describes the data, variables and method used in this study. Section 4 and 5 present the test results and analyses. The final section of this paper provides conclusions.

2. Literature Review and Hypothesis Development

Investment decisions are financial decisions that typically relate to long-term assets of the firms. An efficient apportioning of capital to long-term assets is one of the most critical financial decisions of the firms. Previous studies have attempted to find out the determinants of corporate investment decisions. For example, Modigliani and Miller (1958) suggest that profitability, available cash flows and firms' net worth are related to firms' investment decisions. Nguyen and Dong (2013) show that cash-flow, fixed capital intensity, business risk, leverage, and firm size are determinants of corporate investment decisions. Bokpin and Onumah (2009) report that firm level factors including past investment, profitability, firm size, growth opportunities available to firms and free cash flow are all significant determinants of corporate investment decisions.

Corporate governance is an important mechanism for mitigating agency problems and aligning the interests of shareholders and managers. As corporate investment decisions may be initiated by the self-serving behavior of managers, the welfare of shareholders will be affected by investment decisions. Therefore, board of directors who are elected to represent the shareholders' interests should ensure that the investment decisions of firms meet the objectives of maximizing firm value or shareholders' wealth. Accordingly, better corporate governance practices are expected to have influential effect on strategic decision making such as financing, investment and dividend payout decisions of a firm.

Previous studies have investigated the relationship between corporate governance and corporate investment decisions. For example, Nazar (2021) adopts the Generalized Method of Moments (GMM) model to examine the dynamic effect of corporate governance (measured by managerial ownership, board size, board independence and CEO duality) on investment decisions (measured by increments in total assets and Tobin's Q) of non-financial companies in Sri Lanka over the period 2009-2016. Nazar (2021) finds that except for board size, the other three corporate governance factors all have a significant impact on investment decisions of firms.

Mirza et al. (2020) examine listed Pakistani firms and report a significantly positive relationship between board characteristics (including board independence and CEO duality) and investment decisions (measured by the rate of net fixed assets to total assets). Further, they find that board diversity such as directors' experience, education, and nationality can moderate the relationship between corporate governance and investment decisions.

In addition, Shahid and Abbas (2019) examine the role of corporate governance in the relationship between investor confidence and corporate investment decisions for firms listed in Pakistan and India. They find that firms with good corporate governance practices (measured by board size, board independence and the existence of audit and nomination committees) are accompanied by a higher level of investment (measured by total investment expenditure minus amortization and depreciation expense). In addition, corporate governance has a moderating effect on the relationship between investor confidence and corporate investment decisions. Specifically, good corporate governance practices reduce the effect of investor confidence on corporate investment.

Yang and Xiong (2010) investigate the impact of corporate governance (proxied by ownership structure and board characteristics) on R&D investment of high-tech enterprises. Interestingly, they find that ownership structure is significantly associated with R&D investment while board characteristics (including board size, the proportion of independent directors and CEO Duality) are insignificantly associated with R&D investment. Hossain et al. (2000) suggest that firms with greater investment opportunities require a greater degree of monitoring, for example, through outside directors. This is because managers of these firms have more discretion over the allocation of funds between investments. The authors examine a sample of 77 New Zealand firms and find a positive association between the proportion of outside directors on the board and firms' investment opportunities. A later study by Hutchinson (2002) who studies a sample of 229 Australian firms also documents a relationship between investment opportunities and board composition. However, Hutchinson (2002) finds that firms' investment opportunities are significantly positively associated with the proportion of executive directors.

Furthermore, Al-Hadrami et al. (2020) utilize the survey method to investigate the influence of audit committee's independence and competence on corporate investment decisions in Bahrain and report a significant and positive relationship. Similarly, Gill et al. (2012) adopt a survey approach to investigate how corporate governance and investment decision of small business firms in India are related. They find that board characteristics including CEO duality and board size, and CEO tenure are positively related to investment decision, which is measured by the proportion of small business firms' portfolio being allocated to real estate market to obtain higher return and to diversify risk.

Hartzell et al. (2006) use a sample of Real Estate Investment Trusts (REITs) and analyze the relationship between governance mechanisms and firms' investment choices (measured by Tobin's Q). Hartzell et al. (2006) argue that REITs are more transparent and have less information asymmetry problem with investment opportunities and therefore are good research objects to study. They find an insignificant relationship between board characteristics and investment decisions while a significant relationship between institutional ownership and investment decisions. Based on the literature reviewed above and the mixed evidence reported by previous studies, this study is motivated to test the following hypothesis:

Hypothesis 1 (H1): There exists a relationship between corporate governance and corporate investment decisions.

3. Research Methodology

3.1 Sample and Data Collection

This study aims to investigate the impact of corporate governance on corporate investment decisions for non-financial firms listed on the S&P/TSX composite index between 2009 and 2012. The reason for excluding financial firms in the sample is that the investment nature of financial firms is different from that of non-financial firms. Also, Fama and French (1992) suggest that financial firms have high leverage that may be normal for these firms but may instead indicate financial distress for non-financial firms. Therefore, due to the distinctive nature of financial firms, they are excluded from the sample. The data are collected from the Standard & Poor's Compustat and *The Globe and Mail*. The final sample consists of 352 firm-year observations after excluding the financial sector.

3.2 Model Specification and Definition

To test the relationship between corporate governance and corporate investment decisions, two proxies for investment decisions are used. The first proxy is the ratio of capital expenditure to total assets (CAPEX). Following Nazar (2021), the second proxy used is Tobin's Q (TOBINQ), measured as the ratio of market value of equity plus the book value of debt to the book value of assets. The following then presents the models tested in this study:

$$\text{CAPEX}_{i,t} = \alpha + \beta_1 \text{GOVERN}_{i,t} + \beta_2 \text{CF}_{i,t} + \beta_3 \text{DEBT}_{i,t} + \beta_4 \text{ROA}_{i,t} + \beta_5 \text{LIQUIDITY}_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\text{TOBINQ}_{i,t} = \alpha + \beta_1 \text{GOVERN}_{i,t} + \beta_2 \text{CF}_{i,t} + \beta_3 \text{DEBT}_{i,t} + \beta_4 \text{ROA}_{i,t} + \beta_5 \text{LIQUIDITY}_{i,t} + \varepsilon_{i,t} \quad (2)$$

where GOVERN is the corporate governance index obtained from *The Globe and Mail*. This index incorporates factors such as board compositions, shareholding and compensation, shareholder rights, and disclosure in its calculation. Other control variables in the models include cash flow (CF), leverage (DEBT), firm performance (ROA) and short-term liquidity (LIQUIDITY).

CF measures the firm's cash flow, and is calculated as the sum of income before extraordinary items and depreciation deflated by total assets. Cash flow is incorporated in the model because firms need to have enough cash inflows to be able to participate in investment activities (Sheikh & Siddiqui, 2020). DEBT proxies for the firm's leverage level and is calculated as the ratio of total liabilities to total assets. A high level of leverage will increase the risk of bankruptcy and may deter firms from investment (Sheikh & Siddiqui, 2020). ROA (i.e., return on assets) is a measure for firm performance and is calculated as the ratio of net income to total assets. LIQUIDITY measures the firm's short-term liquidity and is calculated as the ratio of cash and marketable securities to net assets, which are total assets minus cash and short-term securities.

Variable	Symbol	Variable Definition
Investment	CAPEX	This variable is measured as the ratio of capital expenditure to total assets.
Investment	TOBINQ	This variable is measured as the ratio of market value of equity plus the book value of debt to the book value of assets.
Corporate governance	GOVERN	This variable is measured by the corporate governance index score obtained from *The Globe and Mail.*
Cash flow	CF	This variable is the sum of income before extraordinary items and depreciation deflated by total assets.
Leverage	DEBT	This variable is measured as the ratio of total liabilities to total assets.
Firm performance	ROA	This variable is measured as the ratio of net income to total assets.
Short-term liquidity	LIQUIDITY	This variable is measured as the ratio of cash and marketable securities to net assets, which are total assets minus cash and short-term securities.

Table 1: Variable description

Table 2 provides summary statistics for the variables used in this study. The average corporate investment, measured by capital expenditure ratio and Tobin's Q, are 0.086 and 1.331, respectively. The average corporate governance score of sample firms is 67 (out of 100). Table 3 reports the Pearson correlation of the variables. The correlations between investment decision and corporate governance are significantly negative at the 5% level when investment decision is proxied by CAPEX and significantly negative at the 10% level when investment decision is proxied by TOBINQ. Corporate governance is significantly positively associated with leverage level but significantly negatively associated with the short-term liquidity.

	Mean	Median	Std.	Max	Min
CAPEX	0.086	0.074	0.059	0.417	0.001
TOBINQ	1.331	1.137	0.720	5.352	0.463
GOVERN	67.176	68.000	15.186	96.000	27.000
CF	0.095	0.087	0.065	0.424	-0.141
DEBT	0.208	0.195	0.144	0.605	0.000
ROA	4.891	4.563	6.530	45.297	-16.894
LIQUIDITY	0.135	0.058	0.294	3.661	0.000

Table 2: Descriptive statistics of the variables

	1	2	3	4	5	6	7
1.CAPEX	1.000						
2.TOBINQ	0.145 ***	1.000					
3.GOVERN	-0.123 **	-0.091 *	1.000				
4.CF	0.076	0.398 ***	-0.035	1.000			
5.DEBT	-0.035	-0.285 ***	0.249 ***	-0.186 ***	1.000		
6.ROA	-0.046	0.462 ***	0.022	0.885 ***	-0.226 ***	1.000	
7.LIQUIDITY	-0.024	0.319 ***	-0.257 ***	-0.091 *	-0.270 ***	-0.040	1.000

Table 3: Correlation analysis

Note: *** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

4. Results and Discussion

To examine the impact of corporate governance on corporate investment decisions, panel regression analyses are employed and results based on the random effect models are presented in Table 4. Model 1 uses the capital expenditure ratio as the dependent variable and shows that corporate governance score is significantly negatively associated with investment decision at the 10% level. Model 2 uses Tobin's Q as the dependent variable and shows that corporate governance is significantly negatively associated with investment decision at the 5% level. Both models lead to the same conclusion and suggest that better governance is associated with lower level of investment. The results indicate that the rigorous corporate governance practices can prevent managers from overinvestment.

Our results based on Canadian companies are inconsistent with the study based on Pakistani and Indian firms (Shahid & Abbas, 2019) who find that good corporate governance is associated with higher investment level. In their study, three measures of corporate governance, including board size, board independence and existence of audit and nomination committees, are utilized. Mirza et al. (2020) also study Pakistani firms and find positive influence of board independence and CEO duality on corporate investment decisions. Their study further suggests that board diversity (such as experience, education and nationality) can moderate the relationship between corporate governance and investment decision.

However, prior research by Nazar (2021), a study on Sri Lankan Companies, reports mixed findings depending on the measures used for corporate governance and investment decision. Specifically, Nazar (2021) finds a significant positive relationship between managerial ownership and investment decision while an insignificant relationship is reported for board size. As for board independence, Nazar (2021) reports a positively relationship with changes in total assets while a negative relation with Tobin's Q. For CEO duality, a negative relationship is reported with changes in total assets while a positive relationship is found with Tobin's Q.

Therefore, the analytical results of the impact of corporate governance on investment decisions apparently are affected by the proxies adopted for corporate governance and the countries studied. This study therefore contributes to the literature by adopting a well-rounded corporate governance index score that incorporates different aspects of corporate governance and can avoid the mix findings as reported by some previous studies such as Nazar (2021). Also, this study provides additional evidence by examining Canadian companies.

As for other control variables, Table 4 shows that in both models the short-term liquidity is significantly associated with investment decisions; however, opposite relations are found. Short-term liquidity is negatively associated with CAPEX while positively associated with TOBINQ. This finding can be explained by the fact that CAPEX is more related to past investment decisions while TOBINQ represents future growth opportunities and is more related to future investment decisions.

Variables	Model 1: Dep Variable: CAPEX	Model 2: Dep Variable: TOBINQ
CONSTANT	0.111 ***	1.706 ***
	(0.018)	(0.446)
GOVERN	-0.001 *	-0.005 **
	(0.000)	(0.002)
CF	0.043	-0.438
	(0.106)	(1.642)
DEBT	0.025	-0.681
	(0.028)	(0.512)
ROA	0.000	0.022
	(0.001)	(0.017)
LIQUIDITY	-0.067 ***	0.450 ***
	(0.009)	(0.090)
Adj R^2	0.110	0.137

Table 4: Regression results for corporate investment decision

Note: Robust standard errors are presented in parenthesis. *** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

5. Robustness Tests

As a robustness test on the relationship between corporate governance and investment decisions, this study further conducts a two-stage least squares (2SLS) regression analysis and the results are presented in Table 5. The instrumental variables used in 2SLS regression include cash flow (CF), leverage, (DEBT) firm performance (ROA), and firm size (measured by natural logarithm of total assets). The results show that corporate governance in Model 1 becomes insignificant, which is weakly significant (at the 10% level) when a panel regression with random effect (as presented in Table 4) is utilized. However, Model 2 shows that corporate governance remains strongly statistically significant (at the 1% level) and negatively related to investment decisions when investment decision is proxied by Tobin's Q. This finding is consistent with the panel regression analysis in Table 4.

Variables	Model 1: Dep Variable: CAPEX	Model 2: Dep Variable: TOBINQ
CONSTANT	0.061	3.370 ***
	(0.040)	(0.621)
GOVERN	0.000	-0.032 ***
	(0.001)	(0.007)
CF	0.010	-1.011
	(0.159)	(1.954)
DEBT	0.014	-0.012
	(0.041)	(0.353)
ROA	0.000	0.040 *
	(0.002)	(0.021)
LIQUIDITY	-0.065 ***	0.298 **
	(0.020)	(0.154)
Adj R^2	0.102	0.129
F-statistics	10.597 ***	19.669 ***

Table 5: Two-stage least squares regression results for corporate investment decision

Note: Robust standard errors are presented in parenthesis. *** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

Overall, based on the corporate governance index of *The Globe and Mail* which considers four dimensions of corporate governance, including board compositions, shareholding and compensation, shareholder rights, and disclosure, this study finds an inverse relationship between corporate governance and investment decisions, especially when investment decision is proxied by Tobin's Q.

6. Conclusion

Investment decisions are vital to achieve a firm's strategic plan. As these decisions typically involve large amount of money, they are vital for shareholders and other stakeholders. Good corporate governance practices can lead to more effective board monitoring and ensure that managers make investment decisions effectively. Therefore, shareholders' interests can be protected.

The objective of this study is to empirically examine the impact of corporate governance on corporate investment decisions. Based on a sample of non-financial Canadian listed companies in 2009-2012 period, this study adopts the panel regression and 2SLS regression techniques to validate the findings. The results show an inverse relation between corporate governance and investment decisions. This implies that corporate governance mechanisms can inhibit the opportunistic behavior of managers and do play a role in monitoring managerial behavior in terms of investment decisions. Firms with good corporate governance practices are likely to prohibit overinvestment to happen.

The practical implication of this study for managers, investors and policymakers is that corporate governance is important for monitoring managers in investment decisions and protecting shareholders' interests. Policy makers shall continuously ensure compliance of corporate governance guidelines by firm managers. Future research may consolidate the empirical evidence by testing the relationship between corporate governance and the likelihood of overinvestment or underinvestment by firm managers.

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