

Impact of Corporate Governance on Financial Practices of New Zealand Companies¹

By Hardjo Koerniadi

Hardjo Koerniadi is a Senior Lecturer at the Faculty of Business and Law, Auckland University of Technology, New Zealand

This study examines the effects of firm level corporate governance on financing policies of New Zealand firms. Using a unique self-constructed corporate governance index and employing the methodology of Fama and French (1999) of financing of firms, we can report that firms with weak corporate governance generally issue more debt and have significantly higher cost of capital than do firms with strong governance. It is further observed that corporate governance does not have significant impact on dividend policy in New Zealand.

Keywords: corporate governance; financing policy; cost of capital

1. Introduction

The financing policies of a firm, comprising of its method of financing investments, setting its capital structures and their cost of capital, are affected by agency problems generated by the separation of ownership and control. Empirical results supporting this notion, for example, are De Jong and Veld (2001) and Berger et al. (1997) who find that firms with entrenched management, i.e., with weak governance, are more likely to issue equity than debt to protect themselves from external corporate control forces such as takeovers. Stulz (1988) however, argues that entrenched managers may increase leverage in an attempt to shield their firm from takeovers. This is more consistent with a recent study by John and Litov (2010) that finds firms with entrenched management are generally associated with higher leverage. Despite the reported conflicting empirical results, the effect of the agency problem (in which managers follow self-interested objectives at the expense of shareholders) on firm value is real. When managers choose a less than optimal debt level in their capital structure decisions, their sub-optimal financing decisions will lower firm value and/or increase cost of capital. Well-governed corporations, however, are expected to alleviate these problems by implementing such corporate governance mechanism as linking managers'

incentives to their firm market value, effective monitoring by a more independent board, preventing the dilution of firm value through excessive stock options granted to their managers, or a combination of these approaches.

Prior studies on the association between corporate governance and firms' financing decisions usually use a specific corporate governance provision, such as the ratio of outside directors, board size, or antitakeover provisions, as a proxy for the level of corporate governance (see for example, Berger et al., 1997; Wen et al., 2002). The results of the extant studies are inconclusive. For example, while Berger et al. (1997) report a positive relationship between the presence of outside independent directors and leverage, Wen et al. (2002) find the opposite, and yet another study find that outside directors have no significant effect on leverage (Mehran, 1992). Similarly, Berger et al. (1997) report a negative correlation between firms with entrenched management and leverage, but John and Litov (2010) find that firms with entrenched management is associated with higher leverage.

This study proceeds by employing a comprehensive corporate governance index based on several corporate governance components of New Zealand

listed companies. Employing a more comprehensive measure of corporate governance mechanism instead of focusing only on one particular component of corporate governance is expected to mitigate possible substitution or complementary effects of one particular corporate governance variable with another (Klapper and Love, 2004). The impact of corporate governance on firm financing policy is examined by observing whether firms with strong corporate governance mechanisms have different financing policy than those of firms with weak corporate governance. By focusing on these two extreme groups of firms, inference from the results on the effects of corporate governance on financing policy can be drawn more unequivocally.

2. Methodology and Data

In this study, a New Zealand Corporate Governance Index is constructed by creating three sub-indices for the following corporate governance mechanism: board composition, compensation policy, and shareholder rights. The total index is the sum of the values of the three sub-indices. The criteria used to construct the sub-indices are similar to those of McFarland (2002), Klein et al. (2005) and Koerniadi et al. (2013). A clear benefit of constructing this governance indicator is that it is able to capture a wide variety of governance features specific to New Zealand firms. A potential drawback of this approach is that the list of corporate governance features and the weights assigned to each feature may be considered arbitrary. However, this criticism could be applicable to any constructed index, whether for professional or academic purposes. On the whole, this detailed scoring system takes into account a wide range of aspects of firm governance and therefore provides a realistic score. The board composition sub-index measures board independence, CEO duality, busyness of the directors and the number of annual board meetings. This provision is an important governance feature (Fama and Jensen, 1983). The main responsibility of the board is to monitor managers' performance and reduce agency costs. Autonomy is measured by board independence, and by the independence of audit, compensation and nominating committees. Independent directors are expected to be able to monitor managers more effectively than inside directors (Fama and Jensen, 1993). This sub index also contains measures of board effectiveness, number of meetings and the separation of CEO/ Chair positions. The next sub-index is related to the share ownership and option plans of the directors. This sub-index captures the alignment between the interests of the directors and those of the shareholders. Chatterjee (2009) presents evidence consistent with the view that the equity holding by

This study is the first to look at the firms' financing policies using the Fama and French (1999) model. This approach not only enables a comparison of financing patterns of firms with strong and weak corporate governance scores, but also allows us to examine the effects of different corporate governance mechanisms on firms financing policy as well as on their costs of capital. There is as yet limited empirical work on this issue; this study fills this void, albeit for a country with small stock exchange. The remainder of the paper is organised as follows. Section two describes the methodology and the data. Section three discusses the empirical findings, and section four concludes the paper.

directors provides them with incentives for deeper strategic involvement with the firm and Kren and Kerr (1997) offer evidence consistent with the view that share ownership of directors provides them with incentives to rigorously monitor managerial performance. Finally, shareholder rights are measured based on the re-election of directors, existence of dilutive employee stock options and the presence of subordinate shares. These features reduce shareholder rights vis-a-vis managers. As such, firms with high scores on this sub index are considered to be investor friendly. The negative impact of the existence of dilutive stock options and subordinate shares will exacerbate poor performance of the firm under condition of economic stress. Adjaoud and Ben-Amar (2010) provide empirical results that suggest when shareholder rights are strong, shareholders can use their power to force managers to pay higher dividends instead of using them for private benefit. Thus containing managers' opportunistic behaviour is likely to make the firm less risky, ceteris paribus. On the whole, these three major components of corporate governance are aggregated into an overall score.

To observe a firm's financing pattern and its cost of capital, this study adopts Fama and French's (1999) methodology. The following equation is used to observe how a firm finances itself:

$$Y_t + Dep_t + \Delta S_t + \Delta LTD_t = I_t + Int_t + Div_t \quad (1)$$

where Y_t is defined as the sum of income before extraordinary items, interest, income statement deferred taxes and depreciation. Dep_t is the depreciation expenses. ΔS_t is the net newly issued shares, which balances the cash flow. ΔLTD_t is the change in the book value of the long-term debt. I_t is the change in book capital from t-1 to year

t, plus depreciation. Int_t is the total interest expenses paid to creditors. Div_t is the total dividends paid to shareholders. All of the variables are deflated by the value of the year-beginning book assets. The change in short-term interest bearing liabilities is not included in this equation because data for this variable are not available. As a result, ΔS_t could be slightly overstated. However, as the change in short-term interest bearing liabilities is usually small, this omission should not have a significant impact on ΔS_t. To measure implied cost of capital of firms in our sample, for each year, the following equation is estimated:

$$IV_{t-1} = \frac{Y_t + Dep_t - I_t}{(1+r)^t} + \frac{FS_t - FB_t + \Delta LTD_t}{(1+r)^t} + \frac{TV_t}{(1+r)^t} \quad (2)$$

where IV_{t-1} is the initial market value of a firm's capital in the sample at year t-1. The market value of a firm is calculated as the sum of its equity plus the book values of short-term and long-term debts. Y, I and LTD are as defined

3. Results

Table 1 provides descriptive statistics of the capital structures and financing components of all firms in the sample during the period from 2004 to 2008. On average, the equity of the firms (as a percentage of either market or book capital) is larger than their long-term debt. Common equity as a percentage of market (book) capital is 0.65 (0.56) and long-term debt as a percentage of market (book) capital is 0.16 (0.19). Firms in the sample make gross

Table 1. Descriptive statistics

	AVERAGE	SD	MIN	25TH	MEDIAN	75TH	MAX
Equity1	0.65	0.19	0.08	0.54	0.67	0.76	0.99
LTD1	0.16	0.14	0.00	0.02	0.14	0.25	0.59
Equity2	0.56	0.19	0.07	0.41	0.58	0.69	1.00
LTD2	0.19	0.15	0.00	0.03	0.19	0.30	0.57
Y	0.07	0.14	-1.11	0.05	0.08	0.13	0.43
Dep	0.04	0.04	-0.07	0.01	0.03	0.06	0.17
ΔS	0.12	0.35	-0.48	-0.11	0.08	0.33	2.43
ΔLTD	-0.02	0.28	-0.77	-0.22	-0.01	0.18	0.80
Div	0.05	0.06	0.00	0.02	0.04	0.07	0.44
Int	0.02	0.02	-0.05	0.01	0.02	0.03	0.10
I	0.14	0.25	-0.47	0.02	0.09	0.21	1.55

Notes: Equity1 is the market value of equity as proportions of a firm's market capital. LTD1 is the book value of long-term debt as proportions of a firm's market capital. Market capital is the sum of the market value of its common stock plus the book value of its short-term and long-term debts. Equity2 is the book value of equity as proportions of a firm's book capital. LTD2 is the book value of long-term debt as proportions of a firm's book capital. Book capital is the sum of the book value of its common equity plus the book value of its short-term and long-term debts. Y is defined as the sum of income before extraordinary items, extraordinary item, interest, income statement deferred taxes and depreciation. Dep is depreciation expenses. ΔS is the net new issues of shares which balance the cash flows. ΔLTD is the change in the book value of long-term debt. I is the change in book capital from t-t to year t, plus depreciation. Int is total interest expenses paid to creditors. Div is total dividends paid to shareholders. These variables are deflated by the beginning of year book assets. There are 319 firm-year observations from 2004 to 200

above. FS, FB and TV are the dollar amounts of the shares issued, buybacks and the market value capital of the firms, respectively; r is the firm's (implied) cost of capital.

Next firms are sorted according to each sub index as well as the overall index to observe whether firms in the top 33% of each index which are defined as firms with strong corporate governance, have a different financing pattern than that of firms in the bottom 33%, defined as firms with weak corporate governance.

Financial data and corporate governance variables are collected from the annual reports of firms listed in the NZX Deep Archive and Reuter DataStream databases for the period 2004 to 2008. In total, 88 non-financial firms are in the final sample. Observations that do not have the necessary variables for the regression analysis are excluded from the sample and extreme firm variables that are below the 1st percentile and above the 99th percentile are trimmed to avoid the effects of outliers. The final sample consists of 319 firm year observations.

investments that average 14 percent of their book capital. In addition, firms also make substantial payments to security holders. Average dividends and interest expenses account for 5 percent and 2 percent of book capital, respectively. Firms also reduce their long-term debt by 2 percent. These cash outlays are not fully supported by cash earnings however, as total cash earnings, Y + Dep, account for only 11 percent of book capital.

To examine whether firms with weak governance have different financing patterns relative to firms with strong governance, firms are sorted based on the values of the total index and of each index of the corporate governance subsets. Then the samples are divided into three parts and firms are classified as strong (weak) corporate governance firms if they are in the top (bottom) 33 per cent of each index.

Table 2 reports firm leverage as a component of market and book capital that is organised based on the total index and its sub-indices. Taken as a whole, the results suggest that poorly governed firms have more leverage than are

well governed ones. The difference in the level of leverage is statistically significant across different governance mechanisms, except when sorted according to board composition index (Panel B). One possible explanation for the insignificant difference in the latter category could be that not all independent directors are truly independent or have the necessary skills and knowledge to effectively carry out their monitoring duties (Koerniadi and Tourani-Rad, 2012). Another possible reason is that board monitoring and other provisions may act as substitutes. When managerial incentives are aligned with shareholder interests through the firm's compensation policy, the need for the board to monitor management is reduced (Ward et al., 2009).

Table 2. Long term debt sorted according to the value of each index

Panel A. Total Index			
Component of Market Capital		Component of Book Capital	
STRONG	WEAK	STRONG	WEAK
0.14	0.18**	0.19	0.22
Panel B. Board Composition			
Component of Market Capital		Component of Book Capital	
STRONG	WEAK	STRONG	WEAK
0.15	0.16	0.19	0.19
Panel C. Compensation Policy			
Component of Market Capital		Component of Book Capital	
STRONG	WEAK	STRONG	WEAK
0.13	0.19***	0.18	0.21*
Panel D. Shareholder Rights			
Component of Market Capital		Component of Book Capital	
STRONG	WEAK	STRONG	WEAK
0.12	0.18***	0.16	0.21**

Notes: A firm's market capital is the sum of the market value of its common stock plus the book value of its short-term and long-term debts. A firm's book capital is the sum of the book value of its common equity plus the book value of its short-term and long-term debts. Firms in the top (bottom) 33% sorted based on the corresponding corporate governance index are classified as strong (weak) governed firms. *, **, *** denote significantly different from their counterparts at 10%, 5% and 1% respectively (for two-tail tests).

Table 3 focuses on how firms with different corporate governance levels finance their investments. Panel A shows that firms with stronger governance invest around 12 per cent of book capital and pay dividends and interest expenses of 5 percent and 2 percent of book capital, respectively. Because cash earnings, Y + Dep, are not sufficient to finance these cash outlays (11 percent), these firms are likely to issue equity rather than debt to finance their expenditures. These financing patterns however, are not statistically different from those of firms with weak governance.

The costs of capital of poorly governed firms are observed to be significantly higher than those of strong firms with high governance scores. This is in accordance with the previous

related literature such as Chen et al. (2009) who find that firm-level corporate governance quality has a significantly negative effect on the cost of equity capital in countries with weak legal protection of investors. Financing patterns of strong and weak governance firms are similar when sorted according to their board composition index (Panel B).

When firms are ranked according to the compensation policy index (Panel C), firms that have a better alignment among their managers' incentive with those of shareholders are observed to finance their cash shortages by issuing equity, whereas firms with a low compensation policy index are likely to have issued more debt. Similarly, firms with weak shareholder rights are more likely to issue debt to

finance their investments (Panel D). Cash earnings of firms with higher governance scores exceed investment outlays. Cash earnings average 13 percent and gross investments average 11 percent of book capital, respectively. It is further noted that firms with low governance scores do not have sufficient cash for their expenditures and rely significantly on issuing debt to cover their cash shortages. An interesting finding is that the dividend policies of both types of firm are similar. This result is inconsistent with prior studies (Adjoud

and Ben-Amar, 2010; Jiraporn and Ning, 2006) that find positive effect of corporate governance on pay-out policy. A possible explanation to this finding is that, as New Zealand adopts a dividend imputation tax system, pay-out policy in New Zealand is likely to be motivated more by tax purposes rather than driven by corporate governance.

4. Conclusion

This paper examines the effects of corporate governance on financing policy of New Zealand firms. Cost of capital of firms with a high corporate governance score is observed to be significantly lower than that of firms with a low governance score. Furthermore, firms with weak corporate governance mechanisms are more leveraged

than are firms with strong governance mechanisms. As New Zealand adopts a dividend imputation tax system, the insignificant effect of corporate governance on dividend policy suggests that dividend policy in New Zealand could be due to other reasons such as tax purposes.

Table 3. Cash inflows and outflows as percentages of beginning of year book capital of strong and weak governance firms

Panel A. Total Index															
STRONG							WEAK								
Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	COC	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	COC
0.07	0.04	0.10	-0.01	0.12	0.05	0.02	0.18	0.05	0.04	0.12	0.02	0.16	0.04	0.03*	0.31**
Panel B. Board Composition															
STRONG							WEAK								
Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	COC	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	COC
0.07	0.04	0.08	0.00	0.12	0.05	0.02	0.14	0.07	0.04	0.15	-0.02	0.16	0.06	0.03*	0.31
Panel C. Compensation Policy															
STRONG							WEAK								
Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	COC	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	COC
0.07	0.05***	0.17***	-0.09	0.13	0.05	0.02	0.24	0.06	0.03	0.05	0.06***	0.14	0.05	0.02	0.25
Panel D. Shareholder Rights															
STRONG							WEAK								
Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	COC	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	COC
0.08**	0.05**	0.15	-0.1	0.11	0.05	0.02	0.24	0.04	0.03	0.12	0.02***	0.14	0.05	0.02	0.3

Notes: Y_t is defined as the sum of income before extraordinary items, extraordinary item, interest, income statement deferred taxes and depreciation. Dep_t is depreciation expenses. ΔS_t is the net new issues of shares which balance the cash flows. ΔLTD_t is the change in the book value of long-term debt. It is the change in book capital from t-1 to year t, plus depreciation. Int_t is total interest expenses paid to creditors. Div_t is total dividends paid to shareholders. COC is cost of capital. Firms in the top (bottom) 33% sorted based on the corresponding corporate governance index are classified as strong (weak) governed firms. *, **, *** denote significantly different from their counterparts at 10%, 5% and 1% respectively (for two-tail tests assuming unequal variance).

Note

1. This article is based on Koerniadi and Tourani-Rad (2013)

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Corresponding Author:

Hardjo Koerniadi, Department of Finance, Auckland University of Technology
 PO Box 92006, Auckland 1142,, New Zealand.
 Email: hkoernia@aut.ac.nz