

Corporate governance, financing pattern and cost of capital:

Evidence from New Zealand companies

ABSTRACT

We examine whether different and combined corporate governance factors have any effects on how firms are financed, how firms finance their investments, and their cost of capital. Our study finds that different corporate governance controls have different effects on firms' financing policy and capital structures. Consistent with the substitution hypothesis, firms with low incentive alignments and shareholder rights use debt as their control mechanism. Firms with high commitment to disclose corporate governance practices are reported to use not only debt but also dividends as their governance instruments which are consistent with the outcome hypothesis. While cost of capital of firms with best-governance mechanisms are consistently lower than those worst-governance firms, the results show that only firms with high commitment to disclose their governance systems have significantly lower cost of capital than that of their counterparts.

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I. Introduction

Firms' financing policy determines the way firms finance their investments, their capital structures and eventually their costs of capital. Accordingly, a firm should set its financing policy that minimizes its cost of capital and, at the same time, maximizes its value. Agency cost theory however, assumes that managers pursue their self-interest at the expense of shareholders. Empirical studies on the relation between agency problems, such as entrenched managers, and capital structure decisions support this notion. Entrenched managers are reported to be more likely to issue equity than debt to protect themselves from external corporate governance mechanism (see for example, Lundstrum, 2009; DeJong and Veld, 2001; Grossman and Hart, 2004; Berger et al, 1997; Friend and Lang, 1988). Other studies however, suggest that entrenched managers might increase debt in an attempt to shield from takeovers (Harris and Raviv, 1988; Stulz, 1988). Nevertheless, the effects of entrenched management to firm value are similar. As entrenched managers are unlikely to choose optimal debt level, their capital structure decisions would lower firm value and increase cost of capital. Good corporate governance is expected to alleviate this problem either by linking managers' incentives to their firm value, effective monitoring by an independent board, not allowing staggered board or excessive dilution from stock options, or perhaps a combination of these approaches.

Prior studies on the association between corporate governance and firms' financing decisions usually use a specific corporate governance factor such as outside directors, board size, stock options, staggered boards, antitakeover index or dividends as the corporate governance instrument (see for example, Berger et al. 1997; Wen et al., 2002; Abor, 2007; Jiraporn and Ning, 2006; Kang et al., 2006; Lambert et al., 1989; Fenn and Liang, 2001). The results however, are mostly inconclusive. For example, Jiraporn and Ning (2006) use antitakeover index as a proxy for shareholder rights and report that shareholder rights are negatively associated with dividends while another study, using staggered boards as proxy for

shareholder rights, documents a positive relation (Jiraporn and Chintrakarn, 2009). The association between outside directors and firm leverage is also far from clear cut. Abor (2007) reports a positive relation between outside directors and leverage while Wen et al. (2002) find the opposite, and Mehran (2002) finds that outside directors have no significant effects on leverage. Stock options are reported to be negatively correlated with dividends (Lambert et al., 1989). However, Kang et al. (2006) observe that, consistent with White (1996) and Fenn and Liang (2001), stock options are positively related to the amount of dividends paid.

The inconclusive results on the relation between corporate governance and firms' financing might be attributed to the use of a specific corporate governance factors as it is possible that these factors interrelate with each other as suggested by Miguel et al. (2005). This issue is significant as interrelation effects among different corporate governance factors may determine firms' financing policy, their capital structures and cost of capital. Empirical research on the association between full corporate governance measures and financing pattern and cost of capital, however, is not well documented.

This study examines whether different and combined corporate governance factors have any effects on how firms are financed, how firms finance their investments, and their cost of capital. Our study uses a different approach by combining different instruments in each corporate governance mechanism and constructing an index for each mechanism. This approach enables us to observe whether different corporate governance factors are interrelated among each other in determining firms' financing policy and/or capital structure. For example, is the financing policy of a firm with an independent board but has weak shareholders rights different from that of with strong shareholders rights? or, firms with staggered boards but have compensation policy that links managers' incentives with performance may have different capital structure decisions from those of firms that require all directors stand for re-election annually but poor compensation policy.

Our study also provides additional evidence on the competing two major hypotheses in the corporate governance literature, the outcome hypothesis and the substitution hypothesis. The outcome hypothesis states that firms with strong corporate governance will pay (issue) fewer dividends (debt) while the substitution hypothesis suggests the opposite (LaPorta et al., 2000). So far, empirical supports for these hypotheses are mixed. LaPorta et al.'s (2000)

results generally support the outcome hypothesis while those of Jiraporn and Ning (2006) are consistent with the substitution hypothesis.

We find that different corporate governance controls have different effects on firms' financing policy and capital structures. Board composition is, surprisingly, reported to have no significant effects on financing decisions. Firms with low incentive alignments and shareholder rights use debt as their control mechanism. Firms with high commitment to disclose corporate governance practices are reported to use not only debt but also dividends as their governance instruments. Furthermore, while cost of capital of firms with best-governance mechanisms are consistently lower than those worst-governance firms, the results show that only firms with high commitment to disclose their governance systems have significantly lower cost of capital than their counterparts.

The remainder of the paper is organized as follows. Section two describes the methodology and the data. Section three discusses the results and section four concludes.

II. Methodology and Data

We construct a New Zealand Corporate Governance Index by creating four sub-indices for four corporate governance factors namely board composition, compensation policy, shareholder rights and disclosure policy. We also construct a total index by summing up all the total values of the four sub-indices. The criteria that we use for constructing the sub-indices are similar to those of McFarland (2002)¹. The board composition sub-index measures board independence, CEO duality, busyness of directors and the number of annual board meetings. The compensation policy sub-index is related to directors' share ownership and option plans. This sub-index captures the alignment of directors' interests with those of shareholders. The shareholder rights sub-index is whether stock options will dilute ownership and voting rights, and whether boards are staggered. The disclosure sub-index measures the firms' commitment to disclose the information about their corporate governance practises.

We also adopt Fama and French's (1999) methodology to observe a firm's financing pattern and its cost of capital. We use the following equation to observe how a firm finance itself:

¹ See Appendix for details.

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

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. I_t 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. All variables are deflated by the beginning of year book assets. We do not include the change in short-term interest bearing liabilities in this equation because data for this variable are not available. As a result, we overstate ΔS_t . However, as the change in short-term interest bearing liabilities is usually small, the omission of this variable should not have a significant impact on ΔS_t .

As internal financing, $RCE_t = Y_t + Dep_t - Int_t - Div_t$, and external financing equals $\Delta S_t + \Delta LTD_t$, then

$$I_t = RCE_t + \Delta S_t + \Delta LTD_t \quad (2)$$

To measure firms' cost of capital every year we estimate the following equation:

$$IV_{t-1} = \frac{Y_t + Dep_t - I_t}{(1+r)^t} + \frac{FS_t - FB_t + \Delta LTD_t}{(1+r)^t} + \frac{TV_t}{(1+r)^t} \quad (3)$$

IV_{t-1} is the initial market value of a firm's capital in the sample at year t-1. We calculate a firm's market value as the sum of market value of equity plus book values of short-term and long-term debts. Y , I and LTD are as defined above. FS , FB and TV respectively are the

dollar amounts of shares issued, buybacks and firm's market value capital. r is the firm's cost of capital.

Further, we sort firms based on the values of each sub-index and total index of corporate governance and examine if there are any significant differences in the financing policies of good and bad corporate governance firms. We divide the sample into three parts and classify good (bad) corporate governance firms if they are in the top (bottom) 33%. Employing this methodology allows us to look into whether good and bad corporate governance as measured by the indices have different impacts on how firms are financed, how they finance their investment and their cost of capital.

We collect financial data and corporate governance variables from annual reports of firms' listed in the NZX Deep Archive database from 2004 to 2008. As price data from this database are not adjusted for stock splits and stock dividends, we collect price data to calculate the market value of firms' equity from Datastream database. From the NZX Deep Archive database we obtain 88 non financial firms listed in 2004. The number of sample firms in our study is similar to that in prior New Zealand studies (Orr et al., 2005; Hossain et al., 2000). We trim data that don't have the necessary variables for the regression, and extreme firm performance variables that are below the 1th percentile and above the 99th percentile. The final sample consists of 319 firm year observations.

III. Results

Table 1 describes descriptive statistics of capital structures and financing components of all firms in the sample during the period of 2004 to 2008. On average, firms' equity as percentage of either market or book capital is larger than firms' long-term debt. Common equity as percentage of market (book) capital is 0.65 (0.56) and long-term debt is 0.16 (0.19). The low average level of long-term debt in firms' capital structure as opposed to that of firms' equity suggests that debt is not widely used as a corporate governance mechanism to control agency problems. This notion is supported when we classify firms based on the sub-indices provided in Table 2 below. Table 1 also shows that firms in the sample make gross investment averages 14 percent of 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, however, are not fully supported by cash earnings. Total cash earnings, $Y + \text{Dep}$, account for only 11 percent of book capital. As a result, firms make average net new issues of security by 12 percent.

[Insert Table 1 here]

Table 2 reports firms' capital structures as components of market and book capitals, and sorted based on total index and sub-indices of corporate governance factors. The results suggest that different governance factors have different effects on capital structure decisions. Panel A of Table 2 shows components of firms' capital structures sorted based on total index of corporate governance factors. On average best-governance firms have significantly higher market equity than that of worst-governance firms suggesting that the market considers best-governance firms as having more value than those of worst-governance firms. The results however, show that long-term debt as percentages of both market and book capitals, and equity measured as component of book capital of best-governance firms are not significantly different from those of worst-governance firms.

Panel B shows capital structures sorted based on board composition index. The magnitudes of the components of capital structures are similar to those sorted based on total index. However, all components of capital structures of best-governance firms, except for common stocks as component of book equity, are not significantly different from those of worst-governance firms. The results are different when firms are sorted according to compensation policy index (Panel C). Consistent with the substitution hypothesis, long-term debt of worst-governance firms is significantly higher than that of best-governance firms. Common stock of these firms as component of book capital is also significantly higher than that of best-governance firms. These results are consistent with entrenched management theory that managers of firms that have weak incentive alignment policy with shareholders' objectives are more likely to issue equity than debt and that these firms rely more on debt to mitigate agency costs (Lundstrum, 2009; Florackis and Ozkan, 2009; Jung et al., 1996). The results are similar when firms are ranked according to shareholder rights index (Panel D). Firms with poor shareholder rights use debt as an alternative corporate governance control. Panel E reports results for firms sorted based on firms' commitment to disclose corporate governance

practices. The results show that firms with good commitment have higher leverage consistent with the outcome hypothesis.

[Insert Table 2 here]

Table 3 focuses on how firms with different corporate governance levels finance their investments. Panel A shows that, similar to worst-governance firms, best-governance firms invest around 15% of book capital, pay dividends and interest expenses of 5 percent and 2 percent of book capital respectively. As cash earning, $Y + Dep$, are not sufficient to finance these cash outlays, firms prefer issuing equity to issuing debt to finance their expenditures. The financing pattern of firms sorted based on board composition index is similar (Panel B). These results suggest that board composition and total value of corporate governance index fail to control for agency costs (Jung et al., 1996).

When firms are classified according to compensation policy (Panel C), firms that aligned their managers' incentives with those of shareholders finance their cash shortages by issuing equity. This is consistent with Kang et al. (2006) that equity based compensation is a significant determinant of corporate investment. Consistent with the substitution hypothesis, firms with poor compensation policy are observed to use long term debt to finance their cash shortages. The results are similar when firms are ranked based on shareholder rights index in Panel D. Cash earnings of best-governance firms exceed investment outlays. Cash earnings are 13 percent and gross investment averages 11 percent of book capital. However, as firms make payments to security holders, they issue equity to finance these outflows. In contrast, worst-governance firms do not have sufficient cash for their expenditures and rely significantly on issuing debt to cover the shortages. Similarly, firms with good commitment to disclose their corporate governance system have sufficient cash earning to finance their investment spending. Moreover, they rely on debt issues and dividends to control for agency costs. The financing pattern of firms with low commitment to disclose their corporate governance practises however, is consistent with entrenched management. These firms have low cash earnings and are more likely to issue equity than debt for financing.

[Insert Table 3 here]

Inconsistent with prior studies however, the results reported in table 3 suggest that firms in the sample do not use dividends as their corporate governance instrument to reduce agency costs (Jiraporn and Ning, 2006; Sawicki, 2009). Dividends of best-governance firms are not significantly different from those of worst-governance firms, except when sorted according to disclosure policy index. A possible explanation is that best-governance firms might have external financing constraints preventing them to pay out more dividends (Chae et al., 2009).

Table 4 examines how firms finance investment. The results show that there are no significant differences between good-and bad-governance firms on how they finance their investments when sorted based on total index and board composition index (Panels A and B). Similar to our discussion above, when firms are sorted based on compensation policy, best-governance firms issue significantly larger equity than that of worst-governance firms while the latter issue significantly more debt than that of best-governance firms (Panel C). Firms with high shareholder rights index have significantly higher retained cash earnings (RCE) to finance investment than those of low index (Panel D). Firms with high disclosure policy index are observed to have higher retained cash earnings and debt issues than those of low disclosure policy. Consistent with entrenched management hypothesis, firms with low disclosure policy index issue significantly higher equity than that of their counterparts.

[Insert Table 4 here]

Table 5 reports the cost of capital of firms based on sub- and total corporate governance index. The results show that costs of capital of worst-governance firms are higher than those of best-governance firms. The difference is statistically significant when firms are sorted according to the index to disclose corporate governance practices. These results are consistent with agency cost theory that capital structures of these worst-governance firms deviate further from optimal level than best-governance firms resulting in higher costs of capital.

[Insert Table 5 here]

IV. Summary

A firm's financing policy determines its capital structure and subsequently, its cost of capital. Agency cost theory suggests that agency problems would influence managers' to make sub-optimal financing decisions in order to maximize their self interest at the expense of shareholders. Effective corporate governance mechanisms are expected to alleviate these problems.

Our paper examines the effects of different corporate governance factors on financing decisions. We find that not all corporate governance factors make significantly different impacts on financing decisions. Board composition is found to have no significant effects on how firms finance their investments. We also observe that firms with compensation policy that aligned managers' incentives with those of shareholders issue more stocks than those of firms with low incentive alignments. However, the latter are reported to issue significantly larger debt which is consistent with the notion that these firms use debt as a governance instrument consistent with the substitution hypothesis. The use of debt as a governance control is also applied by firms with weak shareholder rights. Further, we find that, supporting the outcome hypothesis, firms with high commitment to disclose their corporate governance practises not only use debt but also dividend to control agency costs, while their counterparts are more likely to issue equity which is consistent with entrenched management hypothesis.

Finally, we report that cost of capital of firms with high corporate governance values is consistently lower than that of firms with low governance values. The difference however, is statistically significant only for firms with high disclosure policy.

Appendix: Components of Corporate Governance Index

Sub-Index 1: Board composition *Maximum marks: 40 marks*

Independent	8 marks for boards with at least 66% independent directors. 4 marks if 50% or more are independent. 0 mark if less than 50% are independent.
Audit committee	6 marks if the committee is fully independent. 2 if there are one or more related directors. 0 if a member of management is on the committee.
Compensation committee	4 marks if the committee is fully independent. 2 if there are one or more related directors. 0 if a member of management is on the committee.
Nominating committee	3 marks if the committee is fully independent. 2 if there are one or more related directors. 0 if a member of management is on the committee. 0 if there is no nominating committee.
Duality	5 marks if the jobs are split. 2 marks if the chairman is also a related director. 3 marks if the jobs are not split, but there is an independent lead director.
Relationship among directors	Start with 5 marks. Minus 3 if marks if the CEO swaps board with the CEO of another company. Minus 2 marks if 3 or more directors are together on the board of another public company. Minus 2 marks if any director who is on more than 8 other

	for-profit corporate boards. (score can go below zero).
CEO commitment	2 marks if the CEO sits on 3 or fewer other boards of public company. 0 mark if more than 3.
Formal system of board performance	2 marks if any. 0 if there is no such system.
Board meeting without management present	2 marks if yes, 0 mark if no.
Number of board meetings	3 marks if the information is disclosed and both the board and audit committee meets at least 4 times. 1 mark if they meet less often, or if only partial number information about the number of meeting. 0 mark if this information is not disclosed.

Sub-Index 2: Shareholding and compensation issues *Maximum marks: 23 marks*

Directors required to own stock (stock option don't count)	4 marks if share ownership is mandatory and equals at least 3 times the annual retainer paid to directors. 2 marks if mandatory but ownership is lower. 0 mark if ownership is not mandatory.
Director own stock	Start with 4 marks. Minus 1 mark if each director has less than 1,000 shares after sitting on the board for at least a year. (Can go below zero).
CEO required to own stock (stock options don't count)	3 marks if required, or if the CEO is the controlling shareholder of the firm.
CEO own shares	3 marks if the CEO owns more than 50,000 shares after 2 years on the job. 2 marks if more than 20,000 shares. 0 mark if less than 20,000 shares.
Directors in their own separate option plan	3 marks if yes or if directors don't get stock options
Loans to directors	6 marks if there are no loans or company makes loans with interest payable. 0 mark if loans are interest free.

Sub-Index 3: Shareholder rights policy *Maximum marks: 22 marks*

Re-election of directors	2 marks for annual election of all directors. 0 mark for staggered boards.
Stock option dilutive	8 marks if dilution is <5% of outstanding shares. 6 marks if dilution is between 5% and 10%. 0 mark if dilution is more than 10%.
Option re-priced, exercise date extended or exchanged for lower priced option	4 marks if no. 0 mark if yes.
Voting shares	8 marks if there are no non-voting or subordinate voting shares. 0 mark if voting control is 5 times greater than the ownership stake.

Sub-Index 4: Disclosure policy *Maximum marks: 15 marks*

Full statement of corporate governance practices	3 marks if the company fully addresses all topics required by New Zealand Securities Commission. 1 mark if the company gives partial answer or chooses to discuss some of the requirements. 0 mark if there is no statement on governance practices.
Information on related directors	4 marks for full disclosure or relationship. 2 marks if information is missing.
Payment for auditors	4 marks for disclosure.
Board member biographies	1 mark for disclosure.
Information on other boards the company director's sit on	1 mark for disclosure.
Attendance records of directors	2 marks for disclosure, but minus 1 mark for poor attendance.

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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 2008.

Table 2

Nonfinancial corporate capital structures of best- and worst-governance firms

Panel A		TOTAL MARKS							
		Component of Market Capital				Component of Book Capital			
		Common Stock		LTD		Common Stock		LTD	
	N	BEST	WORST	BEST	WORST	BEST	WORST	BEST	WORST
2004	70	0.71	0.67	0.15	0.15	0.55	0.55	0.23	0.19
2005	61	0.71	0.61	0.16	0.18	0.59	0.55	0.22	0.19
2006	70	0.72	0.65	0.14	0.13	0.57	0.55	0.21	0.15
2007	63	0.69	0.64	0.13	0.17	0.58	0.54	0.16	0.20
2008	55	0.56	0.51	0.18	0.24	0.52	0.53	0.21	0.20
2004-2008	319	0.69**	0.64	0.15	0.17	0.58	0.55	0.20	0.19

Panel B		BOARD COMPOSITION							
		Component of Market Capital				Component of Book Capital			
		Common Stock		LTD		Common Stock		LTD	
	N	BEST	WORST	BEST	WORST	BEST	WORST	BEST	WORST
2004	70	0.72	0.71	0.13	0.10	0.59	0.57	0.19	0.15
2005	61	0.72	0.61	0.14	0.16	0.62	0.54	0.19	0.18
2006	70	0.73	0.67	0.14	0.13	0.60	0.56	0.20	0.16
2007	63	0.70	0.68	0.14	0.15	0.63	0.56	0.16	0.21
2008	55	0.57	0.52	0.19	0.22	0.53	0.52	0.21	0.20
2004-2008	319	0.68	0.65	0.15	0.16	0.60*	0.55	0.19	0.19

Panel C		COMPENSATION POLICY							
		Component of Market Capital				Component of Book Capital			
		Common Stock		LTD		Common Stock		LTD	
	N	BEST	WORST	BEST	WORST	BEST	WORST	BEST	WORST
2004	70	0.70	0.69	0.11	0.17	0.55	0.58	0.17	0.22
2005	61	0.69	0.66	0.12	0.17	0.55	0.61	0.17	0.18
2006	70	0.64	0.69	0.13	0.16	0.49	0.61	0.20	0.20
2007	63	0.63	0.66	0.11	0.19	0.50	0.59	0.16	0.22
2008	55	0.55	0.54	0.14	0.31	0.49	0.58	0.18	0.28
2004-2008	319	0.65	0.65	0.13	0.19***	0.52	0.59***	0.18	0.21*

Panel D

SHAREHOLDERS RIGHT POLICY

	N	Component of Market Capital				Component of Book Capital			
		Common Stock		LTD		Common Stock		LTD	
		BEST	WORST	BEST	WORST	BEST	WORST	BEST	WORST
2004	70	0.73	0.70	0.10	0.15	0.61	0.56	0.14	0.20
2005	61	0.69	0.65	0.13	0.17	0.57	0.54	0.17	0.21
2006	70	0.64	0.67	0.14	0.14	0.52	0.56	0.20	0.19
2007	63	0.61	0.63	0.12	0.20	0.51	0.54	0.16	0.24
2008	55	0.55	0.51	0.13	0.31	0.52	0.55	0.16	0.28
2004-2008	319	0.65	0.65	0.12	0.18***	0.55	0.55	0.16	0.21**

Table 2 (continued)

Nonfinancial corporate capital structures of best- and worst-governance firms

Panel E

DISCLOSURE POLICY

	N	Component of Market Capital				Component of Book Capital			
		Common Stock		LTD		Common Stock		LTD	
		BEST	WORST	BEST	WORST	BEST	WORST	BEST	WORST
2004	70	0.73	0.70	0.10	0.15	0.61	0.56	0.14	0.20
2005	61	0.68	0.60	0.18	0.15	0.53	0.52	0.26	0.16
2006	70	0.67	0.66	0.17	0.11	0.49	0.57	0.26	0.13
2007	63	0.67	0.62	0.18	0.13	0.49	0.56	0.26	0.14
2008	55	0.58	0.48	0.22	0.23	0.54	0.53	0.24	0.19
2004-2008	319	0.65	0.62	0.19*	0.15	0.51	0.54	0.26***	0.16

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 Best (Worst) governed firms.

*, **, *** denote significantly different from their counterparts at 10%, 5% and 1% respectively (for two-tail tests). Significance is reported for full period only.

Table 3
Annual cash inflows and outflows as percentages of beginning of year book capital of best- and worst-governance firms

Panel A		TOTAL MARKS													
		BEST							WORST						
	N	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t
2004	70	0.05	0.04	0.10	0.02	0.15	0.05	0.02	0.04	0.05	0.13	-0.02	0.13	0.05	0.02
2005	61	0.12	0.05	0.04	0.06	0.18	0.07	0.02	0.02	0.03	0.15	0.01	0.15	0.04	0.02
2006	70	0.08	0.05	0.06	0.03	0.14	0.05	0.02	0.06	0.05	0.24	-0.08	0.19	0.06	0.02
2007	63	0.10	0.04	0.05	-0.05	0.06	0.06	0.02	0.07	0.04	0.18	-0.03	0.18	0.06	0.02
2008	55	0.04	0.03	0.07	-0.02	0.05	0.04	0.03	0.07	0.03	0.10	-0.05	0.08	0.04	0.03
2004-2008	319	0.07	0.04	0.08	0.00	0.13	0.05	0.02	0.05	0.04	0.15	-0.02	0.15	0.05	0.02

Panel B		BOARD COMPOSITION													
		BEST							WORST						
	N	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t
2004	70	0.08	0.04	0.14	-0.03	0.17	0.05	0.02	0.06	0.05	0.16	-0.11	0.10	0.05	0.02
2005	61	0.11	0.04	0.05	0.03	0.14	0.07	0.02	0.05	0.04	0.16	-0.01	0.16	0.05	0.02
2006	70	0.07	0.04	0.07	0.03	0.14	0.05	0.02	0.08	0.05	0.22	-0.06	0.20	0.06	0.03
2007	63	0.08	0.03	0.04	-0.01	0.08	0.05	0.02	0.08	0.03	0.15	-0.02	0.16	0.06	0.02
2008	55	0.05	0.04	0.05	0.01	0.06	0.06	0.02	0.10	0.03	0.12	-0.02	0.15	0.04	0.03
2004-2008	319	0.07	0.04	0.08	0.00	0.12	0.05	0.02	0.07	0.04	0.15	-0.02	0.16	0.06	0.03*

Panel C		COMPENSATION POLICY													
		BEST							WORST						
	N	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t
2004	70	0.04	0.05	0.16	-0.10	0.08	0.05	0.01	0.08	0.03	-0.01	0.08	0.10	0.06	0.02
2005	61	0.10	0.06	0.14	-0.09	0.14	0.06	0.02	0.06	0.03	0.07	0.04	0.14	0.05	0.02
2006	70	0.07	0.04	0.16	-0.11	0.10	0.04	0.03	0.06	0.03	0.09	0.07	0.18	0.04	0.02
2007	63	0.07	0.04	0.20	-0.14	0.10	0.05	0.02	0.06	0.03	0.06	0.04	0.13	0.04	0.02
2008	55	0.09	0.04	0.18	-0.09	0.13	0.04	0.03	0.07	0.03	-0.03	0.13	0.13	0.05	0.02
2004-2008	319	0.07	0.05***	0.17***	-0.09	0.13	0.05	0.02	0.06	0.03	0.05	0.06***	0.14	0.05	0.02

Table 3 (continued)
Annual cash inflows and outflows as percentages of beginning of year book capital of best- and worst-governance firms

Panel D		SHAREHOLDER RIGHTS													
		BEST							WORST						
	N	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t
2004	70	0.07	0.05	0.17	-0.11	0.11	0.05	0.01	-0.01	0.04	0.13	0.03	0.11	0.05	0.02
2005	61	0.11	0.06	0.12	-0.06	0.14	0.06	0.02	0.06	0.04	0.07	0.00	0.10	0.05	0.02
2006	70	0.07	0.05	0.18	-0.08	0.16	0.03	0.03	0.08	0.04	0.16	-0.04	0.17	0.05	0.02
2007	63	0.07	0.04	0.11	-0.13	0.03	0.05	0.02	0.05	0.03	0.11	0.05	0.18	0.04	0.02
2008	55	0.09	0.04	0.14	-0.08	0.12	0.04	0.03	0.07	0.02	0.00	0.12	0.14	0.05	0.02
2004-2008	319	0.08**	0.05**	0.15	-0.10	0.11	0.05	0.02	0.04	0.03	0.12	0.02***	0.14	0.05	0.02

Panel E		DISCLOSURE POLICY													
		BEST							WORST						
	N	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t	Y _t	Dep _t	ΔS	ΔLTD _t	I _t	Div _t	Int _t
2004	70	0.07	0.05	0.17	-0.11	0.11	0.05	0.01	-0.01	0.04	0.13	0.03	0.11	0.05	0.02
2005	61	0.12	0.05	0.04	0.07	0.19	0.06	0.02	0.05	0.04	0.24	-0.08	0.17	0.05	0.02
2006	70	0.10	0.04	0.08	0.07	0.21	0.06	0.02	0.06	0.05	0.24	-0.14	0.14	0.05	0.02
2007	63	0.12	0.04	-0.01	0.04	0.09	0.06	0.03	0.04	0.04	0.27	-0.13	0.15	0.05	0.02
2008	55	0.11	0.04	-0.03	0.07	0.10	0.06	0.03	0.03	0.02	0.15	-0.08	0.05	0.04	0.03
2004-2008	319	0.10***	0.04	0.00	0.06***	0.13	0.06**	0.02	0.04	0.04	0.22***	-0.09	0.14	0.04	0.02

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. I_t 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. Firms in the top (bottom) 33% sorted based on the corresponding corporate governance index are classified as Best (Worst) governed firms.

*, **, *** denote significantly different from their counterparts at 10%, 5% and 1% respectively (for two-tail tests). Significance is reported for full period only.

Table 4

**Investment and forms of financing as percentages of beginning of year book capital
of best- and worst-governance firms**

Panel A		TOTAL MARKS							
		BEST				WORST			
	N	I _t	RCE _t	ΔS _t	ΔLTD _t	I _t	RCE _t	ΔS _t	ΔLTD _t
2004	70	0.15	0.02	0.10	0.02	0.13	0.02	0.13	-0.02
2005	61	0.18	0.08	0.04	0.06	0.15	-0.01	0.15	0.01
2006	70	0.14	0.05	0.06	0.03	0.19	0.03	0.24	-0.08
2007	63	0.06	0.06	0.05	-0.05	0.18	0.03	0.18	-0.03
2008	55	0.05	0.00	0.07	-0.02	0.08	0.03	0.10	-0.05
2004-2008	319	0.13	0.04	0.08	0.00	0.15	0.02	0.15	-0.02

Panel B		BOARD COMPOSITION							
		BEST				WORST			
	N	I _t	RCE _t	ΔS _t	ΔLTD _t	I _t	RCE _t	ΔS _t	ΔLTD _t
2004	70	0.17	0.05	0.14	-0.03	0.10	0.05	0.16	-0.11
2005	61	0.14	0.06	0.05	0.03	0.16	0.01	0.16	-0.01
2006	70	0.14	0.04	0.07	0.03	0.20	0.04	0.22	-0.06
2007	63	0.08	0.05	0.04	-0.01	0.16	0.03	0.15	-0.02
2008	55	0.06	0.00	0.05	0.01	0.15	0.05	0.12	-0.02
2004-2008	319	0.12	0.04	0.08	0.00	0.16	0.03	0.15	-0.02

Panel C		COMPENSATION POLICY							
		BEST				WORST			
	N	I _t	RCE _t	ΔS _t	ΔLTD _t	I _t	RCE _t	ΔS _t	ΔLTD _t
2004	70	0.08	0.03	0.16	-0.10	0.10	0.03	-0.01	0.08
2005	61	0.14	0.08	0.14	-0.09	0.14	0.02	0.07	0.04
2006	70	0.10	0.05	0.16	-0.11	0.18	0.03	0.09	0.07
2007	63	0.10	0.04	0.20	-0.14	0.13	0.02	0.06	0.04
2008	55	0.13	0.05	0.18	-0.09	0.13	0.02	-0.03	0.13
2004-2008	319	0.13	0.05	0.17***	-0.09	0.14	0.03	0.05	0.06***

Panel D		SHAREHOLDER RIGHTS							
		BEST				WORST			
	N	I _t	RCE _t	ΔS _t	ΔLTD _t	I _t	RCE _t	ΔS _t	ΔLTD _t
2004	70	0.11	0.05	0.17	-0.11	0.11	-0.04	0.13	0.03
2005	61	0.14	0.09	0.12	-0.06	0.10	0.02	0.07	0.00
2006	70	0.16	0.06	0.18	-0.08	0.17	0.04	0.16	-0.04
2007	63	0.03	0.04	0.11	-0.13	0.18	0.01	0.11	0.05
2008	55	0.12	0.06	0.14	-0.08	0.14	0.02	0.00	0.12
2004-2008	319	0.11	0.06***	0.15	-0.10	0.14	0.01	0.12	0.02***

Table 4 (continued)**Investment and forms of financing as percentages of beginning of year book capital
of best- and worst-governance firms**

	DISCLOSURE POLICY								
	N	BEST				WORST			
		I_t	RCE_t	ΔS_t	ΔLTD_t	I_t	RCE_t	ΔS_t	ΔLTD_t
2004	70	0.11	0.05	0.17	-0.11	0.11	-0.04	0.13	0.03
2005	61	0.19	0.08	0.04	0.07	0.17	0.01	0.24	-0.08
2006	70	0.21	0.05	0.08	0.07	0.14	0.03	0.24	-0.14
2007	63	0.09	0.06	-0.01	0.04	0.15	0.01	0.27	-0.13
2008	55	0.10	0.07	-0.03	0.07	0.05	-0.01	0.15	-0.08
2004-2008	319	0.13	0.06***	0.00	0.06***	0.14	0.01	0.22***	-0.09

Notes: Retained cash earnings, RCE_t , is $Y_t + Dep_t - Int_t - Div_t$. 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. I_t 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. Firms in the top (bottom) 33% sorted based on the corresponding corporate governance index are classified as Best (Worst) governed firms.

*** denotes significantly different from their counterparts at 1% (for two-tail tests). Significance is reported for full period only.

Table 5**Cost of capital of best- and worst-governance firms**

Panel A	TOTAL MARKS		
	N	BEST	WORST
2004	70	0.30	0.25
2005	61	0.50	0.12
2006	70	0.31	0.31
2007	63	0.06	0.71
2008	55	-0.05	-0.04
2004-2008	319	0.21	0.30

Panel B	BOARD COMPOSITION		
	N	BEST	WORST
2004	70	0.17	0.30
2005	61	0.36	0.18
2006	70	0.33	0.33
2007	63	0.09	0.69
2008	55	-0.06	0.05
2004-2008	319	0.14	0.31

Panel C	COMPENSATION POLICY		
	N	BEST	WORST
2004	70	0.30	0.24
2005	61	0.39	0.12
2006	70	0.31	0.25
2007	63	0.08	0.71
2008	55	-0.01	-0.09
2004-2008	319	0.24	0.25

Panel D	SHAREHOLDER RIGHTS		
	N	BEST	WORST
2004	70	0.27	0.18
2005	61	0.40	0.17
2006	70	0.32	0.30
2007	63	0.05	0.77
2008	55	0.09	-0.08
2004-2008	319	0.24	0.30

Table 5 (continued)

Cost of capital of best- and worst-governance firms

Panel E	DISCLOSURE POLICY		
	N	BEST	WORST
2004	70	0.27	0.18
2005	61	0.47	0.13
2006	70	0.39	0.21
2007	63	0.09	0.74
2008	55	0.06	-0.07
2004-2008	319	0.25	0.27***

Notes: r is the firm cost of capital from equation (3). Firms in the top (bottom) 33% sorted based on the corresponding corporate governance index are classified as Best (Worst) governed firms.

*** denotes significantly different from their counterparts at 1 (for two-tail tests). Significance is reported for full period only.