Boards and Corporate Governance in a Typical Country

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Abstract

The large corporate sectors of the United States and United Kingdom are highly atypical, in that they are composed mainly of freestanding firms without controlling shareholders. Canada is a more typical country in that many of its large corporations are narrowly held and/or members of business groups. Most suggestions for corporate governance reform emerge from debates in the United States and United Kingdom, and so may not be attuned to the realities of other countries. We use Canadian data to relate board attributes to corporate opacity. Fewer directors unrelated to any firm in the same business group, director control rights disproportional to actual share ownership, and director interlocks between subsidiaries and parent, grandparent, or more remote ancestor firms’ boards are all associated with increased opacity. Outside directors, defined in this way, are actually more important to reducing opacity in firms deep within pyramidal groups than in freestanding firms. Larger boards are also associated with worse opacity in group firms, but not in freestanding firms.

Keywords: Corporate governance, board structure, cross-directorship, asymmetric information

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1. Introduction

Recent corporate governance scandals, such as those at Enron and WorldCom, focus attention on boards of directors and how they function. Proposed reforms include limits on board sizes, mandatory proportions of independent directors, nonexecutive chairs, and greater director stock ownership. However, empirical evidence regarding the effectiveness of such measures at improving corporate performance is mixed\(^1\). Moreover, in light of the recent global wave of corporate governance scandals\(^2\), it is hard to argue that one system of corporate governance is superior to any other. Nonetheless, proposals for corporate governance reform around the world are similar, and tend to echo calls for reform in the United States and United Kingdom.

This chorus may be off key. Basic differences in corporate ownership and control distinguish the United States and United Kingdom from most other countries. Large firms in the United States and United Kingdom tend not to have large shareholders. Those elsewhere generally do have controlling shareholders, usually wealthy families\(^3\). Large American and British firms are generally freestanding, in that listed companies are not subsidiaries of other listed companies. Those elsewhere are often organized into pyramidal groups, with one tier of listed subsidiaries controlling the next. These fundamental differences in ownership and control probably affect corporate boards. In particular, independent directors and nonexecutive chairs are likely to be much more constrained by dominant insiders in family controlled pyramid firms than in freestanding widely held firms.

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2 The East Asian Crisis, Parmalat in Italy, Vivendi in France, Mannesmann in Germany, Ahold in the Netherlands Nortel and Hollinger in Canada, and Tokyo Electric Power in Japan revealed governance failures in these firms.

3 La Porta \textit{et al}. (1999).
Canada is an especially useful laboratory in which to test these issues. Canada, like the United States and United Kingdom, has many large widely held corporations; but like more typical countries, it also contains many large pyramidal groups of listed firms controlled by wealthy families. ⁴ In other respects, Canada is much like the United States and United Kingdom. It has large and highly developed financial markets and institutions, a Common Law legal system, and provides strong shareholder rights to public investors.⁵ This approximates ideal conditions for a controlled experiment, so that our findings are unlikely to result from other differences between Canadian and American institutions.

We gauge the efficacy of different corporate governance mechanism by associating them with increases or decreases in the adverse selection component of the bid-ask spread. If market makers believe insiders have a larger information advantage, they react to abnormal trading patterns by raising the bid-ask spread more sharply. The adverse selection component of the spread is the part of the spread that expands and contracts in this way. A larger adverse selection component of the spread is thus an indicator or a more opaque corporate veil hiding the firm’s true visage.

To our surprise, we find that one of the reforms being touted in the United States and United Kingdom, more outside directors, actually seems more important at reducing the opacity of firms located deep in the lower tiers of pyramidal groups than in freestanding firms. However, these outside directors must be outsiders not only to the firm in question but to other firms in the same business group too. We also find that opacity is increased if some of the firm’s directors are also directors of its parent, grandparent, or more remote ancestor firm as well. We do not detect an important effect associated with nonexecutive chairs, or with granting directors greater equity participation. We do however, find increased opacity in firms whose directors’ voting rights outstrip their actual ownership stakes by a wider margin. Also, we find greater opacity associated with larger boards in group firms with director interlocks, but the opposite effect in other firms. These results

⁴ See La Porta et al. (1998), Morck et al. (2001), and Attig et al. (2004).

⁵ See La Porta et al. (1998) and Cheffins (1999).
suggest that governance solutions outside the United States and United Kingdom should take into account the importance of business groups.

The paper proceeds as follows. Section 2 describes a corporate governance scandal in a “typical” country - Canada. Section 3 describes the research design, the sample selection and develop our hypotheses. Section 4 discusses the empirical results. Section 5 concludes.

2. Hollinger – A Typical Corporate Governance Scandal

La Porta et al. (1999) show that large firms, outside the U.S, are often members of multilayered pyramidal groups. Morck et al. (2000) and others point out that these structures entrench controlling shareholders, making it difficult for public shareholders to affect corporate strategies or oust underperforming managers favoured by the controlling shareholder. Johnson et al. (2000) show that a governance problem, which they dub tunnelling, afflicts some pyramidal groups. Tunnelling occurs when one group firm transfers wealth to another in a way that benefits their common ultimate controlling shareholder at the expense of public shareholders.

Tunnelling typically occurs where a controlling shareholders cares less about firms in which his control is indirect than about firms he owns directly. Figure 1 illustrates an instance where a controlling shareholder, Conrad Black, a formerly Canadian typhoon who is now a British Peer, controls some firms directly and others indirectly. As of April1, 2001, proxy circulars for Hollinger Group companies show Ravelston Corporation, privately held by Lord Black and his close associates, owning 71.5% of Hollinger Inc., listed on the TSE, and controlling the same percentage of votes at Hollinger Inc.’s shareholder meeting. Public shareholders hold the remaining 28.5% of Hollinger Inc.’s shares. Lord Black can therefore essentially appoint Hollinger Inc.’s board of directors virtually regardless of the wishes of its public shareholders. This is an example of direct control.

Ravelston is the apex firm of a control pyramid – a structure in which listed firms control other listed firms. Hollinger Inc., in turn, owns 58.58% of Hollinger International Inc.,
listed on the NYSE. Because it holds some shares with superior voting rights, Hollinger Inc. controls 81.58% of the votes in Hollinger International Inc.’s shareholder meeting. This is an example of indirect control.

Hollinger Inc.’s board essentially appoints the board of Hollinger International Inc., which means both boards are effectively appointed by Lord Black. This is despite public shareholders owning 41.42% of Hollinger Inc. directly and another 16.70% (28.5% of 58.58%) indirectly through the public float of Hollinger Inc. This adds up to public shareholders owning 58.12% of Hollinger International. Lord Black’s actual ownership of Hollinger International Inc. is, however, only 71.5% of a 58.58% stake, or 41.88%. Hollinger International Inc., in turn, controlled numerous newspapers in North America, Europe, and the Middle East.

Investors might be anxious that Lord Black gets only 41.88% of any dividends or capital gains generated by Hollinger International, but gets 71.5% of dividends or capital gains generated by Hollinger Inc. and 100% of any dividends or capital gains generated by Ravelston. Since these companies have numerous dealings with each other, fretful investors might fear such transactions might be biased to concentrate wealth and income first in Ravelston, then perhaps in Hollinger Inc., and last and least, in Hollinger International Inc.

Hoshi, Kashyap, and Scharfstein (1990) posit an informational advantage due to interlocking directors, that lets group firms transfer resources among themselves to smooth individual firms’ financial performance or finance their expansion. This advantage should be most pronounced in countries with weak financial systems that fail to step in with reasonably priced external financing. Khanna and Palepu (2000) argue that business groups, by sharing information and doing business among themselves, sidestep deficient labor and product markets as well as deficient financial systems in economies with endemic corruption. Because these advantages all ought to be most extensive in less developed economies, the purpose of business groups in countries like Canada is unclear.

These potentially beneficial features of pyramidal groups require the sharing of information, and so imply that group firms ought to share at least some directors.
Inspection of the proxy circulars of Hollinger companies from 1996 to 2003 reveals that Lord Black and a few of his close associates held interlocking directorships throughout the ownership chains of the Hollinger group.\(^6\) In fact, Lord Black served the shareholders of all the major companies in the Hollinger group as CEO and board chair. However, tunnelling presumably requires similar sorts of director interlocks.\(^7\)

On August 30, 2004 Hollinger International Inc. submitted to the SEC a document entitled *Report of Investigation by the Special Committee of the Board of Directors of Hollinger International Inc.* (hereinafter *the report*). This document alleges extensive tunneling between Hollinger group companies. Specifically, the report alleges (p. 1) that

“Hollinger was systematically manipulated and used by its controlling shareholders for their sole benefit, and in a manner that violated every concept of fiduciary duty. Not once or twice, but on dozens of occasions Hollinger was victimized by its controlling shareholders as they transferred to themselves and their affiliates more than $400 million in the last seven years. The aggregate cash taken by Hollinger’s former CEO Conrad M. Black and its former COO F. David Radler and their associates represented 95.2% of Hollinger’s entire adjusted net income during 1997-2003.”

One method of tunneling was allegedly (p. 14) effected through management agreements between Hollinger companies and Ravelston, whereby the latter provided various head office functions, including supervising management, directing policy, making recommendations to their boards, and preparing consolidated financial statements. The

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\(^6\) The group of insiders, usually referred as Black’s lieutenants, includes Black’s wife and his brother. Four to five directors of Hollinger International Inc. and nine to twelve directors of Hollinger Inc held seats on the boards of firms in higher tiers of the ownership chain leading ultimately to Conrad Black.

\(^7\) Loderer and Peyer (2002), report a negative relationship between shareholder value and the extent of board interlocks in Switzerland. However, they do not distinguish director interlocks within groups from those across groups or involving freestanding firms. This makes inferences about the issues at hand in this paper from their results problematic.
compensation for these services was largely undisclosed fees paid to Ravelston Management Inc., Moffat Management Inc., and Black-Amiel Management Inc., three subsidiaries of Ravelston.

Another type of tunnelling the report (p. 15) alleges is improper non-compete fees, which “a bonanza of more than $90 million purportedly as compensation for executing non-competition agreements with buyers of publications Hollinger was selling.” The report continues (p. 15) that “These payments became a potent device for skimming a small percentage of Hollinger’s cash into the hands of individual officers of Hollinger every time publications were sold.”

Yet another form of tunneling allegation was hiring family. The report alleges that “Black gave his wife a “no show” corporate post that paid her over $1.1 million but did not require her to do anything. Amiel Black was separately compensated for her services as a writer, though Hollinger paid for her pens, pencils, modems, computers and other office equipment as well as the operating cost of a private telecommunications network (something not given to other columnists) to connect her from multiple locations. Black’s expense practices evidence his attitude that there was no need to distinguish between what belonged to the Company and what belonged to the Blacks. In Hollinger’s world, everything belonged to the Blacks.” 8

The Hollinger group typifies pyramidal groups in how it locks in insider control. The entity at the pyramid’s apex is normally a family, family firm, or family trust. To generalize the example, one need only extend Figure 1 to contain many layers of listed firms holding control blocks in other listed firms. The controlling shareholder can readily end up appointing the boards of a geometrically increasing number of firms in which his actual ownership stake diminishes geometrically. 9 Multiple class shares with different voting rights magnify the separation of ownership and control and further misalign the interests of ultimate owners and public shareholders. Large misalignments of this sort

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8 The report’s full 511 pages document many charges in detail. Nonetheless, how many, if any, of the charges are true will probably take some time to ascertain.

9 See Bebchuk et al. (2000) or Morck et al. (2000) for the maths.
surely sorely tempt any controlling shareholder to undertake tunnelling transactions of the sort Lord Black is alleged to have performed.

In a structure like Hollinger, where one man dominated every aspect of financing and business, it seems unlikely to us that independent directors or nonexecutive chairs would voice even the limited dissent that might arise in a freestanding widely held firm. In fact, allegations of wrongdoing at Hollinger arose despite the presence of heavyweight independent directors, including former Secretary of State Henry Kissinger, former Assistant Defense Secretary Richard Perle, and former Illinois Gov. James Thompson.

In sum, we accept that independent directors and nonexecutive chairs might have salubrious effects in freestanding widely held firms, such as those that dominate the large corporate sectors of the United States and United Kingdom, and seek evidence of this in such firms in Canada. However, we theorize that this merit might not survive in pyramidal groups – especially in firms in their lower tiers whose insider directors’ control rights greatly exceed their actual share ownership.

3. Methodology

Corporate governance scandals arise when shareholders are ill informed about goings on within the firm. If a firm were perfectly transparent, public shareholders would immediately see any nefarious acts and could readily sue to correct them. Judges and juries could readily peer into the firm to verify or falsify claims by such litigants, and mete out economically efficient justice. In practice, firms are imperfectly transparent – and some are more opaque than others. In firms whose boards are less effective, this opacity might be more troubling to shareholders. Such firms might thus exhibit greater information asymmetry, in that outsiders might fear a more economically significant difference between what they know and what insiders know. Previous work on corporate governance generally attempt to relate governance variables to firm valuation. This study, in contrast, relates corporate governance variables to measures of information asymmetry.
In particular, nonexecutive chairs and outside directors might reassure shareholders and so reduce their concerns about opacity. However, family firms, group firms, and especially firms in low tiers in pyramidal groups, might be perceived by external shareholders as shrouded in more opaque corporate veils that nonexecutive chairs and outside directors rarely lift.

To test these hypotheses, we need to measure the information asymmetry perceived to be in each firm’s share prices and the status of each firm as regards the corporate governance considerations above. For the former, we use the stock’s mean spread and the mean adverse selection component of its spread. We begin by describing our sample. We then explain these measures, describe our sample, governance variables, and controls.

3.1. Sample of Firms

We start with the Canadian firms listed in the 1996 Stock Guide. Data on different classes of shares, the size of direct ownership and control stakes, the identities of their owners, board size and board structure are collected manually from 1997 management proxy circulars, available at www.sedar.com. These data reflect conditions in 1996. We trace block holdings up the chain of pyramid group companies to their ultimate owners using management proxy circulars and Statistics Canada’s Intercorporate Ownership in Canada (1996) and, in some cases, Internet searches. Firms for which we cannot follow these chains are deleted. These data are available for 476 firms. The availability of data to construct our information asymmetry variable reduces this sample to 252 firms.

3.2. Opacity Variable

La Porta et al. (2004), in a cross country surveys of disclosure rules, regulatory efficiency, and other aspects of law enforcement pertinent to corporate governance, rank Canada behind the United States and United Kingdom. Sanderson and Neumann (2003) report that Canadian commissions devote smaller fractions of their budgets to enforcement than do their American equivalents. These institutional lacunae may permit more robust insider trading in Canada. McNally and Smith (2003) report that illegal
insider trading in Canada is rarely prosecuted – with about one conviction per year since 1980. They also document substantial evidence of insider trading and reporting violations between 1987 and 2000. For instance, they report that about half of firms involved in stock buybacks do not disclose their trades to the Ontario Securities Commission, despite requirements that they do so. Perhaps most damningly, Bris et al. (2003) studies insider trading in 52 countries and Canadian insiders to earn the highest profits surrounding public mergers announcements.

This all implies that Canadian market makers are likely to be concerned that they are at an information disadvantage from time to time, as when trading patterns become “unusual”, and to widen their bid-ask spreads in response. A more rapidly widening spread when trading patterns become abnormal signifies a stock in which market makers have more concerns about such an asymmetry. This expandable part of the spread, due to market makers fearing other investors have inside information, is the adverse selection component of the spread.

To operationalize this approach, we need to identify “abnormal” trading patterns. If the spread widens more in one stock than in another on similar evidence of “abnormal” trading patterns, we infer a larger information asymmetry problem in the former.

Glosten and Harris (1988) and other papers in the market microstructure area suggest using the change in spreads when volume changes to measure the adverse selection component of the spread, which we denote $z$. The intuition behind the Glosten and Harris approach is as follows.

First, if no information ever arrives, and observed prices are one or the other of the permanently fixed bid and ask prices, the price changes are

$$P_t - P_{t-1} = C(Q_t - Q_{t-1}),$$

where the indicator variable $Q_t$ is $+1$ if the transaction at time $t$ is a buy and $-1$ if it is a sell. Since $Q_t - Q_{t-1} = \pm 2$, $C$ is one half of the bid ask spread.
The spread may rise temporarily if market makers run short of inventory. That is, we might have \( C_t = c_0 + c_1 V_t \) where \( V_t \) is trading volume at time \( t \), rather than a constant \( C \).

Taking transitory price pressure due to dealer inventory management into account modifies the observed price changes to

\[
[P_t - P_{t-1} = c_0(Q_t - Q_{t-1}) + c_1(Q_t V_t - Q_{t-1} V_{t-1}) + \xi_t]
\]

where \( \xi_t \) is an error term.

Finally, if market makers adjust spreads permanently in response to informed traders and this too is related to trading volume, the observed price change process becomes

\[
[P_t - P_{t-1} = c_0(Q_t - Q_{t-1}) + c_1(Q_t V_t - Q_{t-1} V_{t-1}) + z_0 Q_t + z_1 Q_t V_t + \epsilon_t]
\]

and the adverse selection component of the spread in dollars is \( Z = 2(z_0 + z_1 \bar{V}) \), where \( \bar{V} \) is the average share volume of a trade. The adverse selection component as a fraction of the share price is thus

\[
[z = 2\left(\frac{z_0 + z_1 \bar{V}}{P}\right)]
\]

where \( P \) is the average price. This is our main information asymmetry measure, the adverse selection component of the bid-ask spread.\(^{10}\)

### 3.3. Board Variables

We consider four characteristics of boards that have become centerpieces of governance reform proposals: the board’s size, its domination by insider or outsider directors, and whether the chair is an insider or outsider.

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\(^{10}\) Although different ways exist to decompose the bid-ask spread, Van Ness, Van Ness, and Warr (2001) test the performance of five popular models and find that no model significantly outperforms the others, but Glosten and Harris (1988) generate the fewest theoretically implausible estimates for the information asymmetry component. Compare different ways of decomposing the bid-ask spread.
We measure *board size* as the number of directors the firm lists in its 1996 shareholder proxy statement. Jensen (1993) argues that large boards entail higher coordination and communication costs. If so, they might be less effective watchdogs, and hence aggravate asymmetric information problems.

We second measure the *proportion of outside directors* on the board, as recorded in the same sources Fama and Jensen (1983) argue that competition in the labor market disciplines outside directors to be diligent watchdogs, and Weisbach (1988) finds some evidence consistent with this in large United States firms. Here, directors are classified as outsiders if they have no other relationship to the firm, material or not, direct or indirect. In practice, this means an outside director have no executive position in the firm or any firm above it in the control chain, may not be a relative of the ultimate owner, and must have no large equity block. This definition is necessary in an economy containing corporate groups. To be an outsider, a director must be from outside the group, not just the firm in question.

Our third board structure measure asks whether the board is chaired by an executive. A board chaired by an executive of the company might be less independent, and this might make it less effective. We therefore set a *nonexecutive chair* indicator variable to one if the chair is not (and was never previously) an executive director of the firm in question or of any other firm in the same business group. The indicator is zero otherwise. Our requirement that the board chair never have served as an executive director of another firm in the same business group is more restrictive than the definitions typically used elsewhere; however we feel it is a more sensible criterion in a country like Canada where large business groups are important.

A fourth feature of the board that Berle and Means (1932) argue is important is directors’ combined equity ownership stake. We therefore sum up the directors’ direct and indirect equity ownership and report this in the variable *board ownership*. Indirect ownership takes into account director who own stock in a subsidiary by owning shares in its parent, grandparent, or more remote ancestor firms. Indirect ownership is important in

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11 See also Jensen and Meckling (1976), Morck et al. (1988), Monks and Minow (1995), and others.
Canada because directors frequently own shares in one listed company that owns shares in another, on whose board they serve.

**3.4. Oligarchic Variables**

We propose that fewer directors or more outsider directors might result in firms being more transparent in freestanding widely held firms, but that this might not work in firms with dominant insider shareholders who exercise unfettered control regardless of any nuances of board structure. We therefore consider a range of measures of insider dominance, which we refer to collectively as *oligarchic variables*.

In Canada, many corporate directors’ stock ownership is indirect, and if the directors own enough stock in the parent company, they control it and all the votes it wields in the annual general meetings of its listed subsidiaries and their listed subsidiaries too. Multiple classes of shares with different voting rights are also commonplace. These two features of the Canadian economy mean that directors often vote many more shares than they actually own. We therefore also compute the directors’ total direct and indirect voting control – *board voting control*. Since Berle and Means (1932) argue that a large difference between board ownership and board voting control due to pyramiding, multiple classes of stock, and the like distorts directors incentives, we use this difference as yet another variable, *board excess control* rights.12

As we indicated above, large Canadian firms, and those in most other countries, differ from those in the United States and United Kingdom in two critical ways: they tend to have controlling shareholders and they tend to be organized into pyramidal groups.

We follow La Porta et al. (1999) and others in defining the *controlling shareholder* as the largest shareholder with a total voting stake of ten percent or more. The ten percent threshold is expedient given that Canadian regulations require insiders to disclose holdings “beneficially owned, directly or indirectly, or exercised control or direction”

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12 See e.g. Fan and Wong (2002), Claessens et al. (2002), Haw et al. (2004) Attig et al. (2004), and others.
exceeding 10% of a firm’s shares. Past practice has been to include an indicator variable reflecting the presence of a controlling shareholder or a variable measuring the size of the controlling shareholder’s stake. We deviate from this practice by focusing instead on attributes of the controlling shareholder.

We distinguish “family firms”, defined as having an individual or family as ultimate controlling shareholder, from other firms. The term family firm is thus somewhat misleading here, and is used for expository convenience only. Our family firms include firms with individual controlling shareholders who have no intention of passing control to their children, however we have no way of distinguishing these from genuine family firms. We set a family firm indicator variable to 1 for such firms, and to 0 otherwise. We plan to differentiate true family firms from other firms in a future draft of this paper.

Another oligarchic control measure, denoted boss, is set to one if the firm’s controlling shareholder also serves public shareholders by chairing the board and acting as CEO. The indicator is zero otherwise. Morck et al. (1989) argue that such a concentration of corporate control can render the board passive and ineffective. We therefore interpret boss as gauging whether or not a single party dominates corporate decision making.

The second key feature of corporate governance in Canada and most countries other than the United States and United Kingdom is that listed firms are organized into business groups. We therefore distinguish freestanding firms from firms that belong to business groups. A freestanding firm is one that neither controls nor is controlled by another listed firm. We thus employ a group firm indicator variable, which is set to one if the firm belongs to a business group containing at least one other listed firm, and to zero otherwise.

Firms that belong to corporate groups often share directors. We therefore set an indicator variable, board interlock, to one if one of the firm’s directors either sits on the boards of its parent, grandparent, or more remote ancestor firms, or has significant shareholdings or an executive position in one of these firms. We focus on ancestor firms rather than
descendent firms because firms lower in pyramids are more exposed to negative effects of tunneling.

Firms in low tiers of pyramidal business groups are more likely to be adversely affected by tunnelling. We therefore also assign each group firm a number corresponding to its tier in the pyramid. Firms directly owned by the pyramid’s controlling shareholder tier is set to one, firms controlled by these firms are assigned 2, firms controlled by these are assigned 3, and so on. For freestanding firms, this variable is set to zero.13

3.5. Control Variables

To isolate the relationship between board’s attributes and information asymmetry, we control for variables known to affect the latter. First, as suggested by Demsetz (1968) and Chiang and Venkatesh (1988), firm size is an important determinant of the bid-ask spread. We use average market capitalization (monthly closing price times outstanding shares). Second, Anderson and Fraser (2000) stipulate that trading frequency is a proxy for the speed of information capture in the stock prices. In addition, Stoll (1978) argues that stock price, risk and trading volume affect the bid-ask spread. Hence, we control for trading volume (and average monthly transactions), average closing stock price, and volatility as measured by the variance of total returns.

3.6. Descriptive Statistics

Table 1 reports descriptive statistics of these variables. The mean adverse selection cost is equal to 0.38% of the price, implying that an average trade moves the stock price substantially.

The average board has 8.3 directors. This is somewhat smaller than the average in the United States; where Yermak (1996) reports an average of twelve directors, Barnhart and

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13 See e.g. Attig, Fischer and Gadhoum (2003).
Rosenstein (1998) report an average of 12.4, and Yermak (2004) reports 12.1. However, Canadian boards are slightly larger than those in the United Kingdom, larger than in the United Kingdom, where Lasfer (2004) reports an average board containing seven directors. Canadian boards are slightly larger than the optimal board size (seven to eight) suggested by Jensen (1993).

On average, 67.97% of the directors on a typical Canadian board are independent – quite similar to the 67.3% reported by Park and Shin (2004). These figures suggest that Canadian boards typically have more independent directors than American boards, which Yermak (1996) reports to average 54% independent directors and Barnhart and Rosenstein (1998) find to contain 60.1% independent directors. However, Yermak (2004) find the average board to contain 80% independent directors. Canadian boards also have a higher fraction of independent directors than United Kingdom boards, which Lasfer (2004) reports to be 43% independent.

We find that 30.55% of firms to have a non-executive as a chairman – lower than the 55.2% reported for the United Kingdom by Lasfer (2004).

On average, directors own 16.08% of the firms on whose boards they sit. This is higher than the 10.6% mean stake reported for Fortune 500 firms in the United States by Morck et al. (1988). Despite controlling an average stake of only 16.08%, the directors of large Canadian firms vote an average stake of 21.14%, and so have excess control rights averaging 5.06%.

Table 1 also shows that 70.63% of our firms are “family” firms, in that they have families or individuals as their ultimate controlling shareholders. In 53.17% of our firms, a controlling shareholder both chairs the board and serves as CEO. Group firms account for 53.97% of our sample. In 53.97% of our firms, at least one director is also on the board of a parent, grandparent, or more remote ancestor firm. The average value of 1.789 for the pyramid tier variable means that the average group firm is in the $0.5317 \times 1.789 = 3.31^{st}$ tier of its pyramid. That is, an average of 3.31 listed firms separates the typical pyramid firm from its ultimate controlling shareholder.
The means, medians, and standard deviations of the board structure, oligarchic control, and control variables reported in Table 1 are quite similar to those of the full 476 firms for which these variables are available. This implies that reducing the sample to the 252 firms for which we can calculate adverse selection components of spreads does not result in an atypical sample.

4. Empirical Results

4.1. Simple Regressions

To make reliable inferences, however, we must run multiple regressions. Table 3 presents such regressions to detect simple linear relationships between our information asymmetry variable and our corporate governance variables controlling for share price, trading volume, firm size, and returns variance. Each regression is thus of the form

\[ \text{information asymmetry} = \beta_1 \text{control variables} + \beta_2 \text{governance variable} + \text{residual} \]

The coefficients of the control variables are similar to those reported elsewhere, and so warrant little discussion.\(^{14}\)

In the Table 3 regressions, the only board characteristic that retains statistical significance is the proportion of outside directors. More outside directors are associated with reduced opacity. Director excess control and director interlock are both significantly associated with greater opacity, while the other entrenchment variables are statistically insignificant.

These results are consistent with investors viewing outsider dominated boards as promoting transparency; and with excess control rights for directors and interlocking boards within pyramidal groups as impeding transparency. Of course, our analysis is only of a simple cross section, so latent variable explanations and reverse causality cannot be ruled out. We hope to address causality issues more directly in subsequent revisions.

\(^{14}\) See e.g. Stoll (1978), Chiang and Venkatesh (1988), Huang and Stoll (1997), Heflin and Shaw (2000), and Van Ness et al. (2000), among others.
4.2. Regressions with Interactions between Board and Entrenchment Variables

Table 4 examines how board characteristics interact with entrenchment measures by rerunning the regressions in the leftmost panel of Table 4 adding cross product terms between each board variable and each entrenchment variable in turn. That is, we run regressions of the form of [4], but assume that the coefficient $\beta$ takes different values in family firms and other firms. To operationalize this, we thus run regressions of the form

$$
\begin{bmatrix}
\text{information asymmetry}
\end{bmatrix} = \begin{bmatrix}
\text{control variables} \\
\text{board variables} \\
\text{entrenchment variables}
\end{bmatrix} + \beta_0 \begin{bmatrix}
\text{board variable} \\
\text{entrenchment variable}
\end{bmatrix} + \beta_1 \begin{bmatrix}
\text{board variable} \\
\text{entrenchment variable}
\end{bmatrix} + \beta_2 \begin{bmatrix}
\text{board variables} \\
\text{entrenchment variables}
\end{bmatrix} + \beta_3 \begin{bmatrix}
\text{regression residual}
\end{bmatrix}
$$

Table 4 shows again that outside directors, defined as having no relationship to the firm in question or to any other firm in its business group, are associated with reduced opacity. The effect is statistically significant even when we control for family firms and group firms and the associated interactions, and borders on statistical significance (significant at 10% in one tailed tests) in the other specifications. Director excess also remains correlated with greater opacity in two of the four panels, and borders on statistical significance in the other two.

The most interesting interaction effects arise in connection with the director interlock variable in the rightmost column of Table 4. The first panel, which interacts board size with the entrenchment variables, indicates the following relationship

$$
\begin{bmatrix}
\text{information asymmetry}
\end{bmatrix} = -1.61 \times \begin{bmatrix}
\text{board size}
\end{bmatrix} - 1.02 \times \begin{bmatrix}
\text{interlock indicator}
\end{bmatrix} + 1.76 \times \begin{bmatrix}
\text{board size}
\end{bmatrix} \times \begin{bmatrix}
\text{interlock indicator}
\end{bmatrix}
$$

This critical element here is the difference between the main effect and interaction effect coefficients. A reduction in the size of its board by one director is associated with a 161% increase in opacity in firms without interlocks, but with raising the adverse selection component of the bid ask spread by $(1.76 - 1.61) \times 0.125 = 2\%$ in firms with director interlocks. This combined effect, though economically small, is statistically significant with a p-level of 0.014. That is, adding a director is associated with lower opacity in
firms without director interlocks, but with greater opacity in firms that have director
interlocks with their parent or grandparent, or more remote ancestor firms.

The other interaction effects in Table 4 are statistically insignificant, though.

As Table 2 indicated, some of our entrenchment variables measure effects that are only
really relevant in group member firms. Table 5 therefore revisits some of the results of
Table 4 in this context.

Table 5, like Table 4, indicates a predominantly negative relationship between board size
and opacity. Firms with bigger boards, all else equal, really do seem to be more
transparent to public investors.

Table 4 was conspicuous in the absence of any interesting story regarding outside
directors, who featured prominently in Tables 2 and 3. In Table 5, which controls not
only for membership in a business group, but for the position of the firm in the group,
more outsider directors are again associated with reduced opacity.

Group membership is also associated with greater opacity. The 1.85 coefficient on the
group main effect in the fourth column indicated that group firms have an adverse
selection component of their spreads that is 185% that of non-group firms.

An intriguing set of interactions also emerges in the fourth column of table 5. Adding an
outside director to a freestanding firm is unrelated to opacity, but has a large negative
effect for group firms. The coefficient of -2.50 on the group firm interaction with the
proportion of outside directors shows that one additional outside director on the board of
a typical group firm (which has a mean of 8.97 directors) reduces the adverse selection
component of the spread by 2.50 / 9 = 28%, or from its average of 0.38% to 0.49%.

Outsider directors seem especially important in firms deep within pyramidal groups, for
the interaction of the tier variable and the proportion of outsider directors carries a highly
significant 0.706 coefficient.

5. Conclusion
Our basis thesis is that the board characteristics that are the focus of corporate governance reformers throughout the world, might have different effects in firms that are run by entrenched insiders versus other firms. In particular, recently alleged corporate governance scandals in Canada and elsewhere cast doubt upon the efficacy of smaller boards, outside directors, nonexecutive chairs, and director equity participation as viable reforms.

Several points tentatively emerge: First, large boards are not necessarily bad things. We find intermittent evidence that larger boards are associated with reduced opacity, especially in freestanding firms. Second, outside directors, who are unaffiliated with not only the firm in question but with other firms in its business group as well, are associated with reduced opacity most strongly in firms deep within pyramidal groups. Third, director interlock, the practice of parent, grandparent, or more remote ancestor company insiders sitting on a company’s board is associated with increased opacity, consistent with investors being concerned more about tunneling in such situations. Finally, greater director share ownership not associated with reduced opacity, and greater director voting power disproportionate to director stock ownership is significantly associated with increased opacity.
References


Figure 1: the Black Group
(Note: the ultimate stakes of Black in Hollinger International Inc. are 71.75% as voting rights and 42.03% as cash flow rights; dashed lines refers to cash tunneling)

Black’s Lieutenants:
The following is a list of the insiders in Ravelston Inc., who are either executives or directors in Hollinger Inc. and Hollinger International Inc.
- M. Boultbee
- M. Chant
- M. Colson
- M. Cowan
- M. Radler

Conrad Black + his wife Barbara Amiel Black + His brother Montengu

Ravelston Inc.

Estate of George M. Black, Jr.

Moffat Management Inc.

Ravelston Management Inc.

Black-Amiel Management Inc.

Argus Corporation

Control = ownership = 71.75%

Hollinger Inc

Control = 81.58%
Ownership = 58.58%

Hollinger International Inc.

The Chicago Sun-Times

The Jerusalem Post

The Daily Telegraph
Table 1. Sample Description
This table displays the mean, median, standard deviation and number of observation for each of the variables used in our empirical framework. The governance data was gathered manually from management proxy circulars for 1996. Board size is the number of directors on the board. Proportion of outside directors is the fraction of directors who are not executives of this firm, its parent firm, or its more remote ancestor firms. The nonexecutive chair indicator is one if the chair was not previously an executive director, and zero otherwise. Directors’ ownership and control stakes refer to ultimate stakes owned and voted, respectively including indirect ownership and control. Directors’ excess control is directors’ control rights less their ownership. Family firm is one for firms ultimately controlled by an individual, family or a coalition of individuals or families and zero otherwise. The boss indicator is one if the firm’s dominant shareholder is also both its CEO and the chair of its board, and zero otherwise. Group interlock is one if one or more director sits on the board of a parent firm or more remote ancestor firm and zero otherwise. The group firm indicator is one for firms that either control or are controlled by another listed company, and zero otherwise. Pyramid tier is the number of listed firms separating the firm from its ultimate owner (i.e. level of pyramidation). Daily and intraday data was gathered from the Toronto Stock Exchange (TSX) databases. Firm size is average market capitalization (monthly closing price times outstanding shares). Share volume is the average of trading volume. Transactions volume is the average number of monthly transactions. Returns variance is the variance of monthly total stock returns. Daily spread is the average quoted bid-ask spread as a fraction of the bid-ask midpoint for daily closing prices in the first quarter of 1996. Intraday spread is the average quoted bid-ask spread as a fraction of the bid-ask midpoint for every six-second trading interval in the first quarter of 1996. The adverse selection component of the spread is estimated using the method of Glosten-Harris and expressed as a fraction of the average contemporaneous price. Sample is 252 large Canadian firms for 1996.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opacity Adverse selection component of spread</td>
<td>0.0038</td>
<td>0.0021</td>
<td>0.0044</td>
</tr>
<tr>
<td>Board variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board size</td>
<td>8.2579</td>
<td>7</td>
<td>3.3257</td>
</tr>
<tr>
<td>Proportion of outside directors</td>
<td>0.6697</td>
<td>0.7000</td>
<td>0.1622</td>
</tr>
<tr>
<td>Nonexecutive chair indicator</td>
<td>0.3055</td>
<td>0</td>
<td>0.4615</td>
</tr>
<tr>
<td>Directors’ ownership</td>
<td>0.1608</td>
<td>0.0811</td>
<td>0.1965</td>
</tr>
<tr>
<td>Entrenchment variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directors’ control</td>
<td>0.2114</td>
<td>0.0890</td>
<td>0.2551</td>
</tr>
<tr>
<td>Directors’ excess control</td>
<td>0.0506</td>
<td>0</td>
<td>0.1477</td>
</tr>
<tr>
<td>Family firm indicator</td>
<td>0.7063</td>
<td>1.000</td>
<td>0.4563</td>
</tr>
<tr>
<td>Boss indicator</td>
<td>0.5317</td>
<td>1</td>
<td>0.4999</td>
</tr>
<tr>
<td>Group firm indicator</td>
<td>0.5397</td>
<td>1</td>
<td>0.4994</td>
</tr>
<tr>
<td>Director interlock indicator</td>
<td>0.5396</td>
<td>1</td>
<td>0.4994</td>
</tr>
<tr>
<td>Pyramid tier</td>
<td>1.7896</td>
<td>2</td>
<td>2.2474</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm size (market capitalization)</td>
<td>4.2430</td>
<td>1.0946</td>
<td>1.1617</td>
</tr>
<tr>
<td>Transactions volume</td>
<td>466.0588</td>
<td>250.2833</td>
<td>659.5581</td>
</tr>
<tr>
<td>Share volume</td>
<td>1.0570.68</td>
<td>5067.71</td>
<td>16662.12</td>
</tr>
<tr>
<td>Returns variance</td>
<td>0.0265</td>
<td>0.0106</td>
<td>0.0973</td>
</tr>
</tbody>
</table>
Table 2: Explaining the adverse selection component of the bid-ask spread

Ordinary least squares regressions of the logarithm of the adverse selection component of the bid-ask spread on control variables and corporate governance variables. Control variables include the average share price in 1996, the logarithm of the average share volume, the logarithm of average market capitalization, and the variance of total stock returns for each firm. All data are for 1996. Variables are defined in Table 1. Governance variables are grouped into board characteristics and indicators of insider entrenchment. Numbers in parentheses are heteroskedasticity consistent p-levels.

<table>
<thead>
<tr>
<th>Governance variable</th>
<th>Board size</th>
<th>Prop. of outsider directors</th>
<th>Non-executive chair</th>
<th>Director ownership</th>
<th>Director excess control</th>
<th>Family firm</th>
<th>Group firm</th>
<th>Group firm and tier</th>
<th>Boss indicator</th>
<th>Director interlock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.98</td>
<td>2.54</td>
<td>2.23</td>
<td>1.98</td>
<td>2.19</td>
<td>2.03</td>
<td>2.29</td>
<td>2.13</td>
<td>2.02</td>
<td>1.94</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.00)</td>
<td>(0.01)</td>
<td>(0.03)</td>
<td>(0.01)</td>
<td>(0.02)</td>
<td>(0.01)</td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.03)</td>
</tr>
<tr>
<td>Av. share price</td>
<td>0.00480</td>
<td>0.00580</td>
<td>0.00570</td>
<td>0.00610</td>
<td>0.00390</td>
<td>0.00600</td>
<td>0.00570</td>
<td>0.00590</td>
<td>0.00560</td>
<td>0.00610</td>
</tr>
<tr>
<td></td>
<td>(0.39)</td>
<td>(0.31)</td>
<td>(0.30)</td>
<td>(0.27)</td>
<td>(0.44)</td>
<td>(0.25)</td>
<td>(0.28)</td>
<td>(0.26)</td>
<td>(0.29)</td>
<td>(0.23)</td>
</tr>
<tr>
<td>Log(av. volume)</td>
<td>-0.113</td>
<td>-0.0957</td>
<td>-0.0919</td>
<td>-0.0766</td>
<td>-0.0888</td>
<td>-0.0860</td>
<td>-0.0693</td>
<td>-0.0672</td>
<td>-0.0852</td>
<td>-0.0530</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.17)</td>
<td>(0.19)</td>
<td>(0.29)</td>
<td>(0.21)</td>
<td>(0.22)</td>
<td>(0.34)</td>
<td>(0.36)</td>
<td>(0.23)</td>
<td>(0.46)</td>
</tr>
<tr>
<td>Log(market cap)</td>
<td>-0.521</td>
<td>-0.544</td>
<td>-0.565</td>
<td>-0.566</td>
<td>-0.571</td>
<td>-0.570</td>
<td>-0.580</td>
<td>-0.587</td>
<td>-0.565</td>
<td>-0.586</td>
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<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Return variance</td>
<td>0.952</td>
<td>0.900</td>
<td>0.870</td>
<td>0.897</td>
<td>0.954</td>
<td>0.860</td>
<td>0.951</td>
<td>0.948</td>
<td>0.825</td>
<td>0.951</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.00)</td>
<td>(0.01)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Governance variable (top row)</td>
<td>-0.0272</td>
<td>-0.949</td>
<td>-0.163</td>
<td>0.440</td>
<td>1.120</td>
<td>0.217</td>
<td>0.239</td>
<td>0.164</td>
<td>0.0236</td>
<td>0.176</td>
</tr>
<tr>
<td></td>
<td>(0.45)</td>
<td>(0.03)</td>
<td>(0.40)</td>
<td>(0.30)</td>
<td>(0.00)</td>
<td>(0.29)</td>
<td>(0.19)</td>
<td>(0.54)</td>
<td>(0.71)</td>
<td>(0.30)</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.312</td>
<td>0.319</td>
<td>0.312</td>
<td>0.313</td>
<td>0.320</td>
<td>0.314</td>
<td>0.315</td>
<td>0.313</td>
<td>0.313</td>
<td>0.320</td>
</tr>
</tbody>
</table>

Sample is 252 large Canadian firms.
### Table 3: Interaction of Board Structure and Entrenchment Variables

All regressions contain the controls used in Table 3. Variables are defined in Table 1. Only the coefficients of the board variables, entrenchment variables, and their interactions are shown. Numbers in parentheses are p-levels for heteroskedasticity consistent t-tests; and the p-level of an F test for joint significance is also shown for each regression.

<table>
<thead>
<tr>
<th>Entrenchment variable</th>
<th>Boss indicator</th>
<th>Family firm</th>
<th>Group firm</th>
<th>Director excess control</th>
<th>Director interlock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board variable main effect</td>
<td>-0.0331</td>
<td>-0.0340</td>
<td>-0.114</td>
<td>-0.0302</td>
<td>-0.161</td>
</tr>
<tr>
<td></td>
<td>(0.49)</td>
<td>(0.66)</td>
<td>(0.11)</td>
<td>(0.43)</td>
<td>(0.02)</td>
</tr>
<tr>
<td>Entrenchment variable main effect</td>
<td>-0.0399</td>
<td>0.130</td>
<td>-0.619</td>
<td>2.11</td>
<td>-1.02</td>
</tr>
<tr>
<td></td>
<td>(0.93)</td>
<td>(0.83)</td>
<td>(0.27)</td>
<td>(0.19)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Interaction effect</td>
<td>0.0240</td>
<td>0.0102</td>
<td>-0.111</td>
<td>-0.0953</td>
<td>0.176</td>
</tr>
<tr>
<td></td>
<td>(0.68)</td>
<td>(0.13)</td>
<td>(0.13)</td>
<td>(0.59)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>F statistic p-level for joint significance</td>
<td>(0.71)</td>
<td>(0.66)</td>
<td>(0.29)</td>
<td>(0.00)</td>
<td>(0.04)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Board variable</th>
<th>Proportion of Outside Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board variable main effect</td>
<td>-1.01</td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
</tr>
<tr>
<td>Entrenchment variable main effect</td>
<td>-0.0351</td>
</tr>
<tr>
<td></td>
<td>(0.95)</td>
</tr>
<tr>
<td>Interaction effect</td>
<td>0.245</td>
</tr>
<tr>
<td></td>
<td>(0.78)</td>
</tr>
<tr>
<td>F statistic p-level for joint significance</td>
<td>(0.16)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Board variable</th>
<th>Nonexecutive Chair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board variable main effect</td>
<td>0.0573</td>
</tr>
<tr>
<td></td>
<td>(0.82)</td>
</tr>
<tr>
<td>Entrenchment variable main effect</td>
<td>0.2780</td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
</tr>
<tr>
<td>Interaction effect</td>
<td>-0.435</td>
</tr>
<tr>
<td></td>
<td>(0.31)</td>
</tr>
<tr>
<td>F statistic p-level for joint significance</td>
<td>(0.39)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Board variable</th>
<th>Director fractional stock ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board variable main effect</td>
<td>0.0014</td>
</tr>
<tr>
<td></td>
<td>(0.87)</td>
</tr>
<tr>
<td>Entrenchment variable main effect</td>
<td>0.105</td>
</tr>
<tr>
<td></td>
<td>(0.65)</td>
</tr>
<tr>
<td>Interaction effect</td>
<td>0.0020</td>
</tr>
<tr>
<td></td>
<td>(0.85)</td>
</tr>
<tr>
<td>F statistic p-level for joint significance</td>
<td>(0.65)</td>
</tr>
</tbody>
</table>

*Sample: 252 large Canadian firms*
Table 4: Group Firms

All regressions contain the controls used in Table 3. Variables are defined in Table 1. Only the coefficients of the board variables, entrenchment variables, and their interactions are shown. Numbers in parentheses are p-levels for heteroskedasticity consistent t-tests; and the p-level of an F test for joint significance is also shown for each regression.

<table>
<thead>
<tr>
<th>Board variable</th>
<th>Board Size</th>
<th>Proportion of Outside Directors</th>
<th>Non-executive chair indicator</th>
<th>Director ownership stake</th>
<th>F statistic p-level for joint significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board variable main effect</td>
<td>-0.063</td>
<td>-0.114</td>
<td>-1.36</td>
<td>-0.753</td>
<td>0.0107</td>
</tr>
<tr>
<td></td>
<td>(0.25)</td>
<td>(0.10)</td>
<td>(0.02)</td>
<td>(0.27)</td>
<td>(0.11)</td>
</tr>
<tr>
<td>Group firm indicator main</td>
<td>0.211</td>
<td>-0.990</td>
<td>0.1486</td>
<td>1.85</td>
<td>0.191</td>
</tr>
<tr>
<td>effect</td>
<td>(0.43)</td>
<td>(0.19)</td>
<td>(0.58)</td>
<td>(0.01)</td>
<td>(0.45)</td>
</tr>
<tr>
<td>Tier</td>
<td>-0.0492</td>
<td>0.0963</td>
<td>-0.60</td>
<td>-0.478</td>
<td>-0.0383</td>
</tr>
<tr>
<td></td>
<td>(0.68)</td>
<td>(0.47)</td>
<td>(0.31)</td>
<td>(0.01)</td>
<td>(0.58)</td>
</tr>
<tr>
<td>Tier x board variable</td>
<td>0.0082</td>
<td>-0.0087</td>
<td>0.259</td>
<td>0.706</td>
<td>0.145</td>
</tr>
<tr>
<td></td>
<td>(0.49)</td>
<td>(0.56)</td>
<td>(0.17)</td>
<td>(0.00)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Group firm indicator x board</td>
<td>0.148</td>
<td>-2.50</td>
<td>-2.50</td>
<td>-2.50</td>
<td>-0.219</td>
</tr>
<tr>
<td>variable</td>
<td>(0.12)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.67)</td>
</tr>
<tr>
<td>F statistic p-level for joint</td>
<td>(0.61)</td>
<td>(0.48)</td>
<td>(0.14)</td>
<td>(0.00)</td>
<td>(0.20)</td>
</tr>
</tbody>
</table>