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*Voluntary vs. Mandatory Corporate Governance Regulation:
Theory and Evidence*

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ABSTRACT

We examine the willingness of firms to implement governance mechanisms voluntarily. We argue that firms have significant incentives to adopt governance mechanisms in the absence of any requirement to do so, such as competition for scarce capital. We then model the interaction between these incentives and the firm's propensity to adopt governance mechanisms. The model identifies conditions under which voluntary adoption of governance mechanisms is the firm's optimal choice. Finally, we document a general increase in the adoption of governance practices following the implementation of a governance regime in which the adoption of governance practices is entirely voluntarily but the disclosure of a firm's practices is mandatory. Our empirical results show that between the years 1999-2003, Canadian firms voluntarily implemented Canadian best practice standards and that after 2002, non cross-listed firms adopted Sarbanes-Oxley like reforms voluntarily. These results suggest that entirely mandatory governance legislation may not be necessary at least where certain incentives exist.

I. Introduction

In this article, we probe the willingness of firms to adopt corporate governance practices voluntarily. We argue that firms have significant incentives to adopt governance reform. These incentives include the competition for scarce capital and the threat of mandatory regulation. We formulate a model of conditions under which voluntary adoption of governance mechanisms is the firm's optimal choice and then present empirical evidence that firms do adopt corporate governance reforms voluntarily. On the basis of this evidence, we argue that mandatory governance legislation, such as the Sarbanes-Oxley Act (SOX), may be unnecessary because of firms' propensity to act voluntarily.

We recognize that corporate law in the United States is largely "enabling" in that corporate statutes generally provide a set of default rules for running the firm (Black, 1998; Romano, 1999). However, in adopting Sarbanes-Oxley, the United States veered away from its otherwise enabling governance system by imposing mandatory governance rules. These mandatory rules differ significantly from "comply and explain" governance regimes in place in other major common law jurisdictions, such as Canada, the United Kingdom and Australia. This difference between the United States governance regime under Sarbanes-Oxley and other common law countries is the starting point for our research.

We note anecdotal media reports that firms outside of the United States voluntarily adopted governance practices set forth in Sarbanes-Oxley. For example, The Financial Times reported that even though US-listed foreign companies were not required to meet certain deadlines for certifying their financial results under the new Sarbanes-Oxley Act, some of them did so nonetheless.⁴ Building on this anecdotal data, we seek to document whether or not Canadian firms have in fact implemented governance practices voluntarily. The specific governance practices that we examine fall in two categories. First are those practices recommended but not required by the guidelines of the Toronto Stock Exchange and second are those that are a direct consequence of the implementation of SOX.

Our empirical analysis is based on hand-collected time-series data from the financial reports of a sample of firms. The resulting dataset represents all firms that were part of the TSX/S&P index (formerly the TSE300) at any point from 1999 to 2003. Clearly some of the sample firms were also simultaneously cross-listed in the US while others were not. As a result, we provide evidence on the

⁴ Alison Beard, "ADR Watch – Foreign groups join in results certification" The Financial Times (19 August 2002) reporting that "US-listed foreign companies were not required to meet last week's deadline for certifying their financial results under the new Sarbanes-Oxley Act. But a handful did."

willingness of the entire sample to voluntarily adopt Canadian guidelines in addition to the propensity for non cross-listed firms to implement elements of SOX. Our findings suggest that firms voluntarily adopt governance standards and that they did so when their incentives are particularly high. These results suggest that mandatory governance legislation such as Sarbanes-Oxley may not be necessary.

There is a growing body of scholarship that examines the effects of the Sarbanes-Oxley Act on costs to domestic issuers (e.g. Romano, 2005; Ribstein, 2-2005, Perino, 2002) including decisions to go private (Kamar, Karacha-Mandic and Talley, 2005). There is less literature on the effect of Sarbanes-Oxley on foreign firms. The existing literature regarding foreign firms tends to examine the extent to which cross-listing improves minority shareholder protection. Coffee's bonding hypothesis asserts that foreign firms list on US exchanges in order to commit themselves to stronger minority investor protections and fuller disclosure and benefit from reputational intermediaries such as US underwriters (Coffee, 2002 at 1780-81). Similarly, Fuerst (1998) and Stulz (1999) support the importance of US law for the protection of minority shareholders. Empirical evidence in support of the bonding hypothesis has been put forward by Reese and Weisbach (2002), Mitton (2002), Doidge et al (2004). On the other hand, others have questioned the persuasiveness of this evidence (Licht, 2002 and Leuz, 2003).

We do not seek to comment on the bonding hypothesis and in particular why firms choose to cross-list. Rather, we inquire into the behaviour of firms that are not cross-listed and that are resident in a jurisdiction in which there is a list of best practices with a legal requirement to disclose the extent of compliance (i.e. the "comply and explain" regime). We also examine the behaviour of non cross-listed foreign firms and specifically their response to Sarbanes-Oxley in light of the fact that they are not legally mandated to adhere to its provisions. In undertaking these two strands of analyses, we aim to understand the characteristics that motivate firms to adopt governance practices voluntarily, i.e. in the absence of a legal requirement to do so. We ask whether there are certain incentives, such as access to capital, on implementing enhanced governance standards. We document the willingness of firms to voluntarily adopt proposed best practices and SOX-like governance reforms. We believe that this project is the first of its kind to indicate the propensity of firms to voluntarily implement best practices and Sarbanes-Oxley type reforms in the absence of a legal requirement to do so.

The remainder of this article proceeds as follows. Part II outlines incentives for the voluntary adoption of governance standards. Our focus in this section is on the desire to pre-empt additional regulation, the competition for scarce capital,

and the competitive pressures from industry peers in a more heavily regulated jurisdiction. In Part III, we model conditions under which voluntary adoption of governance mechanisms is the firm's optimal choice. In Part IV, we use Canadian firm data as a case study, develop our hypothesis and describe our data template and methodology. In Part V, we present evidence that firms not subject to mandatory governance guidelines voluntarily adopted Canadian best practices and SOX-like reforms without any legal requirement to do so.

II. Incentives for Voluntary Adoption of Governance Standards

This section examines a variety of incentives that firms have to adopt corporate governance practices voluntarily. While we do not claim that our list is exhaustive, we feel it is sufficient to demonstrate that there exist intuitive reasons for firms to willingly adopt additional governance practices. The next section develops a model that is general enough to capture not only our proposed incentives but many of the others that we do not include here.

To begin, firms may seek to pre-empt government regulation by adopting governance practices in advance of a legal rule compelling them to do so (Maxwell and Hackett, 2000). Some empirical analysis has been conducted on the willingness of firms to adopt cleaner products or processes (Khanna and Damon, 1999). Several studies show that a threat of mandatory environmental regulation can be one reason behind a firm's decision to reduce its pollution levels. For example, when the EPA's voluntary 33/50 program was launched in 1991 to encourage voluntary reduction in toxic chemical emissions, researchers studying the motivations for participation found that the desire for public recognition and increased consumer goodwill provided statistically significant incentives for firms to participate in the program (Khanna and Damon, 1999).

In the corporate governance area, firms watching the collapse of Enron and WorldCom shortly thereafter, the debates in Congress and the extensive press coverage of investor loss may have expected government action and tighter regulation. Firms reportedly began instituting their own governance mechanisms. For example in 2002 just after the passage of SOX, CFOs and CEOs of Canadian companies voluntarily certified financial statements.⁵ While the incentives for taking such steps are not entirely clear (and certainly not uniform),

⁵ These companies are Canadian National, Magna International and TD Bank. See Mark Hallman, "Canadian National Railway Company – Cdn National Voluntarily certifies financial reports" Canada Stockwatch (13 August 2002); Monica Gutschi, "SEC Certification Rules Meet Little Resistance in Canada" Dow Jones News Service (30 August 2002); "Magna Intl CEO and Fincl Chief Certify Fincl Statements, Dow Jones News Service (29 August 2002). While these companies are cross-listed and ultimately would come to bear the legal responsibility to certify their financial statements, at the time they did so, the legal requirement had not yet come into force. Indeed, it was still being questioned by foreign issuers whether they would be required to comply with SOX.

it is plausible that, in adopting these reforms, firms sought to forestall regulatory action and legislation.

A second rationale for voluntarily implementing additional governance standards may be to deter investors from devaluing the firm. In order for this incentive to hold it must be the case that managers publicly reveal the extent to which governance practices have been implemented and that investors value this disclosure. The value put on this disclosure may be a function of firm performance. If the stock return is high, investors will have much less incentive to analyze and evaluate the firm's governance structure. However, if the firm is under-performing, analysts and investors will search for reasons why this may be so. Such inquiries may lead them to conclude that the firm has a weak governance structure and indeed that the firm's performance may experience a turnaround if its governance structure were enhanced. If management withholds information on its governance practices, then investors are likely to conclude that the information is bad news.⁶ Withholding information increases market noise because of the range of possible interpretations of the information. As a result, the expected cost of investors' discounting the value of the firm is so high that the manager is better served by making disclosure (Verrecchia, 1983). Thus, the need for positive disclosure of governance practices encourages the firm to implement these practices in order to prevent devaluation of the firm by the market.

As discussed above, firms respond to investors' desire for information for reasons relating to the firm's business rather than for altruistic purposes (Diamond and Verrecchia, 1991). Investors are primarily concerned with obtaining information in purchasing securities and maintaining their investment portfolios (Romano, 1998). Management understands this information requirement and will disclose information if they believe that investors require it prior to making the decision to invest or remain invested. Thus, the competition for capital among firms determines the optimal level of disclosure (Diamond and Verrecchia, 1991). In an environment of increasing investor advocacy, ethical investing, and skepticism of corporate motives, it is possible that disclosure regarding governance practices will rank highly at the top of investors' list.

In today's global financial markets, competition for capital is not confined to the borders of a single nation. A firm may just as easily raise funds abroad as in its home country. As a result, an additional incentive for foreign firms' voluntary compliance with rules of another jurisdiction is that issuers seek to remain

⁶ This is the "no news is bad news" hypothesis. See Stephen A. Ross, "Disclosure Regulation in Financial Markets: Implications of Modern Finance Theory and Signaling Theory" in F.R. Edwards ed., *Issues In Financial Regulation: Regulation of American Business and Industry Pinpoint* (New York: McGraw-Hill, 1979).

competitive with their global peers. In practical terms, this means that the fact that Canada neighbors the United States has consequences for domestic firms in Canada. It may be that the US sets the default standard against which firms believe they will be judged by analysts, shareholders, potential acquirors etc.

We have provided a brief discussion of three possible motivators behind the voluntary adoption of corporate governance practices. While we strongly believe that these motivations are reasonable, we are not so naïve to believe that they hold for every firm in every situation. The extent to which these incentives are strong enough to encourage voluntary adoption will depend on the firm's characteristics and market position. We explore this idea more fully in the theoretical model presented below.

III. Model of Voluntary Adoption

There is an extensive theoretical literature discussing voluntary governance structures for firms (see Becht, Bolton and Roell, 2003 and Tirole, 2001 for extended surveys). This literature makes clear that there does not exist a single model that encompasses the complexity of the governance of the modern firm and its interaction with associated agents and market environment. In this section, we sketch the basic ideas for an informal model and the restricted use that we will make of it in our empirical study. We will see that this model is general enough to capture the intuition of the incentives that we have proposed, namely regulatory deterrence, avoiding undervaluation, and global competition for capital.

Consider a simple example, which is a standard, principal-agent model with moral hazard, where there are incentives for voluntary monitoring, stemming from market incentives. (Our exposition here follows closely that presented in Tirole (2001).) An inside management group can alter the probability of success of a random return on a project to make it less profitable. But this action allows the management to receive a private benefit valued at B . Therefore the management is tempted by the private return B , to alter their behavior (to misbehave) and invest in a project with a low net present value. In turn, outside investors, understanding management's incentives, will be wary of investing in a firm where management may misbehave and invest in a low net present value project. In some cases the firm may not be able to secure outside capital, even though the project has a positive net present value. This leads to an incentive for the management to commit to credible control structures that will ensure that the high, net present value project will be chosen. An example of such a credible structure is a governance structure that incorporates monitoring mechanisms to ensure that the management will not be tempted to misbehave.

We can see that management's commitment to a credible governance structure is important to several of the parties discussed in our incentives above. First, regulators contemplating the implementation of new governance standards will look favourably upon management's credible commitment to behave, second investors will value the increased probability of high net present value projects that is associated with good behaviour, and third investors abroad will be attracted to companies complying with the guidelines of investor-friendly jurisdictions.⁷

We will sketch the formal model of voluntary adoption, setting out the key assumptions and equations and giving a brief summary of the key results. Assume there are three dates: at the first date the firm has some initial equity capital A , and decides whether to invest in a project that costs a larger amount I . That is, the firm must borrow $I - A \geq 0$. At the second date the management can choose to behave and the project will have a probability of success of p_H , paying R , and zero otherwise. If the management misbehaves (and earns a private benefit B) then the probability of earning R falls to $p_L < p_H$. Define $\Delta P =: p_H - p_L > 0$ as the decline in probability from misbehaving. Assume that the project has a positive net present value $p_H R - I > 0$. Finally, at the third date, the investment pays a verifiable return R , or zero.

To ensure that investors are willing to lend to the firm, we require incentive compatibility constraints that will guarantee that the management will not misbehave with the borrowed money. First, the risk neutral management must be compensated by an amount w to forgo the private benefit and choose the higher probability project. That is, w must satisfy $(p_H - p_L) \cdot w \geq B$; that is, the benefits from choosing the better project must exceed the private reward from misbehaving. This implies that the outside investors are constrained in the good outcome to earn at most $R - [B / (p_H - p_L)]$ without violating the management incentives.

As a consequence, a necessary and sufficient condition for financing is that $p_H (R - [B / (p_H - p_L)]) \geq I - A$, or $p_H R - (I - A) \geq p_H [B / (p_H - p_L)]$. That is the expected income for the good project must exceed the investor's contribution. If we assume that there is a competitive investor market, then the inequality will be satisfied with equality in equilibrium, and the management will receive the residual from their monopoly of inside information.

⁷ There is a large literature on the impact of legal jurisdictions on investment. La Porta et al (1998) document that legal regimes offering strong investor protection have larger capital markets (both debt and equity) and more initial public offerings.

It is easy to show that if $p_H R - I > 0 > p_H (R - [B / (p_H - p_L)]) - (I - A)$, then a positive net present value project will not be funded. This is said to be a case of *capital rationing*. Notice that the amount of inside equity A has a positive benefit in that it allows the management to circumvent the necessity for large-scale borrowing. In the extreme case where $I = A$, then the management can choose the good project, internalizing the loss of efficiency from taking the inferior project. Another obvious conclusion is that if the management has a good reputation for integrity (we can think of this as being represented by B being small) then the firm is much more likely to be funded. Both of these factors (more inside equity and a good reputation) improve the ability of the firm to raise capital and invest in the project.

The model suggests another method for raising finance for firms that are capital rationed. Consider an active intermediary (e.g. bank, venture capitalist, regulator etc.) that monitors the firm at a cost C_A and is able to reduce the private benefit to management from B to $b < B$. One can show that even though the monitoring is expensive, there is a range of parameter values that ensure the feasibility of a financial intermediary providing monitoring that will ensure that outside investors can provide the requisite funds for the good project. Clearly this mechanism is how banks and venture capitalists have provided funds for firms that were too exposed to moral hazard problems arising from the incentives of managers or entrepreneurs.

Combining the two methods for obtaining finance, we can see that firms with adequate equity capital, or have a good reputation with a low B , will choose to raise funds from equity markets or markets with no or negligible monitoring. Whereas firms that have low equity and/or a low reputation or credibility, will choose to raise finance through monitoring intermediaries or at least through intermediaries that require some credible third party to monitor. The outcome can be a separating equilibrium, where the two types of firms obtain financing according to their credibility in not taking the inferior project. Observe that the cost of monitoring will be incorporated into the cost of borrowing for the firm, so that the less credible firms will face a higher cost of external financing. This separating equilibrium is important because, as our empirical results will show, the willingness of firms to voluntarily adopt governance measures will greatly depend on their characteristics. Therein lies one of the great advantages of a voluntary system – firms can choose the governance structure most compatible with their assets, reputation, and structure.

IV. Canada: A Case Study of Voluntary Adoption

In this section, we use hand-collected data regarding Canadian firms to gain a sense of the propensity of firms to voluntarily adopt corporate governance practices. We begin by outlining the Canadian governance regime and the legal implications of SOX on Canadian firms. We then describe our dataset and outline our hypotheses.

a) The Development of Canadian Governance Standards

The Canadian governance regime is built largely on a “comply and explain” system (for inter-jurisdictional comparison, see Anand, 2006). The regime has been in place from 1995 to 2005 when the Toronto Stock Exchange (TSX) issued a list of best practice guidelines that firms may follow, but they are not obliged to do so.⁸ The guidelines addressed the following issues: the board’s mandate; its composition (including minority shareholder representation); board committees; board approval; structures in place to facilitate an independent board; procedures for recruiting new directors and assessing board performance; measures for receiving shareholder feedback; and the board’s expectations of management.

Added to the best practice guidelines was a disclosure requirement. Disclosure regarding the extent of a firm’s compliance with the best practices was required in a “Statement of Corporate Governance Practices” in the firm’s proxy circular or annual report.⁹ A listed company was obliged to make disclosure with reference to the guidelines and where its governance system differed from the guidelines, it was to explain the differences.¹⁰ However, they were compelled to make disclosure regarding the extent of their compliance in the proxy circular or annual report.

8 See Toronto Stock Exchange Committee on Corporate Governance in Canada, “*Where Were the Directors?*” *Guidelines for Improved Corporate Governance in Canada*, Guideline (12)(i), (1994) [Dey Report]. The TSX adopted the Dey Report in February 1995 and on May 3, 1995, released TSE By-Law 19.17, which requires companies incorporated in a Canadian jurisdiction and listed on the Exchange to make disclosure annually regarding their corporate governance practices in an annual report or information circular. These guidelines came into effect beginning with companies whose fiscal year ended on June 30, 1995. See *Guidelines*, in Toronto Stock Exchange, TSX COMPANY MANUAL § 472 (2004). Section 474 lists the fourteen recommendations of the Dey Committee.

9 See e.g. *Guidelines*, in Toronto Stock Exchange, TSX COMPANY MANUAL § 473 (2004) <http://www.tse.com/en/pdf/CompanyManual.pdf> [TSX Guidelines].

10 The TSX Company Manual, *supra* note 23 at § 473. Section 474 lists the fourteen recommendations of the Dey Committee.

In 2004, securities regulators also implemented mandatory rules relating to audit committee composition and certification of financial disclosure.¹¹ These mandatory rules lessened the extent to which the Canadian governance regime is a “comply and explain” system. The TSX has now relinquished its role as Canada’s corporate governance standard setter by withdrawing its corporate governance guidelines and disclosure rule. Public companies with financial years ending on or after June 30, 2005 are subject to an enhanced “comply and explain” disclosure regime adopted by securities regulators which requires companies to disclose their governance practices against a new set of governance practices recommended by the securities regulators.¹²

Revision to Canada’s securities laws, including its corporate governance regime, followed the passage of the Sarbanes-Oxley Act (SOX). SOX requires certification by CEOs and CFOs of financial and other information in companies’ quarterly and annual reports;¹³ CEOs’ and CFOs’ reimbursement of bonuses for misconduct resulting in the issuance of a restatement of financial disclosure;¹⁴ disclosure of material off-balance transactions and non-GAAP accounting;¹⁵ management establishment and maintenance of internal control systems, assessment of the effectiveness of these controls by management, and attestation and assessment by external auditors in annual disclosure.¹⁶ Foreign issuers generally speaking are not exempted from SOX. Thus any company that is listed on a US exchange is subject to SOX and the relevant exchange listing rules.

Even with certain mandatory governance rules in Canada, it is worth noting that SOX addresses a number of issues that are not duplicated in the Canadian corporate governance regime, including: prohibition on insider loans; disclosure of material-off balance sheet transactions (Canadian rule is weaker); and, forfeiture of bonuses in the event of a restatement of a financial document that arises as a result of misconduct. SOX also requires that all periodic reports containing financial statements filed with the SEC be accompanied by a

¹¹ Multilateral Instrument 52-110: Audit Committees (2004), online: Ontario Securities Commission www.osc.gov.on.ca <http://www.osc.gov.on.ca/Regulation/Rulemaking/Current/Part5/rule_20040326_52-110-audit-comm.jsp>. See also Multilateral Instrument 52-109: Certification of Disclosure in Issuers' Annual and Interim Filings (2004), online: Ontario Securities Commission <http://www.osc.gov.on.ca/Regulation/Rulemaking/Current/Part5/rule_20040326_52-109-cert.jsp>.

¹² See National Instrument 58-101 online: Ontario Securities Commission http://www.osc.gov.on.ca/Regulation/Rulemaking/Current/Part5/rule_20041029_58-101_disc-corp-gov-prac.jsp (this is a mandatory rule compelling disclosure of the corporate governance practices that the issuer has adopted) and). See also National Policy 58-201 - Corporate Governance Guidelines (the Governance Policy http://www.osc.gov.on.ca/Regulation/Rulemaking/Current/Part5/rule_20050617_58-201_corp-gov-guidelines.pdf (this is a policy that suggests corporate governance guidelines)...

¹³ SOX, *supra* note 22 at § 302 and §906.

¹⁴ *Ibid.*, § 304.

¹⁵ *Ibid.*, § 401.

¹⁶ *Ibid.*, § 404.

written statement of the CEO and CFO of the issuer certifying the accuracy of information contained in the reports. Further differences arise under the listing rules of US exchanges. For example, the NYSE requires a majority of independent directors on the board while this is only a suggested practice in Canadian jurisdictions.

In sum, non cross-listed Canadian firms are not subject to SOX while cross-listed Canadian firms are subject to this legislation. The non cross-listed firms will be subject to the Canadian regime under which they may comply with best practices and under which they must explain their departures from the voluntary regime. After March 2004, which is outside the period covered by this study, non cross-listed firms became subject to mandatory rules relating to audit committee composition and CEO/CFO certification.

b) Data Description

In order to establish the propensity of Canadian firms to implement governance practices voluntarily, we hand-collected time-series data from the proxy circulars of a sample of firms. We choose to use proxy circulars since Canadian securities law specifies the specific types of information that should be disclosed in these documents unlike annual reports whose content is not mandated by securities law. For instance, the proxy circulars must provide a description of board members and their relation to the firm. While Canadian governance guidelines recommend certain practices related to board quality such as training sessions for new board members, these practices are not mandatory. We can deduce from the proxy circulars whether or not the company has voluntarily chosen to implement them.

The resulting dataset consists of a panel of companies listed on the Toronto Stock Exchange from 1999 to 2003. Ideally we would have examined firm disclosure since 1995 when the TSX Guidelines were issued. However, because the sample of companies to be examined in this time frame would be unduly large, we chose instead to begin our examination in 1999 as this was the year in which the TSX attempted to clarify its requirements relating to firm disclosure in order to make disclosure more readable.¹⁷ We examined proxy circulars for 2003 but not beyond this year since by 2004, securities regulators had adopted two major mandatory rules that mirrored some of the provisions in SOX. Thus, our data collection covers the time period between the request for formatted disclosure by the TSX (1999) and prior to the implementation of mandatory requirements that affected non cross-listed firms (2003).

¹⁷ In 1999, the TSX stated that the disclosure should take a certain format. *See* letter from Clare Gaudet, Vice President Corporate Finance Services, Toronto Stock Exchange (Nov. 17, 1999) (on file with author).

The companies chosen are those included in the S&P/TSX index (formerly the TSE300). Typically the index contains approximately 280 firms. Since many firms remain in the index for multiple years, the resulting dataset contains 942 firm-year observations from a total of 338 different firms.

The use of panel data permits the examination of both cross-sectional and time-series differences. In other words, we are able to establish whether firms have changed their governance mechanisms over time and whether certain firm or industry characteristics are associated with good governance. For each observation we collect information on the board of directors, large block holders of common shares, the existence of dual classes of common stock, and certain mechanisms explicitly related to SOX such as financial statement certification.

c) Hypotheses Development

Our central thesis is that firms are predisposed to voluntarily adopt corporate governance mechanisms even in the absence of any legal requirement to do so. As a result, voluntary guidelines for corporate governance may be an effective way to encourage firms to adopt additional governance practices that they may be already predisposed to implement. We argue that this predisposition in other words the incentives for voluntary adoption are not uniform across all firms. In this section we formalize our hypotheses related to an increasing trend in voluntary adoption and elaborate on the precise firm characteristics that may make this adoption more or less likely.

The majority of the Canadian governance guidelines implemented by the TSE in 1995 relate to board composition and performance. As a result, we begin our analysis with an assessment of board quality. In this assessment we focus on four characteristics of boards that were suggested to be good practice by the Canadian guidelines. These characteristics include: separation of the CEO and board chair; a fully independent audit committee; a majority of independent directors; and the provision of training for new members. A firm-year observation is allocated a point for each of these guidelines that it follows up to a maximum of 4.

(i) Voluntary Adoption of Board Guidelines

Our first set of hypotheses, hypotheses H1.A. through H1.C. relate to the level of this index. Quite straight forwardly, H1.A. seeks to document that voluntary adoption occurs, in other words the average level of the index of board quality, which we denote by BQ , is significantly different from zero across the sample firms. H1.B. tests whether the extent to which firms voluntarily adopt these

guidelines has changed over time. We suggest that increased public awareness of corporate governance issues and the TSE's further clarification of the guidelines in 1999 contributed to an increase in voluntary adoption over the sample period. We test whether the level of the index increases over time by creating the variable, YR , defined as 0 for 1999, 1 in 2000 etc. until reaching a maximum of 4 in 2003. Formally, these two hypotheses are:

$$H1.A: BQ \neq 0$$

$$H1.B: BQ = a + \beta YR + \varepsilon, \quad \text{where } \beta > 0$$

In broad terms, the third hypothesis related to this index, H1.C, suggests that firm characteristics influence the propensity for voluntary adoption. A more detailed description of this hypothesis requires an examination of these specific firm factors with the eventual test being a multivariate analysis of the influence of each of these factors on the index BQ . The factors that we consider can be categorized according to three groups, shareholdings, access to capital, and competitive pressure. The factors within each of these groups are discussed in turn.

(ii) Influence of Shareholdings and Share Structure on Voluntary Adoption

The first set of firm characteristics that can reasonably be expected to influence the voluntary adoption of corporate governance standards is the presence of a significant number of minority investors. Proxy circulars must disclose all individuals or groups holding over 10% of the voting power of common shares. We examine these block holders and classify them into one of three groups; families, executives, and other investors. Typically family block holdings are possessed by the original founding family of the firm (Morck et al, 2004) whereas executive block holdings are holdings maintained by senior management members. If an executive is also a member of the family we consider his/her holdings to be part of the family block. The third group of block holders is neither family nor executives. Instead they are typically large institutional investors such as pension or mutual funds. While families and executives with significant stock holdings may be less inclined to practice good governance, we suggest that the presence of large institutional investors may in fact encourage the adoption of additional governance mechanisms in keeping with their monitoring role which has extensively been described (e.g. Black, 1990).¹⁸

¹⁸ In formulating this study, we met with representatives from the two largest institutional investors in Canada being the Ontario Teachers Pension Plan Board, the Ontario Municipal Employee Retirement System and the Canadian Coalition for Good Governance which is a coalition group of institutions which was formed in 2002 to fight for improved governance in Canadian corporations. Members of the CCGG

Two final considerations under the category of stock holdings are the prevalence of dual classes of shares and firms cross-listing their securities in the US. One of the most contentious corporate governance issues in Canada is the presence of shares with differential voting power. These shares provide a significant amount of control to a small number of individuals, who are often insiders, at the expense of minority investors. We identify whether firms in our sample maintain dual classes of shares and hypothesize that these firms will be less likely to implement the recommended policies on board composition.

Turning to the issue of cross-listed shares, it is difficult to predict what the impact of cross-listing will be on board composition during our sample period. On the one hand, the Canadian guidelines were in place long before the US mandated additional governance standards under SOX with US corporate law existing at the state level. It could be argued that although these guidelines were not mandatory, their mere presence indicated a more comprehensive governance regime than what was in place in the US at the time. On the other hand, the implementation of SOX near the end of our sample time period ensures that the US standards were more stringent than the corresponding Canadian guidelines. As a result, we may expect these mandated requirements to be more effective than the voluntary guidelines (we discuss this issue more fully in hypothesis H2 below). For now, we make no clear prediction of the relation between board quality and cross-listing.

(iii) Influence of Access to Capital on Voluntary Adoption

We suggest that the extent to which a firm needs access to capital will be an important determinant of its corporate governance guidelines. The more the firm must access public equity markets, the more emphasis it may place on ensuring that adequate conditions are present to protect minority shareholders' interests. Improving board quality is one way to convey a commitment to strong corporate governance to potential investors and may even allow the firm to raise capital at a lower cost if these measures are seen to reduce shareholder risk (Macey, 1998). The firm characteristics presented here fall in the categories of identifying a need for capital and identifying the ability to access capital.

In terms of identifying a need for capital, we control for the firm's current capital expenditures, its retained earnings, and its research and development expenses (R&D). All three of these measures are scaled by total assets to control for differences in firm size. We suspect that the greater the need for capital, as

hold in aggregate \$135 billion of assets of Canadian corporations. These bodies affirmed their commitment to good governance. The CCGG indicated that it does perform a monitoring role in Canadian corporations.

indicated by high capex, low retentions, or R&D, the more willing the firm will be to voluntarily adopt additional governance standards.

To identify the firm's ability to access alternative sources of capital we control for its total leverage ratio, its market to book ratio, the tangibility of its assets and firm size as measured by total assets. We expect that firms with tangible assets that may be used for collateral and a low total leverage ratio may be better able to turn to debt for funds. Firms that turn to debt may not implement the same governance mechanisms since lenders often have the ability to request firm compliance with specific practices through covenants in the case of public debt or direct monitoring in the case of bank loans. Firms with high leverage and intangible assets may be more likely to raise funds through equity and therefore more willing to voluntarily implement additional governance mechanisms.

The predictions for large firms and those with a high market to book ratio are harder to determine. Our intuition suggests that large firms and those with a higher market to book ratio may find it easier to access capital markets. A high market to book ratio implies that the current stock price is strong and therefore management may find investors willing to accept a new stock issue. As a result, these firms may not need to improve board quality to the same extent to attract investors. However, since the timing for an equity issue is appealing, management may want to implement strong board guidelines to further enhance investor protection and make the issue even more enticing to investors. As a result, the relationship between the market to book ratio and board quality is unclear. Similarly, large firms are more likely to need access to additional sources of capital, particularly in a relatively small domestic market like Canada. While overall it may be easier for a large firm to access equity markets than a small firm and therefore less necessary for larger firms to improve board quality, the sheer volume of financing that must be raised may still encourage large firms to voluntarily incorporate additional governance guidelines.

(iv) Influence of Competitive Pressure on Voluntary Adoption

A final set of firm factors that we believe may influence a firm's propensity to voluntarily adopt corporate governance practices related to board quality is the actions of its peers. We suggest that if a firm's peers (i.e. firms within the same industry) adopt strong governance standards, the firm may feel pressure to implement these same standards. We test whether this is the case by examining whether voluntary adoption varies by industry. To do so, we broadly classify firms as belong to one of six industry groups where these groups are defined according to the first digit of the firm's SIC code. In addition, we control for the firm's profitability, as measured by return on equity, as a proxy for whether the firm is a leader in its industry. We suggest that more profitable firms have less

incentive to voluntarily adopt additional governance mechanisms. Any concerns that investors have regarding governance issues may be over-ridden by the attractiveness of firm profits. This represents a very different view on the profit-governance debate since typically, profits are viewed as the dependent variable with researchers attempting to establish whether good governance results in better profits. The results on this research have been mixed. While Gompers, Ishii, and Metrick (2003) find a positive relationship between stock returns and governance mechanisms, Coles, McWilliams and Sen (2000) and Jog and Dutta (2004) find no link between performance and governance. We hypothesize that causality runs both ways. While good governance may lead to better profits, a firm's current profit level may influence its willingness to adopt additional governance standards.

We have outlined firm characteristics that may influence a company's propensity to voluntarily adopt corporate governance guidelines related to board quality. Table 1 summarizes these factors and our predictions for their influence on board quality. These predictions can be broadly thought of as representing hypothesis H1.C.

(v) Voluntary Adoption of SOX Guidelines

In hypothesis 1, we suggested that firms may be motivated to voluntarily adopt governance guidelines in the absence of any legal requirement to do so. We outlined tests for the presence of voluntary adoption, the increased level of adoption over time, and the importance of firm characteristics in motivating adoption. Overall, hypothesis 1 relates to the effectiveness of a voluntary legal regime in encouraging sound corporate governance guidelines. Hypothesis 2 further examines voluntary adoption but in relation to the provisions of Sarbanes Oxley. In essence, hypothesis 2 tests the reach of SOX and suggests that non cross-listed Canadian firms may be inclined to adopt provisions of SOX despite no legal requirement to do so.

In order to test our hypotheses, we focus only on non cross-listed Canadian firms (i.e. those not mandated to comply with SOX). We again create an index related to corporate governance standards, this time incorporating standards outlined by SOX. In a small number of instances, the suggested Canadian guidelines overlap with the SOX practices. A firm receives a point for each of the following standards that it has implemented: a financial expert on the audit committee, the ability of the board to hire advisors, an independent audit committee, an independent compensation committee, a code of ethics, financial certification, the elimination of internal loans to managers, and a majority of independent directors. A maximum of 8 points are possible and the index is denoted by SX.

Our first test, H2.A establishes whether non cross-listed firms voluntarily adopt the provisions of SOX. More formally, this hypothesis is:

$$H2.A: SX \neq 0$$

Having established that some non cross-listed firms adopt these standards voluntarily, we turn to establishing the firm characteristics associated with higher levels of adoption. Similar to hypothesis H1.C. we focus on various categories of characteristics as set forth in Table 5.

IV. Empirical Results

Our empirical results are divided into two parts, the first relating to the behaviour of Canadian firms under a best practices governance regime and the second relating to the governance choices of non cross-listed firms that are not legally obliged to adhere to the Sarbanes-Oxley Act.

(a) Board Quality

Our first hypothesis relates to the index of board quality. This index ranges from 0 to 4 where 4 indicates that the firm is following all suggested TSX guidelines related to board quality. Figure 1 plots the proportion of firms complying with each of these guidelines in the fiscal years 1999 to 2003. From the figure, it is clear that a general increase in compliance has occurred during this period. The exception to this statement is the proportion of firms with a majority of independent directors on the board. This proportion has remained fairly flat over the years however it should be noted that a high measure of compliance with this guideline (close to 90%) existed even at the beginning of the sample period. These results indicate that even before the implementation of SOX, Canadian firms were exhibiting some of the same practices that came to be required under SOX.

Table 2 provides summary statistics related to the index of board quality. Average values for the index are provided for each fiscal year and for various sub-samples of the firms. Univariate tests are provided for differences between these sub-samples.

Our first observation is that the average value of the board quality index across all firm-year observations is 3.04. Clearly with a maximum value for the index of 4, this average compliance level indicates a strong propensity to voluntarily comply. In fact, the most frequently observed index value is 4 with over 37% of all firm-year observations resulting in this value. Examining the index level across all fiscal years shows an upward trend with the average value in 1999 of

2.78 while the average for 2003 is 3.43. In all years, the average value of the index is substantially different from zero and simple univariate t-tests confirm that this difference is statistically significant. As a result, we can confirm the first hypothesis that $BQ \neq 0$.

Our second hypothesis relates to a change in the level of compliance over time. We argue that an increased awareness of corporate governance issues since the introduction of the TSX guidelines has provided firms with greater incentives to implement the recommended board practices even in the absence of any formal requirement to do so. To test this hypothesis formally we create the *YR* variable which is equal to 0 in 1999, 1 in 2000 and so on until reaching its maximum value of 4 in 2003. The first column of Table 3 shows the results of the regression of this variable on the board quality index. Given the general trend observed in Table 2, it is not surprising that the *YR* variable is highly significant with a t-stat of 8.28. As a robustness check, we examine whether the increasing implementation of these practices over time is driven by cross-listed firms preparing to conform to the regulatory requirements of SOX. We confirm that this is not the case by repeating the same regression with only the sub-sample of non cross-listed firms. Again, the coefficient on the *YR* variable is positive and highly significant, indicating increasing adoption of these practices over time.

The results so far have established that many firms construct their boards in a manner consistent with suggested best practices and that recent years have seen an increase in the adoption of these practices. We make no claim that this increase is in response to any of the guidelines suggested by the Toronto Stock Exchange, only that in the absence of any requirement to do so, firms face adequate incentives to voluntarily adopt good governance practices. We turn now to examining whether we can identify particular characteristics that encourage firms to adopt these practices.

(b) Firm Shareholdings and Share Structure

We begin with an examination of whether shareholdings and share structure influence the level of voluntary adoption. Table 2 provides some initial evidence of this influence by reporting average index values for cross-listed firms versus non cross-listed, firms with dual classes of stock versus those without, and firms with family, executive, or other block shareholdings. The univariate results suggest that cross-listed stocks and those with dual class shares score lower on the board quality index measure. The same can be said for firms with significant executive block holdings however firms with family blocks or other block-holdings (typically institutional investors) do not exhibit this phenomenon.

A more robust examination of the factors influencing board quality requires a multivariate regression simultaneously controlling for all aspects of shareholdings and share structure. In addition, we include the *YR* variable to control for the observed general trends in the data. Robust standard errors are provided to account for correlation between firm-year observations from the same firm. Results are presented in the second column of Table 3.

The results show the continued robustness of the *YR* variable. Despite the inclusion of the shareholding variables, evidence of an increasing trend remains. In addition to time, the most significant influence on board composition appears to be whether the firm's executive holds more than 10% of voting power. While share ownership by executives is often advocated as a way to align the interests of managers and owners, we see little evidence that that is the case with the regards to board composition. Firms with executive block holdings score significantly worse on the board quality index.

We examine the correlation among our variables of shareholdings and share structure to establish if multicollinearity is a possible concern. More specifically we are interested in whether firms with executive block holdings have other characteristics in common such as the presence of dual classes of shares. We find low correlation (less than ± 0.17) among executive blocks and all other characteristics. In fact, correlation is very low across all variables with the only relation of note being the tendency for firms with family block holdings to maintain dual classes of shares (correlation of 0.37). This is not surprising given that many founding families hold a different class of shares than outside investors. As a robustness check we repeat the regression excluding the family block variable. We find the results are largely the same. The fiscal year and presence of executive blocks influence the board quality index while cross-listed securities, dual class shares, and the presence of non-family, non-executive block holdings do not.

(c) Demand for and Access to Capital

The second set of factors that are hypothesized to influence board quality reflect the company's need for capital and its ability to access that capital. Need for capital is measured by the firm's current capital expenditures, research and development spending and level of retained earnings. All three measures are scaled by total assets. Access to capital is measured by the firm's current leverage ratio as measured by debt to assets, the tangibility of its assets as measured by the proportion of property, plant and equipment over total assets, the market to book ratio, and finally firm size (\ln of total assets). The values for these variables are downloaded from the Canadian Compustat Database. Unfortunately, this database does not include all of the firms in our sample nor is data always

complete for the firms it does cover. In particular the amount of spending on research and development is missing for a large portion of the sample. As a result, we drop this variable from the analysis.

The third column of Table 3 examines whether a firm with a significant need for capital or a reduced ability to access capital adopts board practices that may be viewed favorably by investors and therefore make them a more attractive investment. There is evidence that firms with little need for additional capital have little incentive to voluntarily improve their board structure. The estimated coefficient on the retained earnings to assets ratio is negative and significant at the five percent level. Also significant are the coefficients on the market to book ratio and asset tangibility measure. In the case of market to book, the estimated coefficient is positive indicating that firms with a high market to book ratio tend to have better quality boards. Contrary to our expectation, firms with more tangible assets also have better quality boards. While we had expected that these firms would rely more on debt than equity and therefore face fewer incentives to voluntarily adopt additional governance mechanisms, we find that this is not the case.

The key variables from the previous specifications of the model remain significant with the addition of the Compustat variables. More specifically, we note that the *YR* variable and executive block holding dummy remain highly significant.

(d) Competitive Pressure

In addition to share structure and access to /demand for capital we hypothesized that firms may face competitive pressure to adopt additional governance standards if other firms in their industries do so. In order to establish if this is the case, we construct 6 industry classifications based on the SIC codes of the firms in our sample. These industry groupings are mining and minerals, manufacturing, transportation and utilities, retail, financial, and the service sector. We first report average values for the board quality index across these industry groupings and conduct t-tests to establish whether any one group has a significantly different level of voluntary adoption than the rest of the sample. Results are reported in Panel A of Table 4.

We find little evidence of vastly different governance standards across the industry groups. The exception to this statement is the financial industry group which tends to have a lower level of voluntary adoption than firms from all other industries. Panel B of Table 4 examines whether this finding remains after controlling for other firm characteristics that we have seen to be associated with varying levels of board quality. For instance, if financial firms also have high

levels of retained earnings, they may have fewer incentives to voluntarily adopt governance standards not so much because of industrial pressures but rather because of firm characteristics. In Panel B, we control for our same shareholding variables and those associated with the demand and access for capital. In addition, we include a measure of the firm's general profitability (return on equity) and dummy variables for industry groupings. We use the mineral group as our base industry and provide dummies equal to 1 for firms in the manufacturing, transportation, retail, financial and service industries.

After controlling for shareholdings and capital access/demand we find that industrial pressures appear to have little impact on firms' incentives to adopt additional governance standards. None of the dummy variables are significant. Controlling for industry however does alter the significance of some of the other factors. While the estimated coefficient for the market to book ratio and proportion of tangible assets remain positive, they are no longer significant. Executive block holdings, fiscal year, and level of retained earnings however remain important factors in determining firm board quality even with the addition of industry controls.

(e) Voluntary Adoption of SOX Standards

Having established that firms' boards reflect voluntary standards put in place by the Toronto Stock Exchange in the mid-90s and that certain firm characteristics are associated with a greater tendency to adopt these standards, we turn to a second setting in which voluntary adoption may occur. This setting is the implementation of standards contained in the Sarbanes-Oxley Act. While Canadian firms with stocks cross-listed in the US must comply with this Act, non cross-listed firms do not. We therefore create an index reflecting the extent to which non cross-listed firms adopt these standards and again test whether firm characteristics impact the level of adoption.

Our index consists of eight elements: the presence of a financial expert on the audit committee, the ability of the board to independently hire advisors, a wholly independent audit committee, a wholly independent compensation committee, a code of ethics, financial certification, prohibition of internal loans and a majority of independent directors. We plot the values of the index across all firm-year observations in Figure 2. Values are plotted both for the entire sample of firms and only those that are not-cross-listed in the United States. For both groups, the most common value for the index is 5 out of 8.

We note that cross-listed firms in 2002 and 2003 did not all reach the maximum index value since many of the provisions of SOX were not required to be implemented by foreign firms by year-end fiscal 2003. While some did manage

full compliance by 2003, we note that some non cross-listed firms also maintained index values of 8 during our sample period. As in the case of the Canadian standards, we see that firms frequently adopt additional governance standards in the absence of any formal requirement to do so. A formal test of whether the SOX index is equal to 0 for all non cross-listed firm-year observations is easily rejected at the 1 percent level.

We proceed to establish whether the same firm characteristics that are associated with voluntary adoption of the Canadian guidelines are also correlated with the adoption of SOX standards for non cross listed firms. The results are presented in Table 5. To conserve space, we report just the estimated coefficients and their significance level. Model 1 includes only the Yr variable to establish the influence of time on index levels. Model 2 includes the shareholding variables, Model 3 adds the capital access factors and Model 4 includes the industry competition values. Again robust standard errors are used in all model specifications. Note that because results are based only on non cross-listed corporations, the number of firm-year observations declines significantly.

Table 5 shows that many of the same factors that influenced firms to adopt the Canadian standards also influence non cross-listed firms to adopt the SOX standards. Starting with the first column we note that the year of the observation again plays a large role with firms adopting additional governance standards in recent years. Regardless of model specification, year is always positively related to the index level. When shareholding characteristics are added to the model in the second column of the table we again see that firms with executive block holdings are less likely to have higher levels of the SOX index. While the estimated coefficient on the executive block holding dummy is significant at the five percent level in Model 2, it falls to only 10% significance in the third and fourth models. Interestingly, the other block holding dummy, associated with holdings by institutional investors, enters the model significantly in Model 3 with the hypothesized positive sign. This indicates that the presence of institutional investors, perhaps some of whom are US-based, may influence firms to adopt SOX standards. However this result is not robust to the inclusion of industry controls.

The addition of variables proxying for a firm's ability to access capital markets and its need for capital again show the importance of a company's retained earnings in supporting its investments. In cases where retained earnings are high, the firm is less likely to voluntarily adopt additional governance standards. The level of capital expenditures is again positively associated with higher levels of the index with 10 percent significance in Model 3 and 5 percent significance in Model 4. As in the case of the Canadian guidelines, Model 4 demonstrates that a

firm's willingness to adopt SOX guidelines is not significantly influenced by competitive pressures such as common industry practice.

While many of the firm characteristics act similarly in both of our experimental settings – Canadian guidelines and adoption of SOX by non cross-listed firms – we note one interesting difference. Firm size had no significant influence on a company's willingness to adopt the Canadian standards however it is positively and significantly related to the adoption of SOX requirements. We hypothesize that this may be the case since larger Canadian firms will be more likely to cross-list their shares in upcoming years. As a result, they may begin implementing SOX standards in preparation for future cross-listings. While further examination of this theory is beyond the scope of this paper we note that the average size of our cross-listed firms is almost four times that of the non cross-listed sample.

V. Conclusion

In this study, we examined two issues: the behavior of Canadian companies under the domestic best practices regime and the impact of SOX on Canadian firms. We hypothesized that a firm's shareholdings and share structure influences its propensity to voluntarily adopt governance practices. We also hypothesized that firms would be motivated to adopt additional governance practices in order to ensure access to capital and to compete with firms in their respective industries.

Regarding the Canadian best practices regime, we found that firms structure their boards in a manner consistent with suggested best practices and that firms have increasingly adopted these practices in recent years. There is evidence that firms with little need for additional capital have corresponding low incentives to voluntarily improve their board structure. In particular, in cases where retained earnings are high, the firm is less likely to voluntarily adopt additional governance standards. We found little evidence that peer or competitive pressure among firms affects governance practices.

We then examined whether SOX affects the governance practices of firms not bound to comply with its requirements and whether these firms are likely to adopt these practices voluntarily. We found that firms frequently adopt additional governance standards in the absence of any formal requirement to do so. Firm size is positively correlated to the adoption of SOX provisions even though it had no significant influence on a company's willingness to adopt the Canadian standards. Again, we found that a firm's willingness to adopt SOX provisions is not significantly influenced by competitive pressures within Canada such as common industry practice.

In subsequent research, we intend to refine our model and narrow the incentives we test. In particular, we will focus on one of the incentives that was consistently a significant influence of voluntary adoption – namely a firm’s need for capital and access to capital. We believe that much of a firm’s governance practices can be explained by reference to its need to access capital markets and in particular US capital markets. In this vein, we found that large Canadian firms were more disposed to adopting SOX-like practices rather than Canadian best practices. This suggests their desire to prepare themselves for US listings or at least compete with their US rivals that are indeed subject to SOX.

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Table 1: Summary of Hypothesize Coefficients

Table 1 identifies the firm characteristics which are hypothesized to influence the voluntary adoption of corporate governance practices. Characteristics are categorized into three types: those that reflect the firm’s shareholdings, its need for or access to capital and competitive pressures within its industry. The hypothesized relation between each factor and the level of voluntary adoption is provided. A negative relation implies that the firm characteristic is less likely to be associated with a high level of voluntary adoption.

Firm Characteristic	Hypothesized Relation to Voluntary Adoption
<i>Shareholdings</i>	
Family Block	Negative
Executive Block	Negative
Other Block	Positive
Dual Class Shares	Negative
Cross-listed in the US	Uncertain
<i>Need for and Access to Capital</i>	
Capital Expenditures	Positive
Retained Earnings	Negative
Total Leverage	Negative
Tangibility	Negative
Market to Book Ratio	Uncertain
Total Assets	Uncertain
<i>Competitive Pressures</i>	
Return on Equity	Negative

Table 2: Summary of Board Quality Index (BQ)

Table 2 provides descriptive statistics and univariate tests on the level of the index of board quality (BQ). This index may range from 0 to 4 with a point added for each of the following board qualities: separation of the CEO and board chair, fully independent audit committee, majority of independent directors, and a provision for training new members. T-statistics and (p-values) are provided to indicate whether the level of BQ is equal to zero and whether its level varies significantly across firms with various characteristics, specifically whether the firm is cross-listed or not, whether it has dual classes of shares, family blockholdings, executive blockholdings, or an alternative blockholder.

	Mean Value of BQ	Univariate T-test Results
Fiscal Year		Test BQ = 0
1999	2.78	38.04 (0.00)
2000	2.80	37.28 (0.00)
2001	2.96	43.84 (0.00)
2002	3.26	54.16 (0.00)
2003	3.43	55.74 (0.00)
Average Across all Years	3.04	96.43 (0.00)
		Test BQ _{non-cross} = BQ _{cross}
Non Cross-Listed Firms	2.98	-2.32
Cross-Listed Firms	3.12	(0.02)
		Test BQ _{non-dual} = BQ _{dual}
Non-Dual Class Shares	3.09	2.90
Dual Class Shares	2.89	(0.00)
		Test BQ _{non-family} = BQ _{family}
Non- Family Block Firms	3.04	-0.86
Family Block	3.11	(0.39)
		Test BQ _{non-exec} = BQ _{exec}
Non-Executive Block Firms	3.15	6.52
Executive Block	2.60	(0.00)
		Test BQ _{non-block} = BQ _{block}
Non-Other Block Firms	3.02	-0.66
Other Block Firms	3.04	(0.51)

Table 3: Characteristics Influencing Board Quality

Table 3 provides regression results where the level of the board quality index (which ranges from 0 to 4) is the dependent variable. This index may range from 0 to 4 with a point added for each of the following board qualities: separation of the CEO and board chair, fully independent audit committee, majority of independent directors, and a provision for training new members. Model 1 uses only year dummies as independent variables, model 2 adds stock and block holding characteristics, and model 3 includes variables measuring the need for and access to capital. Regressions are run with robust standard errors to account for the presence of multiple firm-year observations from the same firm.

	Model 1		Model 2		Model 3	
	Coeff.	T-Stat	Coeff.	T-Stat	Coeff.	T-Stat
Constant	2.69	37.49**	2.84	27.83**	2.69	10.40**
YR	0.17	8.28**	0.17	8.11*	0.16	4.92**
Cross-listed			0.05	0.51	-0.09	-0.82
Dual Class			-0.15	-1.35	-0.23	-1.63
Family Block			0.01	0.11	0.01	0.06
Exec. Block			-0.52	-4.33**	-0.44	-3.18**
Other Block			0.24e-2	0.03	0.03	0.29
Leverage					-0.04	-0.12
Mkt to Book					0.11e-2	2.26*
Tangibility					0.30	2.19*
Ln Assets					0.80e-2	0.28
Capex					-0.09	-0.11
Retain. Earn.					-0.10	-2.39*
Observations	894		863		547	
R squared	0.06		0.13		0.15	

* Indicates significance at the 5% level

** Indicates significance at the 1% level

Table 4: Competitive Pressures and Board Quality

Panel A of Table 4 provides univariate tests for differences in the level of the board quality index for firms from particular industries versus the remaining sample. This index may range from 0 to 4 with a point added for each of the following board qualities: separation of the CEO and board chair, fully independent audit committee, majority of independent directors, and a provision for training new members. A positive T-statistic indicates that the remaining sample maintains a higher level of the BQ index than firms from a particular industry. Panel B of the table runs a regression where the level of the index is the dependent variable. Controls for the year, shareholding characteristics, variables measuring access to capital, and industry characteristics act as independent variables. Robust standard errors are used to account for the presence of multiple observations from the same firm.

Panel A: Univariate Tests		
	Mean BQ Index	T-test that $BQ_{Other} = BQ_{Ind}$
Mineral	3.14	-1.44
Manufacturing	3.07	-0.84
Transportation	3.13	-1.00
Retail	3.13	-0.86
Finance	2.80	2.40*
Service	3.04	-0.03
All Firms	3.04	
Panel B: Multivariate Regression		
	Coefficient	T-Stat
Constant	2.47	8.04**
Year	0.16	4.86**
Dual Class Shares	-0.21	-1.52
Family Block	-0.08	-0.43
Exec Block	-0.45	-3.19**
Other Block	0.01	0.13
Leverage	-0.09	-0.22
Mkt to Book	0.02	1.76
Tangibility	0.26	1.51
Ln Assets	0.03	1.03

Capex	-0.07	-0.08
Retained Earnings	-0.11	-2.69**
ROE	0.02	1.70
Manufacturing	0.09	0.50
Transportation	0.02	0.08
Retail	0.16	0.68
Financial	-0.26	-1.00
Service	0.01	0.05
Observations	547	
R squared	0.16	

Table 5: Characteristics Influencing Adoption of SOX Standards

Table 5 reports the results of a regression with an index identifying the voluntary adoption of SOX terms being the dependent variable. The index ranges from 0 to 8 with firms receiving a point for each of the following terms they adopt: a financial expert on the audit committee, the ability of the board to hire advisors, an independent audit committee, an independent compensation committee, a code of ethics, financial certification, the elimination of internal loans to managers, and a majority of independent directors. Independent variables include the year, stockholding characteristics, variables proxying for need for and access to capital, and industry. Robust standard errors are used to control for the presence of multiple observations from the same firm.

	Model 1	Model 2	Model 3	Model 4
Constant	3.69**	3.84**	2.19**	1.63*
YR	0.34**	0.35**	0.43**	0.43**
Dual Class		-0.03	-0.05	0.05
Family Block		-0.42	-0.42	-0.61
Exec. Block		-0.56*	-0.49	-0.54
Other Block		0.14	0.52*	0.31
Leverage			-0.81	-0.31
Mkt to Book			-0.12e-2	0.03
Tangibility			-0.98	-0.12
Ln Assets			0.24*	0.24*
Capex			2.59	3.28*
Retain. Earn.			-0.67**	-0.66**
ROE				0.03
Manufacturing				0.34
Transportation				-0.61
Retail				0.52
Financial				0.11
Services				0.95
Observations	322	316	186	186
R squared	0.10	0.15	0.29	0.35

Figure 1: The Four Components of the Index of Board Quality

Figure 1 plots the proportion of firms adopting a particular recommendation of the TSX standards related to board quality in each of the sample years.

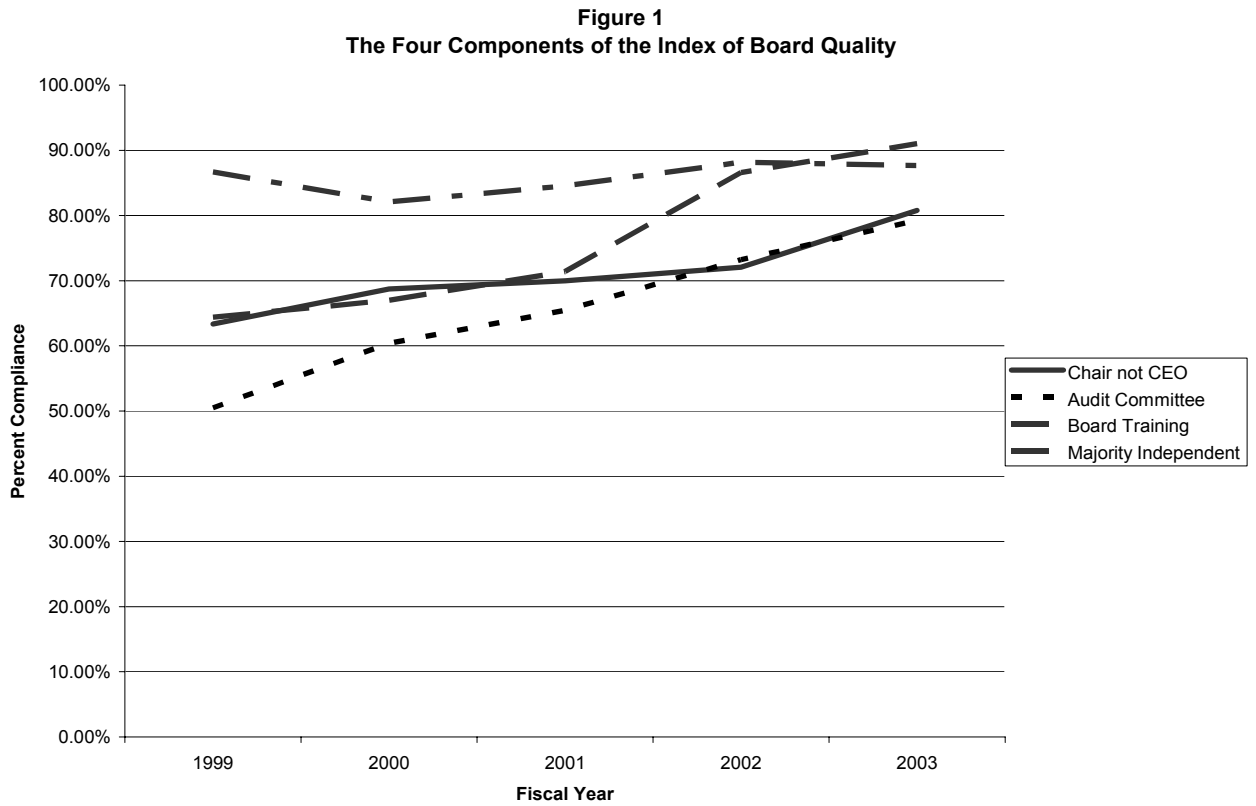


Figure 2: Index of SOX Adoption

Figure 2 plots the number of firm-year observations corresponding to various levels of the index of SOX adoption. The index ranges from 0 to 8 with a firm receiving a point for each of the following terms they adopt: a financial expert on the audit committee, the ability of the board to hire advisors, an independent audit committee, an independent compensation committee, a code of ethics, financial certification, the elimination of internal loans to managers, and a majority of independent directors. Results are provided for the sample as a whole and only those firms that are not cross-listed in the US.

Figure 2: Index of Sox Adoption

