

# Dividends and Corporate Governance: Canadian Evidence

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*This paper examines the role of corporate governance as a determinant of dividend policy with Canadian data over the period 1997-2004. It finds that firms with large board favor higher dividend payments. Further, the ratio of option over cash in CEO's compensation negatively affects dividend payments. Findings generally show support for the 'substitution model' (La Porta et al., 2000). As per the 'substitution model', firms with weaker governance characteristics (such as large board size, lower alignment of CEO pay, lower percentage of unrelated director, CEO duality, lower CEO ownership, prevalence of dual-class share structure) are likely to pay higher dividends. It also finds that firms which pay higher dividends are those with less investment opportunities, larger size, and less market risk. These findings are robust even after controlling for endogeneity, external monitoring by equity analysts, joint effect of investment opportunity and corporate governance variables, stock repurchases, or dividend premium.*

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## Introduction

It has been established in the literature that agency considerations play a significant role in payout decisions (see, for example, Lie, 2000; Aivazian *et al.*, 2003 and 2006; and DeAngelo *et al.*, 2006). As La Porta *et al.* (2000) (henceforth LLSV) summarize, corporate governance, as the mechanism to mitigate agency problems, can potentially have two opposing effects on payout policies. One possibility is that firms operating under better corporate governance system pay more dividends because of the pressure from shareholders (outcome model). Alternatively, firms operating under poor governance systems and weaker shareholder rights need to pay higher dividends to maintain good reputation with shareholders (substitution model). Although LLSV (2000) examined the aforementioned models by using a cross-country analysis with country-level governance ratings, the arguments can be extended to a specific country setup with firm-specific governance practices. That is, as per the outcome model (substitution model), firms with better governance practices<sup>1</sup> would favor higher (lower) dividends. A number of studies have directly or indirectly<sup>2</sup> examined these hypotheses.

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<sup>1</sup> Extant literature generally holds the view that firms with good corporate governance practices are likely to have some of the following characteristics: smaller board size, higher alignment of CEO pay, i.e., higher option pay, higher percentage of unrelated director, no CEO duality, higher CEO ownership, absence of dual-class share structure, etc.

<sup>2</sup> For example, extending the excess cash flow and related agency problem argument of Jensen (1986), Hu and Kumar (2004) examine the management entrenchment hypothesis in the context of dividend policy. Hu and Kumar (2004) argue that entrenched managers are more likely to favor higher dividends to protect them from disciplinary sanctions by outsiders and to maintain good reputation in the market. This argument is similar to that of 'substitution model' presented by LLSV (2000).

However, the findings are mixed. In general, cross-country studies show support for the 'outcome model' (LLSV, 2000; Faccio *et al.*, 2001; and Mitton, 2004), whereas country-specific studies generally show support for the 'substitution model' (Hu and Kumar, 2004; Jiraporn and Ning, 2006; and Officer, 2006). Further, most of country-specific studies use sample firms from the US. It is not clear whether or not these results will hold well in other markets. Kooli and L'Her (2010) thus stress on more international studies and posit that "international evidence on payout policy will help us to explore the robustness of various US results" (p. 58).

In this study, we examine the role of corporate governance as a determinant of dividend policy with Canadian data over the period 1997-2004. Examination of Canadian market presents a special case in the study of dividend policy because of the three critical differences between US and Canadian capital market. In Canada, large blockholders have significant ownership levels in various firms. These large blockholders can maintain some influence over public officials and policy decision. In the US, however, the ownership is primarily diffused (Morck *et al.*, 2000). While the mechanisms for protecting investors in countries with high ownership concentration have been questionable, minority shareholders in Canada receive the benefit of strong legal protection. According to Cheffins (1999), Canadian public firms are subject to legal remedies that protect minority shareholders from corporate expropriation. Prior studies have shown that differences in ownership and control structure and legal environment can significantly affect a firm's dividend policy (LLSV, 2000; and Faccio *et al.*, 2001).

Second, the Canadian tax system differs from the US system when dealing with investment income. The US imposed double taxation on dividend income till the Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA, 2003), whereas the Canadian tax system employs the 'gross up and credit' approach for dividends since 1949. Several studies show that taxation influences corporate payout policy (Bolster and Janjigian, 1991; Chetty and Saez, 2005 and 2006; Brava *et al.*, 2005).

Third, the Canadian equity market is less liquid than the US market. Lower liquidity is usually accompanied by more information asymmetry which affects dividend level as well. Fourth, the average firm size in Canada is much smaller than that of US. Larger companies have more resources to distribute to their shareholders (Fama and French, 2001). Finally, the corporate governance regime is also different in Canada and US. In Canada, corporate governance regime is largely voluntary; whereas in the US, it is mandatory (see Anand *et al.*, 2006).<sup>3</sup> Therefore, it would be interesting to see how the dividend policy is affected by corporate governance practices of Canadian firms.

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<sup>3</sup> Several features of the US regime have become mandatory following Sarbanes-Oxley Act. In Canada, however, the corporate governance regime consists of a list of best practice guidelines issued by Toronto Stock Exchange (TSX) that firms may but are not obliged to adopt. All listed firms, however, are required to disclose, in the proxy circular or annual report, the extent of their compliance with the guidelines and where its governance system differs from it. The TSX best practice guidelines addressed issues dealing with the board's mandate; board independence and composition (including minority shareholder representation); independence of board committees; board approval; procedures for recruiting new directors and assessing board performance; measures for receiving shareholder feedback; and the board's expectations of management.

Despite Canada's well-developed capital market and strong corporate governance environment, there is virtually no extensive study that examines the impact of governance practices on dividend policy in a Canadian context. LLSV include Canada in their global study of dividend policies. However, they use country-level corporate governance rather than firm-level corporate governance, thus they do not attempt to investigate the role of firms' corporate governance on their dividend policies.

Examining a sample of Canadian dividend paying firms over the period 1997-2004, our results generally show support for the 'substitution model'. We find that firms characterized by smaller board size favor lower dividend payments, and vice versa. Further, the ratio of option over cash in CEO's compensation package negatively affects a firm's dividend payments. Extant literature generally holds the view that prevalence of smaller board size and higher level of option pay represent better corporate governance practices (Hu and Kumar, 2004). Therefore, our results are consistent with the arguments of 'substitution model'. We also find that firms which pay higher dividends are those with less investment opportunities, larger size, and less market risk. Considering that both corporate governance and dividend payout are endogenous decisions, we use seemingly unrelated equations to jointly investigate corporate governance and dividend payout and the results are similar. These findings are robust even after controlling for external monitoring by equity analysts, joint effect of investment opportunity and corporate governance variables, stock repurchases, or dividend premium.

## Literature Review

### Agency Theory and Relevance to Dividend Policy

Agency theory predicts that outside shareholders prefer higher dividend payments because dividends reduce the opportunities of managers to squander cash. LLSV (2000, p. 2) explain how agency approach differs from the traditional assumptions of Modigliani-Miller theorem with respect to two issues.

First, the investment policy of the firm cannot be taken as independent of its dividend policy, and, in particular, paying out dividends may reduce the inefficiency of managerial investments. Second, and more subtly, the allocation of all the profits of the firm to shareholders on a pro rata basis cannot be taken for granted, and in particular the insiders may get preferential treatment through asset diversion, transfer prices, and theft—even holding the investment policy constant.

Since investors are not fully convinced of management's intentions, they are better off receiving extra cash from the firms in the form of dividends. This view prompts examining the relation between the agency theory and dividend payments more closely.

Easterbrook (1984) highlights the interplay between dividend payment decisions and the agency costs of management. He bases his explanations on the assumption that managers are not perfect agents and try to pursue their own interests when they get such opportunities. Such 'imperfect agents' (i.e., managers) need to be monitored. Monitoring costs become a

major issue when a firm has a wide ownership base. In such a situation, the monitoring shareholders will bear these costs while all other shareholders will reap the benefits. Therefore, to have an effective monitoring mechanism, shareholders would prefer to have an external body to monitor the managers. Dividend payments can help in the process. Dividend paying firms are more likely to go to secondary market for future fund requirements. This would subject the 'imperfect agents' (i.e., firm's management) to more external monitoring and scrutiny. Jensen (1986) made similar arguments in the context of excess cash accumulation at firm level. Firms often accumulate much more cash than they require for normal business operations. Entrenched managers and/or controlling shareholders may not be willing to distribute this extra cash to the shareholders in order to satisfy their empire-building motives or derive personal benefits. This excess cash might be used in suboptimal projects and non-productive acquisitions (Harford, 1999). Thus, distribution of excess cash is likely to reduce the agency cost of free cash flow as it would reduce the probability of wasteful spending and expropriation by managers and controlling shareholders.

Hu and Kumar (2004) relate the firm-specific governance practices to dividend policy more directly in the form of management entrenchment hypothesis. Hu and Kumar argue that "entrenched managers voluntarily commit to payouts as a protection against disciplinary sanctions by outsiders. Other things being equal, managers who are more likely to take sub-optimal decisions choose higher payouts, as do managers who can be disciplined by outsiders at relatively low cost" (p. 760). This view is also echoed by Fluck (1999).

### **Shareholder Rights, Manager's Concern of Reputation and Dividend Policy**

LLSV (2000) consider the country-level governance environment in order to examine dividend policy across various countries. LLSV (2000) present two competing views with respect to the relation between a firm's dividend policy and the strength of the legal protection and shareholder rights. The first view is termed as 'outcome model'. According to this model, if there is a strong and effective legal system prevailing in a country, minority shareholders are likely to receive more dividends. In a country where minority shareholders enjoy stronger legal support, they can take appropriate actions (such as voting the opportunistic managers out or taking legal actions) and compel managers to pay out extra cash held in a firm. In other words, the possibility of voting out the ineffective managers or legal actions by the minority shareholders will discipline insiders from building excess cash. As a result, minority shareholders are likely to receive more dividends in a country with stronger legal protection (Dutta and Saadi, 2009).

The second view is termed as the 'substitution model'. According to this model, firms that are concerned of their reputation would use dividends as a substitution to mitigate shareholder's concern of being expropriated in a weaker legal environment. Firms that need more frequent external funds are likely to maintain a good reputation in the market by paying regular dividends. According to the substitution model, this phenomenon would be more prevalent in a country with weaker legal protection. As a result, minority shareholders are likely to receive more (fewer) dividends in a country with weaker (stronger) legal protection.

Although, outcome and substitution models are developed with a view of country-level governance environment, the arguments can be extended to specific country setup with firm-level governance practices. In fact, LLSV's models shed light on how the country-level legal and governance environment would affect the relationship between firm-level governance practices and dividend policy. In a country with strong legal environment, firms with better governance practices are likely to face even less pressure to pay dividends.

A number of studies have examined the relationship between dividend policy and governance in the light of 'outcome' and 'substitution' models.<sup>4</sup> Each view finds some support in empirical studies. The international studies of LLSV (2000), Mitton (2004), and Faccio *et al.* (2001) report supporting evidence of the outcome model. Using country-level legal regime and minority shareholder protection index, LLSV (2000) find that (1) firms operating in countries with stronger legal protection to minority shareholders pay higher dividends; (2) high-growth firms in these countries pay higher dividends than low-growth firms. By using firm-specific corporate governance ratings developed by Credit Lyonnais Securities Asia (CLSA) for 365 firms from 19 emerging markets, Mitton (2004) shows that firms with stronger corporate governance practices have higher dividend payouts. Faccio *et al.* (2001) report similar findings for the firms from East Asia and Western Europe.

Alternatively, the study by Jiraporn and Ning (2006) and Officer (2006) on US firms and the study by Aivazian *et al.* (2003) on emerging markets support the substitution model. Jiraporn and Ning (2006) use the governance index (known as the G-Index) developed by Gompers *et al.* (2003) as a proxy for the firm-level corporate governance strength. The basis of the G-Index is the number of corporate governance provisions in a firm that restricts shareholder rights. A higher value of G-Index refers to weaker shareholders' right in a firm. By examining US firms, Jiraporn and Ning show a positive relation between a firm's G-Index and its dividend payout ratio. In another recent study, Officer (2006) also finds that dividend initiation reduces the agency costs. Jiraporn and Ning (2006) attribute this difference to the fact that the international studies of LLSV and other studies examine dividend policies across dissimilar legal systems around the world.

## Data and Variable Definitions

### Data

This study includes all dividend paying Canadian firms listed on Toronto Stock Exchange between 1997 and 2004. We gather data on accounting information from the Stock Guide database. We hand-collect information related to governance variables from annual reports and management information circulars available on the System for Electronic Document Analysis and Retrieval (SEDAR) database. Following LLSV (2000), we exclude observations with negative earnings or dividends greater than earnings.

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<sup>4</sup> While some studies directly examined the arguments of these models (such as LLSV, 2000; and Jiraporn and Ning, 2006), others use indirect but similar approach. For example, managerial entrenchment hypothesis examined by Hu and Kumar (2004) uses the similar argument of substitution model.

## Variable Definition

### *Firm's Dividend Payments*

In this study, we use four different variables to measure the levels of a firm's dividend payment to be consistent with earlier studies: dividends to assets ratio, dividend to cash flow, dividend yield (dividends to price), and dividend payout ratio (dividends to earnings). We mainly focus on the dividends to assets ratio because dividend payout ratio and dividend to cash flow ratio can be unstable as earnings or cash flows get close to zero. Another variable of interest in this area is the 'dividend yield' (dividend/share price). However, dividend yield incorporates market perceptions and pricing effects that are often beyond management control; and deflating dividend by the book value of equity could be more sensitive to accounting distortions (Aivazian *et al.*, 2003). A description of all relevant dependent and independent variables used in the analyses of this study is presented in Exhibit 1. We also indicate the theoretically predicted sign for the regressors in the regression models. A positive (negative) sign implies that the size or level of payout is positively (negatively) associated with the variable, holding other things fixed.

Exhibit 1: Definition of Variables		
Dependent Variable	Construct of the Variables	
Dividends to total assets	Calculated as annual cash dividends divided by total assets.	
Dividend to cash flow	Calculated as annual cash dividends divided by total operating cash flow.	
Dividend yield	Calculated as annual cash dividends divided by share price.	
Dividend payout ratio	Calculated as annual cash dividends divided by annual net earnings.	
Note: We mainly focus on 'dividends to total assets' variable; other variables can be unstable or can be confounded by market perceptions.		
Independent Variables	Predicted Sign	Definition of the Variables
Board size/total asset	Positive	Number of board members divided by total assets.
Percentage of unrelated director	Negative	Number of unrelated directors divided by the number of total board members.
CEO-chair	Positive	If the CEO is also the chairperson of the board, the value of this dummy variable is 1 and 0 otherwise.
CEO voting	Negative	CEO voting right divided by the total votes of all shares of the firm.
CEO ownership	Negative	Percentage of CEO's shares of all shares outstanding.
CEO option pay	Negative	CEO option value divided by total cash compensation (including cash bonuses).

Exhibit 1 (Cont.)

Independent Variables	Predicted Sign	Definition of the Variables
Dual-class structure	Positive	It is a dummy variable; if the firm has more than one class of voting rights for its shares, the value of the dummy variable is 1 and 0 otherwise.
Investment opportunity (dA/A)	Negative	Change in total assets between year $t-1$ and $t$ , divided by total assets in year $t-1$ .
Past profitability (ROA)	Positive	Net income divided by total assets.
Firm size	Negative	Log of total assets.
Firm riskiness (beta)	Negative	Beta of the firm—designate the systematic risk. Beta value is obtained from Stock Guide database. It is calculated based on past 60 months' stock return data.
<p><b>Note:</b> We present the predicted signs for various independent variables in the light of 'substitution model'. As per the 'substitution model', weaker governance characteristics (such as large board size, lower percentage of unrelated director, CEO is the chair of board, lower CEO ownership, prevalence of dual-class share structure) will lead to higher dividend payouts.</p>		

### Governance Variables

**Board Size:** We use the number of board members to determine the board size. The correlation between the number of board members and the total asset is 0.72 in this sample, suggesting that larger firms have larger boards. In order to disentangle the effect of board size from firm size, we use board size divided by total assets in all regressions models. However, we use the unadjusted board size in summary statistics in Table 1 to understand the exact number of board members.

A number of studies have argued that smaller boards are more effective in maintaining better communication and coordination among board members. In large boards, 'free-riding' opportunity increases and the boards become more symbolic and less functional (Jensen, 1993; Wu, 2000; and Hermalin and Weisbach, 2003). Accordingly, we take the view that large board size represents weak governance.

**Percentage of Unrelated Director:** We use the number of unrelated directors to the total number of directors. Fama (1980) and Fama and Jensen (1983) suggest that outside directors have an incentive to develop a good reputation in monitoring management because they compete with one another. As Subrahmanyam *et al.* (1997) note, shareholders expect outside (independent) directors to represent their interests by mitigating agency problems between managers and shareholders. Pfeffer (1981) contends that inside directors are loyal to the CEO because of the power that the CEO has over them. Accordingly, researchers view outside directors as independent and inside directors as being influenced by top managers (Weisbach, 1988; Byrd and Hickman, 1992; and Xie *et al.*, 2003).

**CEO-Chair or CEO Duality:** We use a dummy variable CEO-chair. If the CEO is also the chair of the board, the value of CEO-chair is 1; otherwise, the value is 0. When the CEO is the chair, the CEO has the most influential power on the board, making it possible to expropriate minority shareholders. Thus, the dummy is viewed as a symbol of weak corporate governance.

**CEO Ownership:** We use the percentage of CEO's shares of all shares outstanding. Jensen and Meckling (1976) posit that a higher level of ownership aligns managers' interests with shareholders' more closely. Since managerial ownership works as an alternative mechanism of corporate governance, firms with a higher level of managerial ownership tend to pay lower dividends. Mahadwartha (2007) contends that maintaining higher managerial ownership and a higher dividend payout ratio would be ineffective and costly because the intent of both mechanisms is to achieve the same goal of reducing the agency cost of equity. A number of studies report a negative relation between managerial ownership and dividend payouts (Crutchley and Hansen, 1989; Jensen, *et al.*, 1992; Eckbo and Verma, 1994; and Hu and Kumar, 2004). Yet, Fenn and Liang (2001) argue that managerial ownership is likely to mitigate agency problems at companies with lower investment opportunities or excess free cash flow. Accordingly, Fenn and Liang find supporting evidence for this argument. However, some other studies report a nonlinear relationship. Using UK data in 1991 and 1996, Farinha (2003) reports a U-shaped relation between managerial ownership and dividend payout ratios. It shows that once managers cross a critical ownership level, they feel insulated from external disciplining forces and face less pressure to pay dividends (Fama and Jensen, 1983).

**CEO Option Pay:** It is calculated as CEO option values divided by total cash compensation. CEO option values are obtained from proxy reports and management information circulars archived in SEDAR database. CEO option values include aggregate long-term (option) compensation realized in that year and the value of unexercised in-the-money options at the end of that year. Total cash compensation includes salary, bonus, and other annual compensation.

Recently, stock options have become a major component of executive compensation packages. Hall and Liebman (1998) report that only 30% of CEOs received new option grant in the 1980s. However, since the 1990s, equity-based compensation (stock options and restricted stock awards) has become more common for US CEOs (Murphy, 1999; and Bryan *et al.*, 2000). Towards the later part of the 1990s, Core and Guay (1999) find that more than 90% of CEOs held some form of equity grants and stock options, which contributed about one-third of the median CEO's equity portfolio.

Lambert *et al.* (1989) suggest that managers holding a substantial level of stock options in their firms will be less inclined to pay dividends. According to the standard option valuation models, the value of executive stock options decreases if the firm pays dividends (Dutta and Saadi, 2009). A number of studies support this conjecture and report a negative relation between stock options and dividend payments (Lambert *et al.*, 1989; Fenn and Liang, 2001; and Bhattacharyya *et al.*, 2008). From a corporate governance perspective, Hu and Kumar (2004) argue that the CEO's personal stock ownership and awards of stock options provide



better incentives to CEOs and such awards are the characteristics of strong managers. “In equilibrium, strong manager types have less of a need to make payouts as a disciplining device, compared to weaker manager types” (Hu and Kumar, 2004, p. 762). In other words, Hu and Kumar’s argument supports a negative relationship between CEO option pay and dividends.

**Dual-Class Structure:** One of the important features of Canadian market is the prevalence of dual-class share structure. Firms create dual-class shares based on differential voting rights. There are competing views as to how the presence of a dual-class share structure would affect a firm’s value. Controlling shareholders with dual-class shares (that give them disproportionately higher voting rights) may use this structure to expropriate minority shareholders wealth. On the other hand, primarily the founding members and the controlling shareholders of the firms hold the dual-class shares with more concentrated voting rights. These shareholders are likely to have a better insight of the firm’s operations and willing to manage and direct firms with long-term value creation perspectives (Share, 2004). A number of empirical studies have examined the impact of a dual-class share structure on firm value and the results are mixed (Dimitrov and Jain, 2006; and Gompers *et al.*, 2006). The studies examining the relationship between dual-class share structure and dividend policy are limited.

We use a dummy variable in our analysis to identify a firm with a dual-class share structure. If the firm has multiple voting shares, the value of the dummy variable is 1, and 0 otherwise. Generally, the market perceives dual-class share structure as a weak governance mechanism.

**Suitability of a Model in the Canadian Context:** According to the ‘outcome model’ (better governance leads to less expropriation), we expect that firms with an independent board structure, smaller board, CEO with higher ownership and option pay, absence of dual-class share would pay higher dividends. According to ‘substitution model’ (compensation for reputation), we expect opposite results (Hu and Kumar, 2004; and Jiraporn and Ning, 2006). Canada presents an interesting case to examine these hypotheses. Two features of Canadian corporate world, namely, the high concentration of ownership and the voluntary aspect of corporate governance regime may indicate that in the Canadian context, there are more opportunities for the large shareholders or entrenched managers to expropriate minority shareholders. However, Canada is also characterized by an effective legal environment and efficient market (Cheffins, 1999). As reported in a recent and influential study (Doidge *et al.* 2007), Canada is rated number one as per the FTSE group’s Institutional Shareholder Services (ISS) corporate governance rating system.<sup>5</sup> Thus, Canada presents a unique situation to examine the relationship between dividend policy and corporate governance. In Canada, given the prevalence of strong legal environment and minority shareholders’ rights, firms with better governance practices will feel even less pressure to pay dividends. In other words, we are more likely to see the manifestation of ‘substitution model’ in the Canadian context.

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<sup>5</sup> See Doidge *et al.* (2007) – Table 1, Panel C (p. 14).

As per the 'substitution model', firms with weaker governance characteristics (such as large board size, lower alignment of CEO pay, i.e., low CEO option pay, lower percentage of unrelated director, CEO duality, lower CEO ownership, and prevalence of dual-class share structure) are likely to pay higher dividends.

### **Firm-Specific Control Variables**

**Investment Opportunity (dA/A):** Following Fama and French (2001), we use asset growth to measure investment opportunity. If a firm has high investment opportunity, it would have a substantial impact in reducing the 'agency cost of free cash flow'. In a firm with high investment opportunity, management can more easily justify the demand for more resources to generate positive net returns (Smith and Watts, 1992; and White, 1996). Therefore, we expect that high-growth firms would pay lower dividends (Fama and French, 2001).

**Past Profitability (ROA):** A higher level of past profitability or net income available to common shareholders would give a better chance to management to distribute cash dividends to the shareholder. In a recent study, Fama and French (2001) provide support for this argument. Brav *et al.* (2005) survey financial executives and conclude that earnings quality and cash flow play important roles in dividend policy.

**Firm Size (log of total assets):** Larger firms have generally more resources to distribute to their shareholders (Fama and French, 2001). However, there are alternative views on how firm size may affect dividend policy. It is observed that, at least in the Canadian context (MacAulay *et al.*, 2009), larger firms employ better governance mechanisms. As per the 'substitution hypothesis', larger firms with better governance are likely to pay lower dividends.

**Firm Riskiness (firm beta):** Bhattacharyya *et al.* (2008) posit that riskier firms are less likely to pay dividends. A riskier firm is more likely to reserve cash for future investments and requirements. We expect a negative relation between firm beta and dividend payments. Firm beta values are calculated using the Capital Asset Pricing Model (CAPM) and reported in Stock Guide database.

### **Summary Statistics and Correlation Among Variables**

Table 1 presents descriptive statistics of variables in three categories: dividend levels (Panel A), corporate governance (Panel B), and firm characteristics (Panel C). First, we report the statistics on dividend payouts. On average, dividend paying firms pay out 31.3% of their net income, or 16.4% of their cash flows. The dividend to cash flow ratio is lower than dividend to net income ratio (i.e., dividend payout ratio) because of the existence of non-cash items like depreciations. The dividend to asset ratio is 1.9% on average. As explained earlier, this measure is more stable. To account for the market perceptions, we also calculate the dividend yield and find it to be 2.2% on average.

We next investigate board size (unadjusted) and board structure. The mean of the number of board members is 10.029 and median is 10. The mean percentage of unrelated directors in

<b>Table 1: Summary Statistics of Dividend Levels, Governance Variables and Firm Characteristics</b>						
	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>SD</b>	<b>Q1</b>	<b>Q3</b>
<b>Panel A: Dividend Levels</b>						
Dividends to total assets (ratio)	621	0.019	0.013	0.024	0.008	0.023
Dividend to cash flow (ratio)	621	0.164	0.127	0.139	0.076	0.204
Dividend yield (ratio)	620	0.022	0.016	0.019	0.010	0.029
Dividend payout ratio	621	0.313	0.229	0.224	0.159	0.438
<b>Panel B: Corporate Governance Variables</b>						
Board size (number)	621	10.029	10.000	2.917	8.000	12.000
Percentage of unrelated director (ratio)	613	0.735	0.769	0.164	0.625	0.857
CEO-chair (dummy)	617	0.277	0.000	0.448	0.000	1.000
CEO option pay (ratio)	579	3.734	1.133	8.451	0.000	3.847
CEO ownership (ratio)	530	0.057	0.000	0.143	0.000	0.020
Blockholder voting (ratio)	615	0.351	0.351	0.296	0.029	0.632
Blockholder ownership (ratio)	617	0.324	0.278	0.277	0.028	0.610
Dual-class structure (dummy)	621	0.087	0.000	0.282	0.000	0.000
<b>Panel C: Firm Characteristics</b>						
Return on assets (ratio)	621	0.070	0.057	0.054	0.037	0.088
Total assets (in million dollars)	621	4306.98	1514.72	6879.26	231.80	5390.0
Firm beta	586	0.382	0.310	0.280	0.180	0.540
Investment opportunity (dA/A) (ratio)	621	0.135	0.083	0.245	0.012	0.176
<b>Note:</b> 'Blockholder voting' is the ratio of voting rights held by the shareholders, who own at least 10% shares in the firm. 'Blockholder ownership' is the ratio of cash flow ownership held by the shareholders, who own at least 10% shares in the firm.						

the board is 73.5%. This shows that a majority of the Canadian firms have independent boards. The mean value of CEO Chair dummy is 0.277; representing that 27.7% of the firms have CEO as the chair of board. We next investigate CEOs' ownership and their stock option value. We find that, on average, CEOs option value is 3.73 times of their cash compensation. CEOs of Canadian dividend paying firms on average own 5.7% shares in their firms. We subsequently look at the ownership structure of the blockholders (or block shareholders).<sup>6</sup>

<sup>6</sup> Block shareholders are individuals or outside firms who own at least 10% shares in a firm.

On an average, block shareholders own 32.4% in the Canadian dividend paying firms, but have slightly less voting rights (35.1%), indicating the prevalence of dual-class share structure in some firms. The average dual-class dummy is 0.087, indicating that 8.7% firms in our sample have a dual ownership structure.

We finally examine firm characteristics. Average total asset is \$4.3 bn. Return on asset is on average 7%. We use asset growth to measure investment opportunities, which is on average 13.5%. The market beta from the CAPM model is on average 0.382.

Table 2 presents correlation among dividend levels, corporate governance variables and firm characteristics. Among the corporate governance variables, only the deflated board size, CEO option ratio, and CEO ownership ratio have unanimous sign on the correlation with the four dividend level variables. The sign for other corporate governance variables is mixed. Board size has positive impact on dividend payout, CEO option ratio has negative impact, and CEO ownership has positive impact. This table supports the argument of substitution model that firms with better governance (small board or more CEO option pay) pay fewer dividends.

## Results and Discussion

### Firm Characteristics and Dividend Policy

We first examine the effect of firm characteristics on dividend policy. Four models use four different dependent variables—Model 1: dividend to cash flow; Model 2: dividend yield (or dividend to price); Model 3: dividend to total assets; and Model 4: dividend payout ratio. As discussed earlier, we primarily focus on Model 3 that uses dividend to total assets as the dependent variable. Other models help us in checking the robustness of the results. In all regressions, the firm characteristics are obtained in the previous year (i.e.,  $t-1$ ).

Table 3 reports the regression results. We find that firm's investment opportunity measured by asset growth has a significant and negative impact on dividend payments in all the models. This indicates that firms reduce cash payouts to finance various projects. Interestingly, we find that firm size, measured by the log of total assets, has a significant and negative effect on firms' dividends. This looks puzzling, as larger firms generally have more resources to pay dividends. However, in the absence of other governance variables in the regression models, larger firm size may also proxy for better governance practices. In a Canadian context, MacAulay *et al.* (2009) report that as larger firms have more resources, they are likely to employ better governance mechanisms. 'Substitution hypothesis' suggests that larger firms with better governance are likely to pay lower dividends. Further, our results show that firm risk (as measured by firm beta) has a significant and negative effect (in Models 1, 2, and 4), indicating that firms with higher risk levels pay fewer dividends. Riskier firms are likely to reserve cash for future needs. In a recent study, Li and Zhao (2008) also report negative impact of firm risk on dividend payments. However, Model 3 does not show any significant

	Dividend to Cash Flow			Dividend Yield			Dividend to Total Assets			Dividend Payout Ratio		
	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.
Board size/Total assets	0.267	0.000	***	0.268	0.000	***	0.565	0.000	***	0.075	0.061	*
% of unrelated director	-0.029	0.474		-0.038	0.349		-0.060	0.140		0.094	0.020	**
CEO-chair	-0.011	0.785		0.023	0.567		0.033	0.409		-0.062	0.124	
CEO option pay	-0.134	0.001	***	-0.183	0.000	***	-0.046	0.274		-0.143	0.001	***
CEO ownership	0.126	0.004	***	0.089	0.040	**	0.104	0.017	**	0.004	0.925	
Blockholder voting	0.079	0.050	**	0.081	0.044	**	0.082	0.043	**	-0.079	0.050	**
Blockholder ownership	0.088	0.029	**	0.105	0.009	***	0.100	0.013	**	-0.062	0.127	
Dual-class structure	0.066	0.102		-0.050	0.216		0.024	0.544		-0.037	0.359	
Log of total assets	-0.203	0.000	***	-0.194	0.000	***	-0.309	0.000	***	0.054	0.180	
Firm beta	-0.211	0.000	***	-0.151	0.000	***	-0.131	0.001	***	-0.114	0.006	***
Investment opportunity (dA/A)	-0.071	0.079	*	-0.120	0.003	***	-0.068	0.091	*	-0.109	0.006	***
Return on assets	0.163	0.000	***	0.121	0.002	***	0.591	0.000	***	-0.167	0.000	***

**Note:** \*, \*\*, \*\*\* indicate *t*-statistic significance at 10%, 5%, and 1% levels, respectively.

result for 'firm risk' variable. Profitability measure by ROA instead is insignificant and has mixed signs.

### Corporate Governance and Dividend Policy

Next, we add corporate governance variables in the regression models and examine the effect of these factors on dividends. Table 4 represents the regression results. The results of all the four models show that firms with a larger board size pay higher dividends. It is argued that larger board size reflects weaker governance practice, as larger boards are deemed to be less effective. This finding supports the notion of 'substitution effect' whereby firms with weaker governance tend to pay higher dividends.

It is interesting to see that CEO option pay ratio shows significant negative effect in all four models. Lambert *et al.* (1989) suggest that managers holding a substantial level of stock options in their firms will be less inclined to pay dividends. According to the standard option valuation models, the value of executive stock options decreases if the firm pays dividends (Dutta and Saadi, 2009). Our results corroborate the findings of Lambert *et al.* (1989) and Bhattacharyya *et al.* (2008). The negative relationship for CEO option pay ratio also supports the argument put forward by Hu and Kumar (2004). According to Hu and Kumar, a higher ratio of salary and bonus to the CEO's total annual compensation indicates a 'weak' manager type. Conversely, CEOs with higher option pay are considered 'strong' managers. "Strong (weak) manager types are more (less) likely to take value-maximizing investment decisions due to superior (inferior) investment opportunities (Zwiebel, 1996) and better (poor) incentive alignment with shareholder interests" (Hu and Kumar, 2004, p. 762). As a result, strong managers do not need to make payouts as a 'disciplining device'. This view echoes the argument of 'substitution model'. Thus, the negative effect of CEO option pay ratio on the dividend payments, as presented in Table 4, supports the 'substitution model'.

Turning our attention to other corporate governance variables, we find that although the 'ratio of unrelated directors' coefficient estimate is positive in all models, it is significant only in Model 1 and Model 4.<sup>7</sup> In none of the models, 'CEO-Chair' variable is significant. Similarly, we also do not see any significant effect of CEO ownership on firm's dividend policy. As reported in Table 3, firm's investment opportunity measured by asset growth consistently shows a significant and negative impact on dividends in Models 2 and 3 of Table 4, indicating that firms reduce cash payout to finance various investment projects.

### Modeling for Endogeneity

It follows from Table 4 that firms with larger board and smaller CEO stock option ratio pay more dividends, which is robust after controlling for firm characteristics. However, we need to be cautious in interpreting the coefficient, since similar firm characteristics also determine

<sup>7</sup> As per the 'substitution hypothesis', we expect to see a negative relationship. Conventional wisdom suggests that unrelated directors are more likely to look after shareholders' interests. However, some of the recent studies have contested this view (for example, see Harris and Raviv, 2008; and Kumar and Sivaramakrishnan, 2008). We also find that in the later regression models, once we control for more external monitoring, the significance of this variable disappears (see Table 6).

Table 3: Effect of Firm Characteristics on Dividend Levels												
	Model 1			Model 2			Model 3			Model 4		
	Dividend to Cash Flow			Dividend Yield			Dividend to Total Assets			Dividend Payout Ratio		
	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.
Intercept	0.312	0.000	***	0.052	0.000	***	0.029	0.002	***	0.486	0.000	***
Investment opportunity (dIA/A)	-0.053	0.020	**	-0.010	0.001	***	-0.011	0.001	***	-0.107	0.010	***
Return on assets	0.243	0.258		0.026	0.302		0.238	0.000	***	-0.852	0.005	***
Log of total assets	-0.010	0.046	**	-0.002	0.008	***	-0.002	0.009	***	-0.006	0.459	
Firm beta	-0.050	0.021	**	-0.0045	0.062	*	-0.0039	0.211		-0.055	0.062	*
No. of observations	584			283			584			584		
Adj. R <sup>2</sup> (%)	8.86			7.97			37.87			5.25		
F-Stat.	15.21			13.64			90.15			9.10		
Sig. of F-Stat.	0.00			0.00			0			0.00		

Note: \*, \*\*, \*\*\* indicate t-statistic significance at 10%, 5%, and 1% levels, respectively.

	Model 1			Model 2			Model 3			Model 4		
	Dividend to Cash Flow			Dividend Yield			Dividend to Total Assets			Dividend Payout Ratio		
	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.
Intercept	0.112	0.177		0.023	0.090	*	-0.026	0.109		0.178	0.193	
Board size/Total assets	325.337	0.001	***	43.161	0.003	***	129.278	0.001	***	516.328	0.001	***
% of unrelated director	0.085	0.021	**	0.004	0.489		0.010	0.135		0.114	0.064	*
CEO-chair	0.004	0.751		0.003	0.254		0.001	0.670		-0.003	0.894	
CEO option pay	-0.002	0.000	***	-0.0003	0.001	***	-0.0002	0.057	*	-0.002	0.058	*
CEO ownership	0.055	0.345		0.005	0.510		0.002	0.760		0.086	0.364	
Dual-class structure	0.047	0.264		-0.004	0.076	*	0.006	0.289		-0.026	0.476	
Investment opportunity (dA/A)	-0.026	0.237		-0.008	0.008	***	-0.007	0.031	**	-0.060	0.196	
Return on assets	0.055	0.784		0.013	0.614		0.192	0.000	***	-0.956	0.001	***
Log of total assets	0.000	0.936		0.000	0.770		0.002	0.112		0.009	0.325	
Firm beta	-0.044	0.076	*	-0.005	0.063	*	-0.004	0.171		-0.057	0.124	
No. of observations	480			479			480			480		
Adj. R <sup>2</sup> (%)	14.05			14.10			40.55			8.4		
F-stat.	8.83			8.84			33.67			5.39		
Sig.	0.00			0.00			0.00			0.00		

Note: \*, \*\*, \*\*\* indicate t-statistic significance at 10%, 5%, and 1% levels, respectively.



the corporate governance variables. The error term in our regression model therefore may be correlated with the determinant of corporate governance scheme. This may bias the coefficient estimates on the dividend level status. To correct this, we have to account for the possibility of endogeneity.

Following Li and Zhao (2008), we jointly model both the governance variables and dividend levels using the Seemingly Unrelated Regressions (SUR) to make adjustments for endogeneity. Since only board size and CEO option pay ratio are significant in previous investigations, we test them in SUR. Besides firm characteristics, we include the percentage of annual price change in the regression of CEO option pay ratio, expecting that CEOs are more likely to be paid with options when equity price increases. The results are presented in Table 5. In general, we find that both board size and CEO option pay ratio are still significant when various measures of dividend levels are used. Only in Model 3, the coefficient of CEO option pay is not significant—although the sign is negative.

## Robustness Checks

### Does External Monitoring by Equity Analysts Affect Dividend Payments?

So far we have primarily examined the effect of internal governance mechanisms on firm's dividend payments. How does external monitoring influence the relationship? We use 'analyst following' ('inibes') as a proxy for external monitoring and use a dummy variable in the analyses to examine the effect of this external monitoring mechanism on firm's dividend payments. The value of the dummy variable (inibes) is 1 if the firm is included in I/B/E/S database and 0 otherwise. The results are reported in Table 6 (Model 1). We use 'dividend to total assets' as the dependent variable in all the four models, as other dividend level variables can be unstable or confounded by market perceptions. Our results show that the dummy variable 'inibes' is not significant in the regression model (Model 1) and the effects of other independent variables remain quite similar to the ones as presented in Table 4. This shows that external governance mechanisms such as analyst following do not provide any new insight and that our earlier results are robust to the inclusion of an external governance mechanism variable. Another possible explanation is that only large Canadian firms are covered in I/B/E/S, so that the 'inibes' dummy only catches the size effect, resulting in insignificant estimates for the 'inibes' variable once the firm size variable (i.e., log of total assets) is included in the model.

### What Is the Joint Effect of Investment Opportunity and Corporate Governance Variable?

Besides its own effect on dividend, LLSV find that corporate governance affects the impact of investment opportunities on dividend payments. In order to account for this moderating effect, we include the interaction between corporate governance and investment opportunities (asset growth) variables in the regression analysis. As argued by LLSV, the outcome model predicts a positive coefficient on the interaction because investors who feel protected allow firms to greatly reduce dividends when investment opportunities come up. In contrast, the

Table 5: Seemingly Unrelated Regressions of Board Size, CEO Option Pay and Dividend Levels				
	Coeff.		p-Value	Sig.
<b>Panel A: Determinants of Board Size</b>				
Intercept	0.00034		0.000	***
Investment opportunity (dA/A)	-0.00001		0.660	
Return on assets	0.00054		0.000	***
Log of total assets	-0.00002		0.000	***
Firm beta	0.00002		0.202	
No. of observations	369			
Adj. R-square (%)	34.14			
F-Stat.	48.83			
Sig.	0.00			
<b>Panel B: Determinants of CEO Option Pay</b>				
Intercept	-5.7406		0.053	*
Investment opportunity (dA/A)	2.8273		0.040	**
Return on assets	10.5485		0.158	
Log of total assets	0.5039		0.012	**
Firm beta	3.3809		0.013	**
Percent annual price change	-1.2689		0.205	
No. of observations	369			
Adj. R <sup>2</sup> (%)	4.898			
F-Stat.	4.83			
Sig.	0.00			

Table 5 (Cont.)

	Model 1			Model 2			Model 3			Model 4		
	Dividend to Cash Flow			Dividend Yield			Dividend to Total Assets			Dividend Payout Ratio		
	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.
Intercept	0.1369	0.036	**	0.0264	0.006	***	-0.0250	0.004	***	0.1717	0.141	
Board size/Total assets	380.3292	0.000	***	56.3872	0.000	***	145.2168	0.000	***	626.6649	0.000	***
% of unrelated director	0.0450	0.281		0.0008	0.892		0.0044	0.423		0.1308	0.080	*
CEO Chair	0.0149	0.366		0.0042	0.087	*	0.0037	0.092	*	0.0217	0.462	
CEO option pay	-0.0021	0.030	**	-0.0004	0.002	***	-0.0002	0.121		-0.0047	0.006	***
CEO ownership	0.0290	0.602		-0.0066	0.421		-0.0025	0.732		-0.0018	0.985	
Dual-class structure	0.1171	0.000	***	0.0028	0.530		0.0107	0.009	***	0.0603	0.276	
Investment opportunity (dA/A)	-0.0071	0.775		-0.0078	0.034	**	-0.0041	0.209		-0.0337	0.447	
Return on assets	0.2145	0.123		0.0191	0.349		0.2531	0.000	***	-0.9233	0.000	***
Log of total assets	-0.0006	0.887		-0.0003	0.569		0.0015	0.005	***	0.0099	0.184	
Firm beta	-0.0731	0.003	***	-0.0062	0.087	*	-0.0063	0.056	*	-0.1085	0.015	**
No. of observations	369			369			369			369		
Adj R <sup>2</sup> (%)	19.693			17.41			66.54			10.44		
F-stat.	10.05			8.78			74.39			5.3		
Sig.	0.00			0.00			0.00			0.00		
Test result	F	Pr>F		F	Pr>F		F	Pr>F		F	Pr>F	
Board size/Total assets	25.13	0.000		25.62	0.000		210.23	0.000		21.33	0.000	

**Note:** \*, \*\*, \*\*\* indicate *t*-statistic significance at 10%, 5%, and 1% levels, respectively.

Table 6: Robustness Checks

	Model 1			Model 2			Model 3			Model 4		
	Dividend to Total Assets			Dividend to Total Assets			Dividend to Total Assets			Dividend to Total Assets		
	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.
Intercept	(0.026)	0.114		(0.029)	0.080	*	(0.025)	0.107		(0.025)	0.119	
Board size/Total assets	129.262	0.001	***	147.584	0.004	***	145.726	0.000	***	130.113	0.001	***
% of unrelated director	0.010	0.134		0.010	0.110		0.002	0.825		0.009	0.145	
CEO-chair	0.001	0.665		0.001	0.590		(0.001)	0.821		0.000	0.823	
CEO option pay	(0.000)	0.053	*	(0.000)	0.067	*	(0.000)	0.364		(0.000)	0.046	**
CEO ownership	0.002	0.762		0.001	0.903		(0.001)	0.969		0.003	0.722	
Dual-class structure	0.006	0.275		0.006	0.267		0.016	0.201		0.006	0.260	
Investment opportunity (dA/A)	(0.007)	0.029	**	(0.005)	0.219		(0.010)	0.030	**	(0.007)	0.038	**
Return on assets	0.192	0.000	***	0.200	0.000	***	0.229	0.000	***	0.194	0.000	***
Log of total assets	0.002	0.112		0.002	0.094	*	0.002	0.052	*	0.002	0.094	*
Firm beta	(0.004)	0.155		(0.004)	0.180		(0.005)	0.150		(0.005)	0.108	
inibes	(0.000)	0.970										
(Board size/Total assets) × Investment opportunity (dA/A)				(119.211)	0.417							

Table 6 (Cont.)

	Model 1			Model 2			Model 3			Model 4		
	Dividend to Total Assets			Dividend to Total Assets			Dividend to Total Assets			Dividend to Total Assets		
	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.	Coeff.	p-Value	Sig.
CEO option pay × Investment opportunity (dA/A)	0.000	0.406										
dSM/Total assets				0.010	0.280							
Dividend premium							0.011	0.049	**			
No. of observations	481			481			325			481		
Adj R <sup>2</sup> (%)	55.25			55.59			63.85			55.750		
F-Stat.	54.99			51.17			53.18			56.1		
Sig.	0.00			0.00			0.00			0.00		

Note: \*, \*\*, \*\*\* indicate t-statistic significance at 10%, 5%, and 1% levels, respectively.

substitution model does not predict the sign of the interaction. The results are reported in Table 6 (Model 2). Our results show that interaction is not significant in the regression model (Model 2) and results of the other variables remain similar as presented in Table 4. It does not support the prediction of the outcome model.

### Does Stock Repurchase Affect Dividend Payments?

Grullon and Michaely (2002) show that over the years firms have switched to share repurchases from cash dividends. From the 1970s to the mid-1980s, firms used to distribute cash through dividend payments. However, since the mid-1980s, firms have started to rely more on share repurchases to distribute cash to the shareholders. As a percentage of the total number of firms distributing cash to their shareholders, the number of firms with share repurchases as a sole part of a payout policy increased from 31% in 1972 to 80% in 2000. This increase indicates that the number of firms only paying dividends as the percentage of firms with positive payouts declined from 69% in 1972 to 20% in 2000.

When stock repurchases become so important, it is worth investigating whether corporate governance still matters for dividend payout when the effect of stock repurchase is controlled in the analysis. We include net stock issued (conversely stock repurchase) in the regression, which is dSM scaled by assets. Following Fama and French (2005), dSM for fiscal year  $t$  is the product of (a) the split-adjusted growth

in shares; and (b) the average of the split-adjusted stock price at the beginning and end of the fiscal year. The results are reported in Table 6 (Model 3). Our results show that stock repurchase is not significant in the regression model (Model 3) and results of the other variables remain similar as presented in Table 4. The result indicates that stock repurchases do not affect the magnitude of dividends.

### Does Dividend Premium Affect Dividend Payments?

Baker and Wurgler (2004) posit that payout decision is governed by the investors' demand for dividends. If investors are willing to pay a premium for dividend paying stocks, managers are likely to pay dividends and vice versa. Following their approach, we investigate the catering explanation by using dividend premium information. The dividend premium in a given year is defined as the difference between the logs of all dividend payers' and all non-payers' value-weighted average market-to-book ratios. Baker *et al.* (2009) find that the likelihood for Canadian firms to pay dividend is positively related to dividend premium. However, it is unexplored whether the level of dividend payment is affected by dividend premium. We include the dividend premium in the previous year (year  $t-1$ ) in the regression models. Firms catering to dividend demand are likely to pay more dividends when the dividend premium increases and vice versa. Thus, the expected sign of the dividend premium is positive if the catering theory holds. The results are reported in Table 6 (Model 4). Our results show that dividend premium significantly affects the level of dividend payments. The result indicates that in the Canadian context, the dividend amount is catered to investors' preferences.

### Conclusion

In this study, we examine corporate governance as a determinant of dividend policy with Canadian data. Most of the earlier studies use US data, and the findings of those studies are not necessarily extendible to Canadian firms. There are a few significant differences between the US and Canadian markets in terms of ownership structure, market liquidity, and firm size. Also, most of the international studies (such as LLSV) use the country-level corporate governance data and do not explore the impact of firm-level corporate governance practices on payouts. Studies examining Canadian firms' dividend policy in the context of agency problem are scarce.

In this study we examine the dividend policy of a set of Canadian firms over a period of 1997-2004. We find support for the 'substitution model', i.e., firms with weaker corporate governance practices favor higher dividend payments. Our results further show that firms with higher investment opportunities and higher market risks tend to pay lower dividends. Our results are robust to the inclusion of firm characteristics and the SUR estimates to account for potential endogeneity problem. However, our results show that dividend premium significantly affects the level of dividend payments. ▲

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