OPTIMAL BOARD MEMBER DEMOGRAPHICS AND FIRM PERFORMANCE

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Abstract

This paper focuses on a fundamental element of the corporate governance process, the board of directors. By synthesizing the theory of organizational behaviour, this study identifies optimal board demographics and empirically tests their correlation with firm performance. A sample of 151 firms is used to test the relation of director demographics against Tobin's q , EVA, and ROA. This study suggests that a certain amount of diversity with respect to tenure and age is beneficial in a board and that smaller boards are associated with higher levels of firm performance. Furthermore, board members likely need time to adjust to a board but their contributions will tend to diminish with tenure of excessive levels. Finally, a high proportion of directors who hold outside board positions is associated with decreased firm performance, consistent with current views that directors are stretched too thin. This study argues that board design is related to the firms' ability to create value.

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Chapter 1: Introduction

1.1 Summary

This study focuses on a fundamental element of the corporate governance process, the board of directors. As the literature review will show, the arena of corporate governance is very large, encompassing countless issues that academics have struggled with for years. However, the review also reveals a gap in the literature regarding specific director demographics. By synthesizing the theory of organizational behaviour (OB), the goal of this study is to identify the board demographics that the OB literature tells us should lead to effective boards and to empirically test whether the theory is supported by data on board demographics and firm performance. The primary demographics addressed in this study include board diversity, board size, directors' tenure, and directors' experience. While the OB literature has a history of contributing to the governance literature, this is the first study that specifically links prescriptive ideas from the OB literature to board formation and empirically tests the correlation of firm performance with measures of what the OB literature prescribes.

This thesis is organized as follows. The remainder of this introductory section will address the research and investigative questions, the importance of the topic, and key assumptions of the study. The following section is a literature review that focuses on the firm, corporate governance, the board of directors, and board demographics from an organizational behaviour perspective. The third section deals with the research premise and the fourth portion outlines the research methodology and data analysis. Finally, the

fifth section outlines the analysis and results of the study while the final portion provides a conclusion and discusses the implications of the research.

1.2 Research Question

Do specific board member demographics correlate with firm performance?

1.3 Investigative questions

- i. Do high performing firms have diverse board members?
- ii. Is the size of a firm's board important?
- iii. Is the performance of a firm related to director tenure?
- iv. Do high performing firms have experienced board members?

1.4 Importance of Topic

This study was motivated by a noticeable gap in the existing literature regarding specific director demographics. Many researchers such as Leighton and Thain (1993) argue that the majority of directors are incompetent but offer no proof of such statements. Downen (1995) looked more closely at board of director quality and firm performance but only two propositions were offered in the study and only one was found to be of any consequence. This study will hopefully shed light on a topic deserving of more attention.

The topic itself is of extreme importance in this era of increased corporate fraud and public awareness of board performance. Any contribution to the governance of firms in this day and age is beneficial as both today's economy and society are calling for improvements in the way firms are governed.

There is a need for additional research with respect to board demographics for several reasons. Traditionally, boards have been “old boys’ clubs” where it was “who you knew” that secured a seat on a board rather than experience. Furthermore, in the face of new public pressures to govern corporations better, boards are beginning to change their demographics; as such, more consideration must be given to board design. Finally, it is always beneficial in this current competitive economic environment to be better able to identify contributions to firm performance.

1.5 Key Assumptions

The key assumptions underlying this work are: i) that all the data sources such as the financial reports, *Sedar* filings, Stock Guide and other secondary resources are accurate; ii) that the metrics chosen in this thesis to measure firm performance accurately reflect firm performance; iii) that high performing boards lead to high performing firms; and, iv) that board demographics can be measured using the quantitative methods outlined in the Research Methodology and Data Analysis section of this thesis.

Chapter 2: Literature Review

2.1 Introduction

The first section of this review addresses the theory of the firm. Popular theories and their attempts to describe the firm, as well as its boundaries, are reviewed here. This section provides the necessary background to understand what exactly is being governed. The next section addresses corporate governance and its various forms along with related issues such as the agency problem, ethics, and shareholder activism.

The two following sections address the board of directors and board demography from an organizational behaviour theory perspective. The first explains what financial journals are concerned with in respect of boards of directors and the following section looks at the issue from an organizational behaviour perspective.

2.2 The Firm

It is only appropriate that a study on corporate governance begins by looking at the firm itself. What is this “animal” we are trying to govern? Numerous theories have been developed over the years, some building on each other, and others in conflict. The theories of the firm to be identified in this review include: Coase’s ground breaking rational for the firm, Demsetz’s presentation of the pure economic theory of the firm, and Williamson’s idea of the firm as a governance structure explained via transaction cost economics. A brief review of mechanism design, the classical model of the entrepreneur, and the property rights theory of the firm are also considered. Finally, the firm as a nexus of contracts as explained by Jensen and Meckling will conclude this discussion. The

concept of agency theory will be reviewed in the following section entitled corporate governance.

As identified above there are several theories of the firm and its boundaries. One of the more popular and most cited accounts comes from Ronald Coase (1937). Coase argues that a firm is not an organization but an organism, automatically regulated by the price mechanism. In contrast, within the firm, the entrepreneur directs production and coordinates without intervention of a price mechanism; but "...if production is regulated by price movements, production could be carried on without any organization at all, well might we ask, why is there any organization" (Coase, 1937, Pg 387)? In other words if markets are so efficient why do firms exist? Coase explains, "...the operation of a market costs something [such as the costs of negotiating and concluding a separate contract for each exchange transaction] and by forming an organization and allowing some authority (an "entrepreneur") to direct the resources, certain marketing costs are saved" (Coase, 1937, Pg 391). Thus, firms actually present greater efficiency over markets by decreasing such costs.

That being said, if firms are so efficient, why are markets needed? (Coase, 1937) As per Coase, as the firm grows (when the entrepreneur organizes additional transactions), decreasing returns to scale may occur. This is possible for three reasons: (1) coordination costs may increase until eventually the firm is indifferent between integrating transactions and purchasing through the market, which thus makes firm size a boundary to the firm; (2) the entrepreneur may fail to make the best use of the factors of production; (3) "...the supply price of one or more of the factors of production may rise,

because the ‘other advantages’ of a small firm are greater than those of a large firm” (Coase, 1937, Pg 394). These three decisions are what determines when a firm should integrate or when it should rely on the market; the make or buy decision.

In contrast to Coase, Harold Demsetz looks at the firm from the perspective of the pure economic theory. He argues that there is a difference between firms according to economic theory, which are lean, no-nonsense institutions devoid of managerial amenities versus real firms, which Demsetz describes as largely controlled by management possessing insignificant interest in the profitability of the firm’s activities: “the [real] firm may seek to keep shareholders contented with a minimum acceptable positive return, but beyond that, profit is traded off to increase the utility of management” (Demsetz, 1983, Pg 377). Demsetz explains that two divisions of resources exist, production versus consumption. Households are defined as a theoretical institution in which rational decisions about consumption take place. The firm on the other hand is defined as a theoretical institution in which production (for others) takes place. Both are to be considered as specialized in their functions. Consumption is said to create utility and therefore households are concerned with utility increasing decisions. Firms on the other hand are concerned with profit maximization, which is accomplished by indirectly delivering utility creating consumption capability.

Oliver Williamson (1981), positions the firm as a governance structure:

“Transaction Cost Economics focuses on the organization of transactions that occur whenever a good or service is transferred from a provider to a user across a technologically separable interface...[,] transaction costs can include managing and monitoring personnel and

procuring inputs and capital equipment. The transaction costs of buying the same good or service from an external provider can include the costs of source selection, contract management, performance measurement, and dispute resolution. Thus, the organization of transactions, or “governance structure,” affects transaction costs” (Transaction Cost Economics, <http://www.rand.org/>, Accessed 2003).

The idea is to assess alternative governance structures of which firms and markets are the leading choices in terms of their capacities to economize on transaction costs. The discipline of transaction cost economics (TCE) is the means by which Williamson defines the firm and its operations: “The transaction cost approach to the study of economic organization regards the transaction as the basic unit of analysis and holds that an understanding of transaction cost economizing is central to the study of organizations” (Williamson, 1981, Pg 548). According to Williamson, the TCE approach addresses the firm at three different levels. First, it addresses the overall structure of the enterprise to determine how operating parts should be related to one another. Second, the middle level focuses on operating parts of the firm to determine which activities should be performed within the firm, outside the firm, and why. In other words, the boundaries of the firm are defined at this stage. Third, TCE is also concerned with the manner in which human assets are organized and identifies appropriate governance structures given the attributes of particular work groups. Williamson claims the following proposition applies quite generally such that: “governance structures that have better transaction cost economizing will eventually displace those that have worse, *ceteris paribus*” (Williamson, 1981, Pg 574).

The boundary of the firm according to TCE is as follows: "...the firm begins with a 'core technology', within which integration is treated as unproblematic. Forward, lateral, and backward integration in relation to the core are then examined" (Williamson, 1998a). For example, the firm can choose to employ backward integration into raw material versus procuring raw materials from others. Williamson explains this further by asking whether the firm will produce its own components or buy them in the market. Will the firm integrate forward into distribution or will it rely on the wholesale and retail capacities of others: "...the action resides in the attributes of transactions in relation to the cost on the one hand and competencies of alternative modes of governance on the other" (Williamson, 1998a).

The relationship between the firm, its governance, and TCE can best be summed up by the following hypothesis: "transactions, which differ in their attributes, are aligned with governance structures, which differ in the cost and competence, so as to effect a (mainly) transaction-cost economizing result" (Williamson, 1998b). Williamson explains that governance is the means by which order is accomplished in a relationship in which potential conflict threatens to undo or upset opportunities to realize mutual gains.

There are however several remaining theories in contrast to Williamson's idea of the firm as a governance structure. These include: "...mechanism design (where a menu of contracts is used to elicit private information) [Prescott and Townsend, 1996], agency theory (where risk aversion and multitasking are featured) [Jensen and Meckling, 1976], [the classical model of the entrepreneur (Baumal, 1959)] and the property rights theory of the firm (where everything rests on asset ownership) [Fama, 1980]" (Williamson, 2002).

Of these contrasting propositions, the agency theory will be further reviewed in detail in the following section because of its relevance to corporate governance. The classical model of an entrepreneur, the “economic man” view, proposes that the owner-manager operates the firm to maximize profits (Baumal, 1959). Therefore, the firm is controlled and owned by the same person: “...this literature fails to explain the large modern corporation in which control of the firm is in the hands of managers who are more or less separate from the firm’s security holders” (Fama, 1980, Pg 289).

With regard to the property rights theory of the firm, Fama explains that: “The firm is viewed as a set of contracts among factors of production, with each factor motivated by its self-interest” (Fama, 1980, Pg 289). In essence, the firm is a team of cooperating factors of production and the concept of ownership of the firm under this view is irrelevant because: “...control over the firm’s decisions is not necessarily the province of the firm’s security holders” (Fama, 1980, Pg 290). In fact, the manager is separate from the risk bearer (residual claimants), as each are separate factors of productions. Fama asserts this view is more appropriate for the modern corporation.

Jensen and Meckling (1976) describe the firm as a nexus of contracts and argue that most organizations are simply legal fictions serving as a nexus for a set of relationships between individuals. To them, the firm “...serves as a focus for a complex process in which the conflicting objectives of individuals (some of whom may “represent” other organizations) are brought into equilibrium within a framework of contractual relations” (Jensen and Meckling, 1976, Pg 9). Furthermore, no two firms will have the same ‘nexus of contracts.’ This notion of contracts is also extended to the theory

of property rights: "...specification of individual rights determines how costs and rewards will be allocated among the participants in any organization [but]...the specification of rights is generally effected through contracting" (Jensen and Meckling, 1976).

2.3 The Theory of Corporate Governance and Related Issues

2.3.1 Corporate Governance

Corporate Governance is: "The system of relations between the shareholders, board of directors and management of a company, as defined by the corporate charter, bylaws, formal policy and rule of law" (Corporate Governance Glossary, <http://www.corp-gov.org/glossary...>, Accessed 2003). Corporate governance defined by Cadbury (1992) is the system through which companies are directed and controlled.

Monks (1995) discusses the difficulty in achieving an optimal balance between power and accountability. He explains that agents must have enough power to perform tasks, as long as there is accountability to ensure those tasks are performed to the benefit of shareholders. Monks sees governance as a system of checks and balances that permits the appropriate range of authority (power) and limits the abuse of authority (accountability).

According to Shleifer and Vishny (1997), corporate governance has many purposes. It gets managers to return profits to suppliers of finance and assures managers don't steal capital or invest poorly. Corporate governance also "... deals with constraints that managers put on themselves, or that investors put on managers, to reduce the ex post misallocation and thus to induce investors to provide more funds ex ante" (Shleifer and Vishny 1997, Pg 743). Becht et al. (2002) view corporate governance as being

“...concerned with the resolution of collective action problems among dispersed investors and the reconciliation of conflicts of interest between various corporate claimholders” (Becht et al., 2002, Pg 2). Regardless of the wording among the numerous definitions that exist, the main idea of corporate governance is the same, protection of stakeholders interests.

The literature has different views regarding the state of corporate governance in developed economies. Some say it's optimistic and others such as Jensen disagree. It is worth noting that transition and underdeveloped economies have extremely weak and almost non-existent governance structures. Their weak economic performance might be evidence of the important role corporate governance plays.

One prominent, yet flawed view of corporate governance, identified by Shleifer and Vishny (1997), is that corporate governance itself may not matter because of perfectly efficient capital markets such that that competition requires cost minimization, which would automatically lead to efficient operations. This force obviously doesn't work alone; thus, the existence of corporate governance is an essential part of any economy. Corporate governance is required because “...even if the founder of the firm or the shareholders can design and implement any corporate charter they like, they will tend to write inefficient rules since they cannot feasibly involve all the parties concerned in a comprehensive bargain” (Becht et al., 2002, Pg 19). Regardless, if a firm initially has the right incentives to design efficient rules, Becht et al. (2002) argue that the firm may be inclined to break or alter them later. A problem then arises when firms do not have the power to commit to not changing or breaking the rules in the future.

One may wonder why this topic is so prominent in today's literature. Becht et al. (2002) identify four major reasons for the upsurge in the attention paid to corporate governance: (1) privatization, this concept is on the rise and introduces the question of how new corporations should be owned as well as controlled; (2) pension funds and active investors, this industry has grown phenomenally and as a result has created concentrated shareholdings powerful enough to actually influence firm governance; (3) mergers and takeovers, numerous high profile cases have brought political attention to the issue of firm governance; and (4) highly publicized scandals and failures of major corporations.

2.3.2 The Agency Problem

Agency theory is probably one of the most discussed topics in firm research. Shleifer and Vishny (1997), explain the agency problem as one of ensuring that financial suppliers' capital not be expropriated or wasted. They explain that even though a contract is drafted outlining the intended usage of such funds, contracts are ultimately flawed because agents and owners are unable to foresee everything, thus making contracts inevitably incomplete. Control is then usually allocated to the managers for occurrences unforeseen in the contract; therefore, "...managers end up with significant control rights (discretion) over how to allocate investors' funds" (Shleifer and Vishny, 1997, Pg 742). Jensen and Meckling, define an agency relationship as "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (Jensen and Meckling, 1976, Pg 309).

It is Fama and Jensen (1983) however who really break down the separation of ownership and control. Fama and Jensen first describe the organization as "...the nexus of contracts, written and unwritten, among owners of factors of production and customers. These contracts or internal 'rules of the game' specify the rights of each agent in the organization, performance criteria on which agents are evaluated, and the payoff functions they face" (Fama and Jensen, 1983, Pg 2). Central contracts consist of two components: residual claims and the decision process. The decision process encompasses four steps: (1) initiation of proposals for resource utilization; (2) ratification or choosing initiatives to be implemented; (3) implementation of ratified initiatives; and (4) monitoring decision agents' performance and implementing rewards. Steps (1) and (3) are considered decision management while steps (2) and (4) are decision control.

Fama and Jensen (1983) argue that separation of residual risk bearing from decision management leads to decision systems that separate decision management from decision control. An effective system is in fact one that separates decision management from control but problems (agency costs) occur when managers are not residual claimants. They suggest the separation of decision management, decision control, and residual risk bearing when the firm is complex or large. Three benefits can arise from doing this: (1) the diffusion of specific knowledge or the delegation of decision management to agents with valuable relevant knowledge; (2) diffused residual claims since complex firms would incur great cost for the many agents to be involved in decision control; and (3) a limit on the power of individual decision agents to expropriate

the interests of residual claimants. The board of directors is one mechanism used to separate management and control decisions.

However, in small noncomplex firms it may be “efficient to combine decision management and control functions in one or a few agents” (Fama and Jensen, 1983, Pg 28). This is likely due to resource constraints.

Williamson (1993) presents support for Fama and Jensen’s (1983) theory of decomposition, the act of distinguishing between decision management and decision control. However, Williamson is also a strong proponent of diffuse decision control, that is, allowing strategic decision making to permeate the organization. The problem with Williamson’s views is that they contradict each other, as one cannot have diffused decision control and decomposition at the same time. This is one downside to Fama and Jensen’s theory because it does not admit the possibility of gains due to diffuse decision control that Williamson argues exist.

Agency costs include residual loss, monitoring and bonding expenditures or more specifically the cost of auditing, formal control systems, budget restrictions, and the establishment of incentive compensation systems. In essence agency costs arise because of an inability to draft a perfect contract. According to McColgan (2003), there are three reasons why agency costs may occur. First, is moral hazard. This arises as managers’ equity stakes decrease possibly causing their work incentive to also diminish. Second is earnings retention. Since remuneration is an increasing function of company size, management has an incentive to focus on growth in the size of the firm rather than on shareholder returns. Jensen (1986) furthers this by arguing that managers prefer to retain

earnings versus shareholders who favour higher levels of cash distributions. This is especially problematic when the company has few positive NPV investment opportunities. The third and final reason is risk aversion. Since investors can diversify their holdings, they possess a different view of risk as compared to the managers whose wealth is tied to stock of the company they manage, thus they often avoid taking on risk, even in the form of positive NPV projects.

Now that we know why agency costs take place and what they are, it is important to note how they occur. Shleifer and Vishny (1997) state that managers end up with significant control rights (discretion) over how to allocate investors' funds. As such, three ways of expropriation exist: the manipulation of transfer pricing, entering into projects that benefit managers instead of the firm, and management entrenchment or staying on the job beyond their competency.

Harold Demsetz's (1983) view on the separation of ownership and control is more optimistic than most. First, Demsetz claims that on the job consumption by employees is mutually advantageous because the employee pays for his amenities by accepting lower compensation, and since the goods employees consume on the job are produced at as low an opportunity cost as possible this then complies with the profit maximization assumption. Second, shirking is identified as a non-activity and as a direct result monitoring costs exist. In a firm that has high monitoring costs "...take-home pay will be lower than for the same quality group of employees employed in a low monitoring cost firm" (Demsetz 1983, Pg 381). Consequently, it is no longer clear that diffuse ownership gives rise to high costs since there is substitution between on-the-job-consumption and

take home pay. One stylized fact is that monitoring costs increase the more broadly based the ownership of the firm becomes. While this may be true, the foregoing arguments suggest that take-home pay will be adjusted for those monitoring costs so that the sum of monitoring costs and take-home pay for a group of like quality managers will be the same in both a narrowly owned firm and a broadly owned firm. The deployment of resources may however differ between take-home pay, on the job consumption, monitoring costs, and shirking.

While Demsetz is not arguing there is a perfect correlation between the interests of owners and managers, he makes it clear that there is an ongoing interest in profit maximizing behaviour. Furthermore, “In a world in which self-interest plays a significant role in economic behaviour, it is foolish to believe that owners of valuable resources systematically relinquish control to managers who are not guided to serve their interests” (Demsetz, 1983, Pg 390).

Berle and Means (1932) identify a problem with the separation of ownership and control that is an antecedent to agency costs, and in some cases may actually lead to them: “The separation of ownership from control produces a condition where the interests of owner and of ultimate manager may, and often do, diverge, and where many of the checks which formerly operated to limit the use of power disappear...” (Berle and Means, 1932 - cited in Demsetz, 1983, Pg 375). In a related note Shleifer and Vishny (1997) explain that management discretion has limits and these limits take the form of corporate governance.

2.3.3 Types of Governance and Models of Shareholder Protection

Governance can be classified into two main categories: economic and legal. This discussion focuses on the economic aspects of governance.

2.3.3.1 The Managerial Labour Market

The managerial labour market has an interesting influence on agents. Managers are affected in two different ways: reputation and executive compensation. First, agents tend to avoid risk, which is one of the aforementioned agency costs, for a reason other than their vested stock ownership. Failures in the corporate world have an impact on their personal marketability in the future. Therefore, the protection of reputation by agents and directors has an effect on corporate governance. Managers want to raise capital in the future and their reputation must be intact in order to do so efficiently (Shleifer and Vishny, 1997). Demsetz (1983) supports this notion by explaining that management worries about the price of stocks or bonds because this affects the price of capital to the organization and even shirking managers want cheaper funding of amenities. Becht et al. (2002) add that executives are concerned about performance not only because their pay is linked to it, but because their future career opportunities are also affected by it.

As for the labour market's effect on managerial compensation, Fama (1980) argues that managers will be compensated relative to the market's estimation of how well they are aligned to shareholder's interests, proven by their management of previous companies. One can now see how the first influence (reputation) can actually affect the second (compensation).

2.3.3.2 Corporate Financial Policy

Capital structure can have an influential effect on an agent's decisions. Jensen and Meckling (1976) propose that debt financing can reduce agency costs because managers can be constrained by the interest payments. It is also a means through which insider ownership can increase via leveraged buy-outs (LBOs). A defining feature of debt is the ability of creditors to exercise control (Shleifer and Vishny, 1997). Shleifer and Vishny (1997), agree with Jensen and Meckling that debt puts constraints on agents in that management fears liquidation and bankruptcy. Management therefore will pay creditors and not expropriate free cash flows.

According to Williamson (2002) debt and equity are not merely alternative modes of finance but also alternative modes of governance. Debt, for example, is a governance structure which encompasses a unique set of rules: (1) interest payments to be made at regular intervals; (2) the firm must meet outlined liquidity tests; (3) the principal must be repaid at a stipulated date; and (4) debt holders exercise their asset claims in the event of loan default. As Williamson (2002) explains, debt is a very unforgiving form of capital. Equity on the other hand "...has the following governance properties: (1) it bears a residual-claimant status to the firm in both earnings and asset-liquidation respects; (2) it contracts for the duration of the life of the firm; and (3) a board of directors is created ... [and] awarded to the holders of equity so as to reduce the cost of capital by providing safeguards" (Williamson, 2002, Pg 22). Therefore, Williamson has shown how two separate forms of capital impose entirely different sets of governing rules upon the firm.

Jensen (1989) believes that leverage is so effective that the publicly held corporation is actually being eclipsed by organizations that use public and private debt to make up the majority of their capital structure. Examples of such uses of debt include takeovers, spin-offs, LBOs, and going private transactions, which are primarily done by large institutions and entrepreneurs, not households. Jensen explains that the new organizations are more efficient and have solved the agency problem by eliminating much of the loss created by conflict between owners and managers. In fact, the large institutional funds act like owners instead of traders and they are rediscovering the role of active investing. This occurs through holding large positions, sitting on boards, monitoring and dismissing management, and being involved with the direction of the firm. In essence, Jensen (1989) argues that LBOs create better performance because they generate value not EPS, and for the sceptics, high debt can actually make bankruptcy less likely because troubled companies are recognized earlier.

Shleifer and Vishny (1997) argue that there are costs to debt that may however decrease its efficiency as a controlling mechanism. They explain that an inability to invest in positive net present value (NPV) projects may arise because the covenants may not allow for additional funds to be raised. The call for liquidation may also come at a time when it is inefficient to do so.

Jensen (1986) also argues that paying dividends can help control agency costs by reducing free cash flow; however, the obligation in this instance is not as strong and thus this mechanism is not as effective as debt. Mechanisms such as debt or dividends are

required to reduce free cash flows as Jensen (1986) argues managers are more likely to reinvest (not profitably in all cases) the free cash rather than return it to investors.

When firms are young however they lack the collateral required to raise debt. This makes equity more popular for young and high growth firms whose risks may also be too high for creditors. Equity holders are protected however through voting rights and legal protection for minority shareholders. The issues surrounding proxy contests will be discussed in a later section.

2.3.3.3 Block holders and Institutional Investors

Shleifer and Vishny (1997) propose that concerted action is much easier and legal protection is better leveraged with larger shareholdings. They state a large shareholding is the most direct way to align cash flow and control rights of outside investors. Larger shareholders have more incentive to collect information and monitor agents, as well as possess enough voting control to pressure management, and therefore have both ownership and control. Large creditors on the other hand control rights received when the firm defaults or breaks covenants. Also due to the nature of the lending (short-term), borrowers must come back, thus agents want to be in good standing with large creditors.

The drawback for large investors is that they have a tendency to not diversify and therefore bear a large proportion of the risk. Becht et al. (2002) identify the existence of a trade-off between optimal risk diversification, obtained under a dispersed ownership structure, and optimal monitoring incentives, which requires concentrated ownership. Shleifer and Vishny (1997) also identify costs to other stakeholders of having large

investors, which include: the straightforward expropriation of minority investors, managers, as well as employees and inefficient expropriation through pursuit of the personal objectives of the large investor.

2.3.3.4 The Market for Corporate Control

Jensen and Ruback explain that "...the market for corporate control, [is] often referred to as the takeover market" (Jensen and Ruback, 1983, pg 2). Shleifer and Vishny (1997) identify a typical hostile takeover as the case in which a bidder makes a tender offer and acquires control of the firm giving the bidder the opportunity to replace, or at least control, the management. A takeover is considered a prompt mechanism for ownership concentration and is usually initiated towards poorly performing firms. Fama and Jensen (1983) describe corporate control as the ability to determine the management of the corporation. For example, the right to hire, terminate, and specify management compensation.

Shleifer and Vishny (1997) claim that some problems exist with this form of control: (1) the mechanism is very expensive, (2) agency costs can actually be increased if management overbids, (3) they require very liquid capital markets, and (4) this mechanism is politically sensitive, hence the existence of anti-takeover legislation. However, capital markets "...were relatively constrained by law and regulatory practice from about 1940 until their resurrection through hostile tender offers in the 1970s" (Jensen , 1993, pg 24).

Becht et al. (2002) argue that takeovers are rarely used, are costly, and are highly disruptive. Takeover enthusiasts claim the corporation owes its salvation to this device, but Williamson says this is highly exaggerated, since the corporation was not threatened with demise in the pre-takeover era (Williamson, 1993). However, Williamson (1993) adds that the board of directors bears a greater responsibility for checking managerial discretion in corporations where competition in the capital market is weak. In essence Williamson sees value in the market for corporate control but does not believe it is the only mechanism of governance required.

Jensen and Ruback argue that, “corporate takeovers generate positive gains, that target firm shareholders benefit, and that bidding firm shareholders do not lose” (Jensen and Ruback, 1983, pg 1). There are four sources of these gains according to Jensen and Ruback (1983): (1) a reduction in production or distribution costs called synergy gains; (2) possible unused tax shields, increased leverage, and other tax advantages; (3) an increase in power among product markets due to increase in bargaining power; and (4) a possible elimination of inefficient target management.

2.3.3.5 Managerial Remuneration

McColgan (2003) and Becht et al. (2002) propose that the structure of executive compensation contracts can have a large influence in aligning the interest of shareholders and management; hence, proper incentive design can decrease agency cost. McColgan also identifies numerous components to an incentive system and their origins. Salary for example, is likely to be determined by the managerial labour market, along with firm size

and the manager's position. While option values increase with that of the firm, other components include bonuses and long-term incentive plans which award stock in the company upon achieving long-term performance goals.

In terms of managerial remuneration effectiveness, Kole (1997) found systematic variation among executive compensation plans and linked these differences to the characteristics of the company's assets. This supports the notion that companies attempt to minimise agency costs through the planning of executive compensation contracts. Jensen (1989) argues that when salaries of management are directly linked to performance, the compensation becomes almost 20 times more sensitive to performance than that of a typical company manager. Furthermore, performance based pay is key to decreasing agency costs.

Becht et al. (2002) add some pessimism to the effectiveness of CEO incentive systems. For example, they argue that stock options are a simple and direct way for CEOs to enrich themselves and expropriate shareholders. Becht et al. also state that, "much of the agency theory that justifies executive compensation schemes unrealistically assumes that earnings and stock prices cannot be manipulated" (Becht et al., 2000, Pg 47). This assumption has been proven wrong countless times in the past. Shleifer and Vishny (1997) identify, based on previous research, a distinct positive relationship between management pay and performance but also say there is room for management manipulation of the pay-performance contract.

2.3.3.6 Managerial Share Ownership

Like many other governance issues, managerial share ownership has been found to have both strong proponents and critics. Jensen and Meckling (1976) support managerial share ownership because they believe management's incentives to invest in positive NPV projects increase and that on-the-job-consumption will decrease accordingly. Furthermore, "as the owner-manager's fraction of the equity falls, his fractional claim on the outcomes falls and this will tend to encourage him to appropriate larger amounts of the corporate resources in the form of perquisites" (Jensen and Meckling, 1976, pg 12)

In addition to this, Walkling and Long (1984) found that when management has financial interest in the company, resistance to value-creating takeovers is far less likely.

On the critical side of managerial share ownership, Fama and Jensen (1983) argue that it is possible for managerial entrenchment to transpire. This occurs when management is able to pursue their own self-interests, possibly at the expense of other shareholders, as a result of the power they gained through share ownership. But what is even more likely to occur is that "...management share ownership is [simply] too small to make managers interested in profit maximization" (Shleifer and Vishny, 1997, pg 744), therefore, having little to no effect.

In addition to managerial ownership, Shleifer and Vishny (1997) discuss the existence of cooperatives, which are businesses that belong to the people that use them and likely managed by government. They explain that by voting on management decisions, stakeholders achieve superior outcomes other than that of profit-maximizing

owners. There are, however, many arguments over government ownership such as inefficiency. In some cases, the public sector is a worse polluter than the private sector, and bureaucratic goals may also differ from social welfare enhancing goals.

2.3.3.7 Privatization

Does privatization have an impact on firm governance? In a 1994 international study Megginson et al. “compared the pre- and post privatization financial and operating performance of 61 companies from 18 countries and 32 industries that experienced full or partial privatization ... during the period 1961 to 1990” (Megginson et al, 1994, pg 403). A significant increase in profitability, output per employee, capital spending, and total employment was found; lower leverage and higher dividend payout ratios were also identified. The authors concluded that “the involvement of private investors in a firm’s ownership structure – critically impacts a firms operating and financial performance” (Megginson et al, 1994, pg 448).

2.3.3.8 Legal Protection

Shleifer and Vishny (1997) state that investors receive legal control rights in exchange for capital. One being the right to vote; however, this is expensive to exercise as well as to enforce, and another includes a claim on assets. Further supporting the ineffectiveness of the legal-political-regulatory system as a control force operating on the corporation, Jensen argues it is “far too blunt an instrument to effectively handle the problems of wasteful managerial behavior” (Jensen, 1993, pg 24). The right to vote and the practice of proxy contests will be discussed in more depth later in this review.

Are debt or equity positions in companies protected to varying degrees under the law? Shleifer and Vishny (1997) argue that legal protection is greater for debt than equity holders even if dispersed. Therefore, the level of protection for investors is a function of the form of investment that is selected.

Jensen (1993) argues that an inadequate but prominent legal liability to shareholders exists. The main motivation for a firm is actually the avoidance of lawsuits, usually triggered by unexpected stock price declines. However, “these legal incentives are more often consistent with minimizing downside risk rather than maximizing value” (Jensen, 1993, Pg 42); this is why they are considered inadequate.

2.3.4 Invisible Versus Visible Governance

Williamson identifies the existence of invisible (market) and visible (hierarchy) governance. Coase (1937) questions the necessity of such conscious organization since it is usually argued that coordination will be done by the price mechanism. Based on the argument that the central problem of organization is adaptation: “Survival of an organization depends upon...readjustment of processes internal to the organization” (Barnard, 1938 – cited in Williamson, 1994). Williamson states, however, that a high performance economy will combine the capacity for autonomous adaptation (in the market) with cooperative adaptation (in the firm). Therefore, there is a need for both market and hierarchy forms of governance.

2.3.5 Ethics

Of all the types of governance in existence one of the most important is unquestionably ethics, as “...economic analysis can only go so far, at some point we must

defer to political pressure or to behavioural notions of fairness, social responsibility, trust or culture” (Brennan, 1995, Pg 3). It has also been argued “the presence of what are in slightly old-fashioned terminology called virtues in fact plays a significant role in the operation of the economic system. The process of exchange requires or at least is greatly facilitated by the presence of several of these virtues (not only truth, but also trust, loyalty, and justice in future dealings)” (Noreen, 1988 – cited in Brennan, 1995, Pg 4).

Brennan (1995) also argues that in the absence of general self-denying conduct, that essentially disdains criminal behaviour, our market economy would simply not function as we know it. He also questions Jensen’s agency model, which states businessmen are opportunistic (i.e. it is expected agency costs will occur if monitoring is not present). Brennan argues this sends the wrong message to students of business and that there is a clear distinction between rational and self-interest decisions that Jensen argues are similar. Essentially, Brennan claims ethics play an important role in our market economy, which unfortunately has yet to be captured in present economic theories such as Jensen’s agency model.

2.3.6 Shareholder Passivity/Activism

There is an increasing consensus regarding the rate and effectiveness of shareholder activism: “Pension funds, mutual funds and insurance companies (and banks outside the U.S.) often buy large stakes in corporations and could take an active role in monitoring management. Generally, however, because of regulatory constraints or lack of incentives they tend to be passive” (Becht et al., 2002, Pg 38). Becht et al. argue that such large shareholdings could be optimal but the effectiveness of such a system really

depends on the monitors' incentives to monitor, which unfortunately do not seem to be high enough in today's economy. Black (1990) adds that shareholder activism occurs; however, legal barriers, manager agenda, and conflicts of interest are reasons why shareholders become passive: "Shareholders who would purchase large stakes, join forces with others to present voting proposals, or nominate and elect their own directors, face a complex web of legal barriers and risks" (Black, 1990, Pg 608). Therefore, shareholders have too many constraints, which simply keep them from acting.

In terms of activism, Black (1990) explains that shareholders bear the majority of the cost of proxy campaigns but only receive a share of the gains. The problem here is that many shareholders are getting a free ride. In a later paper, Black (1998) found only minimal shareholder activism in a very small number of US institutional investors. This small effort was found to achieve equally small effects on firm performance. Black has found no convincing evidence that shareholder activism affects the bottom-line, suggesting at most a minor impact. Invisible activism however is thought to have a larger effect but data to prove such a statement does not currently exist. Jensen argues that, "active investors are important to a well-functioning governance system because they have the financial interest and independence to view firm management and policies in an unbiased way" (Jensen, 1993, Pg 46).

Black (1998) identifies two different forms of shareholder activism. The first is a presentation (or threat) of a shareholder proposal of corporate governance at the shareholders meeting. The second concerns what is referred to as "jawboning" a firm's

management team or board of directors to change the management strategy. This is also known as the invisible side of shareholder activism.

The fact of the matter is that, “institutions face costs in deciding what governance issues to press, and collective action problems in organizing to influence managers, compounded by legal rules that make it hard for them to individually own large stakes or act jointly, and dangerous for them to put their own representatives on corporate boards” (Black, 1998, Pg 15). This coupled with the fact that managers also tend to ignore even the majority shareholder’s vote in favour of a proposal makes the importance of shareholder activism quite low. Overall Black argues that a few small battles have been won but shareholder activism has certainly lost the war.

2.3.7 Proxy Contests

Dodd and Warner (1983) define a proxy contest as a group of dissidents attempting to obtain seats on the board of directors, which is currently in the hands of the incumbents or management. Specifically, a proxy contest is a mechanism by which shareholders can change the firm’s board. This usually only occurs if the current management is doing a relatively poor job running the firm. Dodd and Warner (1983) explain that dissident (rebel) directors usually fail to obtain the majority of board seats but they do acquire a few via cumulative voting and similar mechanisms. Proxy votes are the key to obtaining or keeping seats on the board during a contest; thus, a solicitation of these votes tends to occur. This is a process through which stockholders choose between the dissidents and the incumbents to sit on the board. The shareholders may also authorize agents to vote on their behalf at the shareholders’ meeting.

During the solicitation campaign, dissidents try to paint a broad picture of management inefficiency; for example, poor operating payouts or dividend policy are common complaints according to DeAngelo and DeAngelo (1989). DeAngelo and DeAngelo also state that dissidents usually possess industry, firm specific, or takeover related expertise that may help convince stakeholders to side with them. Also, due to resource limitations on the part of the dissidents, the proxy contest appears to be their takeover vehicle of choice.

In studying the effectiveness of proxy contests, Dodd and Warner (1983) found that dissidents obtain majority seats only about one-fifth of the time and are usually former insiders. But regardless of the outcome, the share price reacts positively when such contests occur. These positive returns occur because such challenges benefit shareholders by improving corporate performance¹. DeAngelo and DeAngelo (1989) also found that dissident activity is associated with overall stockholder gains; however, losses typically occur at the announcement that dissidents have failed to obtain board representation (likely due to the expense incurred by the incumbents to ward off the dissidents). DeAngelo and DeAngelo also found that the largest shareholder returns typically arise when dissident activity leads to sale or liquidation of the company.

But why do positive gains occur when dissidents challenge incumbent management? Dodd and Warner (1983) say that positive returns are a result of an expected improvement in corporate performance. This improvement comes after the fact

¹ Dodd and Warner (1983) found evidence that some of the positive returns are only temporary which may be attributed to the changes in the market value of the vote during the proxy contest i.e. it is worth more during a contest but then falls in the later stages as it is determined then who has the right to vote.

by transferring corporate resources to more highly valued uses. In essence, the dissident managers have fresh ideas. DeAngelo and DeAngelo (1989) propose that proxy contests tend to shake up organizations even if dissidents don't obtain control. In fact, less than one-fifth of sample firms remained independent public corporations run by the same management three years after the contest. Furthermore, it was found that proxy contests are typically followed by management resignations or often the sale or liquidation of the firm: "In short dissident challenges pose a serious threat to incumbent managers" (DeAngelo and DeAngelo, 1989, Pg 52).

2.4 The Board of Directors

The board of directors can be defined as a "collective group of individuals elected by the shareholders of a corporation to oversee the management of the corporation" (Corporate Governance Glossary, <http://www.corp-gov.org/glossary...>, Accessed 2003). Fama (1980) considers the board a low-cost mechanism of management discipline when compared to alternative options such as takeovers for example. Brown (1999) considers the board of directors a link between owners and specialists. He sees the purpose of the board to be involved in long-term strategic planning, prioritization of objectives, succession planning and risk management. Furthermore, ensuring appropriate systems of governance, leadership and stewardship exist and to empower management to manage are what Brown sees as the true essence of the board. The Toronto Stock Exchange's amended guidelines (2002) are in accordance with Brown (1999) but add that the board

of directors should be concerned with the integrity of the corporation's internal control and management information systems.

Boards of directors have evolved in response to the problem of contracting. Becht et al. (2002) argue that the board's mission is to select the CEO, monitor management, and vote on important decisions such as mergers & acquisitions, remuneration of the CEO, the firm's capital structure, and so on. But they also state the board is arguably nothing more than a 'rubber-stamp assembly'. Much like the previous topics in this review, among the research and literature on boards of directors there are supporters, critics, and fence sitters. In fact, this topic is so immense that it merits its own section in this review. The following section will thus be organized as follows: first of all, the chairman and his/her role will be reviewed followed by the position of chief executive officer (CEO). Next, the director's responsibilities as well as compensation will be discussed. Finally, the board composition, effectiveness, size, and culture will be addressed.

2.4.1 The Chairman

The position of board chairman is one of great power, influence, and responsibility. Brown (1999) identifies the unique roles and responsibilities of the chairman as an achiever of diversity, consensus builder, and solidarity promoter. Therefore, they must make sure everyone is heard and that an array of ideas is brought to the table, that eventually everyone agrees or at least has come to a settlement, and that harmony exists within the decision-making process. Similarly Cadbury (1992) argues the chairman is "primarily responsible for the working of the board, for its balance of

membership subject to board and shareholders' approval, for ensuring that all relevant issues are on the agenda, and for ensuring that all directors, executive and non-executive alike, are enabled and encouraged to play their full part in its activities" (Cadbury, 1992, Pg 21). This is, in fact, one area of board of director research where somewhat of an agreement among academics has been reached.

On a more contentious note, Cadbury believes the role of chairman "should in principle be separate from that of the chief executive. If the two roles are combined in one person, it represents a considerable concentration of power" (Cadbury, 1992, Pg 21).

To further stress the importance of the chairman, Leighton and Thain (Summer 1993) explain that the effectiveness of a board is in fact largely dependent on the efficacy of this position. Change is very difficult and "...it starts and ends with the chairman. What the chairman wants, he or she generally gets. And the chairman who views the board as a necessary evil rather than as an asset of great potential is not going to make the changes we believe are necessary" (Leighton and Thain, Summer 1993, Pg 3).

2.4.2 The CEO

The majority of research on the CEO discusses the clout and influence of this position. The consensus among leading researchers is that significant governance problems can arise within the board of directors if this position is abused. For example, CEOs tend to have too much influence regarding director selection. Becht et al. (2002) argue that CEOs have considerable influence over the choice of directors. Mace (1986) found that CEOs tend to dominate the director nomination process by selecting directors who fall in line with their own preferences. Such action unquestionably influences the

impartiality and essentially the effectiveness of the board. Therefore, Leighton and Thain (Summer 1993) argue for the requirement of an independent director nominating committee. This is especially important if there is CEO duality² since it is unlikely in this circumstance that the CEO/chairman will allow a person who will be critical of the CEO to stand as a candidate for director, even though it is the director's job to evaluate, reward, and punish the CEO.

To further the issue of CEO duality, Fama and Jensen argue that the board is not an effective device for decision control unless it limits the discretion of top managers. More specifically, "the decision processes of some open corporations seem to be dominated by an individual manager, generally the chief executive officer. In some cases, this signals the absence of separation of decision management and decision control..." (Fama and Jensen, 1983, Pg 18). It is difficult to limit the power of the CEO when he or she also holds the position of chairman. In a later paper, Jensen directly attacks this issue: "The function of the chairman is to run board meetings and oversee the process of hiring, firing, evaluating, and compensating the CEO. Clearly, the CEO cannot perform this function apart from his or her personal interest" (Jensen, 1993, Pg 45).

Other issues surrounding the abuse of the CEO position include serious information problems which "limit the effectiveness of board members in the typical large corporation; for example, the CEO almost always determines the agenda and the information given to the board" (Jensen, 1993, Pg 42). Therefore, the CEO normally

² CEO duality occurs when the CEO also holds the position of chairman of the board

controls what is discussed and voted on within board meetings. The problems accompanying this tendency are obvious.

2.4.3 Directors Responsibilities

The area of research surrounding the responsibilities of individual directors is somewhat of a grey area as the responsibilities are naturally dependent on board and firm specific variables. This analysis will attempt to identify the major and more general responsibilities applicable to all directors. Dey (1994) argues that the board of directors should assume responsibility of stewardship for the corporation via adopting a strategy, succession planning, and the development of a communications program. Dey further argues that directors must develop a position description for the board and CEO as well as define the limits to management responsibilities. According to Dey, an orientation and education program for new recruits to the board is also a major duty of the board.

Brown (1999) argues that individual directors are learners, inquirers, and influencers. Specifically, they understand the issues at hand by asking the right questions and then offer their own knowledge and suggestions to help with the decision-process.

Leighton and Thain (1992) argue that two style codes of board behaviour exist and that every director must make a choice between these two codes. In the old style code the function of the board was primarily to provide legal direction; it was ritualistic and routine. The directors of the old style code were passive and simply supported the chairman and management. Under the new style code, the function of the board is trusteeship, management review, and counsel. Directors are now expected to be active, work to make a difference, and meet existing challenges. Leighton and Thain stress that

directors' choices between these two styles "will have widespread effects and profound implications for corporate governance" (Leighton and Thain, 1992, Pg 78).

Leighton and Thain (1990) also consider the job of a director and character of the board in the context of the type of firm ownership. Very simply, the director's role varies depending on the firm ownership. For example, directors of privately-owned or subsidiary companies are not held to the same level of accountability as directors of minority or widely-held companies (Leighton and Thain, 1990). Leighton and Thain (1990) argue the job of a director for a widely held firm is that of a trustee for the public while a director is more in the nature of a minority representative when the nature of firm ownership is control block. Within a privately held firm, a director is expected to be an advisor to shareholders versus a crown corporation where they are in fact required to represent public interest.

Just as important as defining what the director's responsibilities are, is defining what they are not. Dey (1993) suggests that the corporate status be revised to eliminate any possible interpretation of the director's responsibility as being to manage the business day to day, as their status should be to supervise the management. Brown (1999) also agrees that directors are not responsible for the day-to-day operations of the firm.

2.4.4 Director Compensation

The issue of director compensation may best be summed up by a quote from a senior director: "Director pay is much too low for the job that should be done, and much too high for what most directors do" (Cited in Leighton and Thain, Winter 1993). Leighton and Thain contest that many chairmen are uncertain regarding how much to pay

directors, in what form, and why. In reviewing this issue, they relate back to compensation theory, which argues compensation is to be viewed as an incentive to attract the best candidates for the job and then to motivate their performance. Basically, this issue can be tackled from a first principles perspective: “Directors' compensation, like any other compensation program, should be related to and managed in the context of...board purpose, the directors' job description, selection criteria for directors, performance measurement and evaluation, and the use of incentives to motivate, reward and reinforce top performance” (Leighton and Thain, Winter 1993). The major problem that may arise is that the majority of these factors are not generally defined in the real world. Overcoming this problem is a key initial step in creating an effective compensation program.

A related issue, in nature and importance level, is the concept of director share ownership. Becht et al. (2002) argue that directors frequently possess only a minimal financial stake in the corporation. This is cause for concern because numerous academics support board member equity holdings: “Boards should have an implicit understanding or explicit requirement that new members must invest in the stock of the company...this investment would force new board members to recognize from the outset that their decisions affect their own wealth as well as that of remote shareholders” (Jensen, 1993, Pg 44). Monks (1995) adds to this that the most important characteristic that correlates director's performance with increased shareholder return is a meaningful investment in the company's stock. In other words, the investment must be personal.

Leighton and Thain (Winter 1993) argue that the director's share of ownership in the company must be "significant" in order to make much difference because no correlation between shareholder return and a modest director ownership can be found. They also identify several problems that exist with respect to directors' stock ownership: (1) responsible directors are already doing a good job and shouldn't require increased personal risk to do so; (2) the amount of stock ownership required to make a significant change is relative to each directors personal financial position and risk tolerance, thus would likely amount to hundreds of thousands to the million dollar range; (3) dealing stock of the director's company can be difficult and frustrating due to disclosure, signals, the considerable paperwork, and severe restrictions imposed on insider traders.

In summary, compensation systems should be straightforward and the first principles should be revisited on a recurring basis to help identify the required objectives of a plan. As for director stock ownership, there is little debate that it does in fact motivate board members but as Leighton and Thain point out there are many issues surrounding this debate such as determining an effective amount of ownership and the complexity that accompanies insider trading.

2.4.5 Board Composition

This section primarily addresses the issues surrounding inside versus outside directors. Arguments supporting each type of director will be presented along with evidence demonstrating that the type of board composition depends on the structure and needs of the firm.

2.4.5.1 Arguments in Support of Outside Directors

Fama and Jensen (1983) state that effective boards of directors should be composed of mainly outside independent directors holding significant positions in other companies. This is essential to the concept of separating decision management from decision control. Furthermore, Fama and Jensen (1983) argue that certain committees should be comprised only of independent directors in order to ensure their neutrality toward their assigned tasks, for example, remuneration committees.

The guidelines proposed by Dey (1994), on behalf of the Toronto Stock Exchange, clearly favour director independence. He suggests that boards of directors be made up of a majority of unrelated directors. He also suggests that board committees to propose new directors and undertake board assessments be comprised of outsiders, with a majority being unrelated. Furthermore, every board should appoint a chair who is not a member of management, which puts the concept of CEO duality out the window. Finally, audit committees should be comprised exclusively of outside directors. The guidelines did not specify any benefits of related directors, or provide any reasons why there should be any at all. This also resonates with the Toronto Stock Exchange's new disclosure requirement and amended guidelines (2002). A similar report, authored in the UK, agrees there should be a majority of outside directors but recognizes that executive directors also have something to bring to the table: "[effective board composition consists of] ...a combination of executive directors, with their intimate knowledge of the business, and of outside, non-executive directors, who can bring a broader view to the company's activities" (Cadbury, 1992, Pg 20).

The question still remains as to why many scholars think inside directors are less effective than outside directors. Fama and Jensen (1983) argue that outside directors have incentives to develop reputations as experts in decision control: “They use their directorships to signal to internal and external markets for decision agents that (1) they are decision experts, (2) they understand the importance of diffuse and separate decision control, and (3) they can work with such decision control systems” (Fama and Jensen, 1983, Pg 19). This all ties back to the importance of separating decision management from control. Becht et al. (2002) explain that independent directors are more likely to defend shareholders but even their reappointment is sometimes dependent on the CEO. The idea here is that no system is perfect. Outside directors do, however, experience less pressure to conform to management decision-making than inside directors.

With respect to CEO evaluation: “since the possibility for animosity and retribution from the CEO is too great, it is almost impossible for those who report directly to the CEO to participate openly and critically in effective evaluation and monitoring of the CEO. Therefore, the only inside board member should be the CEO” (Jensen, 1993, Pg 44). Suggesting the board be comprised of all outside directors, plus only the CEO, is an extreme proposition since several arguments exist that claim a minority of inside directors can be beneficial to the board.

2.4.5.2 Arguments in Support of Inside Directors

Eisenberg (1998) argues that outside directors may have a bias against risky projects even if the NPV is positive because of the reputation cost associated with

bankruptcy or failure. This in turn decreases the potential performance of firms. Becht et al. (2002) look at the information possessed by directors who are unrelated to the firm and conclude that outside directors lack appropriate information to be effective monitors, whereas inside directors have substantially more knowledge due to their daily operating activities. Fama (1980) adds that top managers make good directors because they are informed and also tend to perform well since they are competing between each other for the top spots. On the other hand, “outside directors are needed to act like referees to stimulate and oversee competition between internal directors (top management)” (Fama, 1980, Pg 293). Dey (1994) counters these last two propositions by stating that every board should have in place appropriate structures and procedures to ensure the board can function properly without management and the information they possess.

2.4.5.3 The Decision of Inside vs. Outside Directors

Williamson (1993), and Fama and Jensen (1983) look at the relation of residual claimant status to the composition and character of the board of directors. Williamson, Fama and Jensen argue that the composition and character of the board will reflect the hazards to which residual claimants are exposed. For example, for professional partnerships such as lawyers and accountants, the value of the enterprise rests in the development and team utilization of “specific knowledge about particular clients and circumstances” (Williamson, 1993, Pg 358). Outsiders would therefore be reluctant to buy stock in return for a residual claim, thus resulting in a board of directors made up of partners. On the other hand Williamson suggests that for non-profits, the optimal board

would consist of few insiders, because of expropriation hazards, and outsiders who have made negligible contributions. But then again, it is typically insiders who are concerned for the claimants/beneficiaries. The optimal board composition for non-profits is still in debate, but the two aforementioned examples help to recognize that a residual claimant's status varies among organizations and that it also has a systematic bearing on the composition and character of the board. In other words, "specialized governance structures arise in response to the efficiency needs of each type of organization" (Williamson, 1993, Pg 351).

Daily (1996) came to the same conclusion as Williamson, that is, specialized governance structures will arise, but for different reasons. Daily examines the balance between executive and board powers (dominant versus balanced) and states the efficiency of the structure may be dependent on "attendant conditions", such as:

- (1) Ownership Concentration – large ownership concentration commonly causes a separation of CEO and board chairperson and increases the number of outside directors.
- (2) Resource Dependence - outside directors are associated with increased environmental uncertainty because they can provide resources not available in the firm.
- (3) Portfolio exposure (strategic focus and globalization) – highly diversified or firms with large amounts of global exposure (i.e. risky firms) have more inside directors because outside directors don't like such risk due to the impact it might have on their reputation (i.e. liability suits).

- (4) Information requirements – high information requirements lead to more internal directors because they have superior levels of information from their daily involvement in the firm.

It is not as simple as saying that outside directors are better in all cases but in fact that it depends on several firm characteristics. And in some cases, as indicated above, internal directors are actually more appropriate.

Daily (1996) identifies three types of boards: CEO dominant, board dominant, and a balanced governance configuration. He argues that each are effective under the proper circumstances. CEO dominance (CEO duality) for example is actually effective for a firm in a crisis or in transition. The argument is based on the fact that in a crisis, centralization of authority is necessary. Board dominance occurs when the CEO and chairperson are separate and is effective when a large amount of outside holdings exists along with large resource dependence³. Balanced governance configurations occur when institutional ownership is low, limited outside ownership exists, and there is generally low resource dependence. A balanced governance configuration may possess a strong CEO (CEO duality) and a strong board (outsider dominated). This is the most uncommon of the three since the CEO will tend to dominate the board over time. The surprising result of this study is that CEO and Board dominance models under appropriate circumstances are associated with higher firm performance than balanced models. This is

³ Resource dependence refers to a critical need for specific resources. In this case Daily (1996) is arguing that outside directors may represent important external constituencies and thus can provide superior service in the supply of those resources.

therefore evidence that a large amount of outside directors is not necessarily always appropriate.

Countering Daily's remarks on CEO duality being an appropriate composition under the proper circumstances, Monks states, "It is possible for a single individual to combine the characteristics necessary for being chief executive officer of a corporation at the same time as being responsible for directing its board of directors, but it is not probable" (Monks, 1995). Accordingly, other scholars do not offer much support for Daily's (1996) propositions on board composition. Nevertheless her argument is interesting and offers another point of view.

Theory aside, it is also important to note what boards today are actually doing with respect to related versus unrelated directors. In a survey done by Dey (1999) of the Toronto Stock Exchange, the average number of related directors per board was found to be 2.6 compared to unrelated directors, which is 5.5. This shows that there is empirical support for the proposition that unrelated directors should make up the bulk of the board's composition.

2.4.6 Board Effectiveness

Much of the literature on board effectiveness paints a grim picture. Hermalin and Weisbach (1998) argue that a gradual erosion of a board's effectiveness occurs over time. As a firm with independent board members does better, the CEO's power grows. As a result, the independence of the board actually diminishes and CEOs become less monitored as time goes on. This is troubling because it does not offer much hope. Jensen (1983) argues that the internal control system headed by the board of directors has

generally failed to make managers maximize efficiency and value. Jensen states: "...it appears that the infrequency with which large corporate organizations restructure or redirect themselves solely on the basis of the internal control mechanisms in the absence of crises in the product, factor, or capital markets or the regulatory sector is strong testimony to the inadequacy of these control mechanisms" (Jensen, 1983, pg 29). Monks (1995) argues that boards are a successful myth, suggesting they do just enough to blunt societal concerns regarding the concentration of power in corporations without actually becoming a nuisance to management.

Leighton and Thain (1995) argue that management problems frequently go undetected or unresolved by boards of directors. They also claim, however, that well-functioning boards do exist and that the system can work as intended. Leighton and Thain offer six common reasons for board failure: (1) leadership, CEO Duality; (2) legitimacy of power, simply rubber stamping everything without the true support from shareholders; (3) job definition, lack of meaningful job descriptions and board objectives; (4) a high level of incompetence among board members; (5) board culture, can cause resistance to change; and (6) poor board management which is mainly administrative but nonetheless a source of frustration and a turn-off for good directors.

Leighton and Thain (Autumn 1992) also discuss how to improve board effectiveness. They have identified six possible remedies: (1) takeovers; (2) proxy contests; (3) shareholders collective action; (4) power investing; (5) changes in the composition and structure of boards; and (6) improving board management. Leighton and

Thain also argue, however, that the key to board effectiveness is the chairman and until he/she initiate performance enhancing measures, real improvement will not likely occur.

2.4.7 Board Size

Nothing good seems to accompany an oversized board. Jensen (1993) believes that corporate boards become less effective as they grow in size, which is based on the premise that larger boards are likely slower to react. Yermack (1996) found an inverse association among board size and firm value, which was measured with Tobin's q. He also argues that small boards are more likely to dismiss the CEO following periods of poor performance and that CEO compensation is more sensitive to performance in small firms. According to a stock return analysis done by Yermack, investors react positively when the board shrinks in size and negatively when the board grows. The largest loss in firm value however, occurs when a board grows from small to medium size. Eisenberg agrees that problems such as decreased firm performance occur when the board becomes too large in proportion to the firm. He suggests that, "board size ought to correlate with firm size because larger firms probably need larger boards" (Eisenberg, 1998, Pg 35). In a recent study, Eisenberg (1998) found a negative correlation between board size and firm profitability for a sample of small and midsize firms. Yermack (1996) found an inverse link between the performance of certain financial ratios (sales over assets, ROA, ROS) and an increase in board size.

The question still remains why a board size effect exists. Jensen (1993) argues that the problem is rooted in the deterioration of communication and decision-making skills as groups become larger. Furthermore, "when boards get beyond seven or eight

people they are less likely to function effectively and are easier for the CEO to control” (Jensen, 1993, Pg 44).

Inappropriate board size is not a major problem in Canada, according to Dey (1999), the chair of the Toronto Stock Exchange Committee on Corporate Governance in Canada. In fact, he found that many firms in Canada consider selection of an appropriately sized board to be a top ranking issue.

2.4.8 Board Culture

Board culture is a central element of the board and a common reason for its failure: “The great emphasis on politeness and courtesy at the expense of truth and frankness in boardrooms is both a symptom and cause of failure in the control system” (Jensen, 1993, Pg 41). Leighton and Thain (1995) explain that every board has a unique culture of shared attitudes, values, experiences, norms and personal relationships which dictate what action may be taken by directors; for example, what subjects are simply taboo. Jensen argues the result is a cycle of ineffectiveness: “by rewarding consent and discouraging conflicts, CEOs have the power to control the board, which in turn ultimately reduces the CEO’s and the company’s performance” (Jensen, 1993, Pg 42). In countries such as Canada, it is not surprising that similar value systems, political beliefs, and culture arises. This is because there is a relatively small group of capable people to fill directors’ positions. Directors usually know each other, attend the same schools, clubs, and sometimes even live in the same neighbourhoods (Leighton and Thain, Summer 1993).

2.4.9 Board Activism

Millstein and MacAvoy (1998) looked at the impact of an active and independent board on firm performance. Their study encompassed 154 large publicly traded corporations from 1991 to 1995 and used “Economic Profit” (or Economic Value Added) as a performance metric. Millstein and MacAvoy have demonstrated a statistically significant relationship between an active, independent board and superior corporate performance. They argue that the improved corporate performance is a direct result of active corporate governance.

2.5 Board Demography from an Organizational Behaviour Theory Perspective

This section will attempt to identify the optimal board demographics as uncovered in organizational behaviour theory. The goal here is to analyze and look at boards of directors for what they really are, simply groups or teams of individuals working together. Three primary demographics unquestionably stand out in the literature. They include heterogeneity or diversity, team tenure, and team size. Others include experience, preference for working in a group, and member age. Surprisingly, group member race and gender distribution did not receive much attention in the organizational behaviour literature on team effectiveness and thus will not be addressed in this study.

2.5.1 Heterogeneity/Diversity

Ancona (1992) claims that significant overall diversity brings too much creativity to the group. This can impede teamwork and decrease overall performance. What’s interesting is that when diversity is broken down into tenure and functional diversity, unique positive repercussions are found. Ancona argues that the greater functional

diversity, the greater the communication and ultimately the greater the innovation. Furthermore, tenure diversity is associated with improved task work such as clarifying goals and setting priorities, which is linked to an overall increase in team performance in Ancona's study.

Campion and Higgs (1995) explain that traditionally managers were focused on only the most qualified employees without realizing that a diverse team may have skills and experience that differ and complement each other and can thus handle a wider range of tasks. Like Ancona, Campion and Higgs also have mixed thoughts on diverse team membership. They warn of "teams whose membership is excessively varied, because conflict and communication breakdowns can result. Also, in composing a team with varied members, avoid choosing people who are unskilled or inadequately skilled just for the sake of diversity" (Campion and Higgs, 1992, Pg 2).

Basically, some degree of heterogeneity is beneficial and will likely correlate positively with firm performance but the jury is still out on significant overall diversity.

2.5.2 Team Size

Size is another important team demographic. Halebian and Finkelstein (1993) argue that a larger group likely has more capabilities and resources, which may contribute to increased creativity, group knowledge, strategic decision-making, and performance especially in times of turbulence. However, an alternative viewpoint is that excessively large teams require more coordination and that members may feel less involved. Campion and Higgs (1995) argue that teams should consist of the smallest number of

members needed to do the task. The majority of literature on this subject advocates that smaller is better but there is still an issue with regard to how small, small really is.

2.5.3 Team Tenure

The literature includes several successful attempts to tie team tenure to team performance; for example, “Pfeffer (1983) provided a theoretical basis for expecting a direct effect on performance, noting that performance will be highest when employees have been in a position ‘long enough to overcome some initial naiveté and learn the ropes and local practices’” (Pfeffer, 1983 cited in Smith et al., 1994, Pg 415). Katz (1982) also addressed the issue of team tenure, or group longevity, and found that performance appears to be significantly related to tenure but the positive gains in performance taper off for teams of long tenure. Smith et al. (1994) tested the relationship of various demographic variables to performance and found a direct link; team tenure was one of the elements they tested. The results of Katz and Smith et al. establish that tenure is an important team demographic with the optimal composition likely being of medium tenure.

2.5.4 Experience

Corner and Kinicki (1997) propose that experience produces a rich knowledge base for team members. They explain that older experienced members seek additional information when making decisions and likely possess extensive knowledge and skills. Furthermore, with regard to information processing, experts are able to access a store of information that is more comprehensive and sophisticated than is the case for novices. Corner and Kinicki (1997) also found that experience was correlated with firm

performance via a moderating variable. Indicators of experience in their study include average age, average organizational tenure, average years of professional experience, and average educational level.

2.5.5 Preference for Working in a Group

Campion and Higgs (1995) argue that a member's preference for team work enhances the probability of team effectiveness and should be considered when choosing team members. This is an interesting but difficult variable to measure. It cannot be directly observed and it is never reported in annual reports or similar filings.

2.5.6 Demographics Linked to Corporate Strategy Changes

Wiersema and Bantel (1992) have identified specific demographic variables in top management that have been linked to the propensity to make corporate strategy changes. These include the youth of members, high team tenure, heterogeneity in education, and training in the sciences. They also argue "the ability of an organization to anticipate and respond to opportunities or pressures for change...is one of the most important ways in which competitiveness and viability are ensured" (Wiersema and Bantel, 1992, Pg 91).

As one can see here, certain demographics required for a specific skill may conflict with demographics associated with other skills. For example, high average age is said to be associated with experience while youth has been linked to corporate strategy changes. This is another case where contingency theory may be useful.

2.5.7 The Optimal Board based on Organizational Behaviour Theory

According to organizational behaviour theory neither excessive nor inadequate heterogeneity is optimal; therefore, moderate levels would seem to achieve both

creativity and cohesiveness. A board's size should only be large enough to bring the resources and capabilities required by the task. Medium average tenure would appear to be another optimal demographic, which is ostensibly a long enough period to learn the ropes but short of the onset of performance decline due to stale ideas. Finally, an optimal board should have experienced membership and members with a preference for working in groups.

But it is appropriate to calibrate boards of directors or executive teams to the “average group”? Ancona and Nadler (1989) suggest that several distinct issues separate an executive team from others. For example, task complexity is proposed to be higher which may call for an increased level of experience and education as compared to an “average group”. Furthermore, executive teams tend to attract people higher in the “need for power and achievement” dimensions, that is, people who succeeded individually and have distinguished themselves. Individualism is not a highly sought after team quality and as such, higher levels of diversity may be required to counterbalance the typical nature of executives. Therefore, when assessing boards of directors or executive teams with organizational behaviour theory in mind, additional consideration of the distinguishing factors is required.

2.6 Firm Performance

A number of different performance metrics are used in corporate governance research; furthermore, “there is no general agreement on what measures to use for performance, i.e. if the measures should be stock market-based or accounting based

performance” (Mette, 2002, Pg 395). This section will review both market-based measures, such as shareholder returns, and accounting based measures including EVA, ROE and ROA. Tobin’s q, which is considered a hybrid measure, will also be addressed. The objective of this section is to identify the most appropriate performance metric or combination of metrics for the purpose of measuring firm performance in relation to corporate governance.

2.6.1 Market Returns

Shareholders’ returns over a holding period are also known as Market Return_t, (Equation 1). This measure is the percentage growth of the firm’s market value assuming that dividends are reinvested.

Equation 1.
$$\text{Market Return}_t = (P_t + D_t - P_{t-1}) / P_{t-1}$$

In equation 1 P is the price of the firm’s share, D is the corresponding dividend, and t is the year.

Rowe and Morrow (1999) explain that increased use of market-based returns evident in the literature may be in response to criticisms of other metrics; however, theoretically, they reflect the firm’s performance more accurately than do accounting based measures. For example, markets are expected to see through deceptive managerial practices and other distortions. Levine (2001) argues that “... the ultimate measure of success is stock market returns to shareholders: increased asset value of common equity and dividends. Stock market returns are attractive to the extent that investors value all the information about expected future returns” (Levine, 2001).

With stock market returns, however, comes the issue of risk adjustment: “Firm risk, both as a measure of the firm’s information environment and the risk of its operating environment, is also a potentially important determinant...” (Core, 1999, Pg 379). Therefore, measures of firm risk need to be included as control variables. A relevant proxy for firm risk used in the study by Core (1999) is total variance.

Lambert and Larcker (1987) discuss a very important issue regarding the selection of a performance metric. They argue that market returns may be the “correct” measure of firm performance for shareholders but such a measure may not be the most appropriate indicator of managerial actions.

2.6.2 Economic Value Added

Economic Value Added (EVA) identifies economic profit after all costs including the firm’s cost of capital (Equation 2). It essentially measures what the firm has created over and above its cost to do so. Therefore, EVA is returns in excess of the cost of capital.

Equation 2.⁴
$$EVA = NOPAT - [WACC] * Capital$$

In equation 2 EVA is economic value added to the company, NOPAT is the net operating profit after taxes, WACC is the weighted average cost of capital, and Capital denotes the resources used by the firm to create the value in question.

According to Jog EVA is an unambiguous measurement tool that allows for benchmarking at the aggregate level⁵. EVA is appropriate for this study because it

⁴ NOPAT stands for net operating profit after taxes and WACC refers to weighted average cost of capital.

⁵ Dr. Vijay Jog, Professor of Finance, Lecture at Carleton University, 2003.

measures elements of firm performance directly affected by management and furthermore it is a risk-adjusted measure.

The downfalls associated with EVA are mainly the complexity of the calculation and the adjustments required so that NOPAT reflects operational performance. Such adjustments are often, of necessity, subjectively determined, and can have a dramatic effect on NOPAT. Some examples of the exclusions from NOPAT are write offs, earnings from discontinued operations, and the current portion of long-term debt. Also training costs and R&D expenditures that have been expensed as incurred should be capitalized and expensed over their expected cash flow life. The difficulties this measure presents may be the reason for its infrequent use in corporate governance research. A final disadvantage of this metric includes its reliance on the past, whereas market based measures are future oriented.

2.6.3 ROE and ROA

Other widely used measures of firm performance include financial return ratios such as ROE (Equation 3) and ROA (Equation 4). These are accounting based measures.

Equation 3. $ROE = (NI / \text{Total Equity})$

In equation 3 ROE is the return on equity, NI is the firm's net income, and Total Equity is total shareholder's equity.

Equation 4. $ROA = (EBIT / \text{Assets})$

In equation 4 ROA is the return on assets, EBIT is earnings before interest and taxes, and Assets is the firm's total assets.

Both ROE and ROA are measures of managerial performance in their own right. According to www.fool.com⁶ (2003) ROE encompasses profitability, asset management, and financial leverage and represents the executive team's ability to balance these three elements of firm performance. www.bankrate.com⁷ (2003) explains ROA as a measurement of how well a company's management is doing its job. The ratio reveals how much income management can produce with one dollar of a company's assets.

Financial return ratios' popularity may be due to the accessibility of the data for publicly traded companies rather than due to their suitability to the task; "...accounting numbers have built in short term bias, are subject to manipulation by managers, and undervalue intangible assets" (Rowe and Morrow, 1999, Pg 59). Levine (2000) supports the latter notion by arguing that financial variables such as those used in ROE and ROA do not account well for inflation and can be easily manipulated by managers for a variety of purposes like reducing taxes or fooling investors.

Regardless of their limitations or downfalls, many researchers use financial return ratios in conjunction with market-based measures to increase their insight. In fact, Hoskisson et al. (1994) uncovered a significant positive relationship between accounting and market-based performance measures, which "... suggests they may be [just] separate dimensions of a single underlying construct (firm financial performance)" (Rowe and Morrow, 1999, Pg 60).

⁶ This is a website dedicated to offering online seminars to help individuals get in-depth knowledge on a particular subject, specifically finance related issues.

⁷ Bankrate.com, is the Web's leading aggregator of information on more than 100 financial products. They provide tools and information that can help consumers make appropriate financial decisions.

2.6.4 Tobin's q

Tobin's q (Equation 5) is equal to the market value of a firm's assets divided by their replacement cost, "A q above one indicates that the market views the firm's internal organization as exceptionally good or the expected agency costs as particularly small" (Hermalin et al., 1991, Pg 104).

Equation 5. $\text{Tobin's } q = \text{Market Value} / \text{Replacement Value}$

In equation 5 Market Value denotes the market value of the firm's assets while Replacement Value refers to the replacement cost of the firm's assets.

Since its original form is somewhat ambiguous Chung and Pruitt (1994) have developed a popular proxy (Equation 6) that has been empirically proven to explain 96.6% of the variability of Tobin's q.

Equation 6. $\text{Approximate } q = (\text{MVE} + \text{PS} + \text{Debt}) / \text{TA}$

In equation 6 MVE is the market value of equity, PS is preferred shares, Debt is long and short-term debt, and finally TA denotes total assets. Agarwal et al. and numerous other corporate governance researchers use a proxy for Tobin's q that is consistent with Chung and Pruitt, "the sum of the market value of equity, the book values of long-term and short-term debt, the liquidating value of preferred stock, and the book values of convertible debt and convertible preferred stock, all divided by the book value of total assets" (Agarwal et al., 1999, Pg 17).

Tobin's q is a highly regarded and frequently used measure of firm performance among the leading corporate governance researchers. It has also developed into somewhat of a standard for this type of research. The performance metric "...measures

both current performance and future growth opportunities. The larger are these growth opportunities, the larger also will be q ” (Agrawal et al., 1999, Pg 16). Levine (2001) explains that Tobin's q captures good management, which is essential for corporate governance research and that it is a forward-looking measure, which is an advantage over exclusively financial return measures.

Although proxies such as the one developed by Chung and Pruitt (1994) are said to be appropriate substitutes, the chance of variation from a true measure of q exists. Furthermore, approximate q assumes that the replacement costs of a firm's plant, equipment, and inventories are equal to their book values.

2.6.5 Decision Criterion

The metric(s) for use in this research must satisfy the following three criteria:

1. Appropriateness: The measure must minimize the influence of factors other than the agent's actions.
2. Foundation: The measure should have a solid foundation in finance theory and a strong popularity within the corporate governance research community.
3. Clarity: The measure must be easy to explain and execute.

2.6.6 Evaluation of the Alternatives Against the Decision Criteria

Insofar as the first decision criterion is concerned, Tobin's q and EVA reflect the results of agents' actions and are therefore appropriate measures for this study. Financial returns require that we use a number of years of stock return data for a firm. Since it would be unlikely that the make-up of a firm's board would be constant over this length of time, it is likely that financial returns would, in effect, measure performance that is due

in part to the contributions of individuals no longer on the board as at the date of this study. Accordingly, financial returns are considered less appropriate for this kind of research than Tobin's q and EVA.

Both Tobin's q and EVA flow naturally from financial theory, but only Tobin's q enjoys significant popularity in this field of research. Although the lack of acceptance of EVA in the literature might call into question its suitability for this kind of research, the lack of popularity is likely due to the fact that EVA can be difficult and time consuming to calculate. As this study has EVA values already calculated and available to it, this difficulty can be overcome.

All three measures are reasonably easy to explain and execute, primarily because the study will use Chung and Pruitt's proxy for Tobin's q , and the EVA values have already been determined.

In summary, financial return measures are not appropriate for this study because their connection to the actions of the agents that are the object of study of this research is too tenuous. Tobin's q is the highest-ranking measure against the three criteria specified above and is considered the most appropriate measure for this kind of research. Because the EVA measure is already available, and it is theoretically attractive, the study will use this measure as well. ROA values are not difficult to calculate, so results based on this measure will be presented for comparison.

2.7 Summary and Discussion

This review has established that the firm is a contested and complex concept in the financial literature. It is therefore not surprising that firm governance is also complex. The major point of this literature review is that many factors are at play within the firm and its governing process and that each factor is merely an attempt to explain a marginal fraction of the whole.

This review began with a look at the basic unit, the firm, and its boundaries. From there, it addressed the governance process and related issues. The review then focused on the board of directors from two disciplinary perspectives, finance and organizational behaviour. While some overlap exists between the two disciplines, for the most part, organizational behaviour theory brought a perspective that is vastly different from that of finance.

Finally, the review addressed firm performance. It identified the most appropriate performance metrics and ranked them in terms of their suitability for this kind of research.

Chapter 3: Research Premise

3.1 Introduction

This study has been guided by the research outlined in the forgoing literature review. From the review, it was apparent that two different disciplines, organizational behaviour and finance, viewed the issues surrounding boards of directors quite differently. It is therefore the intention of this study to integrate the two disciplines in an attempt to identify the key drivers of board effectiveness. This research identifies an apparent gap in the existing finance literature in the sense that the key drivers of the effectiveness of groups, according to the organizational behaviour literature, have not been considered explicitly in the finance literature that addresses board effectiveness. This study will do so.

3.2 Theoretical Development

The central theory of this study is that specific director qualities may have an impact on firm performance. Corporate governance is extremely important to the economic prosperity of firms and the well-being of society. A board of directors is a fundamental element of the corporate governance process. The quality of a board's directors is essential to the effectiveness of the board. Therefore, the efficacy of the corporate governance process is contingent on the quality of the directors.

Organizational behaviour theory reduces the concept of a board of directors to a team of individuals working together. It proposes that an optimal board would be one of moderate diversity. Diversity can be addressed over many different dimensions, including tenure and age among others. A board's size is another important demographic. A board

should only be large enough to bring the required resources and capabilities the task requires. Assuming a board would not short staff itself, the smaller the board size the better. An optimal board should have medium team tenure: long enough to learn the ropes but not so long that performance declines due to stale ideas. Finally, an optimal board should have experienced membership.

3.3 Research Objectives

The main goal of this research is to identify a link between the specific director demographics and the performance of the firm.

3.4 Hypotheses

The theory set out in Section 3.2 can be articulated in terms of the following hypotheses:

HYPOTHESIS I:

The relationship between firm performance and variation in board of directors' tenure is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of variation are associated with low levels of performance and moderate levels are related to improved performance.

HYPOTHESIS II:

The relationship between firm performance and variation in board of directors' ages is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of variation are associated with low

levels of performance and moderate levels are related to improved performance.

HYPOTHESIS III:

Board size is significantly and negatively related to firm performance.

HYPOTHESIS IV:

The relationship between firm performance and average board tenure is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of average board tenure are associated with low levels of performance and moderate average levels are related to improved performance.

HYPOTHESIS V:

Average director age is significantly and positively related to firm performance.

HYPOTHESIS VI:

The average number of outside board positions held by a director is significantly and positively related to firm performance.

HYPOTHESIS VII:

The proportion of board members who are officers of other corporations is significantly and positively related to firm performance.

Hypotheses VI and VII follow those used in a study done by Downen (1995) that successfully linked high performing firms with boards that have a high proportion of

directors who hold outside board positions. The Dowen study found limited support for hypothesis VII. Nonetheless, it is thought to be an interesting potential indicator of director experience; therefore, it has been included in this study.

Embedded in the aforementioned hypotheses are certain variables that need to be clarified. This is done in detail in Section 4.3.

Chapter 4: Research Methodology and Data Analysis

4.1 Introduction

This research study has collected and analyzed data with respect to director demographics and firm performance. In this section, the design of the research will be identified, measurement issues will be dealt with, and an overall methodology will be outlined. Data collection and analysis will also be reviewed.

4.2 Research Design

This study is seeking insight into the relationship between director demographics and firm performance. The scope of this study is national, encompassing Canadian firms only. The data was collected and tested over a time frame of September 2003 to December 2003. The data as a whole has been gathered through secondary sources only.

4.3 Measurement

The variables in the study include directors' tenure, board size, and outside director positions held. Directors' tenure is measured by the number of years of service on the board in question, rounded to the nearest whole year. With regard to outside director positions held, the outside entity must be a separate firm; therefore, foundations, for example, do not count. Finally, the number of members on the board currently serving the firm was determined from the firm's annual report for the time period in question.

Appendix A ties the investigative questions to the corresponding hypotheses and measurement issues. It also indicates the data analysis techniques employed in this thesis research.

4.4 Research Methodology

4.1.1 Population Definition

The population for this study is comprised of all companies included in the TSE 300 Composite Index (renamed the S&P/TSX Composite Index). The rationale for choosing the index members as the population is as follows. All of the companies included in this index are fairly significant enterprises. They likely possess the greatest potential for a payoff due to an identification of optimal board of director demographics and also may have the most to lose as a result of ignoring such factors. Furthermore, all of these firms have good access to capital, staying power, and a reasonable range of alternatives available to them (e.g. strategy and acquisitions). Consequently, consideration of the issues presented in this study will fit well with these firms because they have the resources needed to survive, are going concerns, and are usually looking for ways to improve their performance. SMEs on the other hand may be too preoccupied with staying afloat, or gaining access to capital, to worry about anything else.

4.1.2 Sampling Frame

A sampling frame is a list of firms that make up the target population. It is a list of companies who meet the requirements for membership in the studies designated population. The sampling frame for this study is a register of firms provided by the Toronto Stock Exchange Review (2001). This sampling frame is appropriate because it is the most definitive and up to date list of firms included in the index in question for the time period required.

4.1.3 Unit of Analysis

The units of analysis for this study will be the firms included in the TSE 300 Composite Index. The criteria for inclusion in this index according to the TSX Index Description (S&P/TSX Composite Index, <http://www.tse.com/en/pdf/...>, Accessed 2003) are as follows:

- The firm must be incorporated under one of either the Canadian federal, provincial, or territorial jurisdictions, as well as be listed on the TSX.
- The firm must be listed on the TSX for at least 12 full months.
- A 12-month waiting period for firms that have been removed from the index is required before they can be added again.
- A company must be considered liquid and meet the following three liquidity requirements:
 - A firm's trading volume, value and number of transactions of the stock for the 12 months after addition to the index must be at least 0.025% of the sum of the other companies in the index.
 - A firm must have less than 25 non-trading days⁸ over the past 12 months.
 - The 12-month volume relative to the current float shares (the float turnover) must be at least 0.25 or greater.
- The number of "float" shares is determined by removing individual or related groups of shareholders that total 20 percent or more of the total number of shares

⁸ A non-trading day is considered one in which a minimum of one board lot does not trade.

issued and outstanding. Such groups may include cross ownership or voting trust agreements.

- Further requirements include the firm meeting a minimum weight of 0.05% of the index as well as a minimum trade weighted average price of \$1 over the past 3 months and a closing price greater than or equal to \$1 at the previous month-end.

4.1.4 Type of Sampling

Stevens (2002) suggests that as a general rule, 15 data points per variable should be used to provide reliable predictability.⁹ Since ten variables in total are present, 150 observations are therefore required to satisfy Stevens' "rule. Another important note regarding the sampling of firms is that certain industries have been excluded due to their high degree of regulation.

A central goal of this study is to explain firm performance via firm-specific variables. Therefore, an outside influence, such as a high degree of regulation specific to an industry, which has a direct effect on the performance of the firm, must be addressed. Two industries have been excluded from the sample: the financial services industry and most of the transportation industry.

Excluding the financial services industry has precedence in corporate governance research. Barnhart and Rosenstein (1998) as well as Vafeas (1999) both excluded large portions of the financial services industry in their studies. As for the transportation

⁹ Steven's "rule" is not affected by non-linear variables. Under the advice of Professor Rolland Thomas the non-linear terms are simply treated as an extra variable.

industry, firms operating in marine, rail, and air have been excluded on the basis that they are in fact heavily regulated by the Canadian Transportation Agency.

4.5 Data Collection

The data for this study is comprised of entirely secondary information. It has been collected from financial statements, Stock Guide, Sedar filings, the “Directory of Directors”, and “Who’s Who in Canadian Business”. All of the data collected is publicly available as every firm in the sample is a listed company subject to full disclosure. The data itself was gathered manually.

The EVA values were obtained from Dr. Vijay Jog who provided them for the purpose of this research. Dr. Jog owns and operates an international consulting firm that specializes in value-based management and which estimates EVA values in the normal course of its business.

The time period covered by the data collected is the year 2001. It is common practice in corporate governance studies to use cross-sectional data pertaining to a performance measure and its explanatory board characteristics because a board’s composition can change overtime.

4.6 Data Analysis

A cross sectional regression analysis is the statistical method used in this study. For hypotheses 1 and 2, standard deviation is used as a measure of variation. In cases when the number of explanatory variables is large in relation to the number of observations it is sometimes appropriate to test the dependent variable against each explanatory variable

individually. In this case enough observations were obtained to test the full model. Accordingly, all the variables were combined and tested as a full model against each performance metric. The full regression model is as follows:

$$\begin{aligned}
 \text{Performance Indicator} = & a + b * V_T + c * V_T^2 \\
 & + d * V_A + e * V_A^2 \\
 & + f * \text{BSZ} \\
 & + g * A_{BT} + h * A_{BT}^2 \\
 & + i * A_{DA} + j * O_{DP} + k * B_{OC} \\
 & + l * \text{SIZE} + m * \text{CEO} + n * \text{COMP}
 \end{aligned}$$

Where:

Performance Indicator = Market Value/Firm Value (A proxy for Tobin's q) and EVA

V_T = The linear component relating to the variation in board member tenure.

V_T^2 = The quadratic component relating to the variation in board member tenure.

V_A = The linear component relating to the variation in board member's age.

V_A^2 = The quadratic component relating to the variation in board member's age.

BSZ = Board size

A_{BT} = The linear component relating to average board tenure

A_{BT}^2 = The quadratic component relating to average board tenure

A_{DA} = Average director age

O_{DP} = Ratio of outside director positions

B_{OC} = Ratio of board members who are officers of other companies

SIZE = A control variable for firm size (number of employees)

CEO = A control variable for CEO Duality

COMP = A control variable for board composition (inside vs. outside directors)

4.7 Pre-test for Variation in the Data

A pre-test on 31 companies was conducted to identify variation in the standard deviation of board member tenure and age, respectively, across boards¹⁰. If little variation in the measures had existed in the data, hypotheses I and II would not have made sense. Figures 1 and 2 present the frequency charts of the standard deviation of board tenure and age, respectively.

Figure 1: Frequency Chart of the Standard Deviation of Board Member Tenure

¹⁰ The pre-test was conducted on data from 2002. The time period of the study was later moved to 2001 because this was the year for which EVA values were available. The pre-test on 2002 data is a reasonable proxy for a test on 2001 data as these board characteristics do not likely change significantly from year to year.

Figure 2: Frequency Chart of the Standard Deviation of Board Member Age

As Figures 1 and 2 display, variation is present in the standard deviation of both tenure and age.

4.8 Conclusion

This study will attempt to answer the research question: “Do specific board member demographics correlate with firm performance”? This study was motivated by a noticeable gap in the existing finance literature regarding specific director demographics. The importance of this topic is heightened by the numerous corporate governance issues currently plaguing society. An extensive literature review revealed that the organizational behaviour literature may be able to shed some light on a once thought purely financial issue, board of director performance. The literature review also identified Tobin’s q, EVA, and ROA as the most appropriate metrics of firm performance.

Chapter 5: Analysis and Results

5.1 Introduction

This chapter will report on the results of the research study. The first section outlines in detail the data that was used and its characteristics. The following section identifies the results from the cross sectional regression analyses. Those results are then interpreted and discussed.

5.2 Descriptive Statistics

Descriptive statistics for the sample of firms for the year 2001 are presented in Tables 1 and 2. Table 1 indicates that of the S&P/TSX Composite Index, 173 firms had data available and that 151 firms had complete data available. Therefore, it is acknowledged that the data set leans toward firms that had sufficient obtainable data. This study observed 1,678 board members not accounting for interlocking directorates, those board members that sit on more than one board.

Table 1: Sample Statistics

Number of boards	173
Number of boards for which total data was available	151
Number of directors observed	1678

Table 2 points out that the average board has nearly 10 members, while the range of board sizes in this study varies from 4 to 18 directors. Average board tenure has a mean of 8 years across the sample. The lowest average tenure per board is 1.13 years while the largest observed is in excess of 20 years. The mean age of a board in the sample

is 58 and ranges from 43 to almost 69 years. Each board holds on average 2.37 outside director positions, the highest being 8.25 and the lowest is none at all. Interestingly, on average 41% of a boards' membership holds a position as an officer of another corporation. The range of observations for this variable is very large. In some cases not a single board member holds an outside officer position while in others a 100 per cent participation rate was observed.

The diversity of director age averaged 8.06 standard deviations across all boards, while 1.41 was the lowest and 15.05 was the highest. Diversity with respect to tenure was not as large as that of age producing a mean of 5.42 standard deviations, ranging from only 0.41 to 15.96. Nonetheless, variation in the data certainly exists.

With respect to the performance metrics, Tobin's q produced a mean result across the sample of 1.38. Noting from earlier, a q in excess of one indicates that the market views the firm's internal organization as exceptionally good. This is a favourable result for the S&P/TSX Composite Index. EVA also produced a favourable yet very small mean result, 0.0002. This indicates that on average firms in the index did create value but only very little. The EVA figures are represented as the percentage of capital employed, not straight dollar amounts. By presenting EVA as a percentage of the capital employed, the figures become more appropriate for comparing across firms. Finally, ROA produced a negative average return across all firms of -0.38.

The control variables also produced interesting results. On average a firm in the index employs 8,493 employees. Also 34 % of these firms practice CEO duality. In other words

the chairperson is also the CEO of the firm. Finally, the average number of inside directors on a board is 23%.

Table 2: Descriptive Statistics

Variables	Mean	Median	n	Min	Max
Board Size	9.7	9	173	4	18
Average Board Tenure	8.05	7.14	173	1.13	20.11
Average Director Age	58.59	59	151	43	68.71
Average # of Outside Director Positions Held	2.37	2.25	151	0	8.25
Proportion of Directors who are Officers of other Corps	0.41	0.40	151	0	1
Variation (STD) in Age	8.06	7.93	151	1.41	15.05
Variation (STD) in Board Tenure	5.42	4.72	173	0.41	15.96
Tobin's q	1.38	1.14	173	0.17	10.41
EVA	0.0002	0.0097	173	-0.48	1.98
ROA	-0.38	3.19	173	-129.17	29.92
Employees	8492.88	2321	173	0	119000
% of Inside Directors	0.23	0.20	173	0.06	0.80

The following are benchmarks for the above data. McFarland (2002) has found the average Canadian board size to be 10 members and an average director age of 60 years. In regards to tenure: "The average time in post was 4.3 years for a FTSE 100 non-executive director [and] the average time on the board for a FTSE 100 chairman was about eight years" (Higgs, 2003, pg 19). From the Dowen (1995) study the average number of outside director positions held was 1.67 and the proportion of directors who are officers of other corporations is 0.08 per cent; both are considerably lower than this study found; however, it is important to note that they came from a sample of 753 firms of the Fortune 1000 in 1992.

It is also useful to look at the similarity of the sample to the TSE 300 group of companies. The conclusion is that the sample is reasonably analogous to the TSE 300

composite index according to several key dimensions. For example, almost all of the TSE 300 industry groups are covered in the sample, except for the financial services industry and most of the transportation industry. This may have an effect on the generalizability of the results to these sectors but not likely since the theory does not suggest that the ideas in this thesis apply differently across industries. CEO duality is another dimension on which the sample can be addressed. The sample experienced 34% CEO duality while Dey (1999) found 31% in his study on the compliance of corporate governance guidelines in the Toronto Stock Exchange. As for inside versus outside directors Dey (1999) found that the average number of related directors per board is 2.6 or 5.5 for unrelated, while this study found 2.12 and 7.49 respectively. From this data board size can be derived; the Dey study implies an average board size of 8.1 compared to 9.7 here. Finally, after reviewing the number of employees and revenues of the composite index companies a modest variation of firm size exists. The sample of firms from the index also represents a respectable variation in firms' size as indicated by the same metrics. The similarity of the sample to the population and other samples drawn from the TSE, such as Dey (1999), is evidence of reasonable generalizability of this study's results.

5.3 Regression Results

This section empirically tests the research hypotheses outlined in section 3.4. For ease of reading, those hypotheses will be repeated, followed by the results of the regression analysis. Table 3 outlines the coefficients, standard error, and significance of

the variables, all broken down by the performance metric¹¹. For a summary of the results please refer to Appendix B.

5.3.1 Board Member Diversity

Recalling that board member diversity is being tested in this study using the variation of board members' tenure and the variation of directors' ages, the hypotheses are as follows.

HYPOTHESIS I: The relationship between firm performance and variation in board of directors' tenure is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of variation are associated with low levels of performance and moderate levels are related to improved performance.

HYPOTHESIS II: The relationship between firm performance and variation in board of directors' ages is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of variation are associated with low levels of performance and moderate levels are related to improved performance.

Hypothesis I, the relationship between firm performance and variation in board of directors' tenure was significant with Tobin's q as the performance metric. The linear component was significant at .003 and the quadratic portion of the variation in board of directors' tenure was significant at .013. As predicted, the coefficient on the quadratic component was negative which implies a downward opening parabola-like distribution of the data. This confirms the prediction that a certain amount of diversity is beneficial in a team but that performance will tend to taper off with too much or too little variation.

¹¹ Although the theory does not state that the performance of the models should vary by industry, the models were estimated while controlling for industry to satisfy our curiosity. No significant differences in the results occurred.

Table 3: Regression Results

Variable	Tobin's q			EVA			ROA		
	B	Std. Error	Sig.	B	Std. Error	Sig.	B	Std. Error	Sig.
Intercept	-1.272	1.533	.408	-.0486	.131	.711	-.31.4	22.37	.163
Board Size	-.152	.041	.000***	-.0015	.003	.675	.418	.608	.493
Average Board Tenure	-.0016	.119	.896	.0226	.010	.028**	4.521	1.751	.011**
Average Board Tenure Squared	-.0017	.006	.756	-.0009	.000	.051*	-.190	.083	.024**
Average Director Age	.0254	.023	.272	-.002	.002	.310	.176	.336	.602
Average # of Outside Director Positions Held	-.187	.074	.013**	.0025	.006	.688	-1.187	1.081	.274
Proportion of Directors who are Officers of other Corps	.460	.468	.327	-.0222	.040	.579	-.244	6.834	.972
Variation (STD) in Age	.453	.166	.007***	.0102	.014	.473	.412	2.433	.866
Variation (STD) in Age Squared	-.025	.010	.014**	-.0005	.001	.573	0.0224	.147	.879
Variation (STD) in Board Tenure	.362	.120	.003***	.0008	.010	.934	-1.595	1.750	.364
Variation (STD) in Board Tenure Squared	-.0196	.008	.013**	.0003	.001	.648	.109	.113	.338
R ²	.22			.14			.14		

* p < .06

** p < .05

*** p < .01

With a parabolic distribution of the data comes an optimal point. By taking the first derivative of the fitted model against variation in board of directors' tenure, an optimal standard deviation of 9.2 is produced. In theory this is the level of diversity with respect to tenure that boards should seek to achieve.

Hypothesis II addresses the relationship between firm performance and variation in board of directors' ages. The linear component of variation in age was found to be significant (.007) with a positive coefficient. The quadratic component was also supported (.014) and had a negative coefficient, which is consistent with the predictions. What this suggests is that an optimal point also exists with respect to diversity in board members' age, 9.06 standard deviations. This is consistent with the supporting literature, which predicted too much diversity may cause conflict and communication breakdowns to occur and with too little diversity comes a lack of skills and experience. EVA and ROA do not support either of the diversity hypotheses.

5.3.2 Board Size

This study predicted that the smaller the board size the better, with the assumption that a board would not short staff itself. Hypothesis III is stated below.

HYPOTHESIS III: Board size is significantly and negatively related to firm performance.

Once again, only Tobin's q produced significant support (.000) for this hypothesis. Furthermore, the coefficient is negative as predicted. Therefore, these findings indicate that smaller boards are associated with improved levels of firm performance. This is

consistent with this study's predictions and the supporting literature from which the aforementioned hypothesis was derived.

5.3.3 Average Board Tenure

The distribution of average board tenure was predicted to resemble a downward opening parabolic distribution.

HYPOTHESIS IV: The relationship between firm performance and average board tenure is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of average board tenure are associated with low levels of performance and moderate average levels are related to improved performance.

Interestingly EVA and ROA both identified the linear and quadratic components of average board tenure as significant but not Tobin's q. Furthermore negative coefficients on the quadratic terms were found in both cases against EVA and ROA.

EVA found a significance level of .028 for average board tenure and .051 for average board tenure squared, only slightly less than the usual .05 significance level. The optimal level for average board tenure is 11.9 years according to the first derivative of the fitted model against EVA.

ROA produced significance at more extreme levels than EVA with a level of .011 for average board tenure and .024 for average board tenure squared. Interestingly the suggested optimal level of average board tenure is 12.56 years, which is very close to that indicated by EVA. These results confirm the prediction that not only do board members likely need time to adjust to a board but that their performance will tend to diminish after long levels of tenure.

The results here are somewhat contradictory to Higgs (2003). Higgs argues that a non-executive director should serve two three-year terms. However, he acknowledges that occasions may exist where value will be added by serving for longer and suggests that after nine years annual re-election is appropriate. It is important to keep in mind that Higgs' conclusions are not the outcomes of a specific empirical study. Furthermore, the Higgs study is targeted at non-executive directors whereas this study makes no such distinction.

5.3.4 Director Experience

This study attempted to measure director experience using average director age, the average number of outside director positions held, and the proportion of directors who are officers of other corporations. The corresponding hypotheses are below.

HYPOTHESIS V: Average director age is significantly and positively related to firm performance.

HYPOTHESIS VI: The average number of outside board positions held by a director is significantly and positively related to firm performance.

HYPOTHESIS VII: The proportion of board members who are officers of other corporations is significantly and positively related to firm performance.

Beginning with average director age outlined in hypothesis V, the prediction was a positive relation to firm performance, and unlike diversity, no decreasing tendencies are associated with it. The idea behind this hypothesis is that with age comes experience. Surprisingly none of the models offered much support for this hypothesis. Therefore, it

can only be concluded that the data does not support the idea that increased levels of average director age are associated with improved levels of firm performance.

Hypothesis VI and VII are based on a study by Downen (1995). Contrary to that study, which successfully linked high performing firms with boards that have a high proportion of directors who hold outside board positions, the results here indicate the opposite. Under Tobin's q a significant result of .013 and a negative coefficient suggest that a high average of directors who hold outside board positions is detrimental to firm performance. This might suggest that there is actually a distraction factor associated with high levels of interlocking directorates. Directors who hold seats on numerous other boards may not devote as much time or commitment as those who hold fewer outside board positions. This finding is consistent with current concerns that board members are stretched too thin.

Consistent with Downen's study, hypothesis VII was not statistically significant. This leads to the conclusion that a high proportion of directors who hold officer positions on other boards cannot be associated with improved levels of firm performance.

In summary, only two of the hypotheses were not supported, and another was significant but opposite to this study's predictions.

5.3.5 General Observations

Table 3 reports R-squares for three of the models run in this study. R-squared is a measure of the level of variability in the dependent variable that all of the independent variables together can explain. Table 3 indicates that the Tobin's q model had an R-squared of 22% while the EVA and ROA both had an R-squared of 14%. R-squares at

these levels are common in the corporate governance literature as there are likely many indicators that can explain the variability in the dependent variable. Ofek and Yermack (2000) as well as Lee and O'Neil (2003) all reported R-squares or adjusted R-squares at similar levels in their corporate governance research. Lee and O'Neil's Adjusted R-squares for example range from .060 to .22 while Ofek and Yermack report Adjusted R-squares only as high as .1009.

Table 4 presents the results of a test for multicollinearity. The VIF values greater than 10, signifying a multicollinearity problem, are with respect to those variables that are associated with a quadratic term. Since the quadratic term is the square of the linear component, multicollinearity is expected.

Table 4: Collinearity of Variables

Variable	Collinearity Statistics	
	Tolerance	VIF
Board Size	.517	1.934
Average Board Tenure	.036	27.683
Average Board Tenure Squared	.038	26.30
Average Director Age	.682	1.467
Average # of Outside Director Positions Held	.760	1.315
Proportion of Directors who are Officers of other Corps	.849	1.177
Variation (STD) in Age	.035	28.532
Variation (STD) in Age Squared	.034	28.989
Variation (STD) in Board Tenure	.049	20.517
Variation (STD) in Board Tenure Squared	.055	18.227

With respect to the identification and handling of outliers, a few have been observed. There are several positions on how to handle outliers such as leaving them in or

deleting them. This study takes the position that outliers naturally occur in the data and that a replication of this study would most likely observe similar data points. Consequently, all the models and the results presented in this study include the outliers. All models were run in the absence of outliers to find out if any large changes occurred in the various models. Small mixed changes in R-squared occurred and the overall tendency was for some significance levels to become slightly stronger. These changes were not drastic and do not warrant further explanation.

With regard to the four instances in which an optimal point has been discussed, it should be noted that the importance of the optimal point depends on the nature of the curvature over which the optimum has been taken. For example, if the parabolic distribution of the data displayed a peaked slender (relatively flat) shape, a small deviation from the optimal point would imply a large (small) drop in firm performance. That being said, the plots of average tenure against EVA and ROA respectively were relatively flat. The plot of variation in both age and tenure against Tobin's q exhibited a more arched nature but not so much that one would regard it as peaked.¹² Therefore, deviation from the optimal point would correspond to moderate changes in firm performance for variation in board member age and tenure and relatively small changes in firm performance for average board tenure.

¹² The data is somewhat loosely fitted around the parabola curves but still tight enough to produce a respectable R-squared in all three models.

Chapter 6: Conclusion and Implications

6.1 Introduction

This section provides a summary of the key findings of this research. Furthermore, the limitations to the study and reasons why more was not found are also outlined. Some important implications of the research pertaining to board design are then discussed as well as the predicted beneficiaries of this study. Finally, suggested directions for further research are offered.

6.2 Summary of Key Findings

The results have indicated that it is extremely useful to branch into other disciplines, such as organizational behaviour, to help explain what is happening in the world of finance. This study suggests that a certain amount of diversity with respect to tenure and age is beneficial in a board but that firm performance will tend to taper off with excessively varied boards. As predicted, smaller boards are also associated with higher levels of firm performance. Furthermore, with respect to average board tenure it was shown that not only do board members likely need time to adjust to a board in order to contribute but also, that their contributions will tend to diminish with tenure at excessive levels. This suggests that an optimal moderate level exists. Finally, a high average proportion of directors who hold outside board positions is associated with decreased levels of firm performance, which was contrary to predictions made, but consistent with current views that directors are stretched too thin. In short, this study proves that team design is a fundamental element of the board of director's success.

6.3 Limitations of the Research

This study is limited by the fact that all of the firms in the TSE 300 Composite Index could not be measured. Also, only publicly available printed data could be used in this study due to limited resources. Due to time and budget constraints, it was simply impossible to sit in on board meetings or conduct first hand interviews. Furthermore, there are likely several other director demographics that contribute to firm performance, but only a select few could be addressed here due to the scope of this study.

Another limitation is the common problem of missing data. This problem came up during the pre-test, which was done for the purpose of identifying sufficient variation in the data for the first two hypotheses. Not all variables have missing data, however those such as board member age and number of outside board positions held do. This is due to the incompleteness of the secondary resources being used.

There are several techniques that have been considered to deal with the problem of missing data. First, listwise deletion that “eliminates all cases of any amount of missing data from a calculation” (Roth, 1994, pg 539) is popular and easy, but sacrifices a lot of data. Secondly, “pairwise deletion deletes information only from those statistics that need the information” (Roth, 1994, pg 540). This technique preserves data although issues arise when interpreting correlation matrices because different parts of the sample are being used. Thirdly, “mean substitution allows researchers to use the mean value of a variable in place of missing data for that same variable” (Roth, 1994, pg 540). This method tends to attenuate variance estimates, which could be a problem in this study because two hypotheses rely specifically on variance. A fourth method is imputation

which involves imputing a value for the missing data equal to a similar case (called hot-deck imputation), regression imputation, or an estimate based on another variable in the data set. Unfortunately the types of variables in this study do not provide enough insight into the others to make this a feasible method. Finally, there is the option of simply doing the regression in error. As making measurements with error is a commonly accepted reality of empirical work, this method along with pairwise deletion for extreme cases are the techniques of choice in this study for handling the problem of missing data. By using these two methods, it is expected that an appropriate proxy of board member demographics has been derived.

Why was more not found? There are likely several answers to this question. Firstly, it is possible that in the Canadian context, governance may not be contributing as much to firm performance as originally thought. Secondly, there is the issue of endogeneity, which is a possible inter-relationship between, in this case, firm performance and director demographics. For example, if performance is good or bad it can have an impact on who sits on the board. Since these two may be correlated it is possible that a fundamental principle of this type of analysis may have been violated. Endogeneity is very common in corporate governance research. Thirdly, due to limited resources only a one year study could be conducted; however, a longitudinal study of say three or four years could better grasp the impact that is really occurring from the directors' decisions and changes in board design. Finally, there are likely other variables that can affect firm performance that this study did not take into account.

6.4 Implications for Board Design

Those in charge of board design might find it beneficial to address the key findings of this research. In particular, the research is relevant for boards of directors that have yet to be developed and also, those going through restructuring. Adhering to the key findings in this report lessen the chances of director selection based on the traditional erroneous methods; i.e. methods that historically lead boards to acquire the label “old boys’ clubs”. Furthermore, these findings may be the motivation needed to influence the restructuring of already established but poorly designed boards.

This study argues that companies need to increase the current average level of diversity with respect to tenure. This conclusion has been drawn by comparing the sample’s mean standard deviation of board of directors’ tenure (5.42) from Table 2 to the optimal level (9.2) suggested in section 5.2.1.

Similar implications revolve around average board tenure. Table 2 indicates the sample’s current average board tenure is 8.05 years while section 5.2.3 identifies the optimal level as 11.9 years from the EVA model or 12.56 using ROA as a performance metric. This implies that director turnover may be too high.

6.5 Research Benefits

Beneficiaries of this study are essentially threefold. First, the shareholders will reap the benefit of owning better-run companies. Secondly, stakeholders including employees and society will be the beneficiaries of a more appropriate, experienced, and efficient corporate community. Thirdly, the board members themselves may not

experience the frustration that accompanies membership on a poorly designed and possibly incompetent team.

This study contributes to the literature on boards of directors and the understanding of the topic area. It was the intention of this study to make sense of the different views on boards of directors from the financial and organizational behaviour disciplines, while at the same time adding an additional dimension to previous research in both areas.

6.6 Future Research

This topic area is under-researched and because of that, numerous future research possibilities exist. For example, an alternative form of measurement for diversity (variation of age and tenure) and average board tenure may be required. As a parabola is a narrow way to specify decreasing performance at extreme values, more representative curves may produce added favourable results and should be considered.

As indicated earlier in the study, there are likely many more indicators of firm performance than have been considered here. For example, race and gender could prove to be very interesting predictors of not only firm performance but a boards' willingness to embrace diversity.

A longitudinal study may also prove to be rewarding. If this study was replicated over the next few years not only could further insight be provided into the indicators already addressed but additional events such as director turnover and changes in board design could be observed.

Different indicators of experience are required. Suggestions for potential experience predictors include education levels or identifying SIC codes which represent their principle (or most recent) occupation. Furthermore, under the experience area, additional exploration into why the proportion of outside director positions held is negatively associated with firm performance might be useful. Getting a first hand account, such as directors' personal opinions on why this might be so, could produce valuable insight.

What else does the OB field have to contribute to board design? Researchers have been studying the performance of teams for years. A more extensive review of the OB literature may generate further contributions from this field.

Finally, it would also be invaluable to interview board committees in charge of director selection to ask them exactly how the process works and to get their opinions on the key findings in this study. This may well provide innovative direction for future research.

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Glossary

Board of Directors – A group of individuals elected by the shareholders of a corporation to oversee the management of the corporation in question (Corporate Governance Glossary, <http://www.corp-gov.org/glossary...>, Accessed 2003).

CEO Duality – When the CEO also holds the position of chairman of the board

Corporate Governance – The system of relations between the shareholders, Board of Directors and management of a company, as defined by the corporate charter, bylaws, formal policy and rule of law (Corporate Governance Glossary, <http://www.corp-gov.org/glossary...>, Accessed 2003).

Cross-Sectional Regression – This type of regression uses “data on one or more variables collected at a single point in time” (Brooks, 2002).

Interlocking Directorates - Two boards of directors which share at least one director in common (Interlocking Directorates, <http://www.investorwords.com...>, Accessed 2003)

Invisible activism (Jawboning) – When the CEO or equivalent of a large (likely institutional) shareholder places a call to a CEO or board member of the company being monitored and displays their displeasure with how the company is performing.

Power Investing – Power investing is practiced primarily by investment bankers who pool their own money with pension funds and other institutions to take control of major companies, often selling assets to finance the deal.

Transaction – A transaction occurs when a good or service is transferred across a technologically separable interface. One stage of activity terminates and another begins (Williamson, 1981).

Transaction Cost – Analogous to friction in mechanical systems. Costs arise when parties to an exchange operate disharmoniously, or there are frequent misunderstandings and conflicts that lead to delays, breakdowns, or other malfunctions.

Transaction Cost Economics (TCE) – TCE is concerned with the examination of the comparative costs of planning, adapting, and monitoring task completion under alternative governance structures (Williamson, 1981).

Transfer Pricing – The price that is assumed to have been charged by one part of a company for products and services it provides to another part of the same company, in order to calculate each division's profit and loss separately (Transfer Pricing, <http://www.investorwords.com...>, Accessed 2003).

Unrelated Director – “A director who is independent of management and is free from any interest and any business or other relationship which could, or could reasonably be perceived to, materially interfere with the director’s ability to act with a view to the best interests of the corporation, other than interests and relationships arising from shareholding” (Toronto Stock Exchange, 2002).

Appendix A

Table 5: Measurement Questions and Data Analysis Techniques

Investigative Questions	Hypotheses	Measurement	Data Analysis Technique
i. Do high performing firms have diverse board members?	<p><i>HYPOTHESIS I:</i> The relationship between firm performance and variation in board of directors' tenure is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of variation are associated with low levels of performance and moderate levels are related to improved performance.</p> <p><i>HYPOTHESIS II:</i> The relationship between firm performance and variation in board of directors' ages is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of variation are associated with low levels of performance and moderate levels are related to improved performance.</p>	<p>Tenure is equal to the number of years of service to the board.</p> <p>Directors' age is the age as given.</p>	A cross sectional regression analysis regresses a linear and quadratic component of variation for both director tenure and age against a performance indicator.
ii. Is the size of a firm's board important?	<p><i>HYPOTHESIS III:</i> Board size is significantly and negatively related to firm performance.</p>	Board size is equal to board membership.	A cross sectional regression analysis regresses board size against a performance indicator.

iii. Is the performance of a firm related to director tenure?	<p><i>HYPOTHESIS IV:</i> The relationship between firm performance and average board tenure is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of average board tenure are associated with low levels of performance and moderate average levels are related to improved performance.</p>	<p>Tenure is equal to the number of years of service to the board rounded to the nearest whole year.</p>	<p>A cross sectional regression analysis regresses a linear and quadratic component of variation for average board tenure against a performance indicator.</p>
iv. Do high performing firms have experienced board members?	<p><i>HYPOTHESIS V:</i> Average director age is significantly and positively related to firm performance.</p> <p><i>HYPOTHESIS VI:</i> The average number of outside board positions held by a director is significantly and positively related to firm performance.</p> <p><i>HYPOTHESIS VII:</i> The proportion of board members who are officers of other corporations is significantly and positively related to firm performance.</p>	<p>Directors' age is the age as given.</p> <p>An outside board position is a seat on any firm's board excluding the firm in question and its subsidiaries.</p> <p>To be considered an officer is to hold any executive position.</p>	<p>A cross sectional regression analysis regresses a linear and quadratic component of the average directors' age against a performance indicator.</p> <p>A cross sectional regression analysis also regresses the number of outside board positions held, and proportion of board members who hold officer positions in other corporations against a performance indicator.</p>

Appendix B

Table 6: Results of Cross Sectional Regression Analyses

Hypotheses	Results	Conclusion
<p><i>HYPOTHESIS I:</i> The relationship between firm performance and variation in board of directors' tenure is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of variation are associated with low levels of performance and moderate levels are related to improved performance.</p>	<p>For Tobin's q the linear component had significance of .003 and the quadratic portion had significance at the .013 level.</p> <p>The coefficient of the quadratic component was negative</p> <p>Optimal level is 9.2 standard deviations</p>	Supported.
<p><i>HYPOTHESIS II:</i> The relationship between firm performance and variation in board of directors' ages is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of variation are associated with low levels of performance and moderate levels are related to improved performance.</p>	<p>The linear component of variation in age was found to be significant under Tobin's q (.007) with a positive coefficient and the quadratic portion had significance the .014 level.</p> <p>Optimal level is 9.06 standard deviations</p>	Supported.
<p><i>HYPOTHESIS III:</i> Board size is significantly and negatively related to firm performance.</p>	Tobin's q produced significant support (.000) and the coefficient is negative.	Supported.

<p><i>HYPOTHESIS IV:</i> The relationship between firm performance and average board tenure is significant, non-linearly related, and quadratic with a negative coefficient. Low and high levels of average board tenure are associated with low levels of performance and moderate average levels are related to improved performance.</p>	<p>Under EVA the significance level is .028 for average board tenure and .051 for average board tenure squared with an optimal level of is 11.9 years.</p> <p>ROA produced a slightly greater significance, .011 for average board tenure and .024 for average board tenure squared with an optimal level of 12.56 years.</p>	Supported.
<p><i>HYPOTHESIS V:</i> Average director age is significantly and positively related to firm performance.</p>	No significant variables identified	No Support.
<p><i>HYPOTHESIS VI:</i> The average number of outside board positions held by a director is significantly and positively related to firm performance.</p>	Under Tobin's q a significance of .013 and a corresponding negative coefficient was found.	Directly Contradicted.
<p><i>HYPOTHESIS VII:</i> The proportion of board members who are officers of other corporations is significantly and positively related to firm performance.</p>	No significant variables identified	No Support.