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ESSAYS ON CORPORATE GOVERNANCE

Thèse présentée
à la Faculté des études supérieures de l'Université Laval
dans le cadre du programme de doctorat en sciences de l'administration
pour l'obtention du grade de Philosophiae Doctor (Ph.D.)

DÉPARTEMENT DE FINANCE ET ASSURANCE
FACULTÉ DES SCIENCES DE L'ADMINISTRATION
UNIVERSITÉ LAVAL
QUÉBEC

2008

ACKNOWLEDGEMENTS

I would like to thank my committee members: Jean Bédard, Ron Giammarino, Nabil Khoury and Issouf Soumaré for their helpful comments and suggestions. I am especially indebted to my dissertation chair, Jean-Marie Gagnon, for his invaluable guidance and support. I wish also to express my gratitude to Klaus Fischer who was my advisor until 2006 when he suddenly passed away. Professor Fischer, rest in peace.

This thesis would not have been possible without the continuous support of my family. I am indebted to my parents, Fayçal and Yamina, and my brothers, Hamza and Hédi. Each of them has provided me with priceless encouragement even if they were far away. I am grateful to my wife, Soumaya, for her love, patience and encouragements, especially during tough times. I cannot end without thanking my daughter, Aysha, whose only presence has inspired me during the last steps of my thesis. To my family, I dedicate this thesis.

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RÉSUMÉ

Dans cette thèse, nous étudions deux questions reliées à la régie d'entreprise en présence d'actionnaires importants, à savoir les rôles des groupes d'entreprises et les structures à plusieurs actionnaires significatifs.

Premièrement, nous explorons les bon et mauvais cotés des groupes d'entreprises au Canada en utilisant les fusions et acquisitions comme laboratoire d'analyse. Nos résultats suggèrent que les rendements boursiers autour de l'annonce des firmes affiliées à un groupe ne diffèrent pas de ceux des firmes indépendantes. Cependant, à l'intérieur des groupes contrôlés par des familles, les firmes situées en bas de la pyramide et les firmes riches en liquidités font des acquisitions moins attrayantes. Une analyse de la propagation de l'effet d'annonce d'une acquisition est conforme à l'hypothèse de mauvaise allocation des ressources au sein des groupes contrôlés par des familles puisqu'il semble que les profits soient dirigés vers les firmes non contraintes financièrement. Finalement, une analyse des fusions intra-groupe n'est pas compatible avec l'hypothèse de « *tunnelisation* » ni celle des marchés internes de capitaux efficients. Globalement, nos résultats soulignent plutôt le mauvais coté des groupes d'entreprises et suggèrent que le rôle joué par ces derniers est déterminé principalement par l'environnement institutionnel et l'identité de l'actionnaire dominant.

Deuxièmement, nous nous demandons si les structures à plusieurs actionnaires significatifs (SPAS) jouent un rôle dans la régie de 1252 entreprises de l'Asie de l'Est. Nous concluons que la présence, le nombre et la taille des actionnaires multiples sont associés avec des primes d'évaluation. Résultat d'égale importance : l'effet des SPAS est plus prononcé dans les firmes où les possibilités de détournement des fonds et les besoins de financements sont élevés. Finalement, les SPAS atténuent la tendance de

l'actionnaire principal à réduire le risque. Généralement, nos résultats, assujettis à plusieurs tests de robustesse, impliquent que les SPAS jouent un rôle bénéfique dans la régie d'entreprise en exerçant une surveillance sur les tentatives de détournement des fonds.

ABSTRACT

In this thesis, we examine two issues related to corporate governance in the presence of large shareholders, namely the roles of business groups and multiple large shareholder structures.

First, we explore the bright and dark sides of Canadian business groups using mergers and acquisitions as our experimental setting. Our results suggest that announcement returns to group-affiliated bidders do not differ from announcement returns to stand-alone bidders. However, we find that within *family* business groups, firms in lower layers of the pyramid and cash-rich firms undertake inferior acquisition decisions relative to firms in higher layers of the pyramid and cash-poor firms. These results lend support to extant theories of agency costs in pyramidal business groups. An analysis of the spillover effect of acquisition announcements within the group is inconsistent with tunneling. Rather, we find evidence of resource misallocation within *family* business groups where profits appear to be diverted to financially unconstrained firms. Finally, an investigation of intra-group mergers is inconsistent with tunneling and internal capital markets. These transactions seem to be employed as a means to simplify the group structure. Overall, our evidence is consistent with the dark side hypothesis of business groups and suggests that the institutional context and the identity of the controlling shareholder are key factors in determining the role of business groups.

Second, we examine whether multiple large shareholder structures (MLSS) convey information about their governance role in a sample of 1,252 publicly traded firms from nine East Asian economies. We find that the presence, number, and size of multiple large shareholders are associated with a significant valuation premium. Our

results show also that MLSS identity influences corporate value. Equally important, we find that the valuation effects of MLSS are more pronounced in firms where the likelihood of corporate diversion is high and external financing requirements are large. Finally, we investigate one channel through which MLSS monitoring operates. We argue and find that MLSS dampen the largest shareholder's incentives to reduce corporate risk-taking. Overall, our results imply that MLSS play a valuable monitoring role in curbing the diversion of corporate resources.

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INTRODUCTION

The questions of how firms are governed and the impact of corporate governance on firms' behaviour and performance have attracted a huge body of theoretical and empirical research over the past decades. Berle and Means (1932) set the stage for this literature in their seminal book "*The Modern Corporation and Private Property*" in which they showed that corporate ownership in the U.S. was widely dispersed among a large number of small shareholders, thereby leaving control in the hands of professional managers. The ensuing research predominantly addressed the U.S. corporate landscape, focusing on the conflicts of interests between managers and shareholders stemming from the separation of ownership and control (e.g., Jensen and Meckling, 1976). However, a handful papers reviewed in Shleifer and Vishny (1997) hinted that corporate control was concentrated outside the U.S. Shleifer and Vishny concluded their review by questioning the incentives of controlling shareholders and calling for further research on international corporate governance.

Responding to this call, La Porta et al. (1999), Claessens et al. (2000) and Faccio and Lang (2002) conduct large-scale surveys of corporate ownership and control in different regions of the world. In addition to providing systematic evidence for control concentration, principally endowed to families, they show that control is separated from ownership through the use of such mechanisms as pyramidal structures, dual class shares and crossholdings. Their findings clearly confirm that the Berle and Means's image of the widely held firm and the

associated conflicts of interests between managers and shareholders are far from universal. This in turn shifted the attention of researchers to the analysis of conflicts of interests between controlling and minority shareholders; by separating ownership from control, controlling shareholders become inclined to generate private benefits at the expense of minority shareholders because they capture a small fraction of the cash flow effects of their actions (Bebchuck et al., 2000).

In this thesis, we examine two issues related to corporate governance in the presence of large shareholders, namely the roles of business groups and multiple large shareholder structures.

Business groups are common organizational forms around the globe. They are collections of legally independent firms brought under the control of a large shareholder who generally employs control enhancing devices such as pyramiding, and to a lesser extent, dual class shares and crossholdings to secure voting rights in excess of cash flow rights. There are mainly two theories rationalizing the emergence of business groups. According to the first theory, business groups are set up to generate private benefits at the expense of minority shareholders because the separation of ownership and control provides the controlling shareholder with the incentives and the ability to do so (Almeida and Wolfenzon, 2006). According to the second theory, business groups are created to get around frictions inherent to external markets because group-affiliated firms can create "friction-free" internal markets for factor inputs (Khanna and Palepu, 1997). It happens that these theories are well suited to explain the prevalence of business groups in emerging markets but have limited predictive power for their presence in investor-friendly, developed countries. In these countries, investor protection binds the ability of controlling shareholders to expropriate minority shareholders' wealth and the limited impact of frictions in external markets

hampers the credibility of the internal markets argument. In our first essay, we use the setting of mergers and acquisitions to test the alternative hypotheses on the role of business groups in Canada, a country characterized by sound investor protection laws and well developed markets. In doing so, we contribute to the literature by deepening our understanding of the functioning of business groups in environments that went relatively unexplored by previous research.

An interesting feature emerging from recent worldwide surveys of ownership structures is the prevalence of firms having multiple large shareholders (La Porta et al., 1999; Claessens et., 2000; Faccio and Lang, 2002). A natural question arises as to whether multiple large shareholders serve a corporate governance role. Unfortunately, existing theoretical work does not provide a clear-cut answer. For instance, Bennedsen and Wolfenzon (2000) and Bloch and Hege (2001) model the strategic interactions between large shareholders and find that their presence is associated with reduced private benefits consumption. On the other hand, Zwiebel (1995) and Kahn and Winton (1998) identify occurrences where multiple large shareholders adopt a selfish behaviour at the expense of minority shareholders. In our second essay, we build on extant theoretical work to generate testable predictions on the valuation effects of the presence and attributes of multiple large shareholder structures in East Asian firms. In doing so, we contribute to the literature by examining a relatively overlooked, and potentially important corporate governance mechanism in East Asia, a region where extant research documents significant expropriation of minority shareholders (e.g., Claessens et al., 2002).

CHAPTER 1: BUSINESS GROUPS AND MULTIPLE LARGE SHAREHOLDER STRUCTURES: REVIEW OF THE LITERATURE

The objective of this opening chapter is to review the relevant literature on business groups and multiple large shareholder structures. In what follows we summarize the findings of studies advocating their positive and negative roles in corporate governance.

1. BUSINESS GROUPS

A business group is a set of legally independent firms, listed or private, typically under the control of a large shareholder. There is a debate in the literature on whether this organizational form adds to or destroys firm value. Below, we review the pros and cons of business groups.

1.1 The Bright Side of Business groups: Efficient Internal Markets

In frictionless markets, factor inputs should flow to firms where the marginal returns are higher. However, in the presence of frictions, markets may not channel the appropriate level of inputs to the firm. Khanna and Palepu (1997) build on this situation, coined by Willamson (1975) as "market failure", to argue that business groups are desirable organizational forms that can substitute for imperfect external markets. In particular, business groups can create an internal market in which intra-group transactions are sheltered from the imperfections that plague external markets, thereby allowing affiliated firms to obtain an efficient allocation of inputs.[1]

Extant research that corroborates the intermediation role of business groups has predominantly addressed the so-called internal capital market.[2] This research shows that group-affiliated firms are subject to fewer financing constraints relative to stand-alone firms, and attributes this finding to efficient reallocation within the group internal capital market. For instance, Hoshi et al. (1990) report that, after the onset of financial distress, Japanese *keiretsu* members invest and sell more intensively relative to similar non-affiliated firms. Hoshi et al. (1991) and Perotti and Gelfer (2001) show that the sensitivity of investment to internal funds, a measure of the severity of capital market imperfections, is lower for group-affiliated firms than for stand-alone firms in Japan and Russia,

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[1] Intra-group transactions may have other positive effects as well. Khanna and Yafeh (2005) find evidence that intra-group liquidity smoothing reduces affiliated firms' risk in Japan and several emerging markets. Ferris et al. (2003) report similar evidence in Korean *Chaebols* and find that the lower risk of *Chaebol*- affiliated firms enhances their debt capacity. Gramlich et al. (2004) find evidence that income shifting within Keiretsu-affiliated firm's results in a lower tax burden. More recently, Gopalan et al. (2007) find that intra-group loans in India contribute to reduce the probability of bankruptcy of affiliated firms.

[2] The evidence on the intermediation role of business groups in other than capital markets is rather scarce. A notable exception is Khanna and Palepu (1999), who construct indexes measuring the extent of managerial labor and product market intermediation achieved by business groups in Chile and India. They find that higher levels of the indexes tend to boost the performance of group member firms.

respectively. Shin and Park (1999) find that the investment of Korean affiliated firms is more sensitive to the cash flow of other group members than to their own cash flow, which indicates that capital is actively reallocated within the *Chaebols*.

Distinct evidence on the role of internal capital markets comes from studies of the performance effects of business groups. Khanna and Rivkin (2001) find that group affiliation has a positive effect on the profitability of the average group member in several emerging markets. In two successive papers, Khanna and Palepu (2000a, 2000b) document a U-shaped relationship between affiliated firms' performance and group diversification in Chile and India, respectively. Their results suggest that the operations of internal capital markets entail a fixed cost and that the benefits of group affiliation are higher the larger the scope of the internal capital market.

1.2 The Dark Side of Business Groups: Agency Costs and Resource Misallocation

1.2.1 Agency Problems

On the negative side, business groups have recently been criticized for creating severe agency problems between controlling and minority shareholders. These criticisms have mainly centered on *pyramidal* business groups as their structure allows ownership to be separated from control, which in turn provides the controlling shareholder with the incentive to consume private benefits. For instance, consider a simple three-layer pyramid where a family controls 51% of the equity of firm *X*, firm *X* controls 51% of the equity of firm *Y*, and firm *Y* controls 51% of the equity of firm *Z*. The pyramidal structure lets the family exert effective control over firm *Z* while owning only 13.27% (=51%x51%x51%) of it. Because the family internalizes only a fraction (13.27%) of the outcome of its actions in firm *Z*, it has the incentive to engage in self-dealing at the expense of minority shareholders.

There is mounting evidence on the agency costs of separating ownership from control in pyramidal business groups. Claessens et al. (2002) report that in East Asia, where pyramiding is the main technique to separate ownership from control, firm value declines as the control rights of the controlling shareholder exceed its ownership rights. Lins (2003) reports a similar finding from a distinct sample of emerging market firms. Joh (2003) examines a time-series sample of Korean data and finds that the controlling shareholder's control-ownership disparity in *Chaebol*-affiliated firms has a negative impact on accounting measures of performance. Complementary evidence comes from the Asian financial crisis, when the sudden decrease of firms' expected returns on investment heightened controlling shareholders' incentives to expropriate minority shareholders. For instance, Baek et al. (2004) report that *Chaebol*-affiliated firms in which controlling shareholders separated their control from ownership suffered larger stock price declines relative to other firms during the crisis period. Lemmon and Lins (2003) generalize these results to a larger sample of East Asian firms.

While these studies provide evidence on the existence of agency costs arising from the separation of ownership and control in pyramidal business groups, they do not address the exact nature of private benefits of control enjoyed by the controlling shareholder. A salient feature of private benefits in pyramidal business groups is tunneling, which entails the transfer of resources from one group-affiliated firm to another. Johnson et al. (2000a, 2000b) describe several cases of tunneling in developed and emerging market economies. An important aspect in their discussion of these cases is that controlling shareholders are able to expropriate minority shareholders without incurring legal liability. Bertrand et al. (2002) provide a general methodology to detect and quantify tunneling. In essence, they observe how a shock to the profits of an affiliated firm propagates within the group. Their findings indicate that the controlling

shareholders of Indian pyramidal groups tunnel profits from affiliated firms in which they have low cash flow rights to affiliated firms in which they have high cash flow rights. This evidence suggests that intra-group transactions may be structured to increase the wealth of the controlling shareholder at the expense of minority shareholders in affiliated firms lower down the pyramid. This rationale for intra-group transactions contrasts with the efficient internal capital markets view.

1.2.2 Resource Misallocation

Fueled by evidence of a diversification discount in U.S. conglomerates (Berger and Ofek, 1995), a distinct but related strand of research raises doubts on the efficiency of business groups' internal capital markets. The underlying argument of this research is that internal capital markets engage in inefficient cross-subsidization, i.e., the transfer of funds from (strong) members with good investment opportunities to (weak) members with poor investment opportunities.[3] Using excess value measures, Lins and Servaes (2002) in emerging markets, Ferris et al. (2003) in Korea and Walker (2005) in Japan, document that diversified group-affiliated firms trade at a discount relative to focused stand-alone firms. These findings suggest that resources are misallocated within internal capital markets. Of particular interest, the results of Lins and Servaes indicate that the discount is most severe for affiliated firms in which insiders have separated their control from ownership rights. Like tunneling, these results are consistent with an agency cost explanation of intra-group transactions.

[3] Scharfstein and Stein (2000) attribute this behaviour to what they coin "socialist" internal capital markets.

2. MULTIPLE LARGE SHAREHOLDER STRUCTURES

A multiple large shareholder structure exists whenever significant stakes of a firm's control rights are owned by more than one shareholder. As in the case of business groups, there is no consensus in the literature over whether multiple large shareholders enhance or destroy firm value. However, unlike business groups, the literature on multiple large shareholders is relatively scarce. Below, we review these contrasting views of multiple large shareholder structures.

2.1 Multiple Large Shareholder Structures: A Governance Mechanism

Bennedsen and Wolfenzon (2000) develop a model in which a firm's single owner has to raise external capital by selling equity to a number of large shareholders. Neither the initial owner nor the other large shareholders possess sufficient voting rights to exert effective control over the firm, so they have to behave strategically by forming coalitions. Since any coalition will hold a larger equity stake than any individual member, it will capture a larger fraction of the outcome of its actions, thereby increasing firm value. However, Bennedsen and Wolfenzon note that once the equity stakes are distributed among large shareholders, the winning coalition will hold the smallest possible equity stake. This "coalition formation" effect will therefore lead to forgone opportunities to further enhance firm value. Bloch and Hege (2001) consider a model with two blockholders competing for corporate control. To gain control, the two blockholders submit their proposals to a shareholders' meeting, and in order to attract the vote of minority shareholders, the proposals should signal the commitment of the blockholders not to consume private benefits.

While using different settings, the models reviewed in this section reach a similar conclusion. They show that multiple large shareholders can improve firm value either by forming coalitions that hold larger equity stakes or by fiercely competing for corporate control.

2.2 Multiple Large Shareholder Structures: An Entrenchment Mechanism

Zwiebel (1995) study the behaviour of investors allocating money across and within firms. He notes that the existence of private benefits empowers investors with incentives to accumulate large equity stakes in a few firms. When these private benefits are divisible, one interesting outcome of his model is the emergence of (moderately) large shareholder structures in which large shareholders find it mutually beneficial to cooperate in order to generate private benefits. Kahn and Winton (1998) model the behaviour of moderately large investors when they possess private information about the firm's prospects. In their model, a large shareholder can use its private information to intervene and improve firm performance. If the benefits of intervention are larger than the associated costs, the institution can realize profits by buying shares immediately and selling after the performance improvement. However, intervention can also have an impact on future trading profits. On the one hand, if uninformed traders believe that the firm will perform poorly in the future, then future trading profits will increase. On the other hand, if uninformed traders believe that the firm will perform well, then trading profits will decrease. In the latter scenario, it could be more profitable for the institution to sell firm's share short, i.e., speculate instead of intervening.

The models reviewed in this section illustrate an alternative role of multiple large shareholders. They show that they can behave opportunistically either collectively or individually at the expense of other shareholders.

Like theoretical work, empirical studies on the role of multiple large shareholders are rather scarce. Maury and Pajuste (2005) and Laeven and Levine (2007) relate the distribution of equity rights among large shareholders to firm value in Finland and Western Europe, respectively. They find that greater contestability of corporate control, i.e., a more even distribution of shares

between large shareholders improves corporate valuation. Both papers conclude that relatively powerful large shareholders can mitigate the expropriation incentives of the largest shareholder.

CHAPTER 2: THE BRIGHT AND DARK SIDES OF BUSINESS GROUPS: EVIDENCE FROM MERGERS AND ACQUISITIONS

1. INTRODUCTION

Business groups – a set of legally independent firms under common control – are widespread and dominate the corporate sector of many emerging as well as developed economies (Ghemawat and Khanna, 1998; LaPorta et al., 1999). There is an ongoing debate in the financial economics literature on the role of business groups.[4] Proponents of the bright side of business groups argue that they can play an intermediation role by allocating resources to affiliated firms in a more efficient way than imperfect external markets (Khanna and Palepu, 1997). In contrast, advocates of the dark side argue that business groups have the

[4] See Khanna (2000), Morck et al. (2005) and Khanna and Yafeh (2005) for a literature review.

potential to create agency problems and economic inefficiencies. Agency problems arise because controlling shareholders often exercise control in excess of their ownership in affiliated firms, which provides them with the incentives to consume private benefits (Claessens et al., 2002; Lins, 2003; Lemmons and Lins, 2003). Another aspect of agency problems in business groups is tunneling, i.e., the undue diversion of resources by controlling shareholders from affiliates in which they have low cash flow rights to affiliates in which they have high cash flow rights (Johnson et al., 2000a; Bertrand et al., 2002). A final concern is that business groups may not be positioned better than external markets in channeling resources to affiliated firms and, as a result, engage in resource misallocation (Lins and Servaes, 1999, 2002).

A key element in the debate on business groups is the institutional environment in which they operate. On the one hand, Khanna and Palepu (1997, 1999) conceive of business groups as responses to capital, product and labor market voids. On the other hand, theoretical findings, as in Bebchuk et al. (2000) and Almeida and Wolfenzon (2006), suggest that controlling shareholders may set business groups as devices to expropriate minority shareholders in poor legal investor protection settings. These arguments are helpful to explain the occurrence and the role of business groups in emerging economies where market institutions are underdeveloped and legal protection of minority shareholders is inadequate. Yet, why business groups materialize and the nature of their role in countries characterized by more developed markets and better minority shareholder protection remain open questions.

In this essay, we examine the bright and dark sides of business groups in Canada, a country characterized by well-functioning capital, product and labor markets and a Common Law regime that is protective of minority shareholders' rights (La Porta et al., 1998). Canadian business groups are typically pyramids,

i.e., structures in which a controlling shareholder controls a firm, which in turn controls another firm and so on. Pyramidal business groups have a long-lasting tradition in Canada; Morck et al. (2004) trace their existence back to the beginning of the last century. In addition, pyramidal-affiliated firms account for more than 30% of Canadian listed firms and span virtually all industry sectors (Attig and Gadhoum, 2003). While families control the majority of business groups in Canada, there are non-trivial cases of business groups controlled by widely held firms and other investors. Therefore, the Canadian setting offers a distinctive opportunity to study the impact of controlling shareholder identity on the role of business groups, a relatively unexplored issue.

Our focus is on mergers and acquisitions (M&As). These transactions are well suited to investigate the bright and dark sides of business groups for many reasons. First, M&As involve large investment outlays and are readily observable to outside investors. Therefore, one may gain insights from the market reaction to the announcement of these important decisions to assess the incentives of controlling shareholders to maximize (or destroy) firm value.[5] Second, using abnormal returns in the M&As setting as a measure of performance is arguably superior to accounting and market based measures of performance used in prior research on business groups. For instance, Khanna (2000) criticizes the return on assets (ROA) measure as it does not account for risk and is not forward looking. He also raises concerns about noise in the Tobin's q measure attributable to firms' disclosure policy and stock illiquidity. Third, using abnormal returns mitigates the reverse causality problem inherent to the performance and group affiliation relationship since abnormal returns are measured over short time

[5] Managerial/controlling shareholders' incentives have been shown to influence the outcome of M&As. For instance, Lewellen et al. (1985) and Hubbard and Palia (1995) find that bidders with low managerial ownership exhibit negative abnormal returns in the U.S. while Boehmer (2000) documents that German majority controlled firms are more likely to make value-destroying bids.

intervals.[6] Fourth and perhaps most importantly, acquisition decisions lie at the heart of theoretical models of agency costs in business groups (Bebchuk et al., 2000; Almeida and Wolfenzon, 2006). Thus, M&As offer the opportunity to empirically test the implications of extant theoretical work.

We develop and test a rich set of hypotheses on efficient internal capital markets, resource misallocation, agency costs of the separation of ownership and control, agency costs of free cash flow and tunneling within business groups. Our research is conducted using a sample of M&A transactions over the period 1990-99. Of the 571 transactions that took place over this period, 184 were by group-affiliated bidders (105 controlled by families, 59 controlled by widely held firms and 20 controlled by other investors) while 387 were by stand-alone bidders. Our results are summarized as follows.

First, we compare the abnormal returns to group-affiliated bidders relative to stand-alone bidders. We do so on the premise that the extent to which the group internal capital market is more or less efficient than external capital markets should be revealed in the investment performance differential between group-affiliated and stand-alone bidders. We find that both group-affiliated and stand-alone bidders exhibit positive and statistically indistinguishable abnormal returns. This result runs counter to the idea that internal capital markets do a better job than external capital markets in channeling resources to affiliated firms.

[6] In order to investigate the dark and bright sides of business groups, a line of research pioneered by Khanna and Palepu (1999) investigates their performance effects. For instance, these authors find that firms affiliated with large Indian business groups have a higher performance than freestanding firms. However, it is not clear whether group affiliation influences performance, or the reverse, i.e., performance influences group affiliation. The latter scenario comes about, for example, when controlling shareholders chose to add well-performing firms to the group ex-ante.

Second, we investigate the agency costs arising from the separation of ownership and control and the agency costs of free cash flow. We find that within family business groups, acquisitions by firms in lower layers of the pyramid generate lower abnormal returns relative to firms in higher layers of the pyramid. This result is consistent with Bebchuk et al. (2000) who argue that separating ownership from control provides controlling shareholders with the incentive to overexpand through projects conferring private benefits. We also find that within family business groups, cash-rich bidders exhibit lower abnormal returns relative to cash-poor bidders. This finding lends support to the "theory of family business groups" of Almeida and Wolfenzon (2006) which proposes that families are likely to use cash-rich affiliated firms to set up new firms offering future opportunities for resource diversion. Interestingly, we do not find a similar pattern of results within business groups controlled by widely held firms and other investors. This piece of evidence suggests that, in contrast to other shareholder types, families have distorted incentives in affiliated firms under their control.

Third, we investigate the spillover effect within the group of the acquisition announcement by a group-affiliated bidder. This allows us to identify wealth transfers from the bidder to other firms affiliated with the same business group, and to assess whether these transfers are motivated by tunneling, efficient internal capital markets or resource misallocation. Our results do not support tunneling as we do not find evidence of wealth transfers to affiliated firms in which controlling shareholders have higher cash flow rights. Rather, we find that cash-rich and low growth firms affiliated with family business groups are likely to benefit from the acquisition announcement. We interpret this finding as evidence for resource misallocation within family business groups since profits seem to be diverted to financially unconstrained firms.

Fourth, we examine the effects of intra-group mergers since these settings are ideal to test the hypotheses of tunneling against the efficient internal capital market. On the one hand, intra-group mergers are non-arm's-length transactions; which suggests that controlling shareholders may opportunistically set the terms to increase their wealth at the expense of minority shareholders. On the other hand, intra-group mergers can add value in an efficient internal market if they lead to better asset redeployability (Gertner et al., 1994). We do not find evidence for either tunneling or efficient internal capital markets: bidder returns are negative and insignificant, target returns are positive and significant, and combined returns are negative and insignificant. One plausible interpretation for intra-group mergers is that they are simply attempts to restructure the group.

Our research adds to the literature by investigating the role of business groups in an institutional environment characterized by well-functioning markets and a high level of investor protection. On the one hand, our results suggest that when external markets are developed, business groups have no superior proficiency for internally reallocating resources between affiliated firms. This contrasts with some of the evidence on business groups in emerging markets (Shin and Park, 1999; Perotti and Gelfer, 2001), but is in line with the evidence on diversified U.S. conglomerates (Berger and Ofek, 1995). On the other hand, our results are consistent with the contention of LaPorta et al. (2000) that investor protection shapes controlling shareholders' expropriation technology.[7] The evidence suggests that the Common Law regime prevailing in Canada makes costly and presumably impossible the outright expropriation of minority

[7] LaPorta et al. (2000, page 6) argue that "One way to think about legal protection of outside investors is that it makes the expropriation technology less efficient. At the extreme of no investor protection, the insiders can steal a firm's profits perfectly efficiently... As investor protection improves, the insiders must engage in more distorted and wasteful diversion practices such as setting up intermediary companies into which they channel profits... When investor protection is very good, the most the insiders can do is overpay themselves, put relatives in management, and undertake some wasteful projects."

shareholders through tunneling activities; which have been documented in less friendly environments for minority shareholders. Still, families are able to generate "softer" private benefits in firms lower down the pyramid and in cash-rich firms.

Our research also contributes to the literature on family ownership. We show that much of the dark side of business transpires when families are the controlling shareholders. Morck et al. (2000) argue that families have vested interests in preserving existing capital and blocking innovation. Our result that families divert resources to cash-rich and low growth firms is consistent with this contention to the extent that these firms have poor innovation potential. Morck and Yeung (2004) suggest that families engage in lobbying activities and that their political influence is proportional to the assets under their control. Our results lend support to these arguments, as families appear to be pursuing size to enhance their political influence with little regard to minority shareholders' wealth in firms lower down the pyramid and cash-rich firms. Overall, our evidence is inconsistent with the recent findings in the U.S. where family ownership is associated with efficient outcomes (Anderson and Reeb, 2003; Villalonga and Amit, 2006).

The remainder of the essay is organized as follows. Section 2 presents the Canadian context. In Section 3, we describe the sample and the variables used in this study. Section 4 provides the empirical results, and Section 5 presents a summary and concludes the essay.

2. THE CANADIAN CONTEXT

The ownership structure in Canada is concentrated. Attig and Gadhoum (2003) report that more than 80% of Canadian listed firms have controlling shareholders. Corporate control is in the hand of families and widely held firms

who control, respectively, 40% and 20% of listed firms. Moreover, the controlling shareholders manage to separate their ownership from control: 33% of listed firms are controlled through pyramidal structures while 16% are controlled through shares with superior voting rights. The picture of Canadian corporate ownership in general, and the pervasiveness of pyramidal business groups in particular, contrast with the freestanding, widely held firm prototype prevailing in the U.S. and U.K. At first glance, this seems surprising since Canada, the U.S. and U.K. have comparable institutions such as developed markets and Common Law regimes. However, we note that Canada has a smaller economy and smaller firms, which may facilitate concentration of ownership in the hands of large shareholders. Consistent with this argument, a regression of country-level ownership concentration on the natural log of GDP has a negative slope.[8] Interestingly, the magnitude of the residual for Canada is slightly positive. In contrast, the magnitude of residuals for the U.S. and U.K. are negative and larger in absolute value. This suggests that while the size of the economy largely explains ownership concentration in Canada, other factors may justify the lowest ownership concentration in the U.S. and U.K.

Explanations for the emergence of pyramidal business groups in Canada may reside in historical factors. With this in mind, Morck et al. (2004) review the evolution of corporate ownership in Canada during the twentieth century. They show that family-controlled pyramidal groups dominated the corporate sector in the beginning of the century, then virtually disappeared by mid-century and subsequently resurfaced in the 1970s. The authors point to government policies as the main cause for the reemergence of family pyramids in the 1970s. The (Liberal) government at the time engaged in interventionist policies by limiting

[8] The data is gathered from La Porta et al. (1999) who report the ownership stakes of large shareholders in the 10 largest corporations from 46 countries. Ownership concentration is defined as the sum of ownership stakes of the three largest shareholders. The regression is estimated at the country level using the average ownership concentration across 10 firms.

competition and generously awarding subsidies and tax incentives. This in turn favored family ownership as families have an advantage over professional managers in lobbying and rent-seeking activities. Two features of the tax code may also have played a role in the resurfacing of pyramidal groups. First, inheritance taxes were abolished in the early 1970s, thereby lowering the tax burden on family empires passing from one generation to another.[9] Second, there is no penalty on dividends flowing from firms in lower layers to firms in higher layers of the pyramid as inter-corporate dividends are tax exempt in Canada.[10]

Figure 1 shows the structure of the Edper-Bronfman family group, the largest business group in Canada. The figure illustrates only listed affiliated firms as the group contains hundreds of private firms and could not be graphed on a single page. The Edper-Bronfman group is diversified across several industries including real estate, mining, oil, forestry, financial services and food industries. The multi-layered pyramidal nature of the group allows the Bronfman family to gain control of the majority of affiliated firms with very limited ownership. For instance, the family indirectly controls 42.75% of the share capital of Central Crude Ltd., a firm in the bottom layer of the pyramid, but effectively owns only 1.28% of it.

Figure 2 illustrates the structure of the Bell Canada Enterprises (BCE) group. BCE exhibits several dissimilarities from the Edper-Bronfman group. First, unlike the family nature of the Edper-Bronfman group, the BCE group has a widely held firm at its apex. Second, the BCE group is more focused than the Edper-Bronfman group as its affiliated firms operate exclusively in the

[9] Still, heirs have to pay capital gain taxes at the death of their predecessor.

[10] Morck (2003) contends that inter-corporate dividend taxation is an important factor in determining the presence of pyramids in a given tax jurisdiction. He surveys a sample of 33 countries and finds that only the U.S. levies taxes on inter-corporate dividends. As corroborative evidence, he mentions that the dismantling of pyramidal structures was an explicit purpose of the U.S. tax reform that introduced inter-corporate dividend taxation in the 1930s.

telecommunications industry (BCE had a diversification experience during the 1980s but divested its non-telecom related lines of business in the early 1990s). Third, although pyramidal in nature, the BCE group has only two layers of affiliated firms.

FIGURE 1. THE STRUCTURE OF THE BRONFMAN FAMILY GROUP

Note: O denotes cash flow rights C denotes control rights

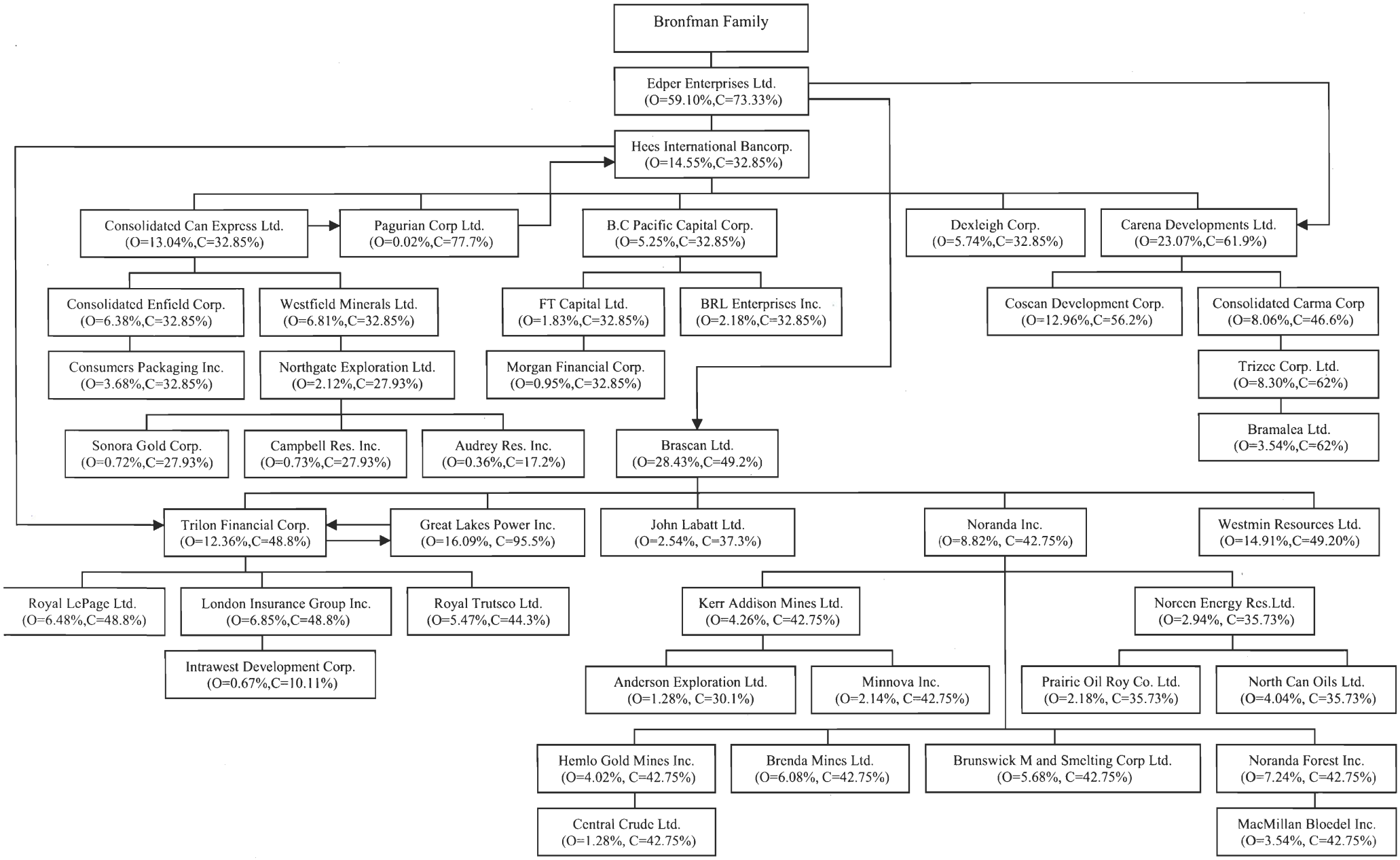
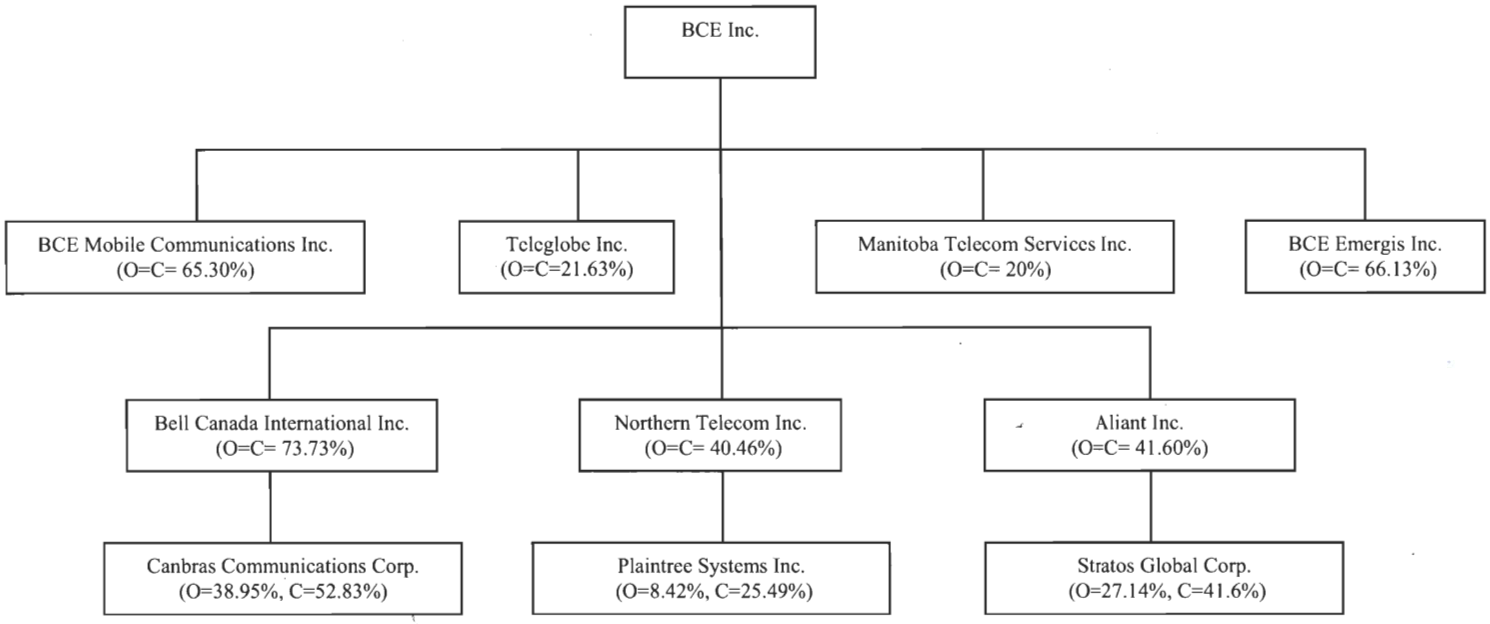


FIGURE 2. THE STRUCTURE OF THE BCE GROUP



The Edper-Bronfman and the BCE groups are typical cases in that business groups in Canada are controlled by families and to a lesser extent by widely held firms. This raises the question as to the impact of the identity of the controlling shareholder on the role of business groups. Arguably, families and professional managers of widely held firms have different incentives.[11] First, because their wealth is tied to the business group, families may be able to provide better internal monitoring services with respect to affiliated firms' management. Second, widely held firms' entrenched professional managers can be disciplined through internal (e.g., the appointment of outside board members, compensation packages proportional to firm performance, etc.) and external governance mechanisms (e.g., the market for corporate control). However, these mechanisms are unlikely to discipline entrenched families. Families can appoint their relatives to the board; they can overpay themselves and are virtually invulnerable to hostile takeovers. Third, families have longer time horizons than widely held firms' professional managers. On the one hand, this can foster efficient investment in family business groups but lead to myopic investment in business groups controlled by widely held firms (Stein, 1989). On the other hand, Morck and Yeung et al. (2004) argue that families' long tenure in management makes them preferred partners for corrupted politicians as they are better positioned to return past favors. According to this argument, families may want to enhance their political influence by over investing to increase the assets under their control at the expense of minority shareholders' wealth. To the extent that the theory provides ambiguous predictions, the impact of the identity of the controlling shareholder on the role of business groups is an empirical issue.

[11] When a widely held firm is at the apex of the business group, the professional managers of the apex firm exert de facto control over all affiliated firms.

Despite the pervasiveness of pyramidal business groups in Canada, there are only a handful of papers examining their role.[12] Some of the evidence comes from case studies of the largest business groups. Daniels et al. (1995) study the Edper-Bronfman family group during the period 1988-1992. They find that its member firms were riskier and more leveraged, but did not exhibit higher operating performance relative to their industry peers. Halpern and Jog (1995) examine the diversification strategy of the BCE group in the 1980s and conclude that it has destroyed shareholders wealth as evidenced by its subsequent poor performance and the discount relative to industry peers. More recently, in a cross-sectional study, Attig et al. (2003) find that pyramidal group affiliation correlates negatively with firm value.[13] In a follow-up paper, Attig et al. (2006) document wider bid-ask spreads in family-controlled pyramidal-affiliated firms and interpret their finding as evidence for information problems between families and minority shareholders. Overall, the results of the limited research on Canadian business groups are consistent with the dark side view.

3. RESEARCH OBJECTIVES AND HYPOTHESES

Our investigation of the dark and bright sides of business groups is fourfold. First, we investigate the efficiency versus the resource misallocation hypotheses in internal capital markets by comparing the abnormal returns to

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[12] Canadian business groups differ markedly from the extensively studied Japanese *Keiretsus* and Korean *Chaebols*. The Japanese *Keiretsus* are collections of industrial firms established around a main bank and are tied through informal mechanisms such as the president council. In Canada, however, there are legal restrictions on bank ownership by industrial firms (and vice versa) so that banks are not affiliated with business groups. In addition, the ties that bind Canadian business groups are formal, either in the form of stock ownership or inter-corporate directorships. The Korean *Chaebols* are controlled by families that employ a complex network of reciprocal holdings to enhance their control. In contrast, widely held firms control a non-negligible fraction of business groups in Canada. Moreover, Canadian business groups are typically pyramids and controlling shareholders use superior voting shares to enhance their control; the use of reciprocal holdings is uncommon.

[13] Using time-series data, two recent papers by King and Santor (2007) and Amoaku-Adu et al. (2007) reach a similar conclusion.

group-affiliated bidders and stand-alone bidders. A key difference between an affiliated firm and a stand-alone firm is that the former has access to an internal capital market while the latter does not. In turn, the extent to which internal capital markets do a better or worse job of allocating capital relative to external capital markets should be reflected in the abnormal stock price performance differential between group-affiliated firms and stand-alone firms. An *efficient* internal capital market helps overcome market imperfections by reallocating funds to profitable, yet constrained, affiliated firms so they can undertake positive net present value projects. In contrast, imperfect external capital markets may not channel sufficient funds to otherwise similar stand-alone firms, so they cannot invest optimally. As such, an efficient internal capital market would predict higher abnormal returns to group-affiliated bidders relative to stand-alone bidders. In contrast, an *inefficient* internal capital market under allocates capital to profitable affiliated firms and over allocates capital to unprofitable ones, so that unprofitable firms over invest and profitable firms under invest. In this regard, external capital markets do a better job in allocating capital to stand-alone firms. Therefore, an inefficient internal capital market would predict lower abnormal returns to group-affiliated bidders relative to stand-alone bidders. The discussion above leads to the following hypotheses:

H_{11}: If internal capital markets are *efficient*, then group-affiliated bidders should exhibit *higher* abnormal returns relative to stand-alone bidders.

H_{12}: If internal capital markets are *inefficient*, then group-affiliated bidders should exhibit *lower* abnormal returns relative to stand-alone bidders.

Second, we examine the agency costs related to acquisition decisions in business groups, with stand-alone firms as a benchmark. Bebchuk et al. (2000) argue that as the separation of ownership and control increases, the controlling

shareholder will be inclined to over expand through investments that, while harmful to minority shareholders' wealth, confer private benefits. This situation occurs because the controlling shareholder does not bear much of the value loss on the investments but reaps the full amount of private benefits. The prestige, the political influence and the ample diversion opportunities associated with the control of larger firms are some examples of such private benefits. To the extent that the separation of ownership and control increases as we move from the top to the bottom of the pyramid, we expect bidders in higher layers of the pyramid to exhibit higher abnormal returns relative to bidders in lower layers. This gives rise to the following hypothesis:

H_2: Abnormal returns to group-affiliated bidders should *decrease* as bidders are located further down the pyramid (i.e., the separation of ownership and control increases).

We also examine the agency costs of free cash flow that are often associated with acquisition decisions. The free cash flow theory put forth by Jensen (1986) posits that firms having free cash flow will invest in value-decreasing projects instead of paying extra dividends to shareholders. Lang et al. (1991) provide an early test of this theory. They identify free cash flow firms as having poor investment opportunities and high cash flow and find that free cash flow bidders have negative abnormal returns. More recently, Harford (1999) suggests that firms may not spend free cash flow immediately but accumulate it over time to build a cash stockpile. He uses a variant of the cash holdings model of Opler et al. (1999) to identify cash-rich firms and finds that acquisitions by cash-rich bidders are value-decreasing. Almeida and Wolfenzon (2006) model the situation where a family already controls a firm A and considers setting up a new firm B. The family has two choices: adopting a horizontal structure (i.e., directly controlling firm B) or a vertical structure (i.e., indirectly controlling firm

B through firm A). They find, among other things, that the family will choose the vertical structure whenever firm A has high cash holdings and firm B confers large private benefits. The intuition behind this finding is that as the private benefits in firm B are larger, external markets are unwilling to finance firm B. The model also predicts that firm A's shareholders will experience a negative return upon the announcement of the acquisition of firm B. These results suggest that acquisitions by pyramidal affiliated firms may be a manifestation of the agency costs of free cash flow. We specifically test the predictions of Almeida and Wolfenzon's model by relating group-affiliated bidders' abnormal returns to their excess cash holdings. We hypothesize that:

H_3: *Cash-rich* group-affiliated bidders should exhibit *lower* abnormal returns relative to *cash-poor* group-affiliated bidders.

Third, we simultaneously test the efficient internal capital markets, tunneling and resource misallocation hypotheses using the spillover effect within the group of the acquisition announcement by an affiliated bidder. In general, testing for these effects is a difficult task, since intra-group transactions and their terms are generally not observable to the researcher. Nevertheless, Bertrand et al. (2002) propose a novel methodology that overcomes this issue. They construct an industry shock to the abnormal stock price performance of group-affiliated firms and observe how this shock propagates to other firms within the same group. Faccio and Stolin (2006) adapt this methodology to the context of M&As by assuming that the shock is the acquisition announcement by a group-affiliated firm and observing the (adjusted) market reaction of the portfolio of other firms in the first layer of the same pyramid. If tunneling occurs, that is if the controlling shareholder transfers some of the acquired assets to first-layer firms, then a portfolio of these firms should exhibit positive abnormal stock price performance. We follow Faccio and Stolin's line of reasoning and consider the

acquisition announcement of a group-affiliated bidder as the shock. However, we do not look at the market reaction of first-layer firms' portfolios. Rather, we look at the market reaction of *all* sister firms within the same business group as the bidder. Doing so allows us to test not only for tunneling but also for efficient internal capital markets and resource misallocation. In particular, in cross-sectional regressions, we relate the abnormal returns of sister firms to the ultimate cash flow rights of the controlling shareholder and proxies for financial constraints. Under the tunneling hypothesis, sister firms in which the controlling shareholder has higher cash flow rights should exhibit positive abnormal stock price performance. In contrast, under the efficient (inefficient) internal capital markets hypothesis, affiliated firms that are financially constrained (unconstrained) should exhibit positive abnormal stock price performance. The discussion above leads to the following hypotheses:

H_{41}: If *tunneling* occurs within the group then sister firms in which the controlling shareholder has *higher cash flow rights* (relative to the bidder) should exhibit *positive* abnormal returns.

H_{42}: If internal capital markets are *efficient* then sister firms that are *financially constrained* (relative to the bidder) should exhibit *positive* abnormal returns.

H_{43}: If internal capital markets are *inefficient* then sister firms that are *financially unconstrained* (relative to the bidder) should exhibit *positive* abnormal returns.

Fourth, we examine intra-group mergers, i.e. mergers between a bidder and a target belonging to the same business group. These transactions are worth studying because they confront the tunneling and efficient internal capital market hypotheses. On the one hand, intra-group mergers are non-arm's-length transactions since the controlling shareholders have effective control over both the bidder and the target. As such, the controlling shareholders can set the terms

of the transaction to redistribute wealth from the minority shareholders to themselves. For example, they may direct a bidder in which they have high cash flow rights to pay a discounted price for a target in which they have low cash flow rights. In this situation, bidder returns will be positive, target returns will be negative, and the controlling shareholder realizes a wealth transfer because their gain on bidder shares is higher than their loss on target shares. Put differently, the controlling shareholder has tunneled the assets of the target to the bidder. On the other hand, intra-group mergers can add value in an efficient internal capital market. Gertner et al. (1994) argue that one advantage of internal capital markets over external markets is better assets redeployability. That is, the assets of one affiliated firm can be efficiently combined with the assets of another affiliated firm. In contrast, an external provider of capital (e.g., a bank) would have to sell the assets of an otherwise similar stand-alone firm to another party that may not pay the full price. Therefore, intra-group mergers can add value to both the bidder and the target in an efficient internal capital market.[14] This leads to the following hypotheses:

H_{51}: if tunneling occurs, then controlling shareholders will set the terms of intra-group mergers to benefit firms in which they have higher cash flow rights.

H_{52}: If internal capital markets are *efficient,* then both the bidder and the target will benefit from the intra-group merger.

[14] There are two papers examining the effects of intra-group mergers. Bae et al. (2002) study rescue mergers (defined as intra-group mergers involving a well-performing bidder and a non-performing target) in Korean *Chaebols*. They find that bidder announcement returns are negative, which they interpret as evidence against the efficient internal capital markets hypothesis. Holmen and Knopf (2004) study dual insider mergers (in which insiders hold shares in both the bidder and the target) in Sweden and do not find evidence of wealth transfers from the minority to the controlling shareholder.

Before moving to the empirical investigation, it is worth noting that a sceptic might argue that, given the firm characteristics on which we base our hypotheses (i.e., group-affiliation, separation of ownership and control, excess cash holdings, etc.), the market is anticipating acquisitions and their outcomes. This, in turn, would lead to the market not reacting around acquisition announcements and the absence of any relationship between abnormal returns and the characteristics we examine. However, any bias that market expectations introduce would almost certainly work against the tests accepting our hypotheses. In our evidence presented in Section 5, we show that abnormal returns are generally different from zero and significantly related to some firm characteristics in a way consistent with our hypotheses. This suggests that, at best, the market does not *fully* anticipate acquisitions and their valuation effects. Besides, we note that market expectations are, by and large, unobservable to the researcher. In sum, although we recognize that, ideally, we should have controlled for market expectations, we believe that not doing so does not affect the reliability of our methodology.

4. SAMPLE SELECTION AND VARIABLE DESCRIPTION

4.1 Sample Selection

Our sample is drawn from the *Securities Data Corporation (SDC) Platinum North America Mergers & Acquisitions* database. We select M&A transactions involving Canadian headquartered bidders with announcement dates between January 1, 1990 and December 31, 1999. To be included in the sample, a transaction must satisfy the following screening criteria:

1. The bidder is listed on the *Toronto Stock Exchange* (TSX) and has sufficient stock price data in the *Canadian Financial Markets Research Center*

(TSX/CFMRC) database to estimate announcement period abnormal returns.[15]

2. The bidder financial statements are available for the fiscal year immediately preceding the transaction's announcement date in the *Stock Guide* database.
3. The bidder group affiliation and ownership data are available from Statistics Canada's *Inter-Corporate Ownership (ICO)*, the *Financial Post survey of Industrials, Financial Post survey of Mines* and proxy circulars in the *SEDAR* database.
4. The transaction is completed.
5. The bidder is not a financial institution.

4.2 Variable Description

4.2.1 Group Affiliation

Inter-Corporate Ownership (*ICO*) is our primary source for group affiliation data. It is a quarterly publication of *Statistics Canada* based on schedule of ownership information filings by firms under the *Corporations and Labor Unions Returns Act (CALURA).*[16] *ICO* defines a group as a set of firms under common control, where control is "the potential to affect the corporate strategic decision-making process of the board of directors of a corporation".[17] We rely on the *ICO*

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[15] For some transactions we could not match bidder names in SDC with those in TSX because the latter does not track corporate name changes. In such circumstances, we rely on the *Financial Post Predecessor & Defunct database* to identify corporate name changes.

[16] The Act applies to every corporation that carries on business in Canada or that is incorporated under a law of Canada or a province, whose gross revenue for the reporting period exceeded $15 million, or whose assets exceeded $10 million.

[17] Basically, *ICO* assigns the control of a corporation according to two different concepts. The first concept is "direct control", which entails holding more than 50% of the voting equity of a corporation. The second concept is "effective control" and implies control of a corporation through methods other than ownership of the majority voting equity. Effective control is assigned if "(1) more than 50% of directors of a corporation are also directors of a trust or an

issue for the quarter immediately preceding the transaction's announcement date to classify bidders into group-affiliated or stand-alone firms. When a bidder is affiliated to a business group, we also gather the entire group structure and the identity of the group's controlling shareholder. We classify group-affiliated bidders into three broad categories according to the identity of their controlling shareholder. The three types of controlling shareholders we examine are i) families, ii) widely held firms, and ii) other investors.[18]

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estate, or are also members of a family, then the corporation is effectively controlled by that trust, estate or family, (2) more than 50% of the directors of a corporation are also directors of another corporation, and if there is a significant voting ownership relationship between these corporations, then the corporation is effectively controlled by that other corporation, (3) a corporation holds voting equity in another corporation which exceeds 33%, and if that block of equity is larger than the combined percentage of the next two largest blocks, then the corporation is effectively controlled by that corporation, and (4) control is acknowledged by a corporation, then the acknowledgement is sufficient to assign effective control".

[18] The category other investors encompasses cases where we cannot clearly identify the identity of the controlling shareholder (e.g., foreign and closely held firms) or cases where the identity of the controlling shareholder is known but does not fall into the other two categories (e.g., managers and directors).

TABLE 1. SAMPLE DISTRIBUTION BY ANNOUNCEMENT YEAR, ORGANIZATIONAL FORM AND CONTROLLING SHAREHOLDER IDENTITY

Year	All bidders	Stand-alone bidders	Group-affiliated bidders			
			All group-affiliated	Controlling shareholder identity		
				Family	WH Firm	Other
1990	23	11	12	7	2	3
	4.03%	*2.84%*	*6.52%*	*6.67%*	*3.39%*	*15.00%*
1991	28	21	7	6	0	1
	4.90%	*5.43%*	*3.80%*	*5.71%*	*0.00%*	*5.00%*
1992	25	15	10	6	2	2
	4.38%	*3.88%*	*5.43%*	*5.71%*	*3.39%*	*10.00%*
1993	49	37	12	6	2	4
	8.58%	*9.56%*	*6.52%*	*5.71%*	*3.39%*	*20.00%*
1994	65	40	25	10	14	1
	11.38%	*10.34%*	*13.59%*	*9.52%*	*23.73%*	*5.00%*
1995	80	54	26	17	8	1
	14.01%	*13.95%*	*14.13%*	*16.19%*	*13.56%*	*5.00%*
1996	77	49	28	20	7	1
	13.49%	*12.66%*	*15.22%*	*19.05%*	*11.86%*	*5.00%*
1997	82	63	19	8	10	1
	14.36%	*16.28%*	*10.33%*	*7.62%*	*16.95%*	*5.00%*
1998	79	52	27	10	12	5
	13.84%	*13.44%*	*14.67%*	*9.52%*	*20.34%*	*25.00%*
1999	63	45	18	15	2	1
	11.03%	*11.63%*	*9.78%*	*14.29%*	*3.39%*	*5.00%*
Total	571	387	184	105	59	20
	100%	*100%*	*100%*	*100%*	*100%*	*100%*

The sample includes completed mergers and acquisitions transactions involving Canadian headquartered (non-financial) bidders with announcement dates between January 1, 1990 and December 31, 1999. Group affiliation status is gathered from Statistics Canada's *Inter-Corporate Ownership* (ICO). Group-affiliated bidders are sorted according to the identity of their controlling shareholders: a family, a widely held firm and other investors.

Table 1 presents the annual breakdown of the sample by organizational form and group controlling shareholder identity. Our screening criteria yield a sample of 571 bids, of which 387 are by stand-alone bidders and 184 by group-affiliated bidders. The majority of group-affiliated bidders are controlled by families (105 transactions) followed by widely held firms (59 transactions) and other investors (20 transactions). There are relatively few transactions in the beginning of the sample period (23 cases in 1990). However, the number of transactions increases dramatically over time and nearly quadruples by the

middle of the decade (80 cases in 1995). In all of our regressions, we control for changes in merger activity over time using year dummies.

4.2.2 Cash Flow and Voting Rights of the Controlling Shareholder

We use the *Financial Post survey of Industrials* and the *Financial Post survey of Mines* to determine the cash flow and voting rights held by the bidder's controlling shareholder in the year immediately preceding the transaction's announcement date. The information was supplemented and crosschecked with bidders' proxy circulars obtained from the *SEDAR* database. We follow the same methodology as in Claessens et al. (2000) to construct the cash flow and voting rights variables. In addition, to evaluate the extent of the separation of ownership and control, we employ the "cash flow rights leverage" ratio, i.e the ratio of voting rights to cash flow rights. This ratio measures how much the controlling shareholder levers its cash flow rights into higher control rights.

For stand-alone firms, cash flow rights and voting rights differ if the controlling shareholder holds shares with superior voting rights. To illustrate, suppose that firm *X* has 100 class A shares giving 10 votes per share and 1,000 class B shares giving 1 vote per share. Further, suppose that the controlling shareholder owns 100 class A shares and 120 class B shares. Therefore, the controlling shareholder has 20% (=[100+120]/[100+1,000]) of the cash flow rights and 56% (=[10x100+1x120]/[10x100+1x1,000]) of the voting rights of firm *X* and the cash flow rights leverage ratio is 2.8 (=56%/20%). For a stand-alone firm controlled through multiple classes of shares, the cash flow rights leverage ratio is an increasing function of the voting ratio and the number of superior voting shares held by the controlling shareholder.[19]

[19] The voting ratio is the ratio of the number of votes attached to superior voting shares to the number of votes attached to subordinate voting shares.

For group-affiliated firms, cash flow rights and voting rights diverge if the controlling shareholder controls the firm through pyramiding and/or superior voting shares. To illustrate the pyramiding case, suppose that a family owns 40% of Firm *Y1* (with all shares giving one vote), which in turn owns 20% of Firm *Y2* (with all shares giving one vote). Thus, in firm *Y2*, the family levers 8% (=40%x20%) of the cash flow rights into 20% (=*Min*[40%,20%]) of the voting rights resulting in a cash flow rights leverage ratio of 2.5 (=20%/8%).[20] Appendix I contains a more elaborate example of the calculations in which the Péladeau family simultaneously employs pyramiding and superior voting shares to further accentuate the divergence between ownership and control. In general, for a group-affiliated firm, the cash flow rights leverage ratio will be higher as it is lower down the pyramid.

Panel A of Table 2 reports descriptive statistics on the controlling shareholder's cash flow rights, voting rights and cash flow rights leverage ratio. We report the information separately for the whole sample, with stand-alone bidders and group-affiliated bidders further sorted by the identity of their controlling shareholders. In discussing the results, we focus on the means of the variables, as means and medians tell the same story.

For the whole sample, the controlling shareholder holds, on average, 17.03% of the cash flow rights and 25.59% of the voting rights of the bidder. Turning to the separation of ownership and control, the controlling shareholder is able to lever one cash flow right into 3.54 voting rights, on average. Interestingly, the extent of the separation of ownership and control in our sample, as measured by the cash flow rights leverage ratio, is higher than that

[20] More formally, for a firm controlled through pyramiding, the ultimate cash flow rights of the controlling shareholder equal the direct cash flow rights plus the product of the indirect cash flow rights along the chain of ownership; and the ultimate voting rights equal the direct voting rights plus the smallest voting right in the chain of ownership.

reported by Lins (2003) in some emerging markets such as Malaysia (3.39), South Korea (2.58), Thailand (1.98) and Indonesia (1.3).

When we split the sample according to the organizational form of the bidder, the average cash flow rights held by the controlling shareholder is 16.84% in stand-alone bidders and 17.42% in group-affiliated bidders. The difference is not statistically significant. However, voting rights exhibit a different pattern. The average voting rights held by the controlling shareholder is 20.26% in stand-alone bidders and 36.80% in group-affiliated bidders, a statistically significant difference at the 5% level. As for the separation of ownership and control, the controlling shareholder in group-affiliated bidders is able to turn one cash flow right into 8.21 voting rights, on average. This figure is only 1.32 for stand-alone bidders, a statistically significant difference at the 1% level. When we further split group-affiliated bidders by the identity of their controlling shareholders, we notice that families have the tightest control (44.46% of the voting rights) and achieve the largest cash flow leverage ratio (11.99).

To understand how the difference in cash flow rights leverage between group-affiliated bidders and stand-alone bidders came about, we first note that (results not reported) 55.44% of group-affiliated bidders are controlled through pyramiding (i.e., indirectly through another corporation).[21] Second, group-affiliated bidders are more likely to adopt a multiple class shares structure (31.69% of cases) than stand-alone bidders (11.91% of cases); the occurrence of multiple class shares structures being most pronounced in group-affiliated bidders controlled by families (49.03% of cases).[22] Therefore, the controlling shareholders of group-affiliated bidders, mainly families, appear to employ a

[21] This percentage is 56.2% for bidders controlled by families, 52.55% for bidders controlled by widely held firms and 60% for bidders controlled by other investors.

[22] The occurrence of multiple class shares structures for other group-affiliated bidders is 6.77% for those controlled by widely held firms and 15% for those controlled by other investors.

combination of pyramiding and multiple classes of shares structures to achieve a higher deviation between ownership and control.

TABLE 2. DESCRIPTIVE STATISTICS

	All bidders N=571	Stand-alone bidders N=387 (A)	Group-affiliated bidders: All group-affiliated N=184 (B)	Ultimate owner identity: Family N=105 (C)	WH firm N=59 (D)	Other N=20 (E)	Difference (B)-(A)	Difference (C)-(A)	Difference (D)-(A)	Difference (E)-(A)
Panel A. Cash flow rights, voting rights and cash flow rights leverage										
Cash flow rights	0.1703	0.1684	0.1742	0.1449	0.2161	0.2042	0.0058	-0.0235	0.0477	0.0358
	[0.1239]	[0.1295]	[0.0990]	[0.0978]	[0.0811]	[0.1633]	[-0.0305]	[-0.0317]	[-0.0484]	[0.0338]
Voting rights	0.2559	0.2026	0.3680	0.4446	0.2426	0.3354	0.1654[a]	0.2420[a]	0.0400[b]	0.1328
	[0.1878]	[0.1410]	[0.4092]	[0.4520]	[0.0000]	[0.3199]	[0.2682][a]	[0.311][a]	[-0.1410][a]	[0.1789]
Cash flow rights leverage	3.5464	1.3268	8.2148	11.9978	1.3228	8.6858	6.888[a]	10.671[a]	-0.004[b]	7.359
	[1.0000]	[1.0000]	[2.1635]	[4.1241]	[1.0000]	[1.0000]	[1.1635][a]	[3.1241][a]	[0.0000][a]	[0.0000]
Panel B. Bidder characteristics										
Excess cash holdings	-0.0074	-0.0143	0.0070	0.0105	-0.0015	0.0141	0.0213	0.0248[c]	0.0128	0.0284
	[-0.0206]	[-0.0243]	[-0.0079]	[-0.0084]	[-0.0044]	[-0.0246]	[0.0164][b]	[0.0159][b]	[0.0199]	[-0.0003]
Tobin's q	1.7364	1.8425	1.5133	1.5780	1.4578	1.3373	-0.3292[a]	-0.2645[b]	-0.3847[a]	-0.5052[a]
	[1.4423]	[1.4817]	[1.3784]	[1.3843]	[1.3770]	[1.1639]	[-0.1033][a]	[-0.0974][c]	[-0.1047][b]	[-0.3178][c]
Debt-to-assets	0.4601	0.4458	0.4899	0.5121	0.4780	0.4086	0.0441[b]	0.0663[a]	0.0322	-0.0372
	[0.4734]	[0.4498]	[0.5210]	[0.5544]	[0.5171]	[0.4191]	[0.0712][a]	[0.1046][a]	[0.0673]	[-0.0307][c]
Assets ($ Millions)	1779.9	863.3	3708.0	2487.4	6584.9	1628.7	2844.7[a]	1624.1[a]	5721.6	765.4[a]
	[293.6]	[165.2]	[1217.0]	[1152.3]	[2648.7]	[176.9]	[1051.8][a]	[987.1][a]	[2483.5]	[11.7][a]
Panel C. Deal characteristics										
Private target	0.2925	0.3333	0.2065	0.2762	0.1017	0.1500	-0.1268[a]	-0.0571	-0.2316[b]	-0.1833[a]
Public target	0.4326	0.3824	0.5380	0.4762	0.6271	0.6000	0.1556[a]	0.0938[c]	0.2447[c]	0.2176[a]
All equity deal	0.2259	0.2506	0.1739	0.1238	0.2373	0.2500	-0.0767[b]	-0.1268[a]	-0.0133	-0.0006
All cash deal	0.2855	0.2584	0.3424	0.3714	0.2881	0.3500	0.084[b]	0.1130[b]	0.0297	0.0916
Tender offer	0.2277	0.1990	0.2880	0.2571	0.3729	0.2000	0.089[b]	0.0581	0.1739	0.0010[b]
Diversifying deal	0.3730	0.3721	0.3750	0.4000	0.3729	0.2500	0.0029	0.0279	-0.1221	0.0008

The sample includes completed mergers and acquisitions transactions involving Canadian headquartered (non-financial) bidders with announcement dates between January 1, 1990 and December 31, 1999. Group affiliation status is gathered from Statistics Canada's *Inter-Corporate Ownership* (ICO). Group-affiliated bidders are sorted according to the identity of their controlling shareholders: a family, a widely held firm and other investors. Cash flow rights and voting rights of the controlling shareholder are calculated following the methodology in Claessens et al. (2000). Cash flow rights leverage is the ratio of voting rights to cash flow rights of the controlling shareholder. Excess cash holdings is the difference between the bidder's actual cash holdings and the cash holdings predicted by the Opler et al. (1999) reduced cash model for the bidder's industry. Tobin's q is the ratio of market capitalization plus total assets minus the book value of equity to total assets. Debt-to-assets is the ratio of total debt to total assets. Assets are total assets expressed in 1999 $ Million. Private target (Public target) is an indicator variable set to one if the target is a private (public) firm, and zero otherwise. All equity deal (All cash deal) is an indicator variable set to one if equity (cash) is the only method of payment, and zero otherwise. Tender offer is an indicator variable set to one if the acquisition is a tender offer, and zero otherwise. Diversifying deal is an indicator variable set to one if the bidder and the target have different two-digit SIC industry codes, and zero otherwise. Median values are in brackets.

The significance of the differences in means is based on a t-test assuming inequality in variances. Significance for differences in medians is based on the Wilcoxon rank-sum test. [a], [b] and [c] denote statistical significance at the 1%, 5% and 10% level, respectively.

4.2.3 Excess Cash Holdings

We employ the Opler et al. (1999) reduced cash holdings model to identify cash-rich bidders. This model recognizes that firms with strong growth opportunities, firms with riskier cash flows and small firms may find it harder to raise external funds because of market imperfections such as transaction costs and asymmetric information. Holding larger cash reserves may be valuable for these firms because it helps avoid the underinvestment problem when cash flow is too low or external funds are expensive. The model also incorporates net working capital since it may be viewed as a close substitute to cash. Finally, the model controls for cash flow as firms with high cash flow have more room to hoard larger cash holdings.

For firm *j*, in industry *I*, in year *t*, the model is given by the following equation:

$$CASH_{j,I,t} = \alpha + \beta_{1,I} MTB_{j,I,t} + \beta_{2,I} SIZE_{j,I,t} + \beta_{3,I} CF_{j,I,t} + \beta_{4,I} NWC_{j,I,t} + \beta_{5,I} CFVOL_{j,I,t} + \varepsilon_{j,I,t},$$

where *CASH* is the ratio of cash and marketable securities to assets; *MTB* is the market to book ratio of assets; *SIZE* is the natural logarithm of assets in 1999 dollars; *CF* is the ratio of cash flow (i.e., earnings after interest, taxes and dividends but before depreciation) to assets; *NWC* is the ratio of net working capital (i.e., working capital less cash and marketable securities) to assets; and *CFVOL* is cash flow volatility estimated as the standard deviation of cash flow over a maximum period of five years ranging from *t-5* to *t-1*.

The model is estimated cross-sectionally, annually and separately for each industry group using all firms with available data in the *Stock Guide* database. The advantage of this procedure is that it allows the coefficients of the cash

holdings model to change through time and across industries. As in Opler et al. (1999), we assume that the predicted value of the model is the amount of cash that a firm should hold. Thus, for a given bidder, we measure excess cash holdings as the difference between actual cash holdings and cash holdings predicted by the model for its industry. We then construct a "cash-rich" indicator variable equal to one if excess cash holdings are positive, and zero otherwise.[23]

The M&A literature suggests that bidder and deal characteristics affect bidder announcement returns. Therefore, we include the following variables in our regressions of bidder abnormal returns.

4.2.4 Other Bidder Characteristics

Tobin's q. Firms with positive net present value projects should make better acquisition decisions. In line with this argument, Lang et al. (1989) find that the announcement return of bidders acquiring public firms is increasing in Tobin's q, a measure of the quality of the bidder's investment opportunity set. We use the market-to-book ratio, defined as the ratio of market capitalization plus total assets minus the book value of equity to total assets, as a proxy for Tobin's q.

Size. Moeller et al. (2004) find that small bidders have higher acquisition announcement returns than large bidders. They suggest that this result is due to hubris. That is, managers of large firms are overconfident about their acquisition decisions, so they overpay for targets. For instance, managers of large firms might suffer from hubris because they have more resources under their control

[23] We use an indicator variable because we are interested in the "cash-rich" status of the bidder. The indicator variable has also some merits. First, it avoids having to discuss whether 2% excess cash holdings leads to more agency problems than 1% excess cash holdings. Second, it helps mitigate any measurement errors in the excess cash holdings variable. Yet, using the raw excess cash variable instead of the indicator variable produces similar results.

or because they perceive themselves as more important socially. We control for bidder size using the natural logarithm of total assets in 1999 dollars.

Leverage. Debt may play a disciplinary role with respect to entrenched managers. For instance, Jensen and Meckling (1976) contend that high debt levels increase managerial effort. Jensen (1986) argues that debt decreases the free cash flow that would otherwise serve to pursue value-destroying acquisitions. Therefore, one would expect a positive association between leverage and the performance of investment projects. Indeed, Maloney et al. (1993) find that bidders with higher leverage have higher acquisitions announcement returns. We control for leverage using the ratio of the book value of debt to total assets.

Panel B of Table 2 reports descriptive statistics on bidder characteristics measured at the fiscal year end immediately preceding the transaction announcement date. For the whole sample, mean and median excess cash holdings are negative, suggesting that our sample bidders are cash-poor, on average. However, we note that the mean excess cash holdings are positive for group-affiliated bidders and negative for stand-alone bidders. Moreover, the comparison tests show that family-controlled group-affiliated bidders have significantly larger excess cash balances than stand-alone bidders (the differences in means and medians between other group-affiliated bidders and stand-alone bidders are not significant). This result runs counter to a previous finding reported by Pinkowitz and Williamson (2001), who show that Japanese *keiretsu* (affiliated) firms have lower excess cash holdings than *non-keiretsu* (non-affiliated) firms. The authors interpret their result as evidence for the group internal capital market in which affiliated firms face lower market imperfections and, thus, hold less cash. In contrast, our results are consistent with families' opportunistic behaviour at the expense of minority shareholders, since they

direct affiliated firms under their control to hold more cash reserves than needed to circumvent market imperfections.

The mean and median Tobin's q ratios are higher than unity for the full sample. This suggests that our sample bidders have good investment opportunities. Nevertheless, the comparison tests indicate that group-affiliated bidders exhibit significantly lower Tobin's q values than stand-alone bidders. This finding corroborates previous evidence reported by Attig et al. (2003) who show that pyramidal affiliation in Canada is negatively correlated with Tobin's q.

The debt-to-asset ratio is significantly higher in group-affiliated bidders than in stand-alone bidders. Yet, the breakdown of the sample of group-affiliated bidders by controlling shareholder identity shows that this difference is mainly driven by the family-controlled sub sample (51.21% compared to 44.58%). This finding is consistent with the existence of mutual insurance inside family business groups, which reduces affiliated firm's risk and, in turn, increases debt capacity (Daniels et al., 1995; Ferris et al., 2003).

Finally, the differences in firm size between the group-affiliated and stand-alone subsamples are instructive. The results show that, on average, group-affiliated bidders are more than four times larger than stand-alone bidders. This result is in line with previous theoretical (Almeida and Wolfenzon, 2006) and empirical (Khanna and Palepu, 2000a) findings. Note also that, among group-affiliated bidders, those controlled by widely held firms are the largest.

4.2.5 Deal Characteristics

Target listing status. Recent studies document higher bidder abnormal returns when the target is a private firm or a subsidiary (Fuller et al., 2002; Faccio et al., 2006). Fuller et al. (2002) argue that the market for corporate control of private firms and subsidiaries is less liquid than that of publicly traded firms. Consequently, acquirers of private firms and subsidiaries experience higher returns since they capture a liquidity discount. We control for the target listing status using two indicator variables to identify whether the target is a private firm (1) or not (0) and whether the target is a public firm (1) or not (0).

Method of payment. Myers and Majluf (1984) contend that, by issuing equity, a firm signals to investors that its stock is overvalued. In line with this argument, Travlos (1987) finds that bidders experience lower (higher) abnormal returns when they pay with equity (cash) for publicly traded targets. However, Chang (1998) reports the opposite for a sample of bidders acquiring private targets. He suggests that acquisitions of private targets paid for with equity have higher returns since they lead to the creation of outside blockholders who can provide valuable monitoring services. We control for the method of payment using two indicator variables for whether cash is the only medium of exchange (1) or not (0) and whether equity is the only medium of exchange (1) or not (0). We do not control for the third possible method of payment type, a mix of cash and equity, to avoid the dummy variables trap.[24]

Diversifying deals. Morck et al. (1990) find that diversifying acquisitions are associated with lower bidder returns. We control for diversification using a

[24] Opting for a combination of cash and equity as a method of payment may minimize income taxes as it enables the seller to choose the fiscal year during which capital gains taxes have to be paid. In alternative specifications, we control for a cash-equity mix dummy along with either a cash or equity dummy. The coefficient on the cash-equity mix dummy is insignificant and our results remain qualitatively and quantitatively unchanged.

diversifying deal indicator variable equal to one when the bidder and the target have different two-digit SIC industry codes, and zero otherwise.

Tender offer deals. Moeller et al. (2004) find that bidders have higher announcement returns in tender offers. They note that tender offers are mostly acquisitions of public firms made with cash, which may explain the positive bidder announcement returns. We control for this effect using an indicator variable for whether the transaction is a tender offer (1) or not (0).

Panel C of table 2 reports descriptive statistics on deal characteristics gathered from *SDC*. Group-affiliated bidders are significantly more (less) likely to acquire public targets (private targets). This is not surprising since we documented in Panel B that group-affiliated bidders are larger than stand-alone bidders.

Turning to the method of payment, group-affiliated bidders are twice as likely to finance their acquisitions with cash rather than equity. On the other hand, cash and equity financing are equally likely for stand-alone bidders. When we disaggregate the sample of group-affiliated bidders based on controlling shareholder identity, we note that family-controlled bidders have the largest (smallest) propensity to finance acquisitions with cash (equity). Faccio and Masulis (2005) find that the incumbent bidder's controlling shareholder concerned with preserving control is reluctant to pay with equity because doing so dilutes their voting rights. Accordingly, the choice of payment method of group-affiliated bidders in our sample is consistent with their controlling shareholders (especially families) valuing control more than the controlling shareholders of stand-alone bidders.

Finally, group-affiliated bidders are more likely to acquire targets through tender offers relative to stand-alone bidders, a result primarily driven by

affiliated bidders controlled by other investors. Finally, diversifying deals account for nearly 40% of the total sample and their occurrence does not differ significantly across the subsamples.

5. EMPIRICAL RESULTS

5.1 Bidder Abnormal Returns

We employ the standard event study methodology (Brown and Warner, 1985) to evaluate the performance of M&As by our sample firms. For each bidder, we estimate the market model over a maximum period of 200 trading days, ranging from day -250 to day -51 relative to the announcement date (day 0) provided by *SDC*. Bidders that have less than 40 trading days available in the estimation period are excluded from the analysis. We use the *CFMRC* equally weighted index as the proxy for market returns. The abnormal return (AR) is obtained by subtracting the market model predicted return from the realized return. We then sum the ARs to obtain the cumulative abnormal return (CAR) over the relevant event period. In the subsequent analysis, we retain relatively short time periods ranging from 5 days before the announcement to 5 days after. We do not consider longer periods because CAR may capture the price effects of other confounding events.

Panel A of Table 3 presents the mean and median ARs from day -5 to day +5. The mean ARs for the whole sample, stand-alone and group-affiliated subsamples are positive and statistically significant on day -3, day 0 and day +1. The median ARs are also positive, albeit smaller in magnitude than the mean ARs and not always significant.

Panel B of Table 3 presents the mean and median CARs over selected event windows. For the whole sample, both mean and median CARs are positive and statistically significant at the conventional levels. The mean CAR ranges

from a 0.57% low over the [-1,0] window to a 2.46% high over the [-5,+1] window. Therefore, on average, shareholders of Canadian acquiring firms benefit from acquisitions, which is consistent with extant M&A studies in the Canadian setting (e.g., Eckbo and Thorburn, 2000). Our results are also surprisingly close in magnitude to those found by Moeller et al. (2004) in the (different) U.S. setting. They report a mean (median) U.S. bidder CAR[-1,+1] of 1.10% (0.36%). Our corresponding figures are 1.29% (0.33%).

TABLE 3. DESCRIPTIVE STATISTICS ON BIDDERS ABNORMAL RETURNS (ARs) AND CUMULATIVE ABNORMAL RETURNS (CARs) SORTED BY ORGANIZATIONAL FORM AND CONTROLLING SHAREHOLDER'S IDENTITY

			Group-affiliated bidders							
				Controlling shareholder identity						
	All bidders N=571	Stand-alone bidders N=387 (A)	All group-affiliated N=184 (B)	Family N=105 (C)	WH firm N=59 (D)	Other N=20 (E)	Difference (B)-(A)	Difference (C)-(A)	Difference (D)-(A)	Difference (E)-(A)
Panel A. Daily abnormal returns (%)										
Day										
-5	0.2429	0.2600	0.2088	-0.0332	0.1889	1.5049[c]	-0.0512	-0.2932	-0.0711	1.2449[a]
	[0.0066]	[0.0150]	[0.0431]	[0.1261]	[0.0716]	[0.2688]	[0.0281]	[0.1111]	[0.0566]	[0.2538]
-4	0.1685	0.2949	-0.0743	-0.0912	-0.1146	0.1385	-0.3692	-0.3861	-0.4095	-0.1564
	[0.2483]	[0.1895]	[0.3371]	[0.4438][c]	[0.0167]	[0.1344]	[0.1476]	[0.2543]	[-0.1728]	[-0.0551]
-3	0.6428[a]	0.7721[a]	0.3886[b]	0.2160	0.5533	0.8168	-0.3835	-0.5561[c]	-0.2188	0.0447
	[0.0931][c]	[0.0602]	[0.1608][b]	[0.0939]	[0.2888][b]	[0.2327]	[0.1006]	[0.0337]	[0.2286]	[0.1725]
-2	0.1209	0.1497	0.0625	0.1502	-0.1252	0.1890	-0.0872	0.0005	-0.2749	0.0393
	[0.2964]	[0.2230]	[0.3562]	[0.2506]	[0.4304]	[0.5139]	[0.1332]	[0.0276]	[0.2074]	[0.2909]
-1	0.1853	0.3030	-0.0556	-0.3389	0.1867	0.6322	-0.3586	-0.6419[c]	-0.1163	0.3292
	[0.0535]	[0.1143]	[0.0972]	[0.1024]	[0.0010]	[0.1511]	[-0.0171]	[-0.0119]	[-0.1133]	[0.0368]
0	0.3941[b]	0.5465[b]	0.0755	0.1438	-0.1175	0.3618	-0.4710	-0.4027	-0.664	-0.1847
	[0.1082]	[0.0880]	[0.1194]	[0.2007]	[0.0504]	[1.0965]	[0.0314]	[0.1127]	[-0.0376]	[1.0085]
+1	0.7109[a]	0.7854[a]	0.5563[a]	0.6861[a]	1.0445[a]	-1.6156[c]	-0.2291	-0.0993	0.2591	-2.4010[a]
	[0.1334][c]	[0.1319]	[0.1454][c]	[0.2654][b]	[0.1551]	[1.0830][c]	[0.0135]	[0.1335]	[0.0232]	[0.9511][b]
+2	-0.1977	-0.2160	-0.1593	0.0613	-0.4473	-0.3445	0.0567	0.2773	-0.2313	-0.1285
	[0.1908]	[0.2130]	[0.1788]	[0.0215]	[0.4449][c]	[0.2862]	[-0.0342]	[-0.1915]	[0.2319]	[0.0732]
+3	-0.1737	-0.2197	-0.0779	-0.2127	0.0301	0.2649	0.1418	0.007	0.2498	0.4846
	[0.2367][c]	[0.1977]	[0.2694]	[0.2795][c]	[0.2304]	[0.2666]	[0.0717]	[0.0818]	[0.0327]	[0.0689]
+4	-0.1818	-0.3121	0.0911	-0.0044[b]	0.2863	-0.0522[b]	0.4032	0.3077	0.5984	0.2599
	[0.2427][a]	[0.3013][a]	[0.1663]	[0.1290]	[0.1892]	[0.3745]	[-0.135]	[-0.1723]	[-0.1121]	[0.0732]
+5	-0.0711	-0.1998	0.1959	-0.0235	0.3397	0.9106	0.3957	0.1763	0.5395	1.1104[a]
	[0.1669]	[0.2203]	[0.0415]	[0.0919]	[0.1004]	[0.2555]	[-0.1788]	[-0.1284]	[-0.1199]	[0.0352]

Panel B. Cumulative abnormal returns (%)										
Event window										
CAR [-1,+1]	1.2903[a]	1.6349[a]	0.5762[c]	0.4910	1.1137	-0.6216	-1.0587[b]	-1.1439[c]	-0.5212	-2.2565[a]
	[0.3390][a]	[0.1053][c]	[0.5740][b]	[0.7686][a]	[0.3091]	[-0.2555]	[0.4687]	[0.6633]	[0.2038]	[-0.3608]
CAR [-5,+5]	1.8411[a]	2.164[a]	1.2116[c]	0.5535	1.8249	2.8064[b]	-0.9524	-1.6105	-0.3391	0.6424
	[0.5462][c]	[0.3825]	[0.9653][b]	[0.3514]	[1.4329][c]	[1.4843]	[0.5828]	[-0.0311]	[1.0504]	[1.1018]
CAR [-1,0]	0.5794[b]	0.8495[b]	0.0199	-0.1951	0.0692	0.9940[c]	-0.8296	-1.0446[c]	-0.7803	0.1445
	[0.3629][b]	[0.3707][c]	[0.3337]	[0.4534]	[-0.1116]	[0.4211]	[-0.037]	[0.0827]	[-0.4823]	[0.0504]
CAR [-5,+1]	2.4654[a]	3.1116[a]	1.1618[b]	0.7328[b]	1.6161	2.0276[a]	-1.9498	-2.3788[c]	-1.4955	-1.0840
	[0.5117][b]	[0.4335]	[0.6700][b]	[0.8426]	[0.8329]	[-0.0471]	[0.2365]	[0.4091]	[0.3994]	[-0.4806]

The market model is estimated over a maximum period of 200 trading days, ranging from day -250 to day -51 relative to the announcement date (day 0) provided by *SDC*. We use the *CFMRC* equally weighted index as the proxy for market returns. The abnormal return (AR) is obtained by subtracting the market model predicted return from the realized return. We then sum the ARs to obtain the cumulative abnormal return (CAR) over the relevant event period. The sample includes completed mergers and acquisitions transactions involving Canadian headquartered (non-financial) bidders with announcement dates between January 1, 1990 and December 31, 1999. Group affiliation status is gathered from Statistics Canada's *Inter-Corporate Ownership* (ICO). Group-affiliated bidders are sorted according to the identity of their controlling shareholders: a family, a widely held firm and other investors. Median values are in brackets. The significance of means is based on the z-test. The significance of the differences in means is based on a t-test. The significance of medians is based on the Wilcoxon signed-rank tests. The significance of differences in medians is assessed using the Wilcoxon rank-sum test. [a], [b] and [c] denote statistical significance at 1%, 5% and 10% respectively.

The breakdown of the sample by organizational form illustrates that both stand-alone and group-affiliated bidders exhibit positive and generally significant CARs. The comparison tests offer preliminary tests of H_{11} and H_{12}. They show that, overall, there is no statistically significant difference in CARs between the group-affiliated and the stand-alone subsamples. The fact that the market views acquisitions by group-affiliated firms as value enhancing is inconsistent with the idea that the group's controlling shareholder systematically generates private benefits when acquiring other firms. At the same time, our finding that group-affiliated bidders do not outperform stand-alone bidders raises some doubts on the comparative advantage of business groups in terms of efficient internal capital markets. However, these results, which are inconsistent with both H_{11} and H_{12}, must be interpreted cautiously as our raw and comparison tests do not account for the heterogeneity in the separation of ownership and control, bidder characteristics and deal characteristics. This issue is addressed below using univariate and multivariate analyses of bidder returns.

5.2 Univariate Tests

We perform a series of univariate tests to provide an initial perspective on H_2 and H_3, i.e., the impact of the separation of ownership and control and excess cash holdings on bidder returns, respectively. Table 4 presents the mean CAR[-5,+5] for the whole sample as well as subsamples of stand-alone and group-affiliated bidders sorted by quartiles of the cash flow rights leverage ratio and excess cash holdings. We are interested in whether the CARs of bidders with high cash flow rights leverage ratios and high excess cash holdings in the fourth quartile) differ from those of bidders with low cash flow rights leverage ratios and low excess cash holdings. To do so, we compare the mean CARs between the fourth quartile and the first quartile of each variable of interest.

TABLE 4. BIDDER MEAN CAR[-5,+5] BY QUARTILES OF THE CASH FLOW RIGHTS LEVERAGE RATIO AND EXCESS CASH HOLDINGS SORTED BY ORGANIZATIONAL FORM AND CONTROLLING SHAREHOLDER'S IDENTITY

			Group-affiliated bidders			
				Controlling shareholder identity		
	All bidders N=571	Stand-alone bidders N=387	All group-affiliated N=184	Family N=105	WH firm N=59	Other N=20
Panel A. Cash flow rights leverage						
First quartile	1.911	2.213	0.592	0.793	1.082	0.784
Second quartile	1.911	2.213	5.162	2.650	1.082	0.784
Third quartile	7.054	2.213	1.730	0.766	1.082	2.057
Fourth quartile	1.203	1.571	0.106	-1.717	1.161	7.048
Difference:						
Fourth quartile – First quartile	-0.708	-0.642	-0.486[b]	-2.510[a]	0.079	6.264
Panel B. Excess cash holdings						
First quartile	4.114	5.584	0.366	1.197	-1.379	0.541
Second quartile	-1.633	-2.034	1.510	0.423	2.601	1.062
Third quartile	3.007	2.595	1.575	1.573	3.002	0.919
Fourth quartile	1.896	2.490	1.260	-1.330	2.754	7.288
Difference:						
Fourth quartile – First quartile	-2.218	-3.094	0.894	-2.527[a]	4.133	6.747

The market model is estimated over a maximum period of 200 trading days, ranging from day -250 to day -51 relative to the announcement date (day 0) provided by *SDC*. We use the *CFMRC* equally weighted index as the proxy for market returns. The abnormal return (AR) is obtained by subtracting the market model predicted return from the realized return. We then sum the ARs to obtain the cumulative abnormal return (CAR) over the relevant event period. The sample includes completed mergers and acquisitions transactions involving Canadian headquartered (non- financial) bidders with announcement dates between January 1, 1990 and December 31, 1999. Group affiliation status is gathered from Statistics Canada's *Inter-Corporate Ownership* (ICO). Group-affiliated bidders are sorted according to the identity of their controlling shareholders: a family, a widely held firm and other investors. Cash flow rights and voting rights of the controlling shareholder are calculated following the methodology in Claessens et al. (2000). The cash flow rights leverage is the ratio of voting rights to cash flow rights of the controlling shareholder. Excess cash holdings is the difference between the bidder's actual cash holdings and the cash holdings predicted by the Opler et al. (1999) reduced cash model for the bidder's industry. Firms in the first (fourth) quartile have the lowest (highest) values of the relevant variable. The significance of the differences in means is based on a t-test.. [a], [b] and [c] denote statistical significance at 1%, 5% and 10% respectively.

Panel A of Table 4 presents the results of the comparisons based on quartiles of the cash flow rights leverage ratio. For the whole sample and the stand-alone sub sample, the mean CARs do not differ significantly between the fourth and the first quartile. However, the difference is negative and statistically significant for the group-affiliated sub sample; group-affiliated bidders in the fourth quartile significantly underperform group-affiliated bidders in the first quartile. When we further split the group-affiliated sub sample by controlling shareholder identity, the differences appear to be fully driven by family-controlled bidders. For the family-controlled sub sample, bidders in the first quartile have a mean CAR of 0.793% while bidders in the fourth quartile have a mean CAR of -1.717%. The difference is statistically significant at 1%. The difference is economically significant as well; bidders in the fourth quartile underperform bidders in the first quartile by more than 2%. For group-affiliated bidders controlled by widely held firms and other investors, mean CARs do not significantly differ between the fourth and first quartile.

Panel B of Table 4 presents the results of the comparisons based on quartiles of excess cash holdings. The differences in CARs between the fourth and first quartile are significant only in the family-controlled group-affiliated sub sample. For this sub sample, bidders in the first quartile have a mean CAR of 1.197% whereas bidders in the fourth quartile have a mean CAR of -1.330%. The difference in means is a statistically significant -2.527% at the 1% level.

The results of our univariate tests are consistent with H_2 (H_3). They illustrate that within family-controlled business groups, bidders with high cash flow rights leverage ratios and high excess cash holdings (cash-rich) make inferior acquisition decisions relative to bidders with low cash flow rights

leverage ratios and low excess cash holdings (cash-poor).[25] This pattern is not observed in subsamples of stand-alone bidders and group-affiliated bidders controlled by widely held firms and other investors. This suggests that the agency costs of separating ownership and control and the agency costs of free cash flow are more of a problem in family-controlled business groups.

5.3 Multivariate Analysis of Bidder Returns

We carry out a multiple regression analysis of bidder returns to investigate whether our previous findings hold after controlling for bidder and deal characteristics. The dependent variable is CAR[-5,+5]. As independent variables, we include the cash flow rights leverage ratio, Tobin's q, a cash-rich dummy, the debt-to-assets ratio, the log of total assets, a private target dummy, a public target dummy, an all cash deal dummy, an all equity deal dummy, a tender offer dummy and a diversifying deal dummy.[26] To investigate whether the agency costs of free cash flow are more pronounced in firms with a high separation of ownership and control, we include an interaction variable between the cash flow rights leverage ratio and the cash-rich dummy. Our regressions also incorporate year fixed effects to control for merger activity (the regressions have no intercept as we include a dummy for each year). The regressions are estimated for the whole sample as well as subsamples of stand-alone and group-affiliated bidders using weighted least squares, where the weights equal the inverse of the variances of the ARs.[27]

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[25] The results illustrate that the positive CARs of family-controlled group-affiliated bidders are driven by bidders with low cash flow rights leverage ratios and low excess cash holdings.

[26] We report the correlation matrix between all variables used in our regressions in Appendix II.

[27] We employ WLS instead of the standard OLS because a graphical inspection shows that squared residuals are positively correlated with the variance of ARs. See Boehmer (2000) for a similar approach.

The regression results are reported in Table 5. To capture the effects of group affiliation on bidder returns, we include a group affiliation dummy (set to one if the bidder is affiliated to a business group, and zero otherwise) in regression (1) which uses the whole sample. The coefficient estimate on this variable is positive, yet not statistically significant; a result that is neither consistent with H_{11} nor H_{12}.[28] Thus, our evidence runs counter to that of Bae et al. (2002), who find that affiliation to a business group (*Chaebol*) is negatively related to bidder returns in South Korea.

Consistent with H_2, the coefficient estimate on the cash flow rights leverage ratio is negative and statistically significant in the group-affiliated sample. The separate regressions on group-affiliated subsamples sorted by controlling shareholder identity show that this result is mainly driven by family-controlled bidders; the coefficient estimate on the cash flow rights leverage ratio is a significant -0.1247 at the 1% level, which is also statistically different (at the 1% level) from the corresponding coefficients in regressions on subsamples of other bidders.[29,30] In other words, a one percent increase in the cash flow rights leverage ratio lowers family-controlled group-affiliated bidder returns by about

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[28] In an unreported model, we replaced the group affiliation dummy by three dummies based on the identity of the group's controlling shareholder: a dummy for whether a family is the controlling shareholder (1) or not (0), a dummy for whether a widely held firm is the controlling shareholder (1) or not (0), and a dummy for whether other investor is the controlling shareholder (1) or not (0). The coefficient estimates on the three dummies are -0.0118, -0.6322 and 1.5629, respectively, none of which is statistically significant. Therefore, we can conclude that a particular controlling shareholder type does not drive our result.

[29] The coefficient estimate of the cash flow rights leverage ratio is also negative for group-affiliated bidders controlled by other investors. Yet, its statistical significance is only marginal (p-value = 0.1057). This may be due the relatively small number of observations for this subsample.

[30] We assess the statistical significance of the difference between coefficients across regressions using the following test statistic: $Z = \frac{b_1 - b_2}{\sqrt{SEb_1^2 + SEb_2^2}}$, where b_1 (b_2) is the coefficient of the relevant variable from the first (second) subsample and SEb_1 (SEb_2) is the standard error of the coefficient of the relevant variable from the first (second) subsample.

12 basis points. This result confirms our previous univariate findings and is consistent with agency costs of the separation of ownership and control in family business groups. As the separation of ownership and control increases, families capture less of the outcome of their actions in affiliated firms under their control. Consequently, they tend to make acquisitions that, while harmful to minority shareholders, allow them to extract private benefits.

Consistent with H_3, the coefficient estimate on the cash-rich dummy is -3.68 with a p-value of 0.04 in the family-controlled group-affiliated sub sample. In contrast, in the stand-alone sample as well as subsamples of other group-affiliated bidders, the coefficient estimates are not statistically significant.[31] We also run another set of regressions in which we replace the cash-rich dummy by the excess cash holdings variable. The results (unreported) are qualitatively and quantitatively similar. In particular, the coefficient on the excess cash holdings variable is -0.15 with a p-value of 0.06 in the family-controlled group-affiliated sub sample. These results are in conformity with our univariate findings and suggest that the agency costs of free cash flow are prevalent in family business groups. Excess cash is the amount of cash beyond what is optimal given the market imperfections faced by the firm. Therefore, it should be returned to shareholders in the form of dividends or share repurchases. Instead of paying out the excess cash to the shareholders of affiliated firms, our evidence suggests that families spend it on value-destroying acquisitions that generate private benefits.

The interactive variable between the cash flow rights leverage ratio and the excess cash dummy is not significant in all of our regressions. In the particular case of family business groups in which we document the prevalence

[31] These coefficient estimates are also statistically different from the corresponding coefficient estimate in the regression on the family-controlled group-affiliated sub sample using the statistic described in footnote 26.

of agency costs, this result suggests that the agency costs of free cash flow are not higher in bidders near the base of the pyramid than in bidders near the apex.

TABLE 5. CROSS-SECTIONAL REGRESSIONS OF BIDDER CAR[-5,+5] ON THE CASH FLOW RIGHTS LEVERAGE RATIO, EXCESS CASH HOLDINGS, AND BIDDER AND DEAL CHARACTERISTICS

				Group-affiliated bidders			
					Controlling shareholder identity		
	Expected Sign (Hypothesis)	All bidders (1)	Stand-alone bidders (2)	All group-affiliated (3)	Family (4)	WH firm (5)	Other (6)
Group affiliation dummy	+ (H_{11})	0.5449					
	- (H_{12})	(0.5106)					
Cash flow rights leverage	- (H_2)	-0.0280	0.0971	-0.0768[b]	-0.1247[a]	0.8134	-0.5651
		(0.4677)	(0.5791)	(0.0407)	(0.0025)	(0.5559)	(0.1057)
Cash-rich dummy	- (H_3)	0.6015	1.8989	-0.9149	-3.6853[b]	2.6797	-0.6738
		(0.4365)	(0.2397)	(0.4265)	(0.0425)	(0.3294)	(0.9481)
Cash flow rights leverage x Cash-rich dummy	-	-0.0246	-0.2010	0.0141	0.0713	-0.3654	0.3069
		(0.6641)	(0.8157)	(0.8053)	(0.3009)	(0.8467)	(0.5191)
Tobin's q	+	-0.4310	-0.6027	-1.3467	-0.6355	-1.7762	-3.8505
		(0.4301)	(0.3765)	(0.1570)	(0.6147)	(0.5201)	(0.6392)
Log of assets	-	-0.6910[b]	-1.2490[a]	-0.2221	0.7418	-0.7045	-0.2576
		(0.0140)	(0.0013)	(0.5901)	(0.1918)	(0.4774)	(0.8568)
Debt/assets	+	3.6785	6.0802[c]	-0.9916	5.4199	-5.1621	17.3289
		(0.1376)	(0.0687)	(0.8005)	(0.3532)	(0.6169)	(0.4638)
Private target dummy	+	-0.3890	-1.4045	0.3358	-1.5644	3.1255	-2.9920
		(0.7066)	(0.3116)	(0.8261)	(0.3943)	(0.4055)	(0.8634)
Public target dummy	-	-0.8465	-2.1922	0.7753	-0.0122	-0.9708	-2.0568
		(0.4216)	(0.1699)	(0.5769)	(0.9949)	(0.7637)	(0.7915)
All equity deal dummy	?	0.8438	-1.5112	5.5474[a]	5.5730[b]	3.6351	16.5295[c]
		(0.4798)	(0.3466)	(0.0018)	(0.0174)	(0.3154)	(0.0591)
All cash deal dummy	?	0.7083	-0.1823	1.8358[c]	0.0719	-0.8899	1.3343
		(0.3716)	(0.8771)	(0.0750)	(0.9611)	(0.6864)	(0.9115)
Diversifying deal dummy	-	0.6008	1.8758[c]	-0.4821	0.6252	-2.4231	0.2738
		(0.4207)	(0.0742)	(0.6475)	(0.6569)	(0.2413)	(0.9636)
Tender offer dummy	+	-0.8386	-2.1008	0.1305	3.0427	0.7511	-2.4058
		(0.4112)	(0.2063)	(0.9158)	(0.1117)	(0.7578)	(0.7185)
Number of observations		571	387	184	105	59	20
Adjusted R-squared		0.0152	0.0445	0.0559	0.1760	0.1611	0.6803
F-test		1.38	1.82[b]	1.50[c]	2.02[b]	1.54	3.66
		(0.1110)	(0.0141)	(0.0817)	(0.0120)	(0.1212)	(0.1091)

The dependent variable is the bidder CAR[-5,+5]. The sample includes completed mergers and acquisitions transactions involving Canadian headquartered (non-financial) bidders with announcement dates between January 1, 1990 and December 31, 1999. Group affiliation status is gathered from Statistics Canada's *Inter-Corporate Ownership* (ICO). Group-affiliated bidders are sorted according to the identity of their controlling shareholders: a family, a widely held firm and other investors. Cash flow rights and voting rights of the controlling shareholder are calculated following the methodology in Claessens et al. (2000). The cash flow

rights leverage is the ratio of voting rights to cash flow rights of the controlling shareholder. Cash-rich dummy is an indicator variable set to 1 if the bidder holds positive excess cash, and 0 otherwise. Excess cash holdings is the difference between the bidder's actual cash holdings and the cash holdings predicted by the Opler et al. (1999) reduced cash model for the bidder's industry. Tobin's q is the ratio of market capitalization plus total assets minus the book value of equity to total assets. Assets are total assets expressed in 1999 $ Million. Debt-to-assets is the ratio of total debt to total assets. Private target (Public target) is an indicator variable set to 1 if the target is a private (public) firm, and 0 otherwise. All equity deal (All cash deal) is an indicator variable set to 1 if equity (cash) is the only method of payment. Tender offer is an indicator variable set to 1 if the acquisition is a tender offer, and 0 otherwise. Diversifying deal is an indicator variable set to 1 if the bidder and the target have different two-digit SIC industry codes, and 0 otherwise. The regressions are estimated using weighted least squares, where the weights equal to the inverse of the variances of the ARs. [a], [b] and [c] denote statistical significance at the 1%, 5% and 10% level, respectively.

With respect to bidder characteristics, Tobin's q bears a negative, yet not significant relation with bidder returns in all of our regressions. While this result is inconsistent with bidders having strong investment opportunities making good acquisitions, it is similar to the findings reported by Harford (1999) and Moeller et al. (2004). The coefficient estimate on the debt-to-assets ratio is positive and statistically significant in the stand-alone sample, which is consistent with Maloney et al. (1993). However, this coefficient is not significant in the group-affiliated sample. Accordingly, this result is consistent with the idea that the disciplinary role of leverage is more prevalent in stand-alone bidders than in group-affiliated bidders. In line with Moeller et al. (2004), size bears a negative and statistically significant relationship with bidder returns in the stand-alone sample. Nevertheless, as in the case of leverage, this relationship is not significant in the group-affiliated sample. Coupled with our previous findings, this result suggests that while agency costs are prevalent in family group-affiliated bidders, hubris is of more concern in stand-alone bidders.

Turning to deal characteristics, the target listing status does not seem to affect bidder returns. In fact, neither the public target nor the private target

dummies are statistically significant in all of our regressions.[32] These results stand in contrast to previous evidence in the U.S. (Fuller et al., 2002) and Europe (Faccio et al., 2006). More interestingly, the method of payment appears to have an influence on group-affiliated bidders' returns in that the all equity dummy and the all cash dummy both have positive and significant coefficient estimates. However, we note that the "equity effect" is about three times larger than the "cash effect" and is statistically stronger (the p-values are 0.001 and 0.075, respectively). Further, the regressions on subsamples of group-affiliated bidders sorted by controlling shareholder identity show that the "equity effect" persists in the family and other investors subsamples whereas the "cash effect" disappears. Because ownership is concentrated in Canada, paying with equity for targets is likely to result in new blockholders in the bidder. Thus, the positive market reaction to the announcement of equity-financed acquisitions is consistent with the market rewarding the new blockholders' monitoring role (Chang, 1998). This constitutes indirect evidence on private benefits consumption by families and other investors in affiliated bidders.[33] The diversifying deal dummy has a significant positive coefficient in the stand-alone sample and an insignificant coefficient in the group-affiliated sample. This finding corroborates previous evidence documenting that diversification at the firm level does not add value in business groups (Lins and Servaes, 2002).

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[32] We also control for bid hostility as an additional deal characteristic. Out of 571 bids in our sample, there are only 12 that are classified as hostile by *SDC* (8 by stand-alone bidders, 1 by family-controlled bidders and 3 by bidders controlled by widely-held firms). When we include a hostile deal dummy, we find that its coefficient is insignificant and the coefficients of other variables rmain qualitatively and quantitatively similar.

[33] However, we recognize that the tax treatment of different methods of payment is different, which in turn may confound our conclusion. To assess if tax considerations are at stake here, we rerun the regression for family controlled firms including the effective tax rate as an additional explanatory variable. The coefficient estimate of this variable is negative, yet statistically insignificant. Thus, it seems that tax considerations are not interfering with our argument.

5.4 Tunneling, Efficient Internal Capital Markets and Resource Misallocation

In this section, we examine the spillover effect within the group of the acquisition announcement by an affiliated bidder. To do so, we identify all listed firms affiliated to the same business group as the bidder (sister firms, hereafter) using *ICO*. This resulted in a sample of 731 firms, of which 492 are controlled by families, 190 by widely held firms and 49 by other investors. We then compute sister firms' CAR over the [-5,+5] event window following the standard methodology described in section 5.1. To properly measure the sister firms' abnormal returns, one must purge their CARs from the mechanical reaction arising from equity ownership in the bidder. For instance, suppose that in a business group, firm A (with a market value of $2,000) owns 20% of the equity of firm B (with a market value of $1,000). Further, suppose that firm B announced an acquisition, which resulted in an increase of firm A's share price by 0.1% and firm B 's share price by 1%. Therefore, the market value of firm A increased by $2 (=2,000 x 0.1%) which is exactly equal to the amount implied by its equity ownership in firm B ($2= 20% x 1,000 x 1%). As such, even if the CAR of firm A is positive, it does not imply that firm A exhibited positive abnormal share price performance. To consider this, we employ an adjusted cumulative abnormal return (ACAR) to measure the abnormal market reaction of sister firms:

$$ACAR_i = \frac{CAR_i \times MV_i - CFR_{i,b} \times CAR_b \times MV_b}{MV_i - CFR_{i,b} \times MV_b}$$

Where,

CAR_i is the CAR of sister firm i, MV_i is the market value of sister firm i, $CFR_{i,b}$ is the cash flow right of sister firm i in the bidder, CAR_b is the CAR of the bidder, and MV_b is the market value of the bidder.

We regress the *ACAR* on variables measuring the level of controlling shareholders' cash flow rights and financial constraints in sister firms relative to the bidder. Under the tunneling hypothesis, the controlling shareholders moves profits from firms in which he has low cash flow rights to firms in which he has high cash flow rights. Therefore, we include a dummy variable set to one if the controlling shareholder's cash flow rights in the sister firm are higher than his cash flow rights in the bidder, and zero otherwise. If tunneling occurs, we expect the coefficient estimate on this variable to be positive. On the other hand, under the efficient internal capital market hypothesis, the controlling shareholder moves profits from financially unconstrained firms to financially constrained ones. In contrast, under the resource misallocation hypothesis, the inverse pattern of profit movement takes place (i.e., from financially constrained to financially unconstrained firms).

We employ four indicator variables in order to identify financially constrained sister firms (relative to the bidder). Firms with high excess cash balances are less likely to face financing constraints because they do not need to tap financial markets to raise funds. Therefore, we include a dummy variable for whether the sister firm's excess cash holdings are higher than the bidder's excess cash holdings (1) or not (0). Firms with high Tobin's q ratios are more likely to face financing constraints because they have relatively less assets in place against which they can borrow less funds. Thus, we include a dummy variable for whether the sister firm's Tobin's q is higher than the bidder Tobin's q (1) or not (0). Firms with high leverage ratios are more likely to face financing constraints as they are more likely to have exhausted their debt capacity. As such, we include an indicator variable for whether the sister firm's debt-to-assets ratio is higher than the bidder debt-to-assets ratio (1) or not (0). Finally, if external financing costs have a fixed component, then larger firms should face lower financing costs and be less financially constrained than smaller firms. Thus, we

include an indicator variable for whether the sister firm's assets are higher than the bidder assets (1) or not (0). To summarize, these aforementioned variables are included in the regressions on the premise that cash-poor, high growth, highly leveraged and smaller firms are more likely to suffer from financial constraints.

We perform our regressions on the whole sample of sister firms and on subsamples sorted by controlling shareholder's identity. The results are reported in Table 6. The coefficient estimate on the controlling shareholder's cash flow rights dummy is positive, which is consistent with the tunneling hypothesis (H_{41}). However, this coefficient is not statistically significant. The excess cash holdings dummy is positively and significantly related to sister firms' abnormal returns in all but the widely held controlled sub sample. In other words, sister firms (controlled by families and other investors) that have higher (lower) cash holdings relative to the bidder are more likely to benefit (lose) from the acquisition announcement. We also note that the coefficient on the Tobin's q dummy is negative and statistically significant in the family-controlled sub sample. That is, family-controlled sister firms having higher (lower) Tobin's q ratios relative to the bidder are more likely to lose (benefit) from the acquisition announcement. Thus, the latter two results are consistent with resource misallocation hypothesis (H_{43}) within family business groups as profits seem to be directed to cash-rich and low growth financially unconstrained sister firms.

TABLE 6. CROSS-SECTIONAL REGRESSIONS OF SISTER FIRMS CAR[-5,+5]

	Expected Sign	All group-affiliated bidders	Controlling shareholder identity		
			Family	WH Firm	Other
Dummy = 1 if controlling shareholder's cash flow rights in the sister firm > cash flow rights in the bidder	+ (H_{41})	0.0021	0.0073	0.0077	0.0188
		(0.8762)	(0.7014)	(0.6438)	(0.7822)
Dummy = 1 if sister firm excess cash holdings > bidder excess cash holdings	+ (H_{43})	0.0269	0.0488	0.0115	0.1316
	- (H_{42})	(0.0375)[b]	(0.0182)[b]	(0.4417)	(0.0442)[b]
Dummy = 1 if sister firm Tobin's q > bidder Tobin's q	+ (H_{42})	-0.0205	-0.0343	-0.0277	0.1154
	- (H_{43})	(0.1366)	(0.0817)[c]	(0.1362)	(0.1136)
Dummy = 1 if sister firm debt-to-assets ratio > bidder debt-to-assets ratio	+ (H_{42})	0.0102	0.0259	-0.0074	-0.0241
	- (H_{43})	(0.4864)	(0.2145)	(0.6623)	(0.7655)
Dummy = 1 if sister firm assets > bidder assets	+ (H_{43})	0.0012	-0.0169	0.0277	-0.1373
	- (H_{42})	(0.9335)	(0.4302)	(0.1460)	(0.1124)
Year fixed effects		Yes	Yes	Yes	Yes
N		731	492	190	49
Adj-R^2		0.0330	0.0433	0.0586	0.3509

The dependent variable is the sister firm ACAR[-5,+5]. The sample includes completed mergers and acquisitions transactions involving Canadian headquartered (non-financial) bidders with announcement dates between January 1, 1990 and December 31, 1999. Group affiliation status is gathered from Statistics Canada's *Inter-Corporate Ownership* (ICO). Group-affiliated bidders are sorted according to the identity of their controlling shareholders: a family, a widely held firm and other investors. Cash flow rights and voting rights of the controlling shareholder are calculated following the methodology in Claessens et al. (2000). The cash flow rights leverage is the ratio of voting rights to cash flow rights of the controlling shareholder. Excess cash holdings is the difference between the bidder's actual cash holdings and the cash holdings predicted by the Opler et al. (1999) reduced cash model for the bidder's industry. Tobin's q is the ratio of market capitalization plus total assets minus the book value of equity to total assets. Debt-to-assets is the ratio of total debt to total assets. Assets are total assets expressed in 1999 $ Million. [a], [b] and [c] denote statistical significance at the 1%, 5% and 10% level, respectively.

5.5 Intra-Group Mergers

We study intra-group mergers to find out whether these transactions are motivated by an efficient internal capital market or tunneling. We use other (non-intra-group) mergers, i.e. mergers between a listed bidder and a listed target as a benchmark. There are 26 intra-group mergers and 107 other mergers (30 by group-affiliated bidders and 77 by stand-alone bidders) during our sample period. For each bidder and target, we compute the CAR over the [-5, +5] event window following the standard methodology described in section 5.1. We also compute the combined CAR using a value-weighted time-series portfolio of the bidder and the target following the methodology in Bradley et al. (1988).[34]

In all but four intra-group mergers, the controlling shareholder's cash flow rights in the bidder are higher than their cash flow rights in the target. Therefore, if tunneling occurs, that is if the bidder pays for the target shares at a discounted price, it follows that bidder returns are expected to be positive and target returns are expected to be negative. The results in Table 7 show that this is not the case. The bidder CAR is negative and insignificant while the target CAR is positive and significant at the 1% level.[35] These results are inconsistent with the tunneling hypothesis (H_{51}). Nevertheless, there is some evidence that group-affiliated bidders underpay target shares in intra-group mergers relative to target shares in other mergers: the difference in mean target CARs between the two is a negative 5.74%; significant at the 10% level. Our results are consistent with those of Holmen and Knopf (2004) in Sweden. Taken together, our results and theirs suggest that institutions in Sweden and Canada provide sufficient protection to minority shareholders to prevent the self-dealing behaviour of controlling shareholders.

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[34] The portfolio weights are adjusted for the pre-acquisition ownership of the bidder in the target and vice versa.

[35] Our results are similar if we drop the four intra-group mergers in which the cash flow rights of the controlling shareholder in the bidder are lower than their cash flow rights in the target.

Under the efficient internal capital market hypothesis, intra-group mergers should add value to both bidder and target. The results in Table 7 show that only the target exhibits positive and significant CAR; the bidder and the combined CAR figures are negative and not significant. Therefore, our results are inconsistent with the idea that intra-group mergers are manifestations of better assets redeployability in efficient internal capital markets (H_{52}).

One possible interpretation for our results is that intra-group mergers are simply a way to restructure the group. For instance, Bebchuck et al. (2000) contend that the Edper-Bronfman intra-group mergers that took place during the early 1990s aimed to simplify the group structure in response to investors' and analysts' demands. Holmen and Knopf (2004) suggest that some of the Swedish intra-group mergers are a means of rearranging the cash flows within the pyramid. Buysschaert et al. (2004), who study intra-group equity sales in Belgium, also suggest that these transactions are part of a strategy to create a more transparent group structure.

TABLE 7. BIDDER, TARGET AND COMBINED CAR[-5,+5] IN INTRA-GROUP MERGERS AND OTHER MERGERS BY GROUP-AFFILIATED AND STAND-ALONE BIDDERS

	Intra-group mergers N=26 (A)	Other mergers by Group-affiliated bidders N=30 (B)	Other mergers by Stand-alone bidders N=77 (C)	Difference (A)-(B)	Difference (A)-(C)
Bidder	-0.0549	1.1889	-0.7044	-1.2438	0.6495
Target	12.2575[a]	18.0072[a]	7.8317[a]	-5.7497[c]	4.4258
Combined	-1.0962	2.1715	1.2266	-3.2677	-2.3228

Intra-group mergers involve a bidder and a target affiliated to the same business group. Group affiliation status is gathered from Statistics Canada's *Inter-Corporate Ownership* (ICO). The market model is estimated over a maximum period of 200 trading days, ranging from day -250 to day -51 relative to the announcement date (day 0) provided by *SDC*. We use the *CFMRC* equally weighted index as the proxy for market returns. The abnormal return (AR) is obtained by subtracting the market model predicted return from the realized return. We then sum the ARs to obtain the cumulative abnormal return (CAR) over the relevant event period. The combined CAR is computed using a value-weighted time-series portfolio of the bidder and the target following the methodology in Bradley et al. (1988). The portfolio weights are adjusted for the pre-acquisition ownership of the bidder in the target and vice versa. The significance of means is based on the z-test. The significance of the differences in means is based on a t-test. [a], [b] and [c] denote statistical significance at 1%, 5% and 10% respectively.

5.6 Robustness and Further Tests

In this section, we examine the robustness of our regressions to the inclusion of additional control variables. We start with the size of the target relative to the bidder, which is frequently employed by extant M&A research as explanatory variable in bidder announcement returns regressions. There are different arguments that lead to contradictory predictions on the impact of relative size on CARs (Moeller et al., 2004). On the one hand, if spending on M&A provides a return that is independent of the target size then one would predict that relative size and CARs are positively correlated. On the other hand, if the bidder pays with shares and demand curves for shares slope down then one would predict that relative size and CARs are negatively correlated. We do not control for relative size in Table 5 because SDC reports 218 transaction values

as "undisclosed". Thus, including relative size would shrink the number of observations in our sample by 32%. We adopt the following strategy to circumvent this issue and preserve the initial number of sample observations. We calculate the relative size as the ratio of transaction value to the market capitalization of the bidder. Because the bidder is more likely not to reveal the value of the transaction when it is smaller, we set undisclosed transaction values to zero. In addition, to control for the effect of this assumption on our results, we construct a dummy variable, *Undisclosed transaction value*, which is equal to one when the transaction value is undisclosed, and zero otherwise. Table 8 shows the results when we add these variables to our regressions. We note that the relative size variable has a positive coefficient that is significant only for the subsample of group-affiliated bidders. Besides, the coefficient on the *Undisclosed transaction value* dummy is negative and significant only for the subsample of stand-alone bidders. Importantly, our main conclusions remain unchanged as the cash flow rights leverage ratio and the cash rich dummy still have negative and significant coefficients for the subsample of family-controlled group-affiliated bidders.

TABLE 8. ROBUSTNESS TO THE INCLUSION OF THE RELTIVE SIZE OF THE TARGET

			Group-affiliated bidders			
				Controlling shareholder identity		
	All bidders (1)	Stand-alone bidders (2)	All group-affiliated (3)	Family (4)	WH firm (5)	Other (6)
Group affiliation dummy	0.2446					
	(0.7542)					
Cash flow rights leverage	-0.0085	0.1398	-0.0603	-0.1131[a]	0.9403	-0.3721
	(0.8230)	(0.4218)	(0.0923)	(0.0036)	(0.5064)	(0.3270)
Tobin's q	-0.0509	-0.0063	-1.2908	-1.1189	-2.7649	-9.7460
	(0.9177)	(0.9917)	(0.1307)	(0.2866)	(0.3014)	(0.3950)
Cash-rich dummy	0.6379	2.6401[c]	-1.0197	-4.1553[b]	3.2617	-3.1508
	(0.4031)	(0.0994)	(0.3482)	(0.0155)	(0.2240)	(0.8101)
Cash flow rights leverage x	-0.0464	-0.6780	0.0038	0.0697	-0.7902	0.2962
Cash-rich dummy	(0.4079)	(0.4328)	(0.9444)	(0.2852)	(0.6725)	(0.6516)
Debt/assets	2.8231	5.7739[c]	-1.7430	1.6056	-13.8986	-12.9742
	(0.2518)	(0.0814)	(0.6416)	(0.7582)	(0.2437)	(0.4332)
Log of assets	-0.2796[c]	-0.3994[c]	-0.1082	-0.0662	0.4234	1.2844
	(0.0952)	(0.0667)	(0.6778)	(0.8535)	(0.6999)	(0.3790)
Private target dummy	0.1540	-0.0049	0.3056	-1.7060	6.7616[c]	11.9636
	(0.8753)	(0.9970)	(0.8303)	(0.3223)	(0.0974)	(0.5618)
Public target dummy	-1.1738	-2.7879[c]	1.2582	1.5493	0.1092	10.1237
	(0.2704)	(0.0869)	(0.3589)	(0.4270)	(0.9761)	(0.3394)
All equity deal dummy	0.2477	-2.2699	5.0467[a]	5.4195[b]	0.7030	15.5377
	(0.8371)	(0.1595)	(0.0040)	(0.0157)	(0.8554)	(0.1017)
All cash deal dummy	0.0031	-1.4314	2.6823[b]	1.6953	0.4990	0.0592
	(0.9972)	(0.2666)	(0.0198)	(0.3519)	(0.8432)	(0.9942)
Diversifying deal dummy	0.7940	2.0014[c]	-0.2220	1.2899	-1.8762	1.6101
	(0.2829)	(0.0552)	(0.8243)	(0.3309)	(0.3807)	(0.7623)
Tender offer dummy	-1.3205	-2.6028	0.6520	2.9339	1.2046	5.8279
	(0.1975)	(0.1157)	(0.5917)	(0.1005)	(0.6002)	(0.5906)
Relative Size	0.4899	-0.1558	1.8395[b]	4.5744[b]	2.4699[b]	-11.9545
	(0.3589)	(0.8161)	(0.0296)	(0.0470)	(0.0416)	(0.2185)
Undisclosed transaction value dummy	-2.2065[a]	-4.4531[a]	1.9747	2.9013	2.8546	-1.3747
	(0.0336)	(0.0015)	(0.1913)	(0.1793)	(0.4254)	(0.8598)
Number of observations	571	387	184	105	59	20
Adjusted R-squared	0.0183	0.0589	0.0895	0.2163	0.2044	0.2001
F-test	1.44[c]	2.05[a]	1.79[b]	2.26[a]	1.66[c]	1.36
	(0.0798)	(0.0033)	(0.0203)	(0.0039)	(0.0845)	(0.3713)

The dependent variable is the bidder CAR[-5,+5]. The sample includes completed mergers and acquisitions transactions involving Canadian headquartered (non-financial) bidders with announcement dates between January 1, 1990 and December 31, 1999. Group affiliation status is gathered from Statistics Canada's *Inter-Corporate Ownership* (ICO). Group-affiliated bidders are sorted according to the identity of their controlling shareholders: a family, a widely held firm and other investors. Cash flow rights and voting rights of the controlling shareholder are calculated following the methodology in Claessens et al. (2000). The cash flow rights leverage is the ratio of voting rights to cash flow rights of the controlling shareholder. Cash-rich dummy is

an indicator variable set to 1 if the bidder holds positive excess cash, and 0 otherwise. Excess cash holdings is the difference between the bidder's actual cash holdings and the cash holdings predicted by the Opler et al. (1999) reduced cash model for the bidder's industry. Tobin's q is the ratio of market capitalization plus total assets minus the book value of equity to total assets. Debt-to-assets is the ratio of total debt to total assets. Assets are total assets expressed in 1999 $ Million. Private target (Public target) is an indicator variable set to 1 if the target is a private (public) firm, and 0 otherwise. All equity deal (All cash deal) is an indicator variable set to 1 if equity (cash) is the only method of payment. Tender offer is an indicator variable set to 1 if the acquisition is a tender offer, and 0 otherwise. Diversifying deal is an indicator variable set to 1 if the bidder and the target have different two-digit SIC industry codes, and 0 otherwise. Relative size is the ratio of transaction value to the market capitalization of the bidder. Undisclosed transaction value is an indicator variable set to 1 if the transaction value is undisclosed, and 0 otherwise. The regressions are estimated using weighted least squares, where the weights equal to the inverse of the variances of the ARs. [a], [b] and [c] denote statistical significance at the 1%, 5% and 10% level, respectively.

Next, we control for the bidder's past performance. Rau and Vermaelen (1998) argue that the market over extrapolates the past performance of the bidder. Their argument suggests that bidders that performed well in the past tend to be rewarded by higher abnormal returns irrespective of the profitability of their acquisitions. We control for past performance using the bidder's average return on assets during the two years preceding the acquisition announcement in order to ensure that our results are not driven by the market's overreaction to acquisitions by bidders with high past performance.[36] The results are illustrated in Table 9. We note that past performance is positively associated with CARs although the association is not statistically significant. Thus, it appears that the market does not over extrapolate bidders' past performance as suggested by Rau and Vermaelen (1998). Besides, the main results in Table 5 remain valid; the coefficients on the cash flow rights leverage ratio and the cash rich dummy are negative and significant for the subsample of family-controlled group-affiliated bidders.

[36] We alternatively included the average return on assets over the previous three, four and five years. Our results are qualitatively similar despite the reduction in sample size due to the additional data requirements.

TABLE 9. ROBUSTNESS TO THE INCLUSION OF PAST PERFORMANCE

			Group-affiliated bidders			
				Controlling shareholder identity		
	All bidders (1)	Stand-alone bidders (2)	All group-affiliated (3)	Family (4)	WH firm (5)	Other (6)
Group affiliation dummy	0.0729					
	(0.9275)					
Cash flow rights leverage	-0.0145	0.1116	-0.0680[c]	-0.1195[a]	0.1796	-0.1487
	(0.7071)	(0.5302)	(0.0597)	(0.0021)	(0.8973)	(0.6754)
Tobin's q	-0.0317	0.1093	-1.4248	-1.7948[c]	-3.3037	-14.7546
	(0.9502)	(0.8616)	(0.1142)	(0.0997)	(0.2663)	(0.1380)
Cash-rich dummy	0.6274	2.5609	-1.5407	-4.5681	0.5393	1.2554
	(0.4232)	(0.1564)	(0.1774)	(0.0094)	(0.8527)	(0.9152)
Cash flow rights leverage x Cash-rich dummy	-0.0341	-0.4338	0.0139	0.0788	1.0703	0.2016
	(0.5489)	(0.6877)	(0.8038)	(0.2276)	(0.5971)	(0.7249)
Debt/assets	3.5265	5.9595	-0.4567	5.2345	-9.0408	-29.3038[c]
	(0.1722)	(0.0934)	(0.9054)	(0.3327)	(0.4008)	(0.0980)
Log of assets	-0.3750[b]	-0.5848[b]	-0.1047	-0.0807	-0.0167	2.1535[c]
	(0.0288)	(0.0104)	(0.6896)	(0.8217)	(0.9876)	(0.0857)
Private target dummy	-0.0012	-0.3330	-0.2532	-2.0082	2.4355	18.6564
	(0.9991)	(0.8041)	(0.8665)	(0.2576)	(0.5746)	(0.2808)
Public target dummy	-0.5157	-1.5858	1.0633	1.9027	-2.6340	14.2901
	(0.6251)	(0.3285)	(0.4317)	(0.3113)	(0.4181)	(0.1575)
All equity deal dummy	0.9379	-1.0802	5.3203[a]	4.4083[b]	2.6955	0.0260
	(0.4293)	(0.5009)	(0.0019)	(0.0441)	(0.4491)	(0.9982)
All cash deal dummy	0.8873	0.4448	1.5861	-0.2752	-2.3742	-2.0731
	(0.2693)	(0.7097)	(0.1176)	(0.8462)	(0.3340)	(0.7025)
Diversifying deal dummy	0.6126	1.9005	-0.5428	1.0973	-1.8899	-0.1308
	(0.4176)	(0.0820)	(0.5954)	(0.4117)	(0.4042)	(0.9779)
Tender offer dummy	-0.8921	-2.1319	-0.0239	2.4113	0.7746	-8.1608
	(0.3831)	(0.2068)	(0.9840)	(0.1896)	(0.7587)	(0.4409)
Past performance	-0.0011	-0.0205	0.1363	0.2475	0.6030	-1.3114[c]
	(0.9852)	(0.7626)	(0.3069)	(0.1240)	(0.1430)	(0.0833)
Number of observations	558	337	181	104	58	19
Adjusted R-squared	0.0041	0.0341	0.0564	0.2113	0.1475	0.3173
F-test	1.10	1.61[b]	1.49[b]	2.27[a]	1.46	1.68
	(0.3389)	(0.0426)	(0.0833)	(0.0042)	(0.1547)	(0.2708)

The dependent variable is the bidder CAR[-5,+5]. The sample includes completed mergers and acquisitions transactions involving Canadian headquartered (non-financial) bidders with announcement dates between January 1, 1990 and December 31, 1999. Group affiliation status is gathered from Statistics Canada's *Inter-Corporate Ownership* (ICO). Group-affiliated bidders are sorted according to the identity of their controlling shareholders: a family, a widely held firm and other investors. Cash flow rights and voting rights of the controlling shareholder are calculated following the methodology in Claessens et al. (2000). The cash flow rights leverage is the ratio of voting rights to cash flow rights of the controlling shareholder. Excess cash holdings is the difference between the bidder's actual cash holdings and the cash holdings predicted by the Opler et al. (1999) reduced cash model for the bidder's industry. Tobin's q is the ratio of market capitalization plus total assets minus the book value of equity to total assets. Debt-to-assets is the ratio of total debt to

total assets. Assets are total assets expressed in 1999 $ Million. Private target (Public target) is an indicator variable set to 1 if the target is a private (public) firm, and 0 otherwise. All equity deal (All cash deal) is an indicator variable set to 1 if equity (cash) is the only method of payment. Tender offer is an indicator variable set to 1 if the acquisition is a tender offer, and 0 otherwise. Diversifying deal is an indicator variable set to 1 if the bidder and the target have different two-digit SIC industry codes, and 0 otherwise. Past performance is the bidder's average return on assets during the two years preceding the acquisition announcement. The regressions are estimated using weighted least squares, where the weights equal to the inverse of the variances of the ARs. [a], [b] and [c] denote statistical significance at the 1%, 5% and 10% level, respectively.

6. SUMMARY AND CONCLUSIONS

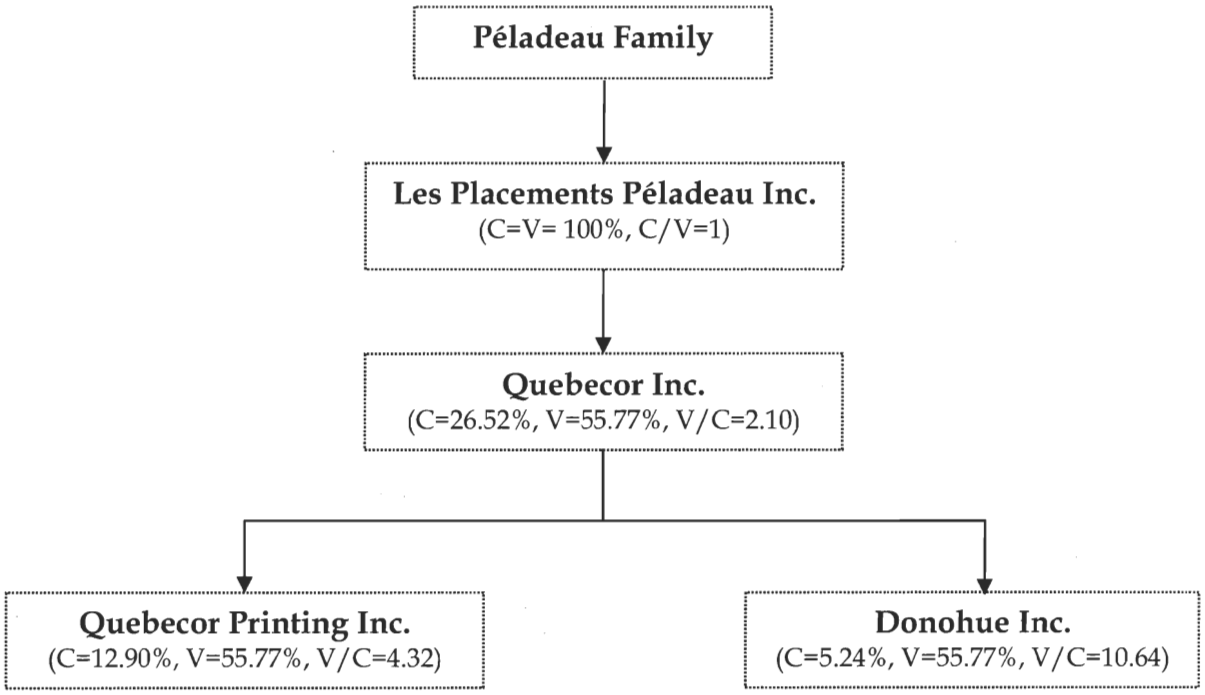
In this essay, we explore the bright and dark sides of business groups in Canada, a country characterized by well-functioning capital, product and labor markets, and a high level of investor protection. Our findings are consistent with the dark side of business groups. In particular, we find evidence of agency costs arising from the separation of ownership and agency costs of free cash flow when family group-affiliated firms acquire other firms. We also find evidence of resource misallocation within family business groups as our results indicate that profits are diverted to cash-rich and low growth (i.e., financially unconstrained) affiliated firms. However, unlike previous research in emerging markets, we do not find evidence of tunneling within Canadian business groups.

Our results shed light on the effects of the Canadian institutional environment on the role of business groups. When external markets are developed, business groups' internal capital markets cannot channel resources more efficiently to affiliated firms. At the same time, when the legal protection of minority shareholders is strong, controlling shareholders find it costly to tunnel profits into firms where they have high cash flow rights. Our findings also suggest that the identity of the controlling shareholder is a key factor in shaping the role of business groups. We find that the dark side of business groups leaks out when families are controlling shareholders.

Our evidence for the dark side of family business groups begs the question as to the means of disciplining families at the apex of these organizational forms. Potential candidates are external governance mechanisms. For instance, Faleye (2003) finds that proxy contests are effective in forcing entrenched professional managers to disgorge excess cash holdings to shareholders. However, since families maintain a lock over control, proxy contests (and other external governance devices) are unlikely to force families to pay higher dividends or repurchase shares in cash-rich firms. The same argument applies to internal governance mechanisms as families can appoint their relatives to the board of directors and set inefficient compensation policies. The ideal candidate could be regulation. For example, governments can inhibit the separation of ownership and control in pyramidal business groups by levying taxes on inter-corporate dividends (to reduce the number of layers) or explicitly prohibiting the use of shares with superior voting rights.[37] However, to the extent that families are politically connected, the willingness of governments to regulate business groups remains questionable. Clearly, the means to discipline families at the apex of business groups need to be addressed by future research.

[37] This recommendation reflects the results reported in this chapter as well as evidence reported by Zingales (1994) in Italy and Modigliani and Perotti (1998) and Nenova (2003) in a cross-country sample showing that dual class shares are associated with private benefits of control. Besides, Bebchuk and Hart (2002) advocate that if the government is willing to regulate dual class share structures, then firms are very likely to substitute them by relying on pyramidal structures. According to their argument, for government intervention to be effective at curbing the separation of ownership and control, *both* dual class shares and pyramidal structures have to be regulated.

APPENDIX I
Péladeau family group



The Péladeau family group contains three listed corporations: Quebecor Inc., Quebecor Printing Inc. and Donohue Inc. Below, we show how we determine the ultimate cash flow and voting rights of the family in the listed corporations.

Quebecor Inc.	
Share capital (Source: Proxy circular as of March 3, 1997)	**Major shareholder stake**
27,479,758 class A shares (10 votes per share) 38,360,320 class B shares (1 vote per share)	Les Placements Péladeau Inc. (wholly owned by the Péladeau family) holds 17,465,264 class A shares.
Ultimate cash flow rights, voting rights and cash flow rights leverage	
Cash flow rights =17,465,264/(27,479,758+38,360,320) = 26.52%. Voting rights =17,465,264x10/(27,479,758x10+38,360,320x1) = 55.77%. Cash flow rights leverage = 55.77%/ 26.52% = 2.10	

Quebecor Printing Inc.	
Share capital (Source: Proxy circular as of February 24, 1997)	**Major shareholder stake**
63,984,552 class A (10 votes per share) 51,550,408 class B (1 vote per share)	Quebecor Inc. holds 56,211,277 class A shares
Intermediate cash flow and voting rights	**Ultimate cash flow rights, voting rights and cash flow rights leverage**
Cash flow rights = 56,211,277/(63,984,552+51,550,408) = 48.65%. Voting rights = 56,211,277x10/(63,984,552x10+51,550,408x1) = 81.30%.	Cash flow rights = 26.52%x48.65% = 12.90%. Voting rights = Min (55.77%, 81.30%) = 55.77%. Cash flow rights leverage = 55.77%/ 12.90% = 4.32

Donohue Inc.	
Share capital (Source: Proxy circular as of March 10, 1997)	**Major shareholder stake**
80,533,770 class A subordinate shares (1 vote per share) 8,652,907 class B shares (20 votes per share)	Mircor Inc. (a wholly owned subsidiary of Quebecor Inc.) holds 10,380,620 class A subordinate shares and 7,248,754 class B shares.
Intermediate cash flow and voting rights	**Ultimate cash flow rights, voting rights and cash flow rights leverage**
Cash flow rights = (10,380,620+7,248,754)/(80,533,770+8,652,907) = 19.76%. Voting rights = (10,380,620x1+7,248,754x20)/(80,533,770x1+8,652,907x20) = 61.26%.	Cash flow rights 26.52%x19.76% = 5.24%. Voting rights = Min (55.77%, 61.26%) = 55.77%. Cash flow rights leverage = 55.77%/ 5.24% = 10.64

APPENDIX II

Correlation matrix

	CAR[-5,+5]	Group affiliation dummy	Cash flow rights leverage	Tobin's q	Cash-rich dummy	Debt/assets	Log of assets	Private target dummy	Public target dummy	All equity deal dummy	All cash deal dummy	Tender offer dummy
Group affiliation dummy	0.011											
	(0.792)											
Cash flow rights leverage	0.015	0.349										
	(0.713)	(0.000)										
Tobin's q	-0.030	-0.050	-0.017									
	(0.472)	(0.221)	(0.670)									
Cash-rich dummy	0.018	0.069	0.039	0.082								
	(0.667)	(0.088)	(0.337)	(0.043)								
Debt/assets	-0.029	-0.024	-0.012	0.978	-0.118							
	(0.486)	(0.545)	(0.761)	(0.000)	(0.004)							
Log of assets	-0.088	0.384	0.168	-0.231	0.096	-0.168						
	(0.033)	(0.000)	(0.000)	(0.000)	(0.018)	(0.000)						
Private target dummy	0.071	-0.142	-0.132	0.073	-0.048	0.062	-0.274					
	(0.078)	(0.000)	(0.001)	(0.073)	(0.239)	(0.122)	(0.000)					
Public target dummy	-0.056	0.141	0.090	-0.050	-0.003	-0.037	0.183	-0.554				
	(0.159)	(0.000)	(0.019)	(0.216)	(0.942)	(0.349)	(0.000)	(0.000)				
All equity deal dummy	-0.021	-0.092	-0.015	-0.018	-0.042	-0.025	-0.210	-0.094	0.264			
	(0.601)	(0.017)	(0.698	(0.663)	(0.306)	(0.532)	(0.000)	(0.014)	(0.000)			
All cash deal dummy	-0.014	0.088	0.040	-0.042	0.042	-0.023	0.200	-0.099	-0.082	-0.347		
	(0.729)	(0.022)	(0.305)	(0.302)	(0.297)	(0.574)	(0.000)	(0.010)	(0.033)	(0.000)		
Tender offer dummy	-0.063	0.080	0.027	-0.027	-0.034	-0.022	0.224	-0.288	0.539	-0.063	0.120	
	(0.117)	(0.037)	(0.482)	(0.507)	(0.411)	(0.589)	(0.000)	(0.000)	(0.000)	(0.099)	(0.002)	
Diversifying deal dummy	0.102	0.001	-0.019	0.044	0.032	0.056	0.035	0.154	-0.179	-0.101	-0.003	-0.144
	(0.011)	(0.978)	(0.618)	(0.273)	(0.437)	(0.159)	(0.377)	(0.000)	(0.000)	(0.008)	(0.939)	(0.000)

This table presents the correlation coefficients between all variables used in this essay. P-values are beneath each coefficient.

CHAPTER 3: MULTIPLE LARGE SHAREHOLDER STRUCTURES: SAINTS OR SINNERS?

1. INTRODUCTION

It is beyond dispute that ownership structure drives a significant part of a firm's agency costs. Yet, different views of the firm's ownership structure lead to strikingly different forms of agency costs. Indeed, *first generation* agency costs can be traced back to the arguments of Berle and Means (1932), who asserted that typical publicly traded American firms are primarily owned by dispersed and uninvolved absentee owners, but controlled by professional managers. This conjecture has spawned many studies that rest mainly on the attributes of managerial equity ownership (e.g., Morck et al., 1988; McConnell and Servaes, 1990). However, in their seminal study, La Porta et al. (1999) call into question

Berle and Means's thesis about shareholder apathy by showing that the governance of public firms outside the U.S. and the U.K. is entrusted to a handful of wealthy families who tend to use different controlling devices, such as top-down chains of control pyramids and multiple class shares, to secure control rights in excess of their ownership rights. This separation of ownership and control enables the controlling shareholders to implement their selfish agenda and extract private benefits at the expense of minority shareholders (Johnson et al., 2000a; Volpin, 2002). This form of *second generation* agency costs has slowly gained attention, and a growing body of research examines its implications on firm value (Claessens et al., 2002; La Porta et al., 2002), firm's dividend and debt policies (Faccio et al., 2001, 2005), the informativeness of firm's reported earnings (Fan and Wong, 2002), auditor's choice (Fan and Wong, 2005; El Ghoul et al., 2007), earnings management (Haw et al., 2004), the likelihood of cross-listing in the U.S. (Doidge et al., 2006), and stock liquidity (Attig et al., 2006).

An important feature of the *second generation* of agency costs is the implicit assumption that the largest shareholder's control over the firm goes unchallenged. However, recent studies profiling corporate ownership structures around the world reveal that a significant number of firms are controlled through multiple large shareholders structures (MLSS hereafter). For instance, Claessens et al. (2000) and Faccio and Lang (2002) document that MLSS exist in 32.2% of East Asian firms and 45.26% of Western European firms, respectively. Despite the pervasiveness of MLSS around the world, we know little about their role in corporate governance. In this essay, we contribute to this timely, yet unresolved, debate on the governance role of MLSS (i.e. *third generation* form of agency costs) by examining whether and how MLSS affect corporate value in East Asia.

We assert that our research is important because theoretical studies have not reached a consensus on the governance role of MLSS. On the one hand, some studies support the view that MLSS play a valuable monitoring role in curbing the extraction of private benefits. For instance, Bennedsen and Wolfenzon (2000) show that the significant ownership stake of the coalition of several large shareholders is associated with more efficient actions, as it captures more of the resulting outcomes. A similar conclusion is reported in Bloch and Hege's (2001) model where two large shareholders commit to refrain from extracting private benefits because they compete for corporate control by attracting minority shareholders. On the other hand, other studies cast doubts on the effectiveness of shared control in producing better corporate governance outcomes. Zwiebel's (1995) model suggests that moderate-sized blockholders are prone to be in cahoots with each other in order to appropriate divisible private benefits. Kahn and Winton (1998) identify occurrences where large shareholders prefer to opportunistically trade on private information instead of monitoring management. Another strand of studies considers both views of the role of MLSS in corporate governance. For instance, Gomes and Novaes (2005) argue that while bargaining problems between large shareholders can obstruct projects harmful to minority shareholders, they may also result in corporate paralysis as profitable projects may be denied. By solving this tradeoff, they find that MLSS are efficient in countries with poor investor protection and when financing requirements are large.

The above contrasting perspectives suggest that whether MLSS genuinely serve a corporate governance role remains an empirical question. Accordingly, in this essay we test two competing governance hypotheses of MLSS. Under the *efficient-monitoring* hypothesis, large shareholders can engage in monitoring activities either by forming coalitions that hold larger equity stakes, or by fiercely competing for corporate control. Alternatively, under the *entrenchment*

hypothesis, MLSS may be viewed as opportune settings for extracting divisible private benefits of control. To test these hypotheses we relate corporate valuation to the presence and attributes of MLSS in a sample of 1,252 publicly traded firms from nine East Asian economies.

Our essay contributes to the literature in several ways. First, we augment the rare empirical studies on the governance impact of MLSS by examining the effect of the largest shareholder's control contestability in the context of East Asian economies. Existing studies address the effect of MLSS in Western European countries (Laeven and Levine, 2007) and in Finland (Maury and Pajuste, 2005). To some extent, the weak legal environment--characterized by inadequate protection afforded to minority shareholders against expropriation by large shareholders--and the different ultimate ownership patterns in East Asia compared to other regions examined to date provide an opportune setting in which to study the impact of MLSS on agency costs.[38] Second, like Laeven and Levine (2007), we investigate the importance of blockholders' identities in shaping the MLSS valuation effects. Yet, we depart from Laeven and Levine (2007), who focus on the interaction between the two largest blockholders, by controlling for up to the fifth largest shareholders. By doing so, we were able to assess the valuation effects of the number, voting size, and the voting distribution among the five largest shareholders. Third, because most of the recent empirical evidence suggests that agency problems around the globe rest in

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[38] For example, in comparing ultimate ownership structures in Western Europe to the findings of Claessens et al. (2000) in East Asia, Faccio and Lang (2002: 367) explain that "... we find that families control a higher proportion of firms; each family controls fewer firms on average; top families control a lower proportion of total stock market capitalization; a higher proportion of family controlled companies have family members in top management; and the largest shareholder is less often alone, but averages much higher cash-flow rights, control rights, and ratio of cash-flow to voting rights. These differences may be due to weaker law enforcement in Asia that allows controlling owners to achieve effective control of a large number of firms by controlling and owning a smaller part of each firm."

the misalignment between the control and ownership stakes of ultimate owners, we assess the impact of MLSS in shaping the outcome of the largest shareholder's excess control—control stakes in excess of cash flow stakes. Last but not least, based on the premise that demand for monitoring is higher in financially constrained firms (e.g., Gomes and Novaes, 2005), we contribute to extant research on the effects of MLSS by examining the impact of external financing needs on the relationship between MLSS and firm valuation.

Our results are consistent with the efficient-monitoring hypothesis of MLSS, providing support to the importance of their role in enhancing corporate governance in East Asia. We find that the presence, number, and size of multiple large shareholders are associated with a significant valuation premium. In fact, after controlling for firm-level characteristics and country-industry effects, we estimate that, on average, firms with MLSS trade at a 6.65% premium over firms with a single large shareholder. Further, our results suggest that adding one large shareholder to the firm's ownership structure enhances corporate valuation by 3.54% on average. We also find that a higher contestability of the largest shareholder voting power (e.g., by the other blockholders or minority shareholders) increases firm value. Three other important findings emerge from our analysis. First, we find that blockholders' identities are not neutral in shaping MLSS valuation effects, as we document more pronounced valuation impact of MLSS when the second shareholder is either a family or the State. Second, we find that the valuation effects of MLSS are more pronounced in firms with excess control of the largest shareholder and firms with excess external financing needs, indicating a more pronounced MLSS valuation effect in firms where the likelihood of corporate diversion is high and external financing requirements are large. Finally, we uncover that MLSS help enhance firm risk-taking consistent with their monitoring role since the largest shareholder has

incentives to reduce the volatility of cash flows when he intends to maximize the proceeds from his expropriation activities.

Our work is particularly related to Claessens et al. (2002) and Fan and Wong (2005) who study agency problems embedded in ultimate ownership structures of East Asian firms. While Claessens et al. (2002) document significant firm value discounts associated with higher excess of control rights by the largest shareholder, Fan and Wong's (2005) evidence implies that high-quality auditing plays a corporate governance role by reducing the extent of these discounts. We extend these studies by showing that MLSS also play a valuable monitoring role in curbing the diversion of corporate resources in East Asia.

The remainder of the essay proceeds as follows. Section 2 describes our data construction and variables. Section 3 discusses our methodology and empirical findings. Section 4 concludes.

2. DATA AND VARIABLES

2.1 Sample

The main source of ownership data is Claessens et al. (2000), which covers firms from nine East Asian countries: Hong Kong, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand. The dataset identifies the ultimate controlling shareholders of 2,980 East Asian firms as well as their ultimate cash flow (ownership) and voting rights (control) as of December 1996 or the end of the 1996 fiscal year. It also includes information on the presence of multiple large shareholders as well as their control stakes; which is essential to our study as it facilitates testing their role in corporate governance.[39] Since our

[39] Claessens et al. (2000) use various academic, private and governmental data sources to identify dual class shares, cross-holdings and pyramidal structures. Their database has been used extensively by extant research investigating the effects of ownership structure in East Asia (e.g., Fan and Wong, 2002, 2005; Claessens et al., 2002; Mitton, 2002 and Durnev and Kim, 2005). It is

focus is on the effects of MLSS on corporate valuation, we exclude widely-held firms from the analysis, i.e., firms that do not have a controlling shareholder owning more than 10% of the voting rights.[40] In order to obtain industry affiliations and financial data related to firm-level variables in 1996, we hand match the ownership dataset with the 1997 version of the *Worldscope* database. We drop firms with insufficient financial data to measure corporate valuation and other firm-level variables. Following previous research, we also eliminate financial firms (SIC codes between 60 and 69) from our analysis. This procedure leaves us with 1,252 firms for which we have data on ownership structure, corporate valuation, industry affiliation and firm-level control variables in 1996.

2.2 *Variables*

Firm Valuation. Following prior research (e.g., La Porta et al., 2002; Claessens et al., 2002; Lins, 2003), we use Tobin's Q as our proxy for firm valuation (*TOBQ*).[41] We define *TOBQ*[42] as the ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity.[43]

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available online on the Journal of Financial Economics' website at http://jfe.rochester.edu/data.htm.

[40] Our results remain virtually unchanged if we keep widely-held firms in the sample (See Section 3.3.2 below).

[41] Tobin's Q may also be viewed as a proxy for growth opportunities. We include sales growth and capital expenditures-to-assets in our regressions to control for this possibility.

[42] The list of variables employed in this chapter is provided in an appendix to this chapter.

[43] Tobin's Q is the ratio of the market value of the firm to the current replacement value of its assets. The rationale behind using this variable as a measure of firm value is the following. The replacement value captures the alternative-use value (opportunity cost) of assets. If the market value of assets is higher (lower) than their alternative-use value then the firm has created (destroyed) value. Therefore, higher Tobin's Q values should correspond to higher firm valuations. In constructing Tobin's Q, we followed comparable studies by La Porta et al. (2002), Claessens et al. (2002) and Lins (2003). However, we recognize that there are alternative, more sophisticated, proxies of Tobin's Q, e.g., in Lindenberg and Ross (1981). Although using such

Ultimate Ownership and Control of the Largest Shareholder. We follow Claessens et al. (2002) to gauge the incentive and entrenchment effects of the largest shareholder on firm value. We use the ultimate share of ownership rights to capture the incentive alignment with minority shareholders; we label this variable *CASH1*. For the entrenchment effect, we construct a continuous variable called *CONTMCASH* measuring the largest ultimate owner's control rights in excess of ownership rights.[44]

Multiple Large Shareholders Structures. We employ a number of variables reflecting various attributes of MLSS. We start by identifying whether the firm has more than one large shareholder. To this end, we construct a dummy variable (*MOWNERS*) set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise. Based on the efficient-monitoring (entrenchment) hypothesis, we expect this variable to have a positive (negative) effect on corporate value.

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sophisticated proxies could improve the precision of Tobin's Q estimation, it certainly comes at the expense of a substantial reduction in sample size. For instance, in computing the numerator of Tobin's Q, Lindenberg and Ross use information on the terms of debt contracts (e.g., coupon rate, rating, maturity,etc.) to derive the market value of the firm debt obligations. Unfortunately, this information is not available for a large subset of firms as several bond issues trade over the counter and most bank loans are privately held. Besides, in computing the denominator, Lindenberg and Ross employ an algorithm using information on firms' disclosures of replacement costs, accounting methods and technological change that are, again, available for only some firms. Overall, these extensive data requirements are likely to result in a sample selection bias whereby only large firms are included in the analysis. We believe that the proxy retained in this study provides a reasonable balance between accuracy and sample size.

[44] We also construct two alternative variables capturing the entrenchment effect of the largest ultimate owner. The first variable, called *CONTSUPCASH*, is a dummy variable set equal to one if the largest ultimate owner's share of control rights is higher than his share of ownership rights, and zero otherwise. The second variable, called *CONTSUPCASH_HI* is set equal to one if *CONTSUPCASH*=1 and if *CONMCASH* is higher than the median for the subsample of firms with excess control rights, and zero otherwise. This variable is intended to capture any sign changes of the entrenchment effect at high levels of separation between the ownership and control rights of the largest ultimate owner. Replacing *CONTMCASH* with these variables does not affect our core results.

Our second variable measures the number of other large shareholders (up to the fifth) controlling more than 10% of the firm (*NOWNERS*). This construct allows us to disentangle the coalition formation effects (Bennedsen and Wolfenzon, 2000) and the bargaining effects (Gomes and Novaes, 2005) of MLSS. The coalition formation hypothesis predicts that, all else equal, the larger the number of shareholders, the greater the likelihood that the winning coalition will hold a small equity stake, thereby capturing less of the outcome of its actions, resulting in a decline in firm value. Therefore, a negative relationship between *NOWNERS* and firm value is expected. Alternatively, the bargaining effects hypothesis suggests that disagreement among a large number of shareholders implies that projects diluting minority shareholders interests will be rejected which, in turn, translates into value premium. Consequently, a positive relationship between *NOWNERS* and firm value is expected. It is unclear which hypothesis, a priori, should dominate, making the relationship between corporate value and the number of large shareholders an empirical issue.

In a second step, we refine our analysis to investigate the importance of the voting size of MLSS. According to the efficient-monitoring hypothesis (Bennedsen and Wolfenzon, 2000; Bloch and Hege, 2001), greater control contestability empowers other large shareholders with enhanced monitoring incentives.[45] However, under the entrenchment hypothesis (Zwiebel, 1995), large shareholders extract private benefits that are proportional to their control stakes, so that greater contestability is associated with higher dilution of minority shareholders' interests. Our tests allow us to examine the contestability of the largest shareholder's control by the second large shareholder as well as a

[45] In Bennedsen and Wolfenzon (2000) increasing contestability while holding the number of shareholders constant increases the equity stake of the winning coalition which translates into actions more aligned with the interests of minority shareholders. In Bloch and Hege (2001) low contestability decreases the intensity of the competition for corporate control among large shareholders resulting in less commitments (to minority shareholders) to refrain from consuming private benefits.

coalition of (up to) four large shareholders. More specifically, we consider the voting rights of the second largest shareholder (*CONT2*). Then we measure the second largest shareholder's relative power vis-à-vis the largest shareholder using the ratio of voting rights of the second largest shareholder to voting rights of the first largest shareholder (*VOTING21*). Similarly, we consider a dispersion ratio (*DISPERSION1*) defined as the difference in the control stakes of the first and second largest shareholders over their sum, (*CONT1-CONT2*)/(*CONT1+CONT2*). The higher this ratio, the lower is the contestability of the control of the largest shareholder by a second shareholder.

Additionally, we consider the power of a coalition formed by up to four large shareholders. We first define *CONT2345* as the sum of the voting rights of the second, third, fourth and fifth largest shareholders, *CONT2+CONT3+CONT4+CONT5*, and *VOTING23451* which is a relative measure of the control of the coalition, (*CONT2+CONT3+CONT4+CONT5*)/*CONT1*. Then we consider a proxy for the dispersion of the MLSS control stakes (*DISPERSION2*), measured as the Herfindahl index of the differences between the voting rights of the five largest shareholders, $(CONT1\text{-}CONT2)^2+(CONT2\text{-}CONT3)^2+(CONT3\text{-}CONT4)^2+(CONT4\text{-}CONT5)^2$. All else equal, higher rates of this variable imply lower contestability of the control of the largest shareholder by the coalition of large shareholders. Under the efficient-monitoring (entrenchment) hypothesis, we expect a positive (negative) effect of variables measuring the power of other large shareholders (i.e., *CONT2*, *VOTING21*, *CONT2345*, *VOTING23451*) and a negative (positive) effect of variables measuring the dispersion of voting rights (i.e., *DISPERSION1*, *DISPERSION2*) on corporate value.

Finally, we use a proxy to measure the power of small shareholders (i.e., the ocean). To this end, we rely on the framework of Milnor and Shapley (1978)

to estimate the Shapley value of the ocean's votes, which is the probability that those votes are pivotal in a control contest. Following Zingales (1994), we then estimate the relative Shapley value (*SHAPLEY*) as the Shapley value of votes held by small shareholders deflated by their fraction of votes. We use the five largest control stakes to compute the Shapley value.[46] Based on the efficient-monitoring hypothesis, a higher value of *SHAPLEY* should be associated with a higher corporate value, because large shareholders will compete to attract the support of small shareholders (i.e. the ocean) who will be determinant in control contests. Alternatively, under the entrenchment hypothesis, *SHAPLEY* is not expected to affect firm valuation since large shareholders will extract private benefits that are proportional to their control stakes, i.e., irrespective of the importance of small shareholders.

Control Variables. Our selection and specification of control variables closely follow recent international corporate governance research. We proxy for firm size with the natural logarithm of total assets in U.S. dollars (*SIZE*); we measure leverage with long-term debt to total assets ratio (*LEVERAGE*); we capture investment with the ratio of capital expenditure to total assets (*CAPEX*); and we control for growth opportunities using lagged sales growth (*SALESGR*). Claessens et al. (2002) contend that in East Asia small firms are less diversified, leading to lower diversification discounts. Thus, we anticipate *SIZE* to bear negatively with *TOBQ*. Faccio et al. (2005) show that controlling shareholders in East Asia use debt financing, mainly obtained from related parties, to acquire more resources to expropriate. Consequently, we expect *LEVERAGE* to be negatively related to *TOBQ* in our sample. Finally, La Porta et al. (2002) argue that firms with better growth opportunities should exhibit higher performance. Therefore, we expect *SALESGR* and *CAPEX* to be positively associated with

[46] The appendix in Eckbo and Verma (1994) contains a detailed description of the mathematical derivation of the shapley value in the presence of multiple large shareholders.

TOBQ. To limit the influence of outliers, we winsorize all continuous variables at the 1st and 99th percentiles.

2.3 Descriptive Statistics

Table 1 reports the number of observations and provides descriptive statistics by country for all the variables used in the analyses. There is a wide variation in the number of firms in each country: Japan is the most represented, totaling 477 firms, followed by Korea and Hong Kong which account for 155 and 133 firms, respectively. The Philippines is the least representative with only 54 firms.[47] Consistent with Claessens et al. (2002), we find that Malaysian firms exhibit the highest performance with a mean (median) *TOBQ* of 2.18 (1.90). In contrast, we report that Thailand firms have the lowest performance with a mean (median) *TOBQ* of 1.23 (1.00). This result is likely driven by the fact that we exclude widely-held firms from our sample while Claessens et al. (2002) do not.

MLSS are present in approximately one-third of the firms in our East Asian sample.[48] This figure also shows considerable cross-country variation. Multiple large shareholders are most common in Thailand (88.6% of firms) and Singapore (63.3% of firms), while least frequent in Japan (9.6% of firms). The variables measuring the power of other large shareholders, their number and the dispersion of voting rights among them are generally consistent with this sorting. We report further information on the distribution of control stakes among large shareholders in the appendix (Table A1).

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[47] Given the uneven representation of countries in the sample, it is important to note that the results reported in this paper are not affected by sequentially removing each country from the analysis, suggesting that our evidence is not driven by a single country dominating the data. We further address this issue in section 3.3 (sensitivity analyses).

[48] This is smaller than the proportion of 46% reported in Western European firms (Faccio and Lang, 2002).

The largest shareholder owns 19.58% of the cash flow rights, on average, and voting rights exceed cash flow rights by an average of 4.96%. Yet, the patterns of ownership and excess control show systematic differences across the East Asian countries. Thailand and Hong Kong firms exhibit the most concentrated cash flow rights at 36.60% and 28.03%, respectively; while Japan firms exhibit the least concentrated cash flow rights at 10.21%. For excess control, Indonesia and Singapore firms lead the East Asian countries with an average separation of 8.99% and 7.48%, respectively, while Thailand firms show the lowest average separation with only 2.35%. Finally, descriptive statistics on firm-level characteristics show that firms in Korea and Japan are the largest; those in Malaysia exhibit the highest sales growth; firms in Korea are the most leveraged; and firms from Indonesia invest the greatest amounts.

TABLE 1. DESCRIPTIVE STATISTICS BY COUNTRY

Variable		HONG KONG	INDONESIA	JAPAN	KOREA	MALAYSIA	PHILIPPINES	SINGAPORE	TAIWAN	THAILAND	TOTAL
TOBQ	Mean	1.390	1.342	1.432	1.014	2.183	1.651	1.566	1.837	1.230	1.475
	Median	1.075	1.024	1.296	0.951	1.889	1.249	1.301	1.654	1.000	1.263
MOWNERS	Mean	0.286	0.544	0.096	0.180	0.582	0.630	0.633	0.481	0.886	0.332
	Median	0.000	1.000	0.000	0.000	1.000	1.000	1.000	0.000	1.000	0.000
NOWNERS	Mean	0.353	0.647	0.107	0.180	0.809	0.685	0.826	0.667	1.586	0.439
	Median	0.000	1.000	0.000	0.000	1.000	1.000	1.000	0.000	2.000	0.000
CONT2	Mean	3.759	7.647	1.049	2.266	7.545	8.000	8.716	5.309	14.721	4.419
	Median	0.000	10.000	0.000	0.000	10.000	10.000	10.000	0.000	20.000	0.000
VOTING21	Mean	0.131	0.273	0.077	0.109	0.279	0.327	0.349	0.273	0.421	0.181
	Median	0.000	0.282	0.000	0.000	0.250	0.313	0.323	0.000	0.430	0.000
DISPERSION1	Mean	0.827	0.649	0.916	0.868	0.638	0.587	0.568	0.662	0.455	0.775
	Median	1.000	0.560	1.000	1.000	0.600	0.524	0.512	1.000	0.398	1.000
CONT2345	Mean	4.436	8.676	1.154	2.266	9.818	8.556	10.647	7.160	22.149	5.514
	Median	0.000	10.000	0.000	0.000	10.000	10.000	10.000	0.000	20.000	0.000
VOTING23451	Mean	0.154	0.316	0.087	0.109	0.369	0.353	0.440	0.401	0.678	0.230
	Median	0.000	0.282	0.000	0.000	0.274	0.328	0.385	0.000	0.572	0.000
DISPERSION2	Mean	0.105	0.133	0.029	0.055	0.091	0.074	0.085	0.059	0.102	0.064
	Median	0.078	0.086	0.012	0.048	0.063	0.049	0.054	0.036	0.067	0.040
SHAPLEY	Mean	0.704	0.570	0.939	0.881	0.728	0.836	0.749	0.846	0.631	0.824
	Median	0.849	0.779	0.981	0.920	0.811	0.891	0.882	0.902	0.860	0.926
CASH1	Mean	28.030	28.721	10.206	19.507	26.836	25.019	23.569	19.877	36.603	19.584
	Median	26.000	26.000	8.000	18.000	24.000	24.000	22.000	20.000	36.000	18.000
CONTMCASH	Mean	4.346	8.985	5.119	3.033	5.145	3.389	7.477	4.827	2.351	4.956
	Median	0.000	7.000	6.000	0.000	0.000	0.000	8.000	3.000	0.000	0.000
SIZE	Mean	12.726	12.151	13.342	13.519	12.553	12.235	12.281	12.898	12.443	12.945
	Median	12.526	11.988	13.078	13.488	12.577	12.179	12.249	12.812	12.383	12.784
SALESGR	Mean	0.111	0.136	0.045	0.141	0.290	0.250	0.133	0.029	0.165	0.112
	Median	0.091	0.120	0.025	0.124	0.143	0.195	0.077	0.016	0.095	0.058
LEVERAGE	Mean	0.104	0.189	0.135	0.199	0.101	0.117	0.111	0.119	0.194	0.139
	Median	0.087	0.150	0.106	0.193	0.057	0.086	0.058	0.104	0.164	0.113
CAPEX	Mean	0.061	0.093	0.028	0.084	0.078	0.126	0.075	0.059	0.081	0.060
	Median	0.044	0.069	0.017	0.065	0.062	0.115	0.054	0.037	0.048	0.040
N		133	68	477	150	110	54	109	81	70	1,252

This table reports descriptive statistics on Tobin's q, multiple large shareholders structures and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The variables are: *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity; *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; and *CAPEX*, ratio of capital expenditures to total assets.

3. EMPIRICAL EVIDENCE

3.1 Univariate Tests

In this section, we try to gain initial insights on the relationship between firm valuation and MLSS from correlations and univariate tests. Table 2 reports Pearson's correlation coefficients between all regression variables. The results indicate that *TOBQ* is positively and significantly correlated with *MOWNERS*, *NOWNERS*, *CONT2*, *VOTING21*, *CONT2345* and *VOTING23451*, and negatively and significantly correlated with *DISPERSION1*. These pairwise correlations, which are all significant at the 1% level, lend preliminary support to the efficient-monitoring hypothesis of MLSS. It is also worth mentioning that the pairwise correlation coefficients among the explanatory variables are generally low (consistently below 40%), providing some assurance that multicollinearity is not affecting our multivariate results.[49]

We further shed light on the relationship between *TOBQ* and MLSS using graphical evidence. In Figure 1, we plot mean and median *TOBQ* for firms with MLSS and firms with a single large shareholder. Consistent with the correlation analysis, the figure indicates that firms with MLSS are worth more; the average MLSS premium is 15.1%. This result does not seem to be driven by outliers, since the same pattern is observable for median values, although the difference is more conservative at 6.4%. We also find in unreported results that the MLSS premium is positive in seven out of nine countries in our sample.

Table 3 compares firm valuation and other firm characteristics after bisecting our sample according to the presence of multiple large shareholders. The table shows that the MLSS premium is statistically significant. The table also

[49] However, note that correlations between some of the MLSS related variables are quite high. For this reason, we include the MLSS variables sequentially in our regressions. Later, in robustness checks (see section 3.3.1), we consider principal components of MLSS variables instead of the raw variables.

portrays significant differences between the two subsamples of firms: the largest shareholder owns higher cash flow rights and achieves a lower separation between ownership and control in firms with MLSS. Additionally, firms with MLSS are significantly smaller, exhibit greater growth and invest more.

Although the correlation and univariate analyses offer preliminary evidence supporting the efficient-monitoring hypothesis, we perform a multivariate analysis to examine more rigorously the governance role of MLSS. Results are reported in the following section.

TABLE 2. CORRLATION BETWEEN THE REGRESSION VARIABLES

	TOBQ	*MOWNERS*	*NOWNERS*	*CONT2*	*VOTING21*	*DISPERSION1*	*CONT2345*	*VOTING23451*	*DISPERSION2*	*SHAPLEY*	*CASH1*	*CONTMCASH*	*SIZE*	*SALESGR*	*LEVERAGE*
MOWNERS	0.129 **(0.000)**														
NOWNERS	0.111 **(0.000)**	0.885 **(0.000)**													
CONT2	0.127 **(0.000)**	0.901 **(0.000)**	0.818 **(0.000)**												
VOTING21	0.110 **(0.000)**	0.882 **(0.000)**	0.799 **(0.000)**	0.885 **(0.000)**											
DISPERSION1	-0.119 **(0.000)**	-0.942 **(0.000)**	-0.847 **(0.000)**	-0.916 **(0.000)**	-0.988 **(0.000)**										
CONT2345	0.114 **(0.000)**	0.852 **(0.000)**	0.940 **(0.000)**	0.930 **(0.000)**	0.836 **(0.000)**	-0.865 **(0.000)**									
VOTING23451	0.102 **(0.000)**	0.799 **(0.000)**	0.896 **(0.000)**	0.785 **(0.000)**	0.910 **(0.000)**	-0.897 **(0.000)**	0.881 **(0.000)**								
DISPERSION2	0.034 (0.236)	-0.140 **(0.000)**	-0.139 **(0.000)**	-0.111 **(0.000)**	-0.218 **(0.000)**	0.207 **(0.000)**	-0.119 **(0.000)**	-0.211 **(0.000)**							
SHAPLEY	-0.032 (0.266)	0.069 **(0.014)**	0.061 **(0.031)**	0.127 **(0.000)**	0.191 **(0.000)**	-0.168 **(0.000)**	0.104 **(0.000)**	0.162 **(0.000)**	-0.916 **(0.000)**						
CASH1	0.087 **(0.002)**	0.183 **(0.000)**	0.167 **(0.000)**	0.210 **(0.000)**	0.022 **(0.428)**	-0.071 **(0.012)**	0.194 **(0.000)**	0.013 (0.649)	0.774 **(0.000)**	-0.694 **(0.000)**					
CONTMCASH	-0.037 (0.189)	-0.056 **(0.049)**	-0.064 **(0.023)**	-0.044 (0.123)	-0.063 **(0.025)**	0.066 **(0.020)**	-0.053 **(0.061)**	-0.071 **(0.012)**	0.163 **(0.000)**	-0.156 **(0.000)**	-0.362 **(0.000)**				
SIZE	-0.169 **(0.000)**	-0.195 **(0.000)**	-0.201 **(0.000)**	-0.205 **(0.000)**	-0.166 **(0.000)**	0.179 **(0.000)**	-0.209 **(0.000)**	-0.163 **(0.000)**	-0.155 **(0.000)**	0.125 **(0.000)**	-0.224 **(0.000)**	-0.008 (0.775)			
SALESGR	0.075 **(0.008)**	0.087 **(0.002)**	0.083 **(0.003)**	0.104 **(0.000)**	0.077 **(0.006)**	-0.082 **(0.004)**	0.098 **(0.001)**	0.076 **(0.007)**	0.073 **(0.010)**	-0.045 (0.110)	0.109 **(0.000)**	-0.014 (0.622)	0.017 (0.553)		
LEVERAGE	-0.144 **(0.000)**	0.005 (0.858)	0.010 (0.715)	0.006 (0.835)	0.002 (0.932)	-0.007 (0.819)	0.014 (0.617)	0.002 (0.932)	-0.063 **(0.026)**	0.041 (0.151)	-0.039 (0.167)	-0.038 (0.183)	0.339 **(0.000)**	0.068 **(0.017)**	
CAPEX	0.033 (0.244)	0.173 **(0.000)**	0.123 **(0.000)**	0.163 **(0.000)**	0.119 **(0.000)**	-0.140 **(0.000)**	0.131 **(0.000)**	0.090 **(0.001)**	0.165 **(0.000)**	-0.151 **(0.000)**	0.224 **(0.000)**	-0.030 (0.294)	0.025 (0.369)	0.151 **(0.000)**	0.200 **(0.000)**

This table reports Pearson correlations between all regression variables for a sample of 1,252 nonfinancial firms from nine East Asian countries in 1996. The variables are: *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity; *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; and *CAPEX*, ratio of capital expenditures to total assets. *P*-values are in parentheses. Ownership data is from Claessens et al. (2000).

FIGURE 1. THE UNIVARIATE RELATION BETWEEN *TOBQ* AND THE PRESENCE OF MULTIPLE OWNERS

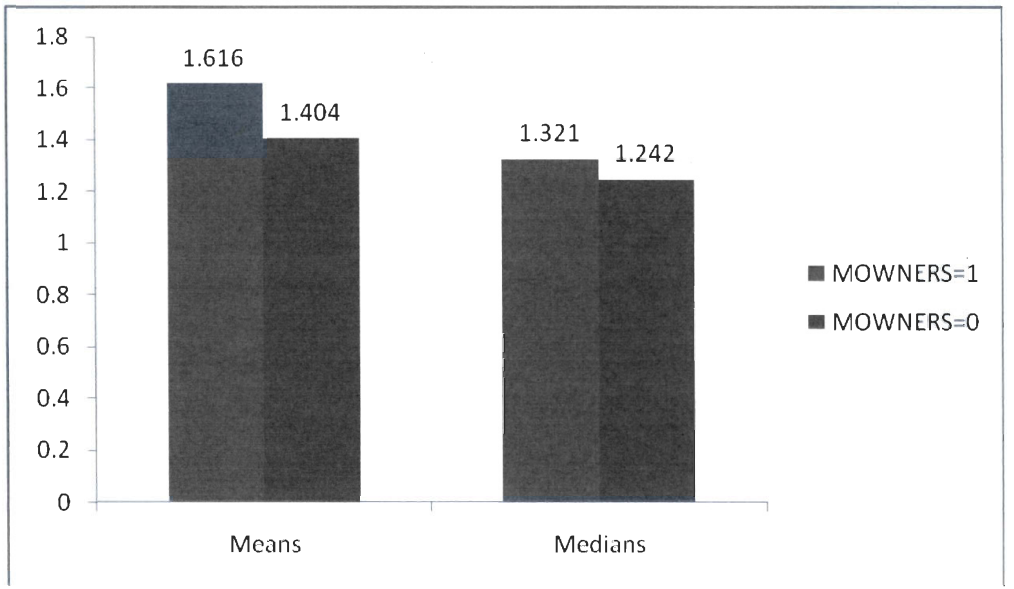

TABLE 3. UNIVARIATE TESTS

Variable		MOWNERS=1 (A)	MOWNERS=0 (B)	Difference (A)-(B)	T-test (Wilcoxon test)
TOBQ	Mean	1.616	1.404	0.212	4.59***
	Median	1.321	1.242	0.079	(2.44**)
CASH1	Mean	23.090	17.840	5.250	6.57***
	Median	22.000	15.000	7.000	(8.05***)
CONTMCASH	Mean	4.434	5.216	-0.782	-1.97**
	Median	0.000	3.000	-3.000	(-2.98***)
SIZE	Mean	12.551	13.141	-0.589	-7.01***
	Median	12.550	12.951	-0.401	(-6.28***)
SALESGR	Mean	0.148	0.094	0.054	3.10***
	Median	0.076	0.051	0.025	(2.15**)
LEVERAGE	Mean	0.140	0.138	0.001	0.18
	Median	0.108	0.116	-0.008	(-0.87)
CAPEX	Mean	0.076	0.052	0.024	6.20***
	Median	0.053	0.035	0.018	(5.79***)
N		416	836		

This table presents mean and median difference tests of Tobin's q and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The variables are: *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; *CAPEX*, ratio of capital expenditures to total assets. Ownership data is from Claessens et al. (2000). Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.2 Regression Analysis

To control for country- and industry-specific effects, we perform our regressions using a country and industry random-effects specification following Dittmar et al. (2003), which is also supported by the Breusch and Pagan Lagrange Multiplier test. The random-effects specification accounts for possible country- and industry-level cross-correlation of errors produced by common country/industry components. Reflecting the various proxies capturing the effects of MLSS, several specifications are reported below.

In specification (1) of Table 4, the basic regression, we include cash flow rights and excess control of the largest shareholder. Consistent with extant

studies documenting the entrenchment effect associated with excess control rights held by the controlling owner, we find that the coefficient for *CONTMCASH* is negative and significant at the 5% level. This corroborates the extensive research showing that excess control is associated with lower firm valuation (e.g., Claessens et al., 2002; Lins, 2003; among others). In analyzing the effects of MLSS on firm value, we start by controlling for the presence of multiple large shareholders (specification 2). The estimated positive and statistically significant coefficient of *MOWNERS* suggests that the mere presence of multiple large shareholders (other than the very largest controlling shareholder) is associated with higher firm valuation, consistent with the univariate tests. Economically, our result suggests that when all other variables are set to their mean values, MLSS show a 6.65% value premium over firms with a single large shareholder. The results of specification (3) suggest that increasing the number of large shareholders - at least up to the five largest - improves corporate governance, and thus enhances corporate value in East Asian firms. More specifically, the estimated coefficient implies that adding a second large shareholder to a firm with a single large shareholder yields a 3.54% increase in firm valuation.[50] This result is consistent with the bargaining effect of MLSS: the presence of a large number of controlling shareholders reduces the diversion of corporate resources since corporate decisions, especially those involving private benefits, require mutual consent among large shareholders.

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[50] We further explore whether the relationship between *TOBQ* and the number of large shareholders is nonlinear. To this end, we rerun regression (3) replacing the number of large shareholders by indicator variables for the second (*OWNER2*), third (*OWNER3*), fourth (*OWNER4*) and fifth (*OWNER5*) largest shareholders. We obtain the following estimation results (where statistically significant coefficients are reported in bold): *TOBQ* = **2.280** + **0.121****OWNER2* - **0.154****OWNER3* + **0.344****OWNER4* + 0.239**OWNER5* + 0.002**CASH1* - 0.006**CONTMCASH* - **0.063****SIZE* + **0.126****SALESGR* - **0.464****LEV* + **0.578****CAPEX*. The results indicate that while the second and fourth shareholders enhance firm value, the valuation impact of the third shareholder is negative. Although it is hard to interpret on theoretical grounds why the entrenchment effect is associated with the third largest shareholder, we note that this effect is dominated by the incentive effects associated with the second and fourth largest shareholders.

The evidence above is supportive of the premise that the presence of other large shareholders constrains the largest shareholder from extracting private benefits. To shed more light on the governance role of MLSS, we investigate the impact of their control size (i.e. voting power) on firm value. The results of this investigation are reported in the rest of Table 4. We first start by focusing on the size of the second largest shareholder, whose presence tends to be non-trivial in ultimate ownership structures in East Asian corporations. Specification (4) indicates that the control rights of the second shareholder (*CONT2*) are positively and significantly associated with firm value (at the 1% level). In specification (5), we find that the proxy for the size of the second largest shareholder relative to the controlling owner, *VOTING21*, is significantly, positively associated with higher firm value. These results imply that the size of the second largest shareholder, both in absolute and relative terms, is material to monitoring the largest shareholder.

In specification (6) we address the effect of the dispersion of control rights between the controlling owner and the second largest shareholder (*DISPERSION1*). Intuitively, this proxy tests whether unequal distribution of voting rights reduces the incentives and the monitoring power of the second largest shareholder. Stated differently, this variable captures the control contestability of the largest owner by the second largest shareholder, with higher values implying lower contestability. Interestingly, the estimated coefficient of *DISPERSION1* is negative and statistically significant at the 1% level, suggesting that unequal distribution of voting rights between the first and second largest shareholders compromises the monitoring power of the latter, resulting in lower firm value.

Our analysis so far has addressed the monitoring role of the second largest shareholder. When we extend our analysis to include other large shareholders

(up to the fifth), we find similar patterns. For instance, in specification (7), we report a positive and statistically significant (at the 5% level) coefficient for *CONT2345*, suggesting that the level of voting rights held by other large shareholders increases firm value. Additionally, in specification (8), we find that the level of control by a coalition of these large shareholders relative to the controlling owner (*VOTING23451*) has a positive and significant impact on firm value. Equally important, the negative and highly significant coefficient for *DISPERSION2* (specification (9)) suggests that uneven distribution of control rights among the five largest shareholders reduces the effectiveness of MLSS monitoring and, hence, increases the diversion of corporate resources resulting in lower firm valuation. This is further supported by the finding in specification (10) where the estimated coefficient of *SHAPLEY* is positive and statistically significant at the 5% level. We recall that higher measures of this construct reflect greater contestability of the largest owner's power, hence the positive effect on firm value. Overall, these findings suggest that multiple large shareholders play a valuable governance role, conditioned by their size relative to the controlling owner.

Turning to the firm-specific controls, we find that firm size (*SIZE*) and leverage (*LEVERAGE*) are always significantly and negatively associated with firm value, suggesting that smaller and less leveraged firms have higher valuation, consistent with Lins (2003), among others. Additionally, we find that the variables *SALESGR* and *CAPEX* enter the regressions with statistically significant positive coefficients across all specifications. These findings suggest that firms with better future growth opportunities and higher investment enjoy higher valuations.

In sum, the results in this section lend support for the efficient-monitoring hypothesis of MLSS: the presence, number and voting power of large

shareholders, beyond the largest one, translate into improved monitoring which helps to restrain the incentives and ability of the largest shareholder to expropriate firm value. In the next sections, we refine our analysis by investigating the role of MLSS when the likelihood of corporate diversion is high and external financing requirements are large.

TABLE 4. THE EFFECTS OF MLSS ON FIRM VALUATION

	Exp. Sign	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
INTERCEPT	(?)	2.396***	2.289***	2.308****	2.267***	2.278***	2.340***	2.279***	2.296***	2.262***	2.029***
		(10.975)	(10.227)	(10.250)	(10.164)	(10.097)	(10.947)	(10.148)	(10.149)	(10.579)	(8.149)
MOWNERS	(+)		0.097**								
			(1.960)								
NOWNERS	(+)			0.052*							
				(1.540)							
CONT2	(+)				0.009***						
					(2.616)						
VOTING21	(+)					0.153**					
						(1.987)					
DISPERSION1	(-)						-0.158***				
							(-2.380)				
CONT2345	(+)							0.006**			
								(2.152)			
VOTING23451	(+)								0.093**		
									(1.659)		
DISPERSION2	(-)									-1.246***	
										(-2.636)	
SHAPLEY	(+)										0.230**
											(2.153)
CASH1	(+)	0.001	0.002	0.003**	0.002	0.002	0.004**	0.002	0.002	0.008***	0.006***
		(0.628)	(0.884)	(1.853)	(0.866)	(1.124)	(2.047)	(0.902)	(1.073)	(3.064)	(2.658)
CONTMCASH	(-)	-0.007**	-0.006**	-0.006**	-0.006**	-0.006*		-0.006**	-0.006*		
		(-1.998)	(-1.717)	(-1.770)	(-1.771)	(-1.589)		(-1.767)	(-1.630)		
SIZE	(-)	-0.068***	-0.064***	-0.065***	-0.063***	-0.064***	-0.062***	-0.063***	-0.064***	-0.065***	-0.065***
		(-4.187)	(-3.928)	(-3.960)	(-3.869)	(-3.910)	(-3.809)	(-3.882)	(-3.948)	(-4.023)	(-4.021)
SALESGR	(+)	0.118*	0.121**	0.119*	0.115*	0.116*	0.117*	0.116*	0.115*	0.120**	0.115*
		(1.616)	(1.660)	(1.640)	(1.590)	(1.591)	(1.611)	(1.602)	(1.583)	(1.645)	(1.578)
LEVERAGE	(-)	-0.437***	-0.452***	-0.448***	-0.446***	-0.443***	-0.435***	-0.449***	-0.441***	-0.443***	-0.430***
		(-2.432)	(-2.521)	(-2.490)	(-2.489)	(-2.470)	(-2.426)	(-2.503)	(-2.460)	(-2.469)	(-2.397)
CAPEX	(+)	0.627**	0.594**	0.623**	0.588**	0.598**	0.585**	0.615**	0.617**	0.627**	0.628**
		(1.825)	(1.730)	(1.810)	(1.714)	(1.742)	(1.701)	(1.793)	(1.797)	(1.828)	(1.828)
N		1,252	1,252	1,252	1,252	1,252	1,252	1252	1252	1,252	1,252
R^2		4.50	5.20	4.88	5.20	5.10	5.10	4.97	4.94	4.70	4.50

This table presents country-industry random-effects regressions of firm value on multiple large shareholders structures and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The dependent variable is *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity. The independent variables are: *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; *CAPEX*, ratio of capital expenditures to total assets. Ownership data is from Claessens et al. (2000). *T*-statistics are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.2.1 Evidence on the Role of Multiple Large Shareholder Structures when Expected Agency Costs are High

Prior studies have established that expropriation of corporate resources is more likely to take place in firms where the largest shareholder holds control rights in excess of cash flow rights. This is confirmed by the negative and significant coefficient estimate for *CONTMCASH* across the different specifications in Table 4. This evidence motivates examining whether and how the monitoring role of MLSS varies with the potential risk for expropriation by the controlling shareholder. To this end, we split the sample into firms with and without separation of ownership and control rights for the controlling shareholder. The results reported in Table 5 support the premise that the governance role of MLSS is more pronounced in firms where the likelihood of expropriation is high (Panel B of Table 5). Indeed, we report distinguishable estimated coefficients for *CONT2* and *VOTING21* between the two subsamples. The coefficient estimates for these variables are statistically insignificant in the subsample of firms with no excess control (Panel A of Table 5). However, the coefficients for both variables become positive and highly significant in the subsample of firms with excess control (Panel B of Table 5). Further supportive evidence of the valuable effects of MLSS in firms with higher likelihood of expropriation is obtained when considering the voting rights of all large shareholders (*CONT2345* and *VOTING23451*). Similarly, the estimated coefficients for *DISPERSION1* and *SHAPLEY* are statistically indistinguishable from zero in the subsample of firms with no separation, in contrast to those reported for the subsample of firms with excess control. Specifically, *DISPERSION1* displays a negative and significant coefficient at the 1% level in the subsample of firms with excess control. Again, this result suggests that unequal distribution of voting rights between the first and second largest shareholders compromises the monitoring power of the latter, resulting in lower firm value. The estimated coefficient for *SHAPLEY* is positive and significant at

the 5% level suggesting that the presence of minority shareholders with pivotal voting role improves firm value in firms with high likelihood of corporate expropriation. In concluding, we note that the coefficient estimates on the MLSS-related across the two sub-samples are statistically different at conventional levels of significance.[51]

Overall, the findings above suggest that MLSS supervision is more advantageous in firms with expected agency problems resulting from excess control by the largest shareholder. A plausible interpretation for this evidence is that when large shareholders fear corporate diversion by the largest controlling shareholder, they tend to exercise a more efficient monitoring role.

[51] We assess the statistical significance of the difference between coefficients across regressions using the following test statistic: $Z = \frac{b_1 - b_2}{\sqrt{SEb_1^2 + SEb_2^2}}$, where b_1 (b_2) is the coefficient of the relevant variable from the first (second) subsample and SEb_1 (SEb_2) is the standard error of the coefficient of the relevant variable from the first (second) subsample.

TABLE 5. THE EFFECTS OF MLSS ON FIRM VALUATION: SUBSAMPLE ANALYSIS

	Exp. Sign	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A. Subsample without separation of ownership and control										
INTERCEPT	(?)	2.386***	2.426***	2.406***	2.438***	2.517***	2.429***	2.458***	2.286***	2.346***
		(7.093)	(7.140)	(7.151)	(7.197)	(7.567)	(7.166)	(7.213)	(6.460)	(5.355)
MOWNERS	(+)	0.112*								
		(1.552)								
NOWNERS	(+)		0.038							
			(0.798)							
CONT2	(+)			0.007*						
				(1.328)						
VOTING21	(+)				0.003					
					(0.673)					
DISPERSION1	(-)					-0.109				
						(-1.059)				
CONT2345	(+)						0.003			
							(0.782)			
VOTING23451	(+)							0.027		
								(0.328)		
DISPERSION2	(-)								-1.685*	
									(-1.568)	
SHAPLEY	(+)									0.093
										(0.485)
CASH1	(+)	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.011**	0.003
		(0.628)	(0.601)	(0.533)	(0.696)	(0.718)	(0.565)	(0.600)	(1.650)	(0.709)
SIZE	(-)	-0.071***	-0.072***	-0.071***	-0.073***	-0.072***	-0.072***	-0.074***	-0.069***	-0.073***
		(-2.807)	(-2.833)	(-2.810)	(-2.872)	(-2.845)	(-2.831)	(-2.903)	(-2.735)	(-2.909)
SALESGR	(+)	0.144	0.142	0.143	0.142	0.142	0.143	0.142	0.143	0.144*
		(1.278)	(1.264)	(1.273)	(1.259)	(1.264)	(1.269)	(1.263)	(1.270)	(1.280)
LEVERAGE	(-)	-0.697***	-0.695***	-0.693***	-0.685***	-0.687***	-0.696***	-0.688***	-0.699***	-0.687***
		(-2.572)	(-2.561)	(-2.557)	(-2.527)	(-2.536)	(-2.562)	(-2.536)	(-2.582)	(-2.533)
CAPEX	(+)	0.423	0.480	0.454	0.466	0.452	0.482	0.490	0.481	0.505
		(0.850)	(0.965)	(0.913)	(0.936)	(0.908)	(0.970)	(0.985)	(0.971)	(1.018)
N		643	643	643	643	643	643	643	643	643
R^2		5.90	5.49	5.60	5.50	5.60	5.42	5.34	5.47	5.19

TABLE 5. CONTINUED

	Exp. Sign	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel B. Subsample with separation of ownership and control										
INTERCEPT	(?)	1.931***	1.918***	1.872***	1.884***	2.099***	1.862***	1.873***	2.067***	1.759***
		(6.940)	(6.918)	(6.785)	(6.811)	(7.828)	(6.740)	(6.786)	(7.685)	(5.531)
MOWNERS	(+)	0.127**								
		(1.997)								
NOWNERS	(+)		0.103**							
			(2.289)							
CONT2	(+)			0.013***						
				(3.011)						
VOTING21	(+)				0.010***					
					(2.796)					
DISPERSION1	(-)					-0.220***				
						(-2.674)				
CONT2345	(+)						0.011***			
							(3.106)			
VOTING23451	(+)							0.206***		
								(2.983)		
DISPERSION2	(-)								-1.135**	
									(-1.707)	
SHAPLEY	(+)									0.290**
										(1.865)
CASH1	(+)	0.003	0.003	0.003	0.003	0.004	0.003	0.004	0.008*	0.007*
		(0.761)	(0.825)	(0.857)	(0.876)	(1.011)	(0.917)	(1.124)	(1.527)	(1.512)
SIZE	(-)	-0.045**	-0.044**	-0.042**	-0.043**	-0.042**	-0.042**	-0.042**	-0.050***	-0.049***
		(-2.194)	(-2.180)	(-2.068)	(-2.107)	(-2.073)	(-2.058)	(-2.077)	(-2.492)	(-2.458)
SALESGR	(+)	0.113	0.110	0.096	0.097	0.107	0.096	0.101	0.120*	0.105
		(1.200)	(1.166)	(1.025)	(1.027)	(1.132)	(1.023)	(1.076)	(1.274)	(1.107)
LEVERAGE	(-)	-0.310*	-0.309*	-0.301*	-0.303*	-0.312*	-0.305*	-0.310*	-0.326*	-0.307*
		(-1.319)	(-1.320)	(-1.288)	(-1.298)	(-1.335)	(-1.306)	(-1.326)	(-1.384)	(-1.308)
CAPEX	(+)	0.805**	0.845**	0.754*	0.805**	0.790**	0.806**	0.823**	0.834**	0.803**
		(1.684)	(1.770)	(1.582)	(1.690)	(1.656)	(1.695)	(1.729)	(1.743)	(1.679)
N		609	609	609	609	609	609	609	609	609
R^2		4.90	5.05	5.30	5.10	5.30	5.38	5.55	4.87	4.97

This table presents country-industry random-effects regressions of firm value on multiple large shareholders structures and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The dependent variable is *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity. The independent variables are: *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; *CAPEX*, ratio of capital expenditures to total assets. Panel A reports the results for the subsample of firms where the largest shareholder holds control rights equal to cash flow rights. Panel B reports the results for the subsample of firms where the largest shareholder holds control rights in excess of cash flow rights. Ownership data is from Claessens et al. (2000). *T*-statistics are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.2.2 Evidence on the Role of Multiple Large Shareholder Structures for Firms Needing External Finance

Prior literature suggests that firms relying on external financing have incentives to constrain expropriation of outside shareholders to reduce the cost at which they can raise external funds (e.g., Klapper and Love, 2004; Durnev and Kim, 2005). Consequently, we test whether the monitoring role of MLSS is more valuable in firms that need external finance. We use the difference between a firm's actual growth rate and maximum attainable growth rate to capture firms' external financing needs, following Demirguç-Kunt and Maksimovic (1998).[52] We estimate actual growth rate using the two-year geometric average of growth rate of assets, and maximum attainable growth rate using the two-year average of *ROE*/(1-*ROE*) after Durnev and Kim (2005).[53] We then identify firms with (without) need for external finance as those for which the difference between the actual growth rate and the maximum attainable growth rate is positive (negative). The results, reported in Table 6 for the two subsamples, lend support to the premise that the monitoring role of MLSS is more prominent for firms in need of external finance.

Interestingly, we find that the coefficient of *MOWNERS* is (positive and) only statistically significant (at the 1% level) in the subsample of firms that do require external finance (Panel B of Table 6). Economically, the point estimate of *MOWNERS* (when all other variables in Specification (2) of Panel B are held at their mean values) suggests that the MLSS value premium is 20% for firms in need of external finance. Reinforcing this evidence, we report similar results for

[52] Under certain assumptions (see Demirguç-Kunt and Maksimovic (1998) for details), the firm's external financing need can be expressed as: $EFN=g*Equity-(1+g)*Earnings*b$, where g is the firm's growth rate and b its retention rate. Assuming that the firm retains all of its earnings (i.e., $b=1$), setting *EFN* to zero and solving for g, the maximum attainable growth rate is obtained as *ROE*/(1-*ROE*).

[53] We take the averages over the period 1994-1996. Because of these additional data requirements, the initial sample of 1,252 firms is reduced to 1,054 firms with complete data on external financing needs.

CONT2 (Specification (3)), *VOTING21* (Specification (4)), *CONT2345* (Specification (6)), and *VOTING23451* (Specification (7)). Finally, we note that while the coefficients of *DISPERSION1* and *DISPERSION2* are statistically indistinguishable from zero in the subsample of firms without need for external finance (Panel A), the corresponding coefficients are positive and statistically significant in the subsample of firms that do need external finance (Panel B).[54] Overall, these results suggest that the governance role of MLSS is more valuable in firms with large financing requirements.

[54] We also note that the coefficient estimates on the MLSS-related across the two sub-samples are statistically different at conventional levels of significance.

TABLE 6. MLSS AND FIRM VALUATION: SUBSAMPLE ANALYSIS BASED ON THE NEED FOR EXTERNAL FINANCE

	Exp. Sign	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A. Subsample without need for external finance										
INTERCEPT	(?)	1.996***	2.063***	2.023***	2.004***	1.956***	2.073***	2.058***	1.870***	1.737***
		(8.010)	(8.270)	(8.090)	(7.980)	(8.160)	(8.300)	(8.220)	(7.830)	(5.920)
MOWNERS	(+)	0.067								
		(1.160)								
NOWNERS	(+)		-0.004							
			(-0.120)							
CONT2	(+)			0.002						
				(0.600)						
VOTING21	(+)				0.082					
					(0.900)					
DISPERSION1	(-)					-0.101				
						(-1.280)				
CONT2345	(+)						-0.001			
							(-0.280)			
VOTING23451	(+)							-0.001		
								(-0.010)		
DISPERSION2	(-)								-1.338	
									(-0.260)	
SHAPLEY	(+)									0.146
										(1.090)
CASH1	(+)	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.007**	0.004*
		(-0.190)	(-0.160)	(-0.170)	(-0.060)	(0.940)	(-0.150)	(-0.160)	(2.300)	(1.410)
CONTMCASH	(-)	-0.010***	-0.011***	-0.010***	-0.010***		-0.011***	-0.011***		
		(-2.440)	(-2.520)	(-2.500)	(-2.390)		(-2.530)	(-2.490)		
SIZE	(-)	-0.052***	-0.055***	-0.053***	-0.052***	-0.049***	-0.055***	-0.055***	-0.050***	-0.050***
		(-2.850)	(-3.010)	(-2.880)	(-2.860)	(-2.680)	(-3.030)	(-3.000)	(-2.760)	(-2.770)
SALESGR	(+)	0.100*	0.104*	0.101*	0.100*	0.098*	0.105*	0.104*	0.102*	0.099
		(1.370)	(1.430)	(1.370)	(1.370)	(1.330)	(1.440)	(1.430)	(1.400)	(0.520)
LEVERAGE	(-)	0.095	0.091	0.090	0.091	0.118	0.093	0.091	0.091	0.103
		(0.480)	(0.460)	(0.450)	(0.460)	(0.600)	(0.470)	(0.460)	(0.460)	(0.930)
CAPEX	(+)	0.323	0.363	0.340	0.326	0.315	0.368	0.361	0.353	0.365
		(0.820)	(0.930)	(0.870)	(0.830)	(0.800)	(0.940)	(0.920)	(0.900)	(1.090)
N		603	603	603	603	603	603	603	603	603
R^2		2.83	2.46	2.53	2.69	1.65	2.47	2.48	1.95	1.36

TABLE 6. CONTINUED

	Exp. Sign	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel B. Subsample with need for external finance										
INTERCEPT	(?)	1.611***	1.648***	1.658***	1.649***	1.940***	1.644***	1.621***	1.841***	1.580***
		(4.010)	(4.070)	(4.180)	(4.080)	(5.130)	(4.110)	(4.010)	(4.850)	(3.570)
MOWNERS	(+)	0.294***								
		(3.220)								
NOWNERS	(+)		0.180***							
			(2.730)							
CONT2	(+)			0.022***						
				(3.450)						
VOTING21	(+)				0.365***					
					(2.740)					
DISPERSION1	(-)					-0.360***				
						(-3.030)				
CONT2345	(+)						0.017***			
							(3.170)			
VOTING23451	(+)							0.309***		
								(2.930)		
DISPERSION2	(-)								-1.876***	
									(-2.060)	
SHAPLEY	(+)									0.266
										(1.280)
CASH1	(+)	0.000	0.000	-0.001	0.001	0.001	0.000	0.001	0.007	0.003
		(-0.060)	(-0.020)	(-0.220)	(0.160)	(0.380)	(-0.100)	(0.280)	(1.400)	(0.700)
CONTMCASH	(-)	-0.003	-0.003	-0.004	-0.002		-0.004	-0.002		
		(-0.420)	(-0.440)	(-0.620)	(-0.330)		(-0.570)	(-0.280)		
SIZE	(-)	-0.008	-0.009	-0.010	-0.009	-0.007	-0.010	-0.008	-0.018	-0.019
		(-0.270)	(-0.330)	(-0.360)	(-0.310)	(-0.250)	(-0.340)	(-0.290)	(-0.630)	(-0.670)
SALESGR	(+)	1.142***	1.082***	1.080***	1.090***	1.104***	1.044***	1.057***	1.081***	1.083***
		(4.460)	(4.220)	(4.230)	(4.250)	(4.320)	(4.080)	(4.120)	(4.200)	(4.190)
LEVERAGE	(-)	-0.707**	-0.717**	-0.671**	-0.682**	-0.688**	-0.693**	-0.696***	-0.692***	-0.668**
		(-2.080)	(-2.110)	(-1.980)	(-2.000)	(-2.030)	(-2.040)	(-2.050)	(-2.030)	(-1.960)
CAPEX	(+)	0.364	0.512	0.369	0.355	0.351	0.493	0.461	0.513	0.493
		(0.450)	(0.630)	(0.450)	(0.430)	(0.430)	(0.600)	(0.560)	(0.620)	(0.600)
N		451	451	451	451	451	451	451	451	451
R^2		9.28	8.66	8.96	8.52	9.12	8.72	8.83	6.02	6.22

This table presents country-industry random-effects regressions of firm value on multiple large shareholders structures and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The dependent variable is *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity. The independent variables are: *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; *CAPEX*, ratio of capital expenditures to total assets. Panel A reports the results for the subsample of firms without need for external finance. Panel B reports the results for the subsample of firms with need for external finance. Firms with a need for external finance are identified if their actual growth rate, estimated as the geometric two-year average of total assets, exceeds their maximum sustainable growth rate, estimated as the two-year average of ROE/(1-ROE). Ownership data is from Claessens et al. (2000). *T*-statistics are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.2.3 Does Ownership Identity Matter?

Besides focusing on the presence and size of multiple large shareholders, we extend our analysis to examine whether the identity of the second largest shareholders influences the extent of their monitoring role. We follow Claessens et al. (2000) who classify shareholders into three main categories: family, widely-held firm, and state.[55] Prior research suggests that the identity of shareholders is important in understanding the link between ownership structure and firm value. For instance, Claessens et al. (2002) find that minority shareholder expropriation is more likely when the largest controlling shareholder is a family or a state. Accordingly, we examine the impact of the interaction between the identity and size of the second largest shareholder on firm valuation. The underlying assumption is that different types of owners may have distinct incentives and abilities to monitor the controlling shareholder.

For the full sample, specification (1) of Table 7 indicates that the presence of a family (*FAMILY2*) or a state (*STATE2*) as the second largest shareholder is significantly positively associated with firm value, suggesting superior monitoring abilities of these two types of investors. In contrast, we find no evidence that control by a widely-held firm (*WH2*) is associated with higher valuation. We interpret this latter finding as implying lower incentives for widely-held firms to monitor the controlling owner and reduce the extraction of private benefits. This explanation is consistent with Villalonga and Amit (2006), who stress that large institutional shareholders—whether a bank, an investment fund, or a widely-held corporation— have lower incentives to embrace monitoring because the resulting gains will be diluted among a large number of owners. In specification (2), we examine the impact of the interaction of identity and the size of voting rights held by the second largest shareholder (*CONT2*) on

[55] Table A2 in the appendix reports the frequency distribution of large shareholders' identities. More than 50% of largest shareholders are families while more than 50% of second largest shareholders are widely-held corporations.

firm valuation. With the exception of widely-held firms as a second large shareholder, we find positive and statistically significant coefficients on all interaction terms, suggesting that family and state play an important role in curbing the extraction of private benefits by the largest shareholder. This evidence is reinforced by the results in specification (3) indicating positive and statistically significant coefficients at the 1% level for the interactions of family and state ownership with *VOTING21*.

One aspect of our research relates to analyzing the impact of the second shareholder type in firms with potential corporate diversion and in financially constrained firms. Two important findings emerge from Table 7. First, we observe that having a family or state as the second largest shareholder is associated with higher firm valuation only in the subsample of firms with excess control (specifications (7) through (9)). In comparison, we find no evidence that monitoring by widely-held firms affects firm value. Second, we find positive and significant relations between the presence and size of family and state as second large shareholders for the subsample of firms that need external finance (specifications (13) through (15)).

Overall, the results in this section suggest that having a family or the state as second largest shareholders helps reduce the opportunity for the controlling owner to siphon corporate resources and deprive investors of their fair share of firm value. Although this result may seem counter-intuitive—as one may expect a weaker governance role by a family or state—competition for corporate control between the controlling families and the desire of the state to maximize proceeds from future privatizations (see, e.g., Megginson and Netter, 2001) can plausibly explain these findings.

TABLE 7. DOES MULTIPLE SHAREHOLDER IDENTITY MATTER?

		FULL SAMPLE			NO SEPARATION			SEPARATION			WITHOUT NEED FOR EXTERNAL FINANCE			WITH NEED FOR EXTERNAL FINANCE		
	Exp. Sign	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
INTERCEPT	(?)	2.287***	2.294***	2.312***	2.370***	2.402***	2.419***	1.955***	1.951***	1.948***	2.038***	2.054***	2.031***	1.561***	1.646***	1.640***
		(10.170)	(10.280)	(10.240)	(6.980)	(7.100)	(7.080)	(7.040)	(7.160)	(7.160)	(8.150)	(8.230)	(8.110)	(3.870)	(4.130)	(4.040)
FAMILY2	(+)	0.156**			0.156			0.232***			0.100			0.484***		
		(2.270)			(1.600)			(2.400)			(1.250)			(3.710)		
WH2	(+)	0.042			0.093			0.015			-0.012			0.144		
		(0.720)			(1.040)			(0.200)			(-0.170)			(1.330)		
STATE2	(+)	0.220**			0.118			0.466***			0.300***			0.516**		
		(1.770)			(0.620)			(2.930)			(2.480)			(1.730)		
*FAMILY2*CONT2*	(+)		0.011***			0.008			0.018***			0.005			0.030***	
			(2.430)			(1.150)			(3.050)			(0.960)			(3.300)	
*WH2*CONT2*	(+)		0.004			0.006			-0.001			-0.004			0.012	
			(0.870)			(1.030)			(-0.110)			(-0.880)			(1.500)	
*STATE2*CONT2*	(+)		0.026***			0.007			0.047***			0.023***			0.044***	
			(3.010)			(0.480)			(4.640)			(2.470)			(2.410)	
*FAMILY2*VOTING21*	(+)			0.216**			0.129			0.404***			0.173*			0.596***
				(2.030)			(0.810)			(2.940)			(1.430)			(2.920)
WH2 VOTING21*	(+)			0.032			0.079			0.018			-0.085			0.135
				(0.340)			(0.500)			(0.160)			(-0.730)			(0.820)
STATE2 VOTING21*	(+)			0.674***			0.108			1.320***			0.599***			1.050***
				(3.080)			(0.300)			(5.190)			(2.550)			(2.580)
CASH1	(+)	0.002	0.002	0.003	0.002	0.002	0.002	0.003	0.003	0.004	-0.001	-0.001	0.000	0.001	0.000	0.002
		(1.000)	(0.970)	(1.230)	(0.690)	(0.550)	(0.720)	(0.830)	(0.800)	(1.160)	(-0.370)	(-0.340)	(-0.180)	(0.230)	(0.090)	(0.420)
CONTMCASH	(-)	-0.005	-0.006**	-0.005*							-0.010***	-0.010***	-0.009***	-0.001	-0.003	-0.001
		(-1.550)	(-1.680)	(-1.470)							(-2.340)	(-2.370)	(-2.220)	(-0.180)	(-0.420)	(-0.160)
SIZE	(-)	-0.065***	-0.066***	-0.068***	-0.070***	-0.071***	-0.072***	-0.047**	-0.048***	-0.050***	-0.056***	-0.056***	-0.056***	-0.007	-0.011	-0.011
		(-3.960)	(-4.030)	(-4.140)	(-2.760)	(-2.790)	(-2.840)	(-2.320)	(-2.390)	(-2.480)	(-3.040)	(-3.060)	(-3.040)	(-0.240)	(-0.390)	(-0.390)
SALESGR	(+)	0.124**	0.119*	0.123**	0.143	0.143	0.143	0.116	0.097	0.108	0.110*	0.111*	0.110*	1.100***	1.034***	1.061***
		(1.690)	(1.640)	(1.690)	(1.260)	(1.260)	(1.260)	(1.240)	(1.040)	(1.170)	(1.510)	(1.520)	(1.500)	(4.300)	(4.030)	(4.150)
LEVERAGE	(-)	-0.446***	-0.431***	-0.417***	-0.685***	-0.688***	-0.680***	-0.332*	-0.306	-0.282	0.128	0.127	0.138	-0.692**	-0.668**	-0.668**
		(-2.480)	(-2.400)	(-2.320)	(-2.510)	(-2.520)	(-2.490)	(-1.410)	(-1.320)	(-1.220)	(0.650)	(0.650)	(0.700)	(-2.040)	(-1.970)	(-1.970)
CAPEX	(+)	0.616**	0.627**	0.628**	0.429	0.459	0.467	0.915**	0.928**	0.921**	0.397	0.433	0.385	0.357	0.363	0.405
		(1.790)	(1.830)	(1.830)	(0.860)	(0.920)	(0.940)	(1.920)	(1.970)	(1.970)	(1.010)	(1.100)	(0.980)	(0.440)	(0.450)	(0.490)
N		1,252	1,252	1,252	643	643	643	609	609	609	603	603	603	451	451	451
R^2		5.75	6.17	6.28	6.09	5.67	5.56	6.96	9.12	9.85	4.18	4.23	4.37	10.58	10.55	10.73

This table presents country-industry random-effects regressions of firm value on multiple large shareholders structures and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The dependent variable is *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity. The independent variables are: *FAMILY2*, dummy variable set to one if the second large shareholder is a family, and zero otherwise; *WH2*, dummy variable set to one if the second large shareholder is a widely-held firm, and zero otherwise; *STATE2*, dummy variable set to one if the second large shareholder is a state, and zero otherwise; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; *CAPEX*, ratio of capital expenditures to total assets. Ownership data is from Claessens et al. (2000). *T*-statistics are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.3 Robustness Checks

In this section, we examine whether our evidence on the effects of MLSS on firm value is robust to additional sensitivity tests.

3.3.1 Using Principal Components Instead of Raw Variables

In our analysis, we employed a battery of MLSS-related variables to investigate the impact of MLSS characteristics on corporate valuation. An inspection of Table 2 shows that these variables are significantly correlated suggesting that they may contain common information about MLSS attributes. In our regressions, we included these variables sequentially in order to prevent multicollinearity issues from affecting our inferences. However, an alternative approach would be to use variable reduction techniques such as principal component analysis. In a nutshell, a principal components analysis transforms a set of correlated variables into a smaller set of principal components that may be viewed as "artificial" variables accounting for most of the variance in the correlated variables. We employ this methodology to transform the two sets of variables associated with the second largest shareholder (*CONT2*, *VOTING21* and *DISPERSION1*) and other large shareholders (*CONT2345*, *VOTING23451* and *DISPERSION2*) into two principal components called *PCOMP2* and *PCOMP5*, respectively. We interpret *PCOMP2* (*PCOMP5*) as a proxy for the "importance" of the second largest shareholder (other large shareholders).[56] We then replicate our regressions replacing the initial set of correlated variables by *PCOMP2* and *PCOMP5*. In Table 8, we find that *PCOMP2* and *PCOMP5* are positively and significantly associated with firm value in the full sample (Specifications (1) and (2)), in the subsample of firms with excess control (Specifications (5) and (6)) and the subsample of firms with external financing needs (Specifications (9) and (10)). Focusing on the role of the identity of the

[56] We obtain very similar results when using the principal component of *all* variables, i.e., those associated with the second largest and all other shareholders. As *PCOMP2* and *PCOMP5* overlap, we do not insert them simultaneously in the regressions.

second largest shareholder, the results portrayed in Table 9 indicate that the interaction terms *PCOMP2*FAMILY2* and *PCOMP2*STATE2* have positive and significant coefficients in the full sample (Specifications (1)), in the subsample of firms with excess control (Specifications (3)) and the subsample of firms with external financing needs (Specifications (5)). Overall, our evidence for the efficient-monitoring hypothesis is robust to using principal components instead of the raw variables.

TABLE 8. THE EFFECTS OF MLSS ON FIRM VALUATION USING PRINCIPAL COMPONENTS

		FULL SAMPLE		NO SEPARATION		SEPARATION		WITHOUT NEED FOR EXTERNAL FINANCE		WITH NEED FOR EXTERNAL FINANCE	
	Exp. Sign	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
INTERCEPT	(?)	2.299***	2.288***	2.433***	2.438***	1.921***	1.900***	2.021***	2.063***	1.706***	1.640***
		(10.365)	(10.192)	(7.273)	(7.199)	(7.032)	(6.961)	(8.172)	(8.280)	(4.303)	(4.098)
PCOMP2	(+)	0.052**		0.038		0.081***		0.023		0.128***	
		(2.266)		(1.088)		(2.876)		(0.850)		(3.118)	
PCOMP5	(+)		0.047**		0.022		0.096***		-0.003		0.148***
			(2.013)		(0.667)		(3.180)		(0.110)		(3.228)
CASH1	(+)	0.002	0.003	0.002	0.002	0.004	0.005*	-0.000	-0.000	0.000	0.003
		(1.080)	(1.296)	(0.677)	(0.705)	(1.012)	(1.359)	(0.114)	(0.175)	(0.092)	(0.632)
CONTMCASH	(-)	-0.006*	-0.005*					-0.010***	-0.011***	-0.003	-0.001
		(1.618)	(1.450)					(2.431)	(2.493)	(0.394)	(0.087)
SIZE	(-)	-0.063***	-0.063***	-0.072***	-0.072***	-0.042**	-0.041**	-0.052***	-0.055***	-0.008	-0.008
		(3.876)	(3.884)	(2.838)	(2.847)	(2.049)	(2.052)	(2.857)	(3.001)	(0.287)	(0.265)
SALESGR	(+)	0.116*	0.116*	0.142	0.142	0.102	0.100	0.100*	0.105*	1.090***	1.048***
		(1.597)	(1.592)	(1.264)	(1.262)	(1.085)	(1.066)	(1.367)	(1.431)	(4.260)	(4.092)
LEVERAGE	(-)	-0.445**	-0.446***	-0.688***	-0.692***	-0.308	-0.314*	0.091	0.091	-0.682**	-0.695**
		(2.485)	(2.486)	(2.538)	(2.550)	(1.319)	(1.344)	(0.459)	(0.463)	(2.012)	(2.052)
CAPEX	(+)	0.593**	0.615**	0.455	0.482	0.775*	0.813**	0.328	0.364	0.350	0.490
		(1.726)	(1.793)	(0.914)	(0.971)	(1.626)	(1.709)	(0.837)	(0.930)	(0.429)	(0.601)
N		1,252	1,252	643	643	609	609	603	603	451	451
R^2		5.14	4.99	5.60	5.42	5.38	5.67	2.65	2.47	8.90	8.91

This table presents country-industry random-effects regressions of firm value on multiple large shareholders structures and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The dependent variable is *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity. The independent variables are: *PCOMP1*, principal component of *CONT2*, *VOTING21* and *DISPERSION1*; *PCOMP2*, principal component of *CONT2345*, *VOTING23451* and *DISPERSION2*; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; *CAPEX*, ratio of capital expenditures to total assets. Ownership data is from Claessens et al. (2000). *T*-statistics are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

TABLE 9. THE EFFECTS OF MULTIPLE SHAREHOLDER IDENTITY ON FIRM VALUATION USING PRINCIPAL COMPONENTS

		FULL SAMPLE	NO SEPARATION	SEPARATION	WITHOUT NEED FOR EXTERNAL FINANCE	WITH NEED FOR EXTERNAL FINANCE
	Exp. Sign	(1)	(2)	(3)	(4)	(5)
INTERCEPT	(?)	2.305***	2.423***	1.944***	2.038***	1.654***
		(10.252)	(7.112)	(7.172)	(8.147)	(4.102)
FAMILY2 PCOMP2*	(+)	0.091**	0.047	0.173***	0.061	0.241***
		(2.138)	(0.740)	(3.141)	(1.259)	(2.856)
WH2 PCOMP2*	(+)	0.018	0.037	0.000	-0.046	0.069
		(0.452)	(0.609)	(0.004)	(0.967)	(0.972)
STATE2 PCOMP2*	(+)	0.292***	0.042	0.532***	0.241***	0.426***
		(3.363)	(0.282)	(5.433)	(2.511)	(2.660)
CASH1	(+)	0.003	0.002	0.004	-0.000	0.001
		(1.208)	(0.675)	(1.068)	(0.215)	(0.360)
CONTMCASH	(-)	-0.005*			-0.010**	-0.001
		(1.519)			(2.270)	(0.232)
SIZE	(-)	-0.067***	-0.072***	-0.049***	-0.056***	-0.012
		(4.121)	(2.838)	(2.453)	(3.043)	(0.408)
SALESGR	(+)	0.120**	0.142	0.099	0.110*	1.040***
		(1.655)	(1.260)	(1.069)	(1.504)	(4.056)
LEVERAGE	(-)	-0.417***	-0.684***	-0.283	0.135	-0.665**
		(2.326)	(2.504)	(1.231)	(0.686)	(1.960)
CAPEX	(+)	0.629**	0.471	0.917**	0.405	0.398
		(1.836)	(0.944)	(1.962)	(1.036)	(0.487)
N		1,252	643	609	603	451
R^2		6.37	5.50	10.19	4.33	10.64

This table presents country-industry random-effects regressions of firm value on multiple large shareholders structures and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The dependent variable is *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity. The independent variables are: *FAMILY2*, dummy variable set to one if the second large shareholder is a family, and zero otherwise; *WH2*, dummy variable set to one if the second large shareholder is a widely-held firm, and zero otherwise; *STATE2*, dummy variable set to one if the second large shareholder is a state, and zero otherwise; *PCOMP1*, principal component of *CONT2*, *VOTING21* and *DISPERSION1*; *PCOMP2*, principal component of *CONT2345*, *VOTING23451* and *DISPERSION2*; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; *CAPEX*, ratio of capital expenditures to total assets. Ownership data is from Claessens et al. (2000). *T*-statistics are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.3.2 Including Widely-Held Firms

In constructing our sample, we deleted widely-held firms for several reasons. First, the nature of agency conflicts arguably differs between firms with concentrated ownership and widely-held firms. For instance, while major shareholders may have incentives to expropriate corporate resources, professional managers may strive to preserve their employment for extended periods of time. Second, our hypotheses address the interactions between large shareholders, and our tests focus on whether these interactions are beneficial or detrimental to minority shareholders. Evidently, widely-held firms do not have large shareholders, making our empirical setting not well suited for such firms. Third, the calculations of some of our variables, in particular *VOTING21*, *DISPERSION1* and *VOTING23451*, use the control stake of the largest shareholder in their denominator, leaving these variables undefined for widely-held firms. Nonetheless, since concentrated ownership may be a matter of choice –arguably depending on firm characteristics- it is possible that the exclusion of widely-held firms creates a sample selection bias. To address this concern, we replicate the regressions of Table 4 above (except regressions controlling for *VOTING21*, *DISPERSION1* and *VOTING23451*) including both firms with concentrated ownership and widely held firms. The results, reported in Table 10, show that our main conclusions are not sensitive to the inclusion of widely-held firms.

TABLE 10. THE EFFECTS OF MLSS ON FIRM VALUATION WHEN THE SAMPLE INCLUDES WIDELY-HELD FIRMS

	Exp. Sign	(1)	(2)	(3)	(4)	(5)	(6)	(7)
INTERCEPT	(?)	2.164***	2.077***	2.088***	2.058***	2.065***	2.062***	1.832***
		(12.863)	(12.135)	(12.130)	(12.054)	(12.023)	(12.477)	(9.258)
MOWNERS	(+)		0.104***					
			(2.413)					
NOWNERS	(+)			0.059**				
				(2.002)				
CONT2	(+)				0.009***			
					(3.172)			
CONT2345	(+)					0.006***		
						(2.692)		
DISPERSION2	(-)						-1.238***	
							(2.949)	
SHAPLEY	(-)							0.228***
								(2.432)
CASH1	(+)	0.002*	0.002*	0.003*	0.002*	0.002*	0.008***	0.006***
		(1.536)	(1.577)	(1.655)	(1.538)	(1.643)	(3.585)	(3.149)
CONTMCASH	(-)	-0.006**	-0.005**	-0.005**	-0.005**	-0.005**		
		(2.014)	(1.924)	(1.918)	(1.977)	(1.943)		
SIZE	(-)	-0.054***	-0.051***	-0.052***	-0.050***	-0.051***	-0.051***	-0.051***
		(4.418)	(4.126)	(4.158)	(4.066)	(4.080)	(4.138)	(4.135)
SALESGR	(+)	0.129**	0.133**	0.131**	0.128**	0.129**	0.130**	0.126*
		(2.014)	(2.066)	(2.044)	(1.999)	(2.011)	(2.036)	(1.958)
LEVERAGE	(-)	-0.362***	-0.373***	-0.370***	-0.369***	-0.372***	-0.362***	-0.353***
		(2.550)	(2.629)	(2.610)	(2.609)	(2.622)	(2.555)	(2.487)
CAPEX	(+)	0.712***	0.679**	0.706***	0.670**	0.697***	0.712***	0.713***
		(2.397)	(2.289)	(2.381)	(2.262)	(2.351)	(2.402)	(2.402)
N		1,633	1,633	1,633	1,633	1,633	1,633	1,633
R^2		4.63	5.32	5.09	5.30	5.12	4.82	4.64

This table presents country-industry random-effects regressions of firm value on multiple large shareholders structures and control variables for 1,633 nonfinancial firms from nine East Asian countries in 1996. The sample includes 1,252 firms with concentrated ownership and 381 widely-held firms. The dependent variable is *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity. The independent variables are: *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term

debt to total assets; *CAPEX,* ratio of capital expenditures to total assets. Ownership data is from Claessens et al. (2000). *T*-statistics are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.3.3 Controlling for Investor Protection and Size of Economies

To ensure the comparability of our results with previous research, we adopted the basic regression of Claessens et al. (2002) and augmented it with MLSS variables. However, this basic regression may not control for other potential determinants of corporate valuation and possible confounding factors. For instance, La Porta et al. (2002) argue that better investor protection constrains the expropriation of corporate resources, and find that firms located in countries with better investor protection have higher valuations. Besides, smaller economies are more likely to exhibit higher corporate ownership concentration and, thus, higher incidence of MLSS. This raises the possibility that the significant relationship between MLLS and performance documented here is an artefact of the impact of the size of the economy on performance. To address these issues, we control for investor protection and the size of the economy.

Table 11 lists the legal origin, the anti-director rights index and the natural logarithm of GDP as of 1996 for our sample countries. La Porta et al. (1998) make that case that common law countries offer better protection to minority shareholders than civil law countries do. In our sample, Hong Kong, Malaysia and Thailand have a common law origin while the remaining countries have either French or German civil law origins. In addition, the anti-director rights index, a proxy of investor protection, exhibits some variation across our sample countries; it ranges from 2 in Indonesia, Korea and Thailand to 5 in Hong Kong.[57] The last column of the table contains the logarithm of GDP by country in 1996.

[57] La Porta et al. (1998) construct this index as the sum of six indicator variables for whether: (1) the country allows shareholders to mail their proxy vote to the firm, (2) shareholders are not required to deposit their shares prior to the general shareholders' meeting, (3) cumulative voting or proportional representation of minorities in the board of directors is allowed, (4) an oppressed minorities mechanism is in place, (5) the minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10 percent, or (6) shareholders have preemptive rights that can be waived only by a shareholders' vote.

Japan is the largest economy followed by Korea, while Malaysia and the Philippines are the smallest economies.

TABLE 11. LEGAL ORIGIN AND ANTI-DIRECTOR INDEX BY COUNTRY

		COMMON	CIVIL LAW		ANTI-	LOG(GDP)
COUNTRY	N	LAW	FRENCH	GERMAN	DIRECTOR	
Hong Kong	133	1	0	0	5	25.759
Indonesia	68	0	1	0	2	25.694
Japan	477	0	0	1	4	29.187
Korea	150	0	0	1	2	26.810
Malaysia	110	1	0	0	4	25.119
Philippines	54	0	1	0	3	24.888
Singapore	109	1	0	0	4	25.162
Taiwan	81	0	0	1	3	26.426
Thailand	70	1	0	0	2	25.474

Given that different levels of investor protection may affect corporate valuation differently, we add the anti-director index as right-hand-side variable in our regressions. This may also be warranted if investor protection is correlated with both the dependent variable (firm valuation) and some dependent variables, say the MLSS-related variables. If this is the case, it would bias the coefficients of the MLSS-related variables with the direction of the bias depending on the signs of the correlations (Theil, 1971). Table 12 contains correlation coefficients between *TOBQ*, *ANTIDIR* and the MLSS-related variables. As expected *ANTIDIR* is positively and significantly correlated with *TOBQ*. Interestingly, *ANTIDIR* is negatively and significantly correlated with *MOWNERS*, *CONT2*, *VOTING21*, *CONT2345* and *VOTING23451*, suggesting that MLSS are more prominent in poor investor protection countries. From an econometric perspective, this result suggests that omitting *ANTIDIR* from the valuation regressions may induce a downward bias of the coefficients of the MLSS variables. This is an additional motivation to control for *ANTIDIR* in our

regressions.[58] We also note that *Log(GDP)* is negatively and significantly correlated with *MOWNERS* suggesting that MLSS are more prominent in smaller economies. We control for *Log(GDP)* in our regressions to make sure that the significant relationship between MLSS variables and *TOBQ* is not driven by the size of the economy.

TABLE 12. CORRLATION BETWEEN *TOBQ, ANTIDIR, LOG(GDP)* AND MLSS-RELATED VARIABLES

	TOBQ	*ANTIDIR*	Log(GDP)	*MOWNERS*	*NOWNERS*	*CONT2*	*VOTING21*	*DISPERSION1*	*CONT2345*	*VOTING23451*	*DISPERSION2*
ANTIDIR	**0.150**										
	(0.000)										
Log(GDP)	**-0.107**	**0.231**									
	(0.000)	**(0.000)**									
MOWNERS	**0.129**	**-0.168**	**-0.453**								
	(0.000)	**(0.000)**	**(0.000)**								
NOWNERS	**0.111**	**-0.182**	**-0.430**	**0.885**							
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**							
CONT2	**0.127**	**-0.190**	**-0.442**	**0.901**	**0.818**						
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**						
VOTING21	**0.110**	**-0.131**	**-0.325**	**0.882**	**0.799**	**0.885**					
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**					
DISPERSION1	**-0.119**	**0.149**	**0.377**	**-0.942**	**-0.847**	**-0.916**	**-0.988**				
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**				
CONT2345	**0.114**	**-0.202**	**-0.434**	**0.852**	**0.940**	**0.930**	**0.836**	**-0.865**			
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**			
VOTING23451	**0.102**	**-0.141**	**-0.317**	**0.799**	**0.896**	**0.785**	**0.910**	**-0.897**	**0.881**		
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**		
DISPERSION2	0.034	**-0.078**	**-0.417**	**-0.140**	**-0.139**	**-0.111**	**-0.218**	**0.207**	**-0.119**	**-0.211**	
	(0.236)	**(0.006)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	
SHAPLEY	-0.032	**0.080**	**0.360**	**0.069**	**0.061**	**0.127**	**0.191**	**-0.168**	**0.104**	**0.162**	**-0.916**
	(0.266)	**(0.004)**	**(0.000)**	**(0.014)**	**(0.031)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**

[58] We also control for legal origin instead of the anti-director index and find similar results.

This table reports Pearson correlations between all regression variables for a sample of 1,252 nonfinancial firms from nine East Asian countries in 1996. The variables are: *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity; *ANTIDIR*, the anti-director index from La Porta et al. (1998); Log(GDP), the logarithm of country's GDP in 1996; *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *P*-values are in parentheses. Ownership data is from Claessens et al. (2000).

In Table 13, we repeat the regressions of Table 4 with *ANTIDIR* and *Log(GDP)* as additional control variables. As predicted, *ANTIDIR* enters the regressions with a positive and significant coefficient. However, we do not find a significant relationship between *Log(GDP)* and *TOBQ*. The coefficients of the MLSS variables have the expected signs but are slightly larger than those reported in Table 4. If anything, our evidence for the efficient-monitoring hypothesis becomes stronger when we control for investor protection and size of the economy.

TABLE 13. THE EFFECTS OF MLSS ON FIRM VALUATION AFTER CONTROLLING FOR INVESTOR PROTECTION AND SIZE OF THE ECONOMY

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
INTERCEPT	(?)	2.868***	2.267**	2.355**	2.149**	2.342**	2.111**	2.197**	2.389**	2.465***	2.242**
		(3.101)	(2.486)	(2.482)	(2.305)	(2.526)	(2.393)	(2.311)	(2.527)	(2.707)	(2.440)
MOWNERS	(+)		0.110**								
			(2.174)								
NOWNERS	(+)			0.062*							
				(1.802)							
CONT2	(+)				0.010***						
					(2.874)						
VOTING21	(+)					0.168**					
						(2.146)					
DISPERSION1	(-)						-0.176***				
							(2.615)				
CONT2345	(+)							0.007**			
								(2.464)			
VOTING23451	(+)								0.106*		
									(1.864)		
DISPERSION2	(-)									-1.288***	
										(2.734)	
SHAPLEY	(+)										0.228**
											(2.147)
CASH1	(+)	0.001	0.002	0.002	0.002	0.003	0.004**	0.002	0.003	0.009***	0.007***
		(0.621)	(1.018)	(1.003)	(1.025)	(1.235)	(2.223)	(1.065)	(1.193)	(3.166)	(2.691)
CONTMCASH	(-)	-0.007**	-0.006	-0.006*	-0.006*	-0.005		-0.006*	-0.006		
		(2.025)	(1.628)	(1.680)	(1.677)	(1.511)		(1.667)	(1.546)		
SIZE	(-)	-0.069***	-0.066***	-0.066***	-0.065***	-0.065***	-0.064***	-0.065***	-0.066***	-0.067***	-0.067***
		(4.248)	(4.030)	(4.047)	(3.975)	(4.002)	(3.937)	(3.976)	(4.036)	(4.111)	(4.110)
SALESGR	(+)	0.116	0.123*	0.120*	0.117	0.117	0.120*	0.118	0.116	0.120*	0.115
		(1.597)	(1.688)	(1.653)	(1.617)	(1.606)	(1.652)	(1.624)	(1.591)	(1.649)	(1.579)
LEVERAGE	(-)	-0.377**	-0.388**	-0.387**	-0.384**	-0.381**	-0.373**	-0.389**	-0.380**	-0.384**	-0.371**
		(2.095)	(2.161)	(2.154)	(2.142)	(2.123)	(2.080)	(2.165)	(2.118)	(2.139)	(2.065)
CAPEX	(+)	0.664*	0.659*	0.686**	0.657*	0.658*	0.663*	0.685**	0.675*	0.680**	0.679**
		(1.916)	(1.903)	(1.979)	(1.901)	(1.899)	(1.913)	(1.979)	(1.950)	(1.965)	(1.960)
ANTIDIR	(+)	0.159***	0.165***	0.167***	0.170***	0.164***	0.167***	0.172***	0.166***	0.164***	0.161***
		(3.572)	(3.907)	(3.802)	(3.912)	(3.799)	(3.896)	(3.879)	(3.763)	(3.680)	(3.603)
Log(GDP)	(-)	-0.038	-0.020	-0.023	-0.017	-0.024	-0.012	-0.019	-0.025	-0.028	-0.028
		(1.102)	(0.614)	(0.676)	(0.510)	(0.694)	(0.358)	(0.550)	(0.720)	(0.831)	(0.826)
N		1,252	1,252	1,252	1,252	1,252	1,252	1252	1252	1,252	1,252
R^2		6.30	6.82	5.32	6.28	6.10	6.12	5.78	5.80	5.60	5.50

This table presents country-industry random-effects regressions of firm value on multiple large shareholders structures and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The dependent variable is *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity. The independent variables are: *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; *CAPEX*, ratio of capital expenditures to total assets; *ANTIDIR* is the anti-director index from La Porta et al. (1998); *Log(GDP)* is the logarithm of country's GDP in 1996. Ownership data is from Claessens et al. (2000). *T*-statistics are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.3.4. Other Robustness Checks

We perform three additional sensitivity tests reported in Table 14. First, similar to other studies on the effects of ownership structure, we acknowledge that endogeneity may be responsible for our evidence on the key test ownership variables. Indeed, extant research implies that the firm's ownership structure is endogenously determined by its contracting environment in ways consistent with value maximization (e.g., Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001; Guedhami and Pittman, 2006). To address the endogeneity issue, we employ a Heckman (1979) two-stage treatment effect model. The first step (selection) regression involves estimating a probit model with *MOWNERS* as the dependent variable. In order to identify this model, we need to select a set of instruments that are correlated with *MOWNERS* but not with *TOBQ*. We follow prior studies (e.g., Lins, 2003; Durnev and Kim, 2005) and use *ALPHA* and *BETA* values from *Worldscope* as instruments.[59] These variables are, respectively, the intercept and the slope coefficients obtained from regressions of up to 35 monthly stock returns on the local market index. *ALPHA* measures future excess performance and, therefore, should be positively related to *MOWNERS*. *BETA* is a proxy for (market) risk and the ability of the largest shareholder to engage in insider trading (Demsetz and Villalonga, 2001).[60] To the extent that other large shareholders play a monitoring role, we expect *BETA* to be positively related to *MOWNERS*. In addition to these two instruments, we include *SIZE*, *SALESGR*, *LEVERAGE*, *CAPEX* and country dummies as independent variables.[61] In the

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[59] Because of these additional data requirements, we lose 185 observations for which *ALPHA* and *BETA* are not available.

[60] Another proxy retained by Demsetz and Villalonga (2001) to measure risk is firm-specific risk, measured as the standard deviation of the residuals from the market model. We do not include this proxy for two reasons. First, Demsetz and Villalonga (2001) find that firm-specific risk is not relevant in explaining ownership-related variables. Second, we do not have access to market data for East Asian stocks over the sample period.

[61] Following Durnev and Kim (2005), we assume that the independent variables already control for industry characteristics and do not include industry dummies in the governance equation.

interest of brevity, we only display the second stage (outcome) regression in Specification (1) of Table 14.[62] The dependent variable is *TOBQ*. In addition to Heckman's λ (*LAMBDA*), as independent variables we include *CASH1*, *CONTMCASH*, *SALESGR*, *LEVERAGE*, *CAPEX*, industry and country dummies as well as *MOWNERS*. We note that *LAMBDA* has a statistically significant coefficient, suggesting that endogeneity is an issue in the single valuation equation. However, reassuringly the *MOWNERS* variable enters the regression with a positive and statistically significant coefficient. Therefore, we can confidently conclude that our results are not affected by the endogeneity of MLSS to firm value.

Second, we test whether our conclusions on the importance of MLSS to firm valuation are sensitive to specifying alternative test variables. In specification (2), we use the ratio of the difference between the voting rights of the controlling owner minus the average voting rights held by the other large shareholders to the voting rights of the controlling owner (*CONT1MA2345_1*), as a proxy for control contestability. We expect this proxy to have a negative effect on firm value, because higher values imply lower contestability of the control of the largest owner. Consistent with this prediction, we find a negative and statistically significant coefficient estimate. In estimating *SHAPLEY*, we took into account the control power of the shareholders beyond the fifth largest shareholder. When we replace the *SHAPLEY*, estimated based on a coalition of the five largest shareholders, with *SHAPLEY3*, estimated based on a coalition of the three largest shareholders, our results reported in specification (3) do not change either economically or statistically.

Supporting this assumption, we run the probit model with industry dummies and find that they are jointly insignificant.

[62] The results indicate that the occurrence of MLSS is significantly negatively associated with *SIZE* and positively associated with *BETA*. *ALPHA*, *SALESGR*, *LEVERAGE* and *CAPEX* coefficients are all positive but lack statistical significance at conventional levels.

Third, to ensure that our results are not driven by the overrepresentation of one particular country in our sample, we run our tests after excluding any country that contributes more than 20% of the total sample of firms. This threshold results in excluding all firms from Japan (nearly 38% of the sample). The regression results reported in specifications (4) through (8) corroborate our earlier findings in Tables 4 and 7 that the presence and identity of the second largest shareholder help constrain expropriation by the controlling owner. More specifically, we continue to estimate positive and statistically significant coefficients on *MOWNERS, CONT2,* and *VOTING21,* our proxies for the presence, size, and relative power of the second shareholder vis-à-vis the controlling owner, respectively. Additionally, the negative and statistically significant coefficient for *DISPERSION1* implies that lower contestability of the control of the largest shareholder decreases firm value. The reported results in Specification (8), which controls for the identity of the second largest shareholder, generally lend support to the evidence in Table 7 that family and state control are associated with superior monitoring, and hence higher firm valuation.

Finally, in a related test, we estimate our models using a weighted multivariate regression to address the concern that some countries contribute a disproportionate share of observations to the sample, which might spuriously induce our evidence. The results reported in specifications (9) through (13) support our previous inferences, including that the presence and relative size of multiple large shareholders have positive effects on firm value.

TABLE 14. FURTHER ROBUSTNESS CHECKS

	Exp. Sign	Endogeneity (1)	Contestability Proxy #1 (2)	Contestability Proxy #2 (3)	Excluding Japan (4)	(5)	(6)	(7)	(8)	Weighted Least Squares (9)	(10)	(11)	(12)	(13)
INTERCEPT	(?)	0.977*** (4.360)	2.646*** (9.698)	2.023*** (8.123)	2.582*** (7.680)	2.563*** (7.640)	2.546*** (7.500)	2.689*** (8.390)	2.592*** (7.630)	2.041*** (4.440)	2.065*** (4.640)	2.005*** (4.520)	2.162*** (5.010)	2.107*** (4.590)
CONT1MA2345_1	(-)		-0.443** (-2.017)											
SHAPLEY3	(+)			0.234** (2.193)										
MOWNERS	(+)	0.451** (2.070)			0.116** (1.800)					0.128** (2.030)				
CONT2	(+)					0.010*** (2.330)					0.008** (1.650)			
VOTING21	(+)						0.230** (2.070)					0.228** (2.000)		
DISPERSION1	(-)							-0.210** (-2.300)					-0.203** (-2.180)	
FAMILY2	(+)								0.171** (1.990)					0.166** (1.690)
WH2	(+)								0.127 (1.150)					0.138* (1.330)
STATE2	(+)								0.295** (2.030)					0.438*** (2.820)
CASH1	(+)	0.003* (1.340)	0.004** (2.062)	0.006*** (2.684)	0.002 (0.590)	0.002 (0.560)	0.003 (0.950)	0.004* (1.340)	0.002 (0.730)	0.002 (0.640)	0.001 (0.510)	0.003 (1.060)	0.003 (1.250)	0.002 (0.760)
CONTMCASH	(-)	-0.002 (-0.350)			-0.004 (-0.900)	-0.004 (-0.990)	-0.003 (-0.690)		-0.003 (-0.750)	-0.003 (-0.560)	-0.003 (-0.630)	-0.002 (-0.400)		-0.003 (-0.530)
SIZE	(-)		-0.063*** (-3.860)	-0.065*** (-4.018)	-0.087*** (-3.480)	-0.086*** (-3.430)	-0.087*** (-3.480)	-0.086*** (-3.420)	-0.090*** (-3.530)	-0.044* (-1.320)	-0.044* (-1.370)	-0.043* (-1.330)	-0.041* (-1.310)	-0.051* (-1.520)
SALESGR	(+)	0.113* (1.350)	0.115* (1.575)	0.115* (1.577)	0.075 (0.840)	0.065 (0.740)	0.065 (0.730)	0.070 (0.780)	0.083 (0.930)	0.135* (1.440)	0.129* (1.360)	0.129* (1.360)	0.129* (1.360)	0.137* (1.510)
LEVERAGE	(-)	-0.573*** (-3.010)	-0.429*** (-2.389)	-0.429*** (-2.392)	-0.646*** (-2.490)	-0.628*** (-2.430)	-0.621*** (-2.400)	-0.629*** (-2.430)	-0.641*** (-2.470)	-0.928*** (-3.800)	-0.933*** (-3.810)	-0.927*** (-3.820)	-0.932*** (-3.840)	-0.877*** (-3.530)
CAPEX	(+)	0.244 (0.630)	0.609** (1.771)	0.627** (1.825)	0.602* (1.410)	0.600* (1.420)	0.599* (1.410)	0.602* (1.420)	0.640* (1.500)	0.764* (1.550)	0.799* (1.610)	0.775* (1.550)	0.764* (1.530)	0.808* (1.630)
LAMBDA		-0.170**												
N		1,067	1,252	1,252	775	775	775	775	1,252	1,252	1,252	1,252	1,252	1,252
R^2		-	4.91	4.50	6.72	6.63	6.73	6.96	7.87	4.52	4.44	4.57	4.55	5.44

This table presents regressions of firm value on multiple large shareholders structures and control variables for 1,252 nonfinancial firms from nine East Asian countries in 1996. The dependent variable is *TOBQ*, ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity. The independent variables are: *CONT1MA2345_1*, ratio of the difference between voting rights of the controlling owner minus the average voting rights held by the other large shareholders to voting rights of the controlling owner; *SHAPLEY3*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes. This proxy is calculated using the three largest control stakes; *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *FAMILY2*, dummy variable set to one if the second large shareholder is a family, and zero otherwise; *WH2*, dummy variable set to one if the second large shareholder is a widely-held firm, and zero otherwise; *STATE2*, dummy variable set to one if the second large shareholder is a state, and zero otherwise; *CONT2*, ultimate voting rights of the second largest shareholder; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *SIZE*, natural logarithm of total assets in millions of U.S. dollars; *SALESGR*, growth rate in sales over the previous year; *LEVERAGE*, ratio of long-term debt to total assets; *CAPEX*, ratio of capital expenditures to total assets. All regressions are estimated using country-industry effects, except for specifications (9) through (13) where they are estimated using weighted least squares. *T*-statistics are in parentheses. Ownership data is from Claessens et al. (2000). Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.4 Further test: MLSS and Corporate Risk-Taking

Thus far, our evidence suggests that MLSS play a positive corporate governance role through their monitoring of the largest shareholders. In this subsection, we examine one channel through which such role may operate, namely the monitoring of the firm's risk-taking strategy. We argue that, left to their own devices, controlling shareholders aiming to maximize the returns on their expropriation activities have incentives to reduce the volatility of cash flows. Our argument is illustrated using the following simple model.

Consider a firm controlled by a risk-neutral, single major shareholder.[63] The firm has an investment project that will yield cash flow CF_1 with probability ½ and cash flow CF_2 with probability ½, where $CF_2 > CF_1$. Suppose that the major shareholder expropriates a constant fraction, s, of the project's cash flow in any scenario. Further, suppose that expropriation activities entail a cost, borne by the major shareholder, which may include effort, legal risks, lost reputation, etc. Following La Porta et al. (2002), we assume that the cost of expropriation is a convex function of the level of expropriated cash flows.[64]

Figure 2 depicts the cost of expropriation function as well as the cash flow outcomes under the two scenarios. The major shareholder is expected to bear $C(sCF_1)$ under the first scenario and $C(sCF_2)$ under the second scenario. This results in an expected cost of expropriation equal to ½ $C(sCF_1)$ + ½ $C(sCF_2)$. Next, consider the situation where the major shareholder completely eliminates the uncertainty of future cash flows using, for instance, operational hedging or hedging instruments available in the financial and commodities markets. In this

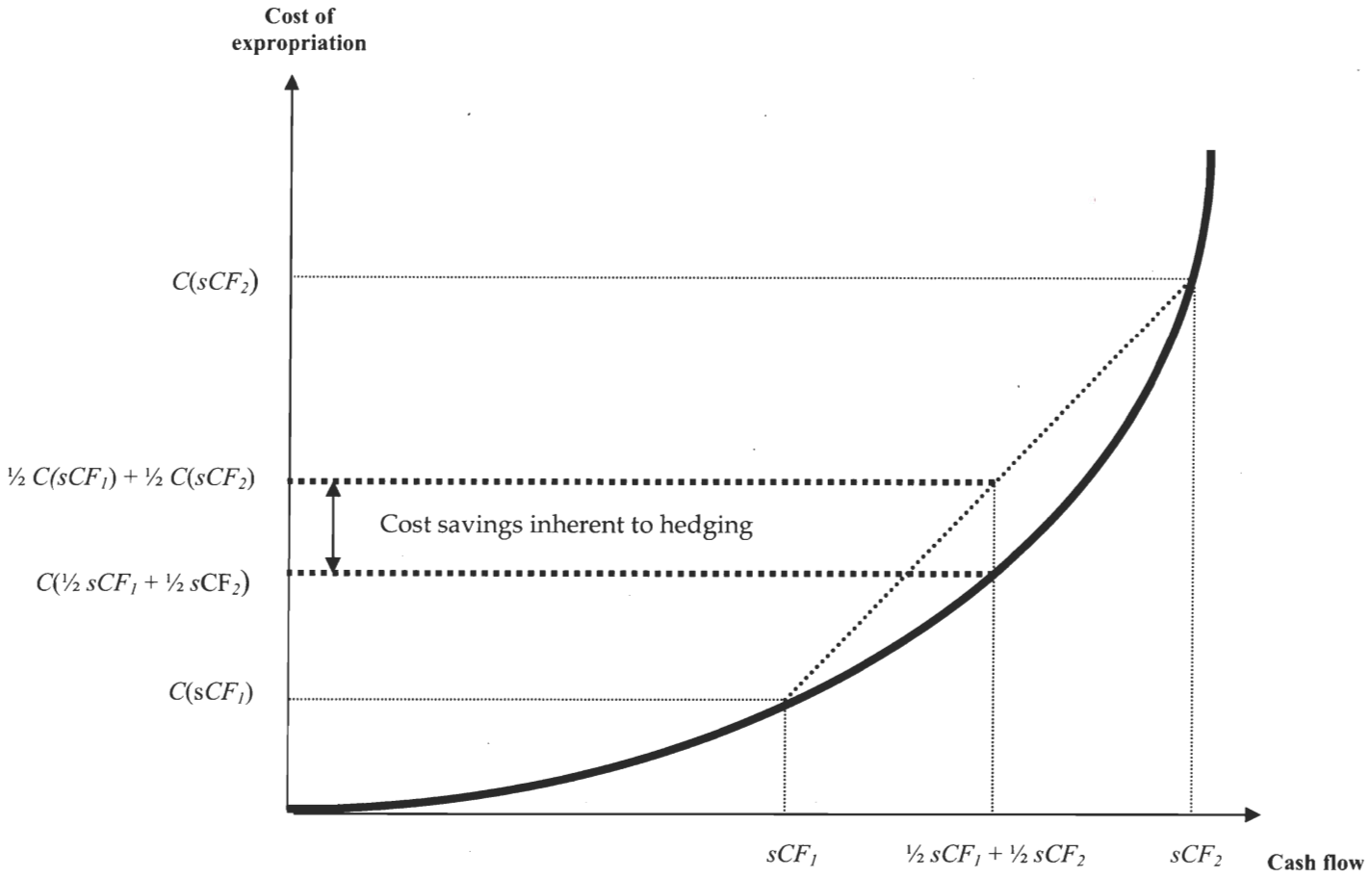
[63] The risk neutrality assumption allows us to focus on the relationship between risk-taking and expropriation when it is not driven by the major shareholder's risk appetite. This assumption is simply used for convenience as our main conclusions also hold when the major shareholder is assumed to be risk averse.

[64] The convexity of the cost of expropriation implies that the cost as well as the marginal cost of expropriation increase as the amount expropriated increases.

case the (certainty equivalent) expropriated cash flow is equal to $\frac{1}{2}\, sCF_1 + \frac{1}{2}\, sCF_2$ and the cost of expropriation is equal to $C(\frac{1}{2}\, sCF_1 + \frac{1}{2}\, sCF_2)$. The figure (and Jensen's inequality) shows that $C(\frac{1}{2}\, sCF_1 + \frac{1}{2}\, sCF_2) < \frac{1}{2}\, C(sCF_1) + \frac{1}{2}\, C(sCF_2)$. That is, the cost of expropriation is lower when cash flow uncertainty is eliminated. In other words, when a major shareholder facing a convex cost of expropriation decides to hedge, the increase in the cost of expropriation when cash flow is low is smaller than the reduction in the cost of expropriation when cash flow is high.[65] Thus, while the expected level of expropriation is the same irrespective of the decision to hedge, the expected cost of expropriation is lower and the net return on expropriation is higher when the major shareholder opts to hedge.

[65] The incentives to hedge in this model are analogous the tax incentives to hedge when the firm faces a convex tax function (See Graham and Smith, 1999).

FIGURE 2. SINGLE MAJOR SHAREHOLDER'S INCENTIVES TO REDUCE INVESTMENT RISK WHEN THE COST OF EXPROPRIATION IS A CONVEX FUNCTION OF CASH FLOWS



The model predicts that the expected net returns on expropriation activities are higher when investment risk is lower. Therefore, unmonitored major shareholders may want to reduce the risk of existing investment projects or alternatively reject risky projects in favor of safer projects to maximize the value of their private benefits of control. This naturally begs the question as to how MLLS affect firms' risk-taking strategies. Based on our previous findings, we conjecture that MLSS reduce the private benefits extracted by the largest shareholders thereby moderating their incentives to reduce firms' risk-taking.

We test these predictions by examining the impact of MLSS characteristics on the riskiness of cash flow while controlling for the incentive and entrenchment effects of the largest shareholder as well as firm traits. We proxy for the riskiness of cash flow using the standard deviation over the period 1990-1996 of earnings before interest, taxes, depreciation and amortization deflated by total assets (*SIGMA_EBITDA*). In computing this variable, we exclude firms having less than three *EBITDA* to assets observations. We control for initial firm traits, i.e., firms traits measured as of the year in which the firm enters our sample to prevent volatility from affecting the control variables. We consider initial firm size defined as the logarithm of total assets in U.S. dollars (*INITIAL_SIZE).* Larger firms are more diversified and, therefore, should exhibit lower cash flow volatility. We also control for leverage, measured as the ratio of long-term plus short-term debt to total assets (*INITIAL_LEVERAGE*).[66] We expect more leveraged firms to have riskier cash flow.[67] Finally, because the volatility of cash flow may exhibit path-dependence, we control for initial *EBITDA* to assets (*INITIAL_EBITDA*).

Table 15 reports descriptive statistics by country for the dependent and firm-level control variables. The sample is comprised of 752 firms. As in the analysis of Tobin's Q, there is a wide variation in the number of firms in each country: Japan is the most representative, totaling 223 firms, followed by Korea which account for 89 firms. The Philippines is the least representative with only 29 firms. Thai firms exhibit the highest cash flow volatility with a mean (median) *SIGMA_EBITDA* of 0.046 (0.037). In contrast, we report that Japanese firms have the lowest cash flow volatility with a mean (median) *SIGMA_EBITDA* of 0.018

[66] We obtain qualitatively and quantitatively similar results if we alternatively use the ratio of long-term debt to total assets.

[67] However, firms with riskier cash flow arguably have lower debt ratios. By selecting the initial level of leverage as independent variable, we avoid this simultaneity issue, i.e., the possibility that the volatility of cash flow affects the choice of leverage.

(0.014). Turning to the control variables, Japanese firms are the largest; Korean firms are the most leveraged and Indonesian firms exhibit the highest cash flows.

TABLE 15. DESCRIPTIVE STATISTICS BY COUNTRY

		SIGMA_EBITDA		*INITIAL_SIZE*		*INITIAL_LEVERAGE*		*INITIAL_EBITDA*	
Country	*N*	Mean	Median	Mean	Median	Mean	Median	Mean	Median
HONG KONG	77	0.037	0.029	12.205	12.125	0.175	0.158	0.118	0.096
INDONESIA	54	0.038	0.033	11.105	10.896	0.270	0.283	0.147	0.136
JAPAN	223	0.018	0.014	13.181	12.900	0.258	0.239	0.089	0.085
KOREA	89	0.028	0.021	12.919	12.836	0.412	0.427	0.107	0.099
MALAYSIA	82	0.040	0.024	11.804	11.985	0.169	0.130	0.119	0.105
PHILIPPINES	29	0.129	0.038	11.251	10.920	0.220	0.194	0.204	0.148
SINGAPORE	77	0.030	0.021	11.786	11.869	0.172	0.152	0.095	0.098
TAIWAN	55	0.025	0.020	12.624	12.554	0.234	0.233	0.103	0.100
THAILAND	66	0.046	0.037	11.539	11.567	0.318	0.317	0.144	0.130
TOTAL	752	0.033	0.022	12.349	12.248	0.252	0.235	0.112	0.100

This table reports descriptive statistics on cash flow volatility and control variables for 752 nonfinancial firms from nine East Asian countries over the period 1990-1996. The variables are: *SIGMA_EBITDA*, the standard deviation of earnings before interest, taxes, depreciation and amortization deflated by total assets; *INITIAL_SIZE*, natural logarithm of total assets in millions of U.S. dollars; *INITIAL_LEVERAGE*, ratio of long-term debt to total assets; and *INITIAL_EBITDA*, ratio of *EBITDA* to total assets. *INITIAL_SIZE*, *INITIAL_LEVERAGE* and *INITIAL_EBITDA* are measured as of the year in which the firm enters the sample. Ownership data is from Claessens et al. (2000).

In Table 16 we report Pearson's correlation coefficients between all variables. The results show that *SIGMA_EBITDA* is positively correlated with *CASH1* and negatively (although not significantly) correlated with *CONTMCAH*. This lends support to our conjecture that entrenched largest shareholders reduce investment risk to maximize the returns on their expropriation activities. The results also show that *SIGMA_EBITDA* is positively and significantly correlated with *MOWNERS*, *NOWNERS*, *CONT2*, *VOTING21*, *CONT2345* and *VOTING23451*, and negatively and significantly correlated with *DISPERSION1*. These results are consistent with the view that MLSS moderate private benefits

extraction, which in turn mitigate the largest shareholders' incentives to reduce investment risk.

TABLE 16. CORRLATION BETWEEN THE REGRESSION VARIABLES

	SIGMA_EBITDA	*MOWNERS*	*NOWNERS*	*CONT2*	*VOTING21*	*DISPERSION1*	*CONT2345*	*VOTING23451*	*DISPERSION2*	*SHAPLEY*	*CASH1*	*CONTMCASH*	*INITIAL_SIZE*	*INITIAL_LEVERAGE*
MOWNERS	0.124													
	(0.000)													
NOWNERS	0.089	0.887												
	(0.009)	**(0.000)**												
CONT2	0.154	0.902	0.829											
	(0.000)	**(0.000)**	**(0.000)**											
VOTING21	0.136	0.888	0.809	0.882										
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**										
DISPERSION1	-0.136	-0.945	-0.855	-0.913	-0.988									
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**									
CONT2345	0.120	0.850	0.943	0.932	0.834	-0.863								
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**								
VOTING23451	0.095	0.803	0.903	0.786	0.909	-0.897	0.881							
	(0.005)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**							
DISPERSION2	0.031	-0.077	-0.085	-0.051	-0.164	0.148	-0.065	-0.163						
	(0.366)	**(0.010)**	**(0.004)**	**(0.088)**	**(0.000)**	**(0.000)**	**(0.030)**	**(0.000)**						
SHAPLEY	-0.023	0.008	0.008	0.070	0.138	-0.111	0.050	0.114	-0.905					
	(0.495)	(0.782)	(0.788)	**(0.018)**	**(0.000)**	**(0.000)**	**(0.093)**	**(0.000)**	**(0.000)**					
CASH1	0.086	0.229	0.211	0.256	0.067	-0.117	0.237	0.056	0.778	-0.689				
	(0.011)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.025)**	**(0.000)**	**(0.000)**	**(0.061)**	**(0.000)**	**(0.000)**				
CONTMCASH	-0.035	-0.037	-0.051	-0.023	-0.043	0.045	-0.036	-0.056	0.142	-0.139	-0.373			
	(0.305)	(0.212)	(0.088)	(0.440)	(0.147)	(0.127)	(0.223)	(0.061)	**(0.000)**	**(0.000)**	**(0.000)**			
INITIAL_SIZE	-0.200	-0.286	-0.284	-0.288	-0.235	0.257	-0.289	-0.227	-0.161	0.148	-0.262	-0.001		
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	(0.986)		
INITIAL_LEVERAGE	-0.050	-0.079	-0.053	-0.060	-0.051	0.059	-0.045	-0.041	-0.117	0.127	-0.103	-0.053	0.307	
	(0.143)	**(0.008)**	**(0.077)**	**(0.045)**	**(0.090)**	**(0.047)**	(0.130)	(0.169)	**(0.000)**	**(0.000)**	**(0.001)**	**(0.077)**	**(0.000)**	
INITIAL_EBITDA	0.173	0.141	0.103	0.139	0.111	-0.125	0.110	0.077	0.108	-0.100	0.179	-0.065	-0.232	-0.245
	(0.000)	**(0.000)**	**(0.004)**	**(0.000)**	**(0.002)**	**(0.001)**	**(0.002)**	**(0.033)**	**(0.003)**	**(0.006)**	**(0.000)**	**(0.072)**	**(0.000)**	**(0.000)**

This table reports Pearson correlations between all regression variables for a sample of 752 nonfinancial firms from nine East Asian countries over the period 1990-1996. The variables are: *SIGMA_EBITDA*, the standard deviation of earnings before interest, taxes, depreciation and amortization deflated by total assets; *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *INITIAL_SIZE*, natural logarithm of total assets in millions of U.S. dollars; *INITIAL_LEVERAGE*, ratio of long-term debt to total assets; and *INITIAL_EBITDA*, ratio EBITDA to total assets. *INITIAL_SIZE*, *INITIAL_LEVERAGE* and *INITIAL_EBITDA* are measured as of the year in which the firm enters the sample. *P*-values are in parentheses. Ownership data is from Claessens et al. (2000).

Table 17 compares cash flow volatility and other firm characteristics after dividing the sample according to the presence of multiple large shareholders. Consistent with our conjecture, the table shows that firms with MLSS exhibit significantly higher cash flow volatility than firms with a single large shareholder. The table also reveals that firms with MLSS are smaller and have higher cash flows.

TABLE 17. UNIVARIATE TESTS

Variable		MOWNERS=1 (A)	MOWNERS=0 (B)	Difference (A)-(B)	T-test (Wilcoxon test)
SIGMA_EBITDA	Mean	0.047	0.025	0.021	2.81***
	Median	0.029	0.019	0.011	(6.88***)
INITIAL_SIZE	Mean	11.779	12.699	-0.920	-8.52***
	Median	11.886	12.522	-0.636	(-7.50***)
INITIAL_LEVERAGE	Mean	0.240	0.260	-0.020	-1.41
	Median	0.231	0.241	-0.010	(-1.63)
INITIAL_EBITDA	Mean	0.128	0.103	0.025	3.61***
	Median	0.111	0.093	0.018	(3.60***)
N		286	466		

This table presents mean and median difference tests of cash flow volatility and control variables for 752 nonfinancial firms from nine East Asian countries over the period 1990-1996. The variables are: *SIGMA_EBITDA*, the standard deviation of earnings before interest, taxes, depreciation and amortization deflated by total assets; *INITIAL_SIZE*, natural logarithm of total assets in millions of U.S. dollars; *INITIAL_LEVERAGE*, ratio of long-term debt to total assets; and *INITIAL_EBITDA*, ratio EBITDA to total assets. *INITIAL_SIZE*, *INITIAL_LEVERAGE* and *INITIAL_EBITDA* are measured as of the year in which the firm enters the sample. Ownership data is from Claessens et al. (2000). Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

While the correlation and univariate analyses provide groundwork evidence in favor of our hypotheses, we also run a set of multivariate regressions to control for the impact unobservable country/industry effects and firm-level characteristics on cash flow volatility. The results are reported in Table 18.

We include cash flow rights and excess control of the largest shareholder in specification (1). Consistent with previous studies documenting the alignment effect associated with the cash flow rights held by the controlling owner, we find that the coefficient of *CASH1* is positive and significant at the 1% level. This

result is consistent with the contention that largest shareholders with aligned incentives derive less private benefits and thus have fewer incentives to reduce their firms' risk-taking. If anything, this result, which is consistent with our theoretical predictions, runs counter an alternative argument suggesting that shareholders with concentrated ownership stakes hold underdiversified portfolios, and thus prefer to reduce their risk.

In the remaining specifications, we sequentially control for MLSS-related variables. We find that *MOWNERS, NOWNERS, CONT2, VOTING21, CONT2345* and *VOTING23451* exhibit positive and statistically significant coefficients at the 1% level. These results suggest that the presence, number and size (both in absolute and relative terms) of multiple large shareholders enhance corporate risk-taking. We also find that *DISPERSION1* and *DISPERSION2* have negative and statistically significant coefficients at the 1% level. This implies that corporate risk-taking is positively associated with a more equal distribution of control rights among multiple large shareholders.

Taken together, the results in this subsection lend further support to the efficient-monitoring hypothesis of MLSS. We show, theoretically and empirically, that minority shareholders' expropriation empowers entrenched controlling shareholders with incentives to reduce the volatility of future cash flows. However, reinforcing our previous findings, we find evidence consistent with MLSS acting as monitors that mitigate expropriation, thereby enhancing corporate risk-taking.

TABLE 18. THE EFFECTS OF MLSS ON FIRM RISK-TAKING

	Exp. Sign	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
INTERCEPT	(?)	-2.172***	-2.484***	-2.415***	-2.510***	-2.507***	-2.223***	-2.476***	-2.414***	-2.631***	-2.865***
		(7.550)	(8.315)	(8.056)	(8.513)	(8.352)	(7.787)	(8.328)	(8.016)	(8.467)	(7.611)
MOWNERS	(+)		0.206***								
			(3.541)								
NOWNERS	(+)			0.100***							
				(2.744)							
CONT2	(+)				0.017***						
					(4.320)						
VOTING21	(+)					0.340***					
						(3.597)					
DISPERSION1	(-)						-0.303***				
							(3.728)				
CONT2345	(+)							0.010***			
								(3.634)			
VOTING23451	(+)								0.166***		
									(2.612)		
DISPERSION2	(-)									-3.297***	
										(3.720)	
SHAPLEY	(+)										0.455***
											(2.836)
CASH1	(+)	0.006**	0.005**	0.005**	0.005**	0.007***	0.006***	0.005**	0.006***	0.023***	0.014***
		(2.436)	(2.263)	(2.365)	(2.046)	(2.879)	(2.744)	(2.211)	(2.777)	(4.423)	(3.739)
CONTMCASH	(-)	0.004	0.005	0.005	0.004	0.006	0.006	0.005	0.006	0.023***	0.014**
		(1.015)	(1.076)	(1.145)	(0.945)	(1.359)	(1.314)	(1.073)	(1.324)	(3.494)	(2.543)
INITIAL_SIZE	(-)	-0.195***	-0.176***	-0.180***	-0.173***	-0.176***	-0.175***	-0.175***	-0.181***	-0.176***	-0.187***
		(9.978)	(8.738)	(8.863)	(8.626)	(8.748)	(8.652)	(8.661)	(8.954)	(8.802)	(9.485)
INITIAL_LEVERAGE	(+)	0.074	0.048	0.038	0.022	0.042	0.041	0.019	0.045	0.036	0.036
		(0.485)	(0.319)	(0.252)	(0.148)	(0.278)	(0.272)	(0.126)	(0.295)	(0.237)	(0.237)
INITIAL_EBITDA	(+)	3.450***	3.385***	3.426***	3.368***	3.384***	3.379***	3.413***	3.430***	3.422***	3.435***
		(10.093)	(9.964)	(10.063)	(9.954)	(9.966)	(9.953)	(10.060)	(10.069)	(10.095)	(10.094)
N		752	752	752	752	752	752	752	752	752	752
R^2		31.91	33.05	32.60	33.59	33.09	33.17	33.11	32.53	33.17	32.64

This table presents country-industry random-effects regressions of cash flow volatility on multiple large shareholders structures and control variables for 752 nonfinancial firms from nine East Asian countries over the period 1990-1996. The dependent variable is *SIGMA_EBITDA*, the standard deviation of earnings before interest, taxes, depreciation and amortization deflated by total assets. The independent variables are: *MOWNERS*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise; *NOWNERS*, number of other large shareholders (up to the fifth) controlling more than 10% of the firm; *CONT2*, ultimate voting rights of the second largest shareholder; *VOTING21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *DISPERSION1*, difference between the largest and the second largest shareholders' voting rights to their sum; *CONT2345*, sum of the voting rights of the second, third, fourth and fifth largest shareholders; *VOTING23451*, sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder; *DISPERSION2*, Herfindal index of the differences between the voting rights of the five largest shareholders; *SHAPLEY*, Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes; *CASH1*, ultimate cash flow rights of the largest shareholder; *CONTMCASH*, ultimate cash flow rights minus ultimate voting rights of the largest shareholder; *INITIAL_SIZE*, natural logarithm of total assets in millions of U.S. dollars; *INITIAL_LEVERAGE*, ratio of long-term debt to total assets; and *INITIAL_EBITDA*, ratio EBITDA to total assets. *INITIAL_SIZE*, *INITIAL_LEVERAGE* and *INITIAL_EBITDA* are measured as of the year in which the firm enters the sample. Ownership data is from Claessens et al. (2000). *T*-statistics are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

4. CONCLUSION

Existing corporate governance studies have essentially focused on the shareholding attributes the largest shareholder and little attention has been given to the role of multiple large shareholders. We address this question by examining whether the presence, number, size and identity of multiple large shareholders play a significant monitoring role in curbing the extraction of private benefits by the largest controlling shareholder in a sample of East Asian firms. Our results provide robust evidence that MLSS play a genuine corporate governance role. First, we find that firms with MLSS trade at a premium relative to firms with a single large shareholder, suggesting that multiple large shareholders provide valuable monitoring. Second, increasing the number of large shareholders is associated with higher corporate valuation, consistent with the idea that a large number of shareholders create more disagreement about projects that harm minority shareholders. Third, we document that greater contestability of the largest shareholder voting and a more equal distribution of control stakes among firm's blockholders increase firm value. This result suggests that the incentives and abilities of multiple large shareholders to monitor the controlling owner depend on the extent of their voting power. Fourth, we find that the monitoring role of MLSS resides mainly in firms where the likelihood of corporate diversion is high and financing requirements are large. Fifth, our results suggest that the identity of other large shareholders influences firm value. In particular, we find that the presence and voting power of families or the state as second large shareholders are associated with higher firm valuation. Finally, we develop a simple model to show that an entrenched controlling shareholder has the incentives to reduce cash-flow volatility in order to maximize the proceeds from expropriation. Consistent with MLSS curbing these incentives, we find that presence, number and size of multiple large shareholders enhance firm risk-taking.

More generally, our results imply that MLSS may constitute an effective corporate governance mechanism for firms located in East Asia. We propose that the evidence presented in this essay is important for at least two reasons. First, from a policy perspective, our findings can be useful to regulators and lawmakers to promote the existence of MLSS by, for instance, relaxing the restrictions on foreign ownership and facilitating the issuance of private equity. Second, our findings suggest a future research agenda. For example, the question of how firms with MLSS (compared to firms with a single large shareholder) fared during the East Asian financial crisis has yet to be fully assessed empirically.

APPENDIX I
VARIABLES, DEFINITIONS AND SOURCES

Variable	Definition	Source
Panel A. Firm specific variables		
TOBQ	Ratio of the market value of assets to their book value, where the market value of assets is the market value of common stock plus the book value of assets minus the book value of equity.	Authors' calculations based on *Worldscope* data
SIZE	Natural logarithm of total assets in millions of U.S. dollars.	As above
SALESGR	Growth rate in sales over the previous year.	As above
LEVERAGE	Ratio of long-term debt to total assets.	As above
CAPEX	Ratio of capital expenditures to total assets.	As above
SIGMA_EBITDA	Standard deviation of earnings before interest, taxes, depreciation and amortization deflated by total assets over the period 1990-1996.	As above
INITIAL_SIZE	First observation of the natural logarithm of total assets in millions of U.S. dollars over the period 1990-1996.	As above
INITIAL_LEVERAGE	First observation of the ratio of long-term debt to total assets over the period 1990-1996.	As above
INITIAL_EBITDA	First observation of the ratio EBITDA to total assets over the period 1990-1996.	As above
Panel B. Ownership and control variables		
MOWNERS	Dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the firm, and zero otherwise.	Claessens et al. (2000) data
NOWNERS	Number of other large shareholders (up to the fifth) controlling more than 10% of the firm.	Authors' calculations based on Claessens et al. (2000) data
CONT2	Ultimate voting rights of the second largest shareholder.	As above
VOTING21	Ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder, *CONT2/CONT1*.	As above
DISPERSION1	Difference between the largest and the second largest shareholders' voting rights to their sum, *(CONT1-CONT2)/(CONT1+CONT2)*.	As above
CONT2345	Sum of the voting rights of the second, third, fourth and fifth largest shareholders, *CONT2+CONT3+CONT4+CONT5*.	
VOTING23451	Sum of the voting rights of the second, third, fourth and fifth largest shareholders to the voting rights of the largest shareholder, *(CONT2+CONT3+CONT4+CONT5)/CONT1*.	
DISPERSION2	Herfindal index of the differences between the voting rights of the five largest shareholders, $(CONT1-CONT2)^2+(CONT2-CONT3)^2+(CONT3-CONT4)^2+(CONT4-CONT5)^2$.	As above
SHAPLEY	Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes (Zingales, 1994). The Shapley value of the ocean's votes is the probability that those votes are pivotal in a control contest (Milnor and Shapley, 1978). We use the five largest ultimate control stakes to compute the Shapley value.	As above
CASH1	Ultimate cash flow rights of the largest shareholder.	As above
CONTMCASH	Ultimate voting rights minus ultimate cash flow rights of the largest shareholder.	As above
FAMILY2	Dummy variable set to one if the second large shareholder is a family, and zero otherwise.	As above
WH2	Dummy variable set to one if the second large shareholder is a widely-held firm, and zero otherwise.	As above

Cont'd

Variable	Definition	Source
STATE2	Dummy variable set to one if the second large shareholder is a state, and zero otherwise.	As above
PCOMP1	Principal component of *CONT2*, *VOTING21* and *DISPERSION1*	As above
PCOMP2	Principal component of *CONT2345*, *VOTING23451* and *DISPERSION2*	As above
CONT1MA2345_1	Ratio of the difference between voting rights of the controlling owner minus the average voting rights held by the other large shareholders to voting rights of the controlling owner.	As above
SHAPLEY3	Shapley value of votes held by small shareholders (i.e. the ocean) divided by their fraction of votes. This proxy is calculated using the three largest control stakes.	As above
Panel C. Country-level variables		
ANTIDIR	Anti-director index.	La Porta et al. (1998)
Log(GDP)	Natural logarithm of country's GDP in 1996.	As above

APPENDIX II

Table A1. Frequency Distribution of Large Shareholders' Stakes

	N	[10%-20%[	[20%-30%[	[30%-40%[	[40%-50%[	[50%-100]
First shareholder	1,252	445	383	216	122	86
Second shareholder	416	290	117	8	1	0
Third shareholder	113	110	3	0	0	0
Fourth shareholder	20	20	0	0	0	0
Fifth shareholder	1	1	0	0	0	0

This table reports the frequency distribution of large shareholders' control stakes for a sample of 1,252 nonfinancial firms from nine East Asian countries in 1996. Ownership data is from Claessens et al. (2000).

Table A2. Frequency Distribution of Large Shareholders' Identities

	N	Family	State	Widely-held firm	Miscellaneous
First shareholder	1,252	659	72	517	4
Second shareholder	416	154	39	219	4
Third shareholder	113	32	9	72	0
Fourth shareholder	20	7	1	12	0
Fifth shareholder	1	0	0	1	0

This table reports the frequency distribution of large shareholders' identities for a sample of 1,252 nonfinancial firms from nine East Asian countries in 1996. Ownership data is from Claessens et al. (2000).

CONCLUSION

Since the seminal work of Berle and Means (1932), an extensive line of research, particularly focused on the U.S. context, has addressed the effects of managerial incentives and the different approaches to align them with shareholders' interests in widely held firms. However, recent advances in the financial economics literature have pointed to different kinds of incentive problems in economies characterized by concentrated ownership structures. In this thesis, we examined the incentives of large shareholders in two control structures commonly observed around the world: Business groups and multiple large shareholder structures.

In the first essay, we explored the incentives of the controlling shareholders of Canadian business groups using mergers and acquisitions as our setting. We found that business groups controlled by families tend to undertake value-reducing acquisitions when families separate ownership from control and when the firms under their control hold disproportionately high amounts of cash. We also found some evidence that family-controlled business groups misallocate capital; redirecting profits from financially constrained affiliated firms to financially unconstrained ones. However, unlike the recent evidence documented in some emerging markets, we did not find evidence for tunneling of profits, i.e., their transfer from low cash flow rights affiliated firms to high cash flow rights ones.

Taken together, the results of the first essay were consistent with the institutional environment prevailing in Canada. The common law regime, which is more investor-friendly than other regimes, is likely to prevent controlling shareholders from tunneling profits for their personal gains. However, it may not provide sufficient protection to minority shareholders against more benign types of private benefits such as the desire to over expand firm size to gain political influence. Besides, the development of capital markets in Canada is likely to put business groups' internal markets at a disadvantage when it comes to allocate capital to affiliated firms. We proposed several solutions to address the problems associated with family business groups. Chief among these were government intervention aiming to restrict the means of separation of ownership and control and tax family empires when they pass from one generation to another. However, we warranted that the ability of governments to regulate business groups may be hindered by the close ties between families and the political sphere.

In our second essay, we examined the incentives of multiple large shareholders in East Asian economies by associating their attributes to corporate valuations. Consistent with these shareholders playing a positive governance role, we found that firms with multiple large shareholders trade at a premium relative to firms with a single large shareholder. We also found that the number and the size of these shareholders have a positive impact on firm value. Importantly, we documented that the positive valuation effects of multiple large shareholders' attributes are concentrated in firms where the likelihood of corporate diversion by the largest shareholder is high and firms with great financing needs. Our results also hinted that families and the state, as second large shareholders, are more effective than widely held firms in binding the tendency of the largest shareholder to consume private benefits. Finally, we identified one channel through which MLSS play a governance role, namely their

propensity to curb the largest shareholder's incentives to reduce the volatility of cash-flows.

Overall, the results of the second essay were consistent with multiple large shareholders playing a monitoring role in East Asian economies. As a policy implication of our findings, we proposed the promotion of the emergence of multiple large shareholder structures through, for instance, easing restrictions on foreign capital flows and awarding tax incentives to the issuance of private equity. These implications may be useful to fast-growing countries as multiple large shareholders may act as a hedge against minority shareholders' expropriation during economic downturns.

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