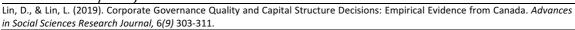
Advances in Social Sciences Research Journal - Vol.6, No.9

Publication Date: Sep. 25, 2019 **DoI**:10.14738/assrj.69.7140.





Corporate Governance Quality and Capital Structure Decisions: Empirical Evidence from Canada

Dan Lin

Takming University of Science and Technology

Lu Lin

Takming University of Science and Technology

ABSTRACT

This study examines the relationship between corporate governance quality and capital structure of firms listed on the S&P/TSX composite index between 2009 and 2012. Using an aggregate corporate governance index, this study finds support for the outcome hypothesis, which argues that capital structure is an "outcome" of corporate governance quality. Governance quality is found to be positively associated with firms' leverage. Firms with lower governance quality have lower leverage as these firms' managers do not like to have only little free cash flow leftover or have extra constraints imposed by debt financing. In contrast, firms with higher governance quality are more leveraged because these firms have lower agency costs and thus lower cost of debt financing. As a result, they can take on more debts. The empirical evidence from this study illuminates important links between governance quality and financing decisions of firms.

Keywords: corporate governance; agency problem; capital structure.

INTRODUCTION

Capital structure is one of the key corporate policy decisions by firm management. A number of theories, including the irrelevance theory, the trade-off theory, the pecking order theory, and the agency theory, have been proposed in an attempt to explain the capital structure. Specifically, the irrelevance theory argues that under the assumption of perfect capital markets, capital structure is unrelated to firm's value (Modigliani and Miller, 1958). The trade-off theory suggests that the advantages of debt provided by tax savings will be offset by the bankruptcy costs as the level of leverage increases (Modigliani and Miller, 1963). The pecking order theory proposes that due to the information asymmetry between managers and outside investors and the signalling effect, the preferences of managers in financing are in the order of internal financing, debt and external equity (Myers and Majluf, 1984). Agency theory argues that due to separation of ownership and control, capital structure decisions are affected by agency problems (Jensen and Meckling, 1976). Capital structure decisions are made by senior managers while the board of directors has the responsibility to supervise and monitor these decisions. Thus, corporate governance is important in reducing the agency costs associated with capital structure decisions (Morellec et al., 2012).

"Corporate governance is the system by which companies are directed and controlled" (World Bank Group, 1992). Corporate governance is essential to attracting investors to the marketplace and building investors' trust (Buallay et al., 2017). Corporate governance considers the relationship between different stakeholders, including shareholders, managers, board of directors, and investors. Better corporate governance quality allows firms to have

more access to financing, lower cost of capital, higher firm performance and more favourable treatment of stakeholders (Claessens et al., 2002).

Based on the agency theory, this study aims to investigate agency costs as an explanation of capital structure. Specifically, we test how capital structure is influenced by corporate governance quality. The agency theory suggests that debt can help reduce agency costs as it requires managers to make fixed interest payments. Managers, therefore, have less free cash flow that can be spent on perquisite consumption, and the chances of opportunistic behaviour of managers are lowered. In addition, raising funds through debts expose firms to the monitoring of the capital markets. Following Jiraporn et al. (2012), this study tests two competing hypotheses, the outcome hypothesis and the substitution hypothesis, on the relationship between capital structure and corporate governance quality. The outcome hypothesis predicts a positive relationship between leverage and corporate governance quality while the substitution hypothesis predicts an inverse relationship.

This study finds support for the outcome hypothesis. Capital structure (measured by book leverage and market leverage) and corporate governance quality are positively related. The results suggest that firms with lower governance quality have lower leverage as these firms' managers do not like to have only little free cash flow leftover or the extra constraints associated with debt financing. On the other hand, firms with higher governance quality are more leveraged as they have lower agency costs and lower cost of debt financing. Therefore, these firms can take on more debts. The empirical evidence obtained from this study highlights the importance of governance quality in explaining capital structure of firms.

This study contributes to the literature by investigating how corporate governance is related to firms' capital structure decisions. Much of the prior literature on capital structure has focused on firm-specific factors while less attention has been given to the effect of within-firm governance mechanisms on capital structure decisions (Boateng et al., 2017). Therefore, our findings add a new piece to the capital structure puzzle. Moreover, most of prior studies have focused on individual corporate governance mechanisms, including Brailsford et al. (2002), Wen et al. (2002), Abor (2007), Sheikh and Wang (2012), and Boateng et al. (2017), rather than treating governance quality as one index variable. Accordingly, this study measures corporate governance quality using the corporate governance index provided by *The Globe and Mail*, which includes four elements: board compositions, shareholding and compensation, shareholder rights, and disclosure. The advantage of using an aggregate governance quality measure is that it can avoid possible interactions between different governance attributes (Agrawal and Knoeber (1996); Bowen et al. (2008); Jiraporn et al. (2012)).

The reminder of this paper is organised as follows. Section 2 reviews relevant literature on the relationship between capital structure and corporate governance, and develops research hypotheses. Section 3 provides descriptions of the sample, data, and empirical models. Section 4 presents the empirical results. Finally, Section 5 provides the conclusions and suggestions for future research.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Capital structure refers to the way a firm finances its assets through debts and/or equity. A firm's capital structure is one of its important choices. Based on the agency theory, which focuses on the conflicts of interests between managers (agents) and shareholders (principals) of a firm (Jensen and Meckling, 1976), this study analyses how capital structure is influenced by corporate governance quality. An agency problem arises when a manager is not an owner or shareholder of the firm. Managers may pursue their self-interests rather than act in the best

interests of the shareholders. One instance of such agency conflicts is that managers may adopt leverage choices that deviate from the optimal capital structure in order to satisfy their private benefits rather than maximize shareholder value (Jiraporn et al., 2012). Therefore, corporate governance needs to be put in place to minimise agency costs. In addition, when leverage is high, controlling shareholders have excess control rights to engage in tunnelling activities (Paligorova and Xu, 2012). Higher leverage can also lead to higher financial risks, higher cost of capital and higher possibility of bankruptcy (Modigliani and Miller, 1958). Accordingly, conflicts of interests can affect a firm's financing decisions and this study expects a relationship exists between capital structure and corporate governance quality.

When the debt level increases, managers are obliged to pay out more cash because of the requirement to pay off the debt. This can therefore reduce the amount of free cash flow in the hands of firm managers who are likely to engage in perquisite consumption due to agency problems (Jensen, 1986). Moreover, when firms raise debts from the market, they are subject to the scrutiny of the capital markets. To be able to raise funds from external capital markets, firms must establish a reputation for decent treatments of shareholders. One way to achieve this is by raising debts and making interest payments because less free cash flow are left for expropriation by management (Jiraporn et al., 2012). Grossman and Hart (1982) also suggest that as debt financing increases the risk of bankruptcy, this risk may motivate managers to work more efficiently and consume less perks.

Prior literature that uses corporate governance indices to test the relationship between capital structure and governance quality include Jiraporn et al. (2012), Shahzad et al. (2015) and Hermassi et al. (2017). Jiraporn et al. (2012) use corporate governance metrics provided by Institutional Shareholder Services and find a robust inverse relationship between leverage and governance quality. Firms with poor corporate governance have higher leverage. Shahzad et al. (2015) study how corporate governance affects the capital structure of Pakistan manufacturing firms that are listed on the Karachi Stock Exchange between 2007 and 2012. They find that corporate governance is significantly negatively related to capital structure, measured by total debt ratio and long-term debt ratio. Hermassi et al. (2017) investigate the impact of corporate governance (measured by *The Globe and Mail* corporate governance index) on capital structure in Canada over the period 2002-2011 and report that firms with better governance quality have lower market leverage.

Other studies have analysed the impacts of individual corporate governance mechanism on capital structure. For example, Berger et al. (1997) find that entrenched CEOs that do not face pressure from ownership and compensation incentives or active monitoring tend to adopt a lower level of leverage. Wen et al. (2002) examine a sample of Chinese listed firms and find that when firms have stronger corporate governance from the board (in terms of higher percentage of outside directors), managers tend to have less debt financing. Brailsford et al. (2002) find a positive relationship between external blockholders and leverage, and a nonlinear relation between managerial share ownership and leverage. Abor (2007) investigates Ghanaian listed firms and finds that firms with larger board size, higher percentage of nonexecutive directors and CEO duality are more leveraged.

Moreover, Sheikh and Wang (2012) study how several corporate governance attributes, including board size, outside directors, ownership concentration, managerial ownership, director remuneration, and CEO duality, have an impact on capital structure (measured by total debt ratio and long-term debt ratio) of Pakistani firms. They find that firms with larger board size, more outside directors, higher ownership concentration and lower director remuneration are associated with more leverage in capital structure. Hussainey and Aljifri

(2012) investigate the relationship between corporate governance mechanisms (including board size, institutional ownership, governmental ownership and audit type) and capital structure of firms in United Arab Emirates (UAE). The authors find that only institutional ownership is significantly related to debt-to-equity ratio. Hermassi et al. (2015) examine the impact corporate governance and ownership structure on capital structure of Canadian firms. The authors find that CEO duality, CEO compensation, and ownership structure (including family, institutional, and governmental ownership) are negatively associated with leverage. Granado-Peiró and López-Gracia (2017) study how corporate governance (measured by managerial ownership and controlling shareholders ownership) affect capital structure of Spanish listed firms and they report a non-monotonic relationship. Boateng et al. (2017) analyse the effects of internal governance mechanisms, including ownership concentration, CEO duality and the percentage of independent directors on capital structure decisions of Chinese listed firms. The authors find that the proportion of independent directors is positively related to the long-term debt ratio while ownership concentration is negatively associated with the long-term debt ratios.

Following Jiraporn et al. (2012), two competing hypotheses, the outcome hypothesis and the substitution hypothesis, are proposed by this study to explain the relationship between capital structure and corporate governance quality. The outcome hypothesis assumes capital structure as an outcome of corporate governance quality and proposes a positive relationship between capital structure and corporate governance quality. That is, firms with poor governance quality have lower leverage. On the other hand, the substitution hypothesis assumes that debt can alleviate agency costs and therefore can be a substitute for corporate governance. This suggests that firms with weak corporate governance have greater need for establishing such reputation through raising debts. Therefore, based on the substitution hypothesis, an inverse relationship is expected between capital structure and corporate governance quality; that is, firms with weaker corporate governance quality are associated with higher leverage in capital structure.

The testable hypotheses of this study are, thus, as follows:

H1a (outcome): Firms with higher corporate governance quality have higher leverage. **H1b (substitution):** Firms with higher corporate governance quality have lower leverage.

RESEARCH METHODOLOGY

Sample and Data

The initial sample includes all Canadian firms that are listed on the S&P/TSX composite index and have corporate governance scores available in *The Globe and Mail* over the period from 2009 to 2012 (687 firm-year observations). After eliminating firms with missing data, the sample consists of 452 firm-year observations. Firms in the financial sector are also excluded. The final sample consists of 352 firm-year observations.

The financial and accounting data used in this study are obtained from the Standard & Poor's Compustat database. The corporate governance indices are obtained from *The Globe and Mail*. The corporate governance scores are based on assessments of four elements: board compositions, shareholding and compensation, shareholder rights, and disclosure. The reason for analysing this sample period, 2009-2012, is that, first, modifications to corporate governance measurements were made by *The Globe and Mail* in 2009 and in 2012. Therefore, to ensure consistency in measurements, the sample period is limited to 2009-2012. Secondly, to avoid the impact of global financial crisis of 2007-2008 in our sample, this period is excluded.

Empirical Models

To investigate the relationship between capital structure and corporate governance quality, this study employs a panel data methodology and the following models are tested:

$$B_{-}LEVERAGE_{it} = \alpha_i + \beta_1 CG_{it} + \beta_2 ROA_{it} + \beta_3 TOBINQ_{it} + \beta_4 DIV_{it} + \varepsilon_{it}$$

$$M_{-}LEVERAGE_{it} = \alpha_i + \beta_1 CG_{it} + \beta_2 ROA_{it} + \beta_3 TOBINQ_{it} + \beta_4 DIV_{it} + \varepsilon_{it}$$
(2)

The dependent variable of this study is capital structure, measured by book leverage $(B_LEVERAGE)$ and market leverage $(M_LEVERAGE)$. The independent variable is corporate governance quality (CG), measured by the corporate governance index provided by *The Globe and Mail*. Control variables include firm's profitability (ROA), Tobin's Q (TOBINQ), and dividend policy (DIV). Table 1 provides the definitions of all relevant dependent, independent and control variables used in the analyses.

Table			

Variable	Symbol	Description	
Dependent variables			
Book leverage	$B_{_}LEVERAGE$	Ratio of total debt to total assets.	
Market leverage	M_LEVERAGE	Ratio of total debt to the sum of total debt and market capitalization.	
Independent variable			
Corporate governance	CG	Corporate governance score provided by <i>The Globe and Mail</i> .	
Control variables			
Profitability	ROA	Ratio of net income to total assets.	
Growth opportunities	TOBINQ	Market value of equity plus book value of debt divided by the book value of total assets.	
Dividend policy	DIV	Ratio of cash dividends to net income.	

RESULTS

Table 2 presents the descriptive statistics of variables used in this study. The average book leverage and market leverage of sample firms are 20.81% and 20.36%, respectively. The descriptive statistics show that book leverage and market leverage apparently do not differ a lot. The sample firms have a mean corporate governance score of 67.17, a maximum score of 96 and a minimum score of 27. The average ROA and Tobin's Q is 4.64% and 1.33. The average dividend payout ratio is 0.41.

Table 2 Descriptive statistics

	Obs.	Mean	Median	Std. Dev.	Max.	Min.
B_LEVERAGE	352	20.8066	19.5040	14.3693	60.4860	0.0000
$M_{LEVERAGE}$	352	20.3636	16.8663	16.4698	68.9205	0.0000
CG	352	67.1761	68.0000	15.1863	96.0000	27.0000
ROA	352	4.6422	4.5055	6.1678	40.0950	-17.1260
TOBINQ	352	1.3314	1.1365	0.7204	5.3516	0.4629
DIV	352	0.4083	0.2108	4.4882	78.1103	-20.3809

B_LEVERAGE is the ratio of total debt to total assets. *M_LEVERAGE* is the ratio of total debt to the sum of total debt and market capitalization. *CG* is the corporate governance score provided by *The Globe and Mail. ROA* is the ratio of net income to total assets. *TOBINQ* is the market value of equity plus book value of debt divided by the book value of total assets. *DIV* is the ratio of cash dividends to net income.

Table 3 presents the correlation matrix. It shows that leverage is positively related to governance quality, providing preliminary support for the outcome hypothesis. The correlation result suggests that firms with lower governance quality use less debt financing. Similar results are found for both book leverage and market leverage. Note that this study finds through correlation analysis that firm size, which is commonly considered as a determinant of capital structure, is highly correlated with governance quality. Therefore, firm size is not included as a control variable in our models.

Table 3 Correlation analysis

Table 5 Correlation analysis							
	1.	2.	3.	4.	5.	6.	7.
1.B_LEVERAGE	1.0000						
2.M_LEVERAGE	0.8657 ***	1.0000					
3. <i>CG</i>	0.2490 ***	0.1488 ***	1.0000				
4.ROA	-0.2239 ***	-0.3536 ***	0.0224	1.0000			
5.TOBINQ	-0.2848 ***	-0.5329 ***	-0.0914 *	0.4626 ***	1.0000		
6.DIV	0.0797	0.0797	0.0713	-0.0072	-0.0482	1.0000	
7.FSIZE	0.3413 ***	0.3070 ***	0.4558 ***	-0.0960 *	-0.3220 ***	0.0326	1.0000

B_LEVERAGE is the ratio of total debt to total assets. *M_LEVERAGE* is the ratio of total debt to the sum of total debt and market capitalization. *CG* is the corporate governance score provided by *The Globe and Mail. ROA* is the ratio of net income to total assets. *TOBINQ* is the market value of equity plus book value of debt divided by the book value of total assets. *DIV* is the ratio of cash dividends to net income. *FSIZE* is the natural logarithm of total assets. *, **, *** denote significance at the 10%, 5% and 1% levels, respectively.

Table 4 presents the panel data analysis of the relationship between capital structure and governance quality. The results show that for both book leverage and market leverage, governance quality and capital structure are significantly positively related. Thus, this study finds evidence consistent with the outcome hypothesis; that is, capital structure is an outcome of corporate governance quality. The results suggest that managers of firms with lower governance quality have lower levels of debt because they do not want to be "tied up" by the fixed interest payments. This is because debt financing would not only impose extra constraints on firms/managers but also reduce the free cash flow left in the firms.

Table 4 Analysis of capital structure and corporate governance quality

Table 4 Analysis of capital structure and corporate governance quanty				
	$B_LEVERAGE$	$M_{_}LEVERAGE$		
Intercept	15.9795 ***	21.2300 ***		
	(4.7749)	(5.8240)		
CG	0.1250 ***	0.1424 ***		
	(3.0787)	(3.1808)		
ROA	-0.3595 ***	-0.4021 ***		
	(-6.2527)	(-6.2559)		
TOBINQ	-1.4314 *	-6.4506 ***		
	(-1.9047)	(-7.7421)		
DIV	0.0118	0.0625		
	(0.2009)	(0.9456)		
Adjusted R ²	0.1251	0.2711		
Total obs.	352	352		

B_LEVERAGE is the ratio of total debt to total assets. *M_LEVERAGE* is the ratio of total debt to the sum of total debt and market capitalization. *CG* is the corporate governance score provided by *The Globe and Mail. ROA* is the ratio of net income to total assets. *TOBINQ* is the market value of equity plus book value of debt divided by the book value of total assets. *DIV* is the ratio of cash dividends to net income. *t*-statistics are reported in parentheses. *, **, *** denote significance at the 10%, 5% and 1% levels, respectively.

In addition, Bhojraj and Sengupta (2003) suggest that firms with higher corporate governance quality have lower agency costs and lower cost of debt financing. In line with this view, our results suggest that firms with higher governance quality have higher leverage because these firms can borrow at a lower cost. Our results are also consistent with the findings of Sheikh and Wang (2012) and Boateng et al. (2017). The former study reports that board size, outside directors, and ownership concentration are positively related to leverage. The latter study also finds that the proportion of independent directors is positively related to the long-term debt ratio.

CONCLUSIONS

Capital structure is one of the crucial corporate decisions made by firm managers. The agency relationship between managers and shareholders has the potential to influence capital structure decisions which in turn potentially impacts on the riskiness and performance of firms. Due to agency costs, managers may adopt capital structure at a sub-optimal level. Consequently, corporate governance plays an important role in firms' financing decisions (Morellec et al., 2012).

The aim of this study is to investigate the relationship between capital structure and corporate governance quality by analysing a sample of Canadian firms listed on the S&P/TSX composite index over the period 2009 to 2012. Our results show that corporate governance quality have a positive impact on capital structure, measured by book leverage and market leverage. That is, we find evidence consistent with the outcome hypothesis. The results suggest that as managers of firms with lower governance quality do not like to have only little free cash flow leftover or the extra constraints associated with debt financing, they will tend to have lower leverage. On the other hand, as firms with higher governance quality have lower agency costs and lower cost of debt financing, these firms are capable of being more leveraged.

In summary, this study highlights the important link between corporate governance and capital structure, and adds to our understanding of the unresolved issue in corporate finance. Knowing how corporate governance affects capital structure decisions is critical to managers, directors and investors as this study shows that corporate governance quality can explicate the financing behaviour of firms. Future research could examine the effect of corporate governance on capital structure of Canadian firms using larger samples and longer time series.

References

Abor, J. (2007) 'Corporate governance and financing decisions of ghanaian listed firms', *Corporate Finance*, Vol. 7, No. 1, pp.83-92.

Agrawal, A. and Knoeber, C. (1996) 'Firm performance and mechanisms to control agency problems between managers and shareholders', *Journal of Financial and Quantitative Analysis*, Vol. 31, No. 3, pp.377-397.

Berger, P. G., Ofek, E. and Yermack, D. L. (1997) 'Managerial entrenchment and capital structure decisions', *Journal of Finance*, Vol. 52, No. 4, pp.1411-1438.

Bhojraj, S. and Sengupta, P. (2003) 'Effect of corporate governance on bond ratings and yields: The role of institutional investors and the outside directors', *Journal of Business*, Vol. 76, No. 3, pp.455-475.

Boateng, A., Cai, H., Borgia, D., Bi, X. G. and Ngwu, F. N. (2017) 'The influence of internal corporate governance mechanisms on capital structure decisions of chinese listed firms', *Review of Accounting & Finance*, Vol. 16, No. 4, pp.444-461.

Bowen, R., Rajgopal, S. and Venkatachalam, M. (2008) 'Accounting discretion, corporate governance and firm performance', *Contemporary Accounting Research*, Vol. 25, No. 2, pp.351-405.

Brailsford, T., Oliver, B. R. and Pua, L. H. (2002) 'On the relation between ownership structure and capital structure', *Accounting and Finance*, Vol. 42, No. 1, pp.1-26.

Buallay, A., Hamdan, A. and Zureigat, Q. (2017) 'Corporate governance and firm performance: Evidence from saudi arabia', *Australasian Accounting, Business and Finance Journal*, Vol. 11, No. 1, pp.78-98.

Claessens, S., Djankov, S., Fan, N. J. P. and Lang, L. H. (2002) 'Disentangling the incentive and entrenchment effects of large shareholders', *Journal of Finance*, Vol. 57, No. 6, pp.2741-2771.

Granado-Peiró, N. and López-Gracia, J. (2017) 'Corporate governance and capital structure: A spanish study', *European Management Review*, Vol. 14, No. 1, pp.33-45.

Grossman, S. and Hart, O. (1982) Corporate financial structure and managerial incentives. *In:* MCCALL, J. (ed.) *The economics of information and uncertainty.* Chicago, IL: University of Chicago Press.

Hermassi, N., Adjaoud, F. and Aloui, C. (2015) 'The effect of corporate governance and ownership structure on capital structure: Empirical evidence from canada', *Gestion 2000*, Vol. 32, No. 6, pp.95-114.

Hermassi, N., Adjaoud, F. and Aloui, C. (2017) 'The impact of corporate governance on capital structure: A new perspective', *International Journal of Business & Economics Perspectives*, Vol. 12, No. 1, pp.76-92.

Hussainey, K. and Aljifri, K. (2012) 'Corporate governance mechanisms and capital structure in uae', *Journal of Applied Accounting Research*, Vol. 13, No. 2, pp.145-160.

Jensen, M. C. (1986) 'Agency costs of free cash flow, corporate finance, and takeovers', *American Economic Review*, Vol. 76, No. 2, pp.323-329.

Jensen, M. C. and Meckling, W. H. (1976) 'Theory of the firm: Managerial behavior, agency costs, and ownership structure', *Journal of Financial Economics*, Vol. 3, No. 4, pp.305-360.

Jiraporn, P., Kim, J.-C., Kim, Y. S. and Kitsabunnarat, P. (2012) 'Capital structure and corporate governance quality: Evidence from the institutional shareholder services (iss)', *International Review of Economics & Finance*, Vol. 22, No. 1, pp.208-221.

Modigliani, F. and Miller, M. H. (1958) 'Corporate income taxes and the cost of capital: A correction', *American Economic Review*, Vol. 3, No. 53, pp.433-444.

Modigliani, F. and Miller, M. H. (1963) 'The cost of capital, corporation finance and the theory of investment', *American Business Review*, Vol. 48, No. 3, pp.261-297.

Morellec, E., Nikolov, B. and Schurhoff, N. (2012) 'Corporate governance and capital structure dynamics', *Journal of Finance*, Vol. 67, No. 3, pp.803-848.

Myers, S. C. and Majluf, N. S. (1984) 'Corporate financing and investment decisions when firms have information that investors do not have', *Journal of Financial Economics*, Vol. 13, No. 2, pp.187-221.

Paligorova, T. and Xu, Z. (2012) 'Complex ownership and capital structure', *Journal of Corporate Finance*, Vol. 18, No. 4, pp.701-716.

Shahzad, A., Shahid, M. A., Sohail, A. and Azeem, M. (2015) 'Investigating the impact of corporate governance on capital structure: A case of kse-listed companies', *IUP Journal of Corporate Governance*, Vol. 14, No. 2, pp.31-43.

Sheikh, N. A. and Wang, Z. (2012) 'Effects of corporate governance on capital structure: Empirical evidence from pakistan', *Corporate Governance*, Vol. 12, No. 5, pp.629-641.

Wen, Y., Rwegasira, K. and Bilderbeek, J. (2002) 'Corporate governance and capital structure decisions of the chinese listed firms', *Corporate Governance: An International Review*, Vol. 10, No. 2, pp.75-84.

World Bank Group (1992) Report of the committee on the financial aspects of corporate governance, London.