TWO ESSAYS ON THE DYNAMICS OF BOARD OF DIRECTORS AND CORPORATE GOVERNANCE IN VENEZUELA

AN ABSTRACT

SUBMITTED ON THE TWENTY-SIXTH DAY OF SEPTEMBER, 2002

TO THE PROGRAM IN BUSINESS ADMINISTRATION

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE

GRADUATE SCHOOL

OF TULANE UNIVERSITY

FOR THE DEGREE

OF

DOCTOR OF PHILOSOPHY

BY

Maximiliano González Ferrero

APPROVED:

Thomas H. Noe, Ph.D.
Director

Paul A. Spindt, Ph.D.

Suman Banerjee, Ph.D.

ABSTRACT

In the first chapter of this dissertation, I argue that independent directors tend to follow a board leader. I theoretically analyze this behavior and show that under normal circumstances there is a tendency for board members to herd. Herding is inefficient because the information contained in the signals that directors' receive is not aggregated and therefore it is wasted. Herding may be one of the reasons why no empirical relation exists between board composition and firm performance.

In the second chapter of this dissertation, I argue that when financial markets are not well developed and when minority shareholders are not well protected, the role of the board of directors becomes more important as the only available control mechanism for management opportunism. Venezuela is an ideal case study to test this proposition because both of these issues are particularly severe. The specific question that I want to answer in this chapter is: Does corporate the governance mechanism work well in Venezuela? That is, is there evidence that board directors and CEOs are removed after a period of poor performance? The answer I found is not conclusive. In the case of directors, I found a strong negative relationship between poor performance and turnover; however, for the case of CEO turnover, I find little support for the hypothesis that they are removed because poor performance.

TWO ESSAYS ON THE DYNAMICS OF BOARD OF DIRECTORS AND CORPORATE GOVERNANCE IN VENEZUELA

A DISSERTATION

SUBMITTED ON THE TWENTY-SIXTH DAY OF SEPTEMBER, 2002

TO THE PROGRAM IN BUSINESS ADMINISTRATION

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE

GRADUATE SCHOOL

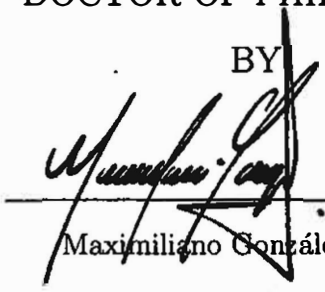
OF TULANE UNIVERSITY

FOR THE DEGREE

OF

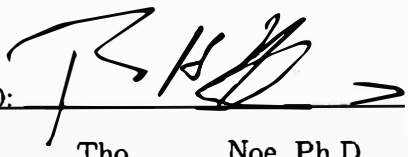
DOCTOR OF PHILOSOPHY

BY



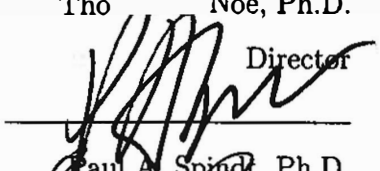
Maximiliano González Ferrero

APPROVED:

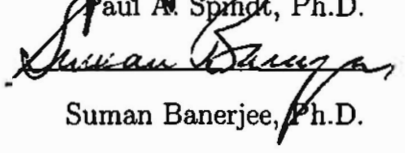


Tho Noe, Ph.D.

Director



Paul A. Spindt, Ph.D.



Suman Banerjee, Ph.D.

Fueron años de mucho trabajo y sacrificio, pero el apoyo incondicional de mi esposa María Sueños lo hizo todo más fácil y llevadero. Por eso, le dedico esta disertación como una pequeña muestra de mi amor y agradecimiento.

ACKNOWLEDGEMENTS

I would like to express my acknowledgement to the following people and institutions:

To professors Thomas H. Noe, Paul A. Spindt, and Suman Banerjee for teaching me how to do research.

To IESA for providing me with a very flexible environment to undertake this program; for providing me financial support to put together the database used in chapter two; and, for providing me financial support during the period August 2001 to February 2002.

To Banco Mercantil for providing me financial support for my summer trips to New Orleans.

To Fundayacucho for providing me financial support to cover the tuition fees.

To Janice Hughes for all the help she provided me during my studies.

To Milly Honik and Clara Serfaty for their help with the database.

To my fellow colleagues at the Finance Center at IESA for their support and encouragement.

To my fellow Ph.D. students, especially, Isabella Otero, Julian Benavides, Cándido Pérez, Rigoberto Bastidas, and Benito Sanchez for all the hours we enjoyed together.

To my father Julio César González, to my mother María Luisa Ferrero, and to my dear sister María Luisa González for always being there when I need them.

To Dalita Navarro for making my life much easier!

To Maria Soledad Reyna for taking care of my dog for eight months.

And last, but not least, to my wife Sueños for helping me become the person I am.

Contents

List of Tables

Introduction

In the first chapter of this dissertation, I argue that independent directors tend to follow a board leader. I theoretically analyze this behavior and show that under normal circumstances there is a tendency for board members to herd. Herding is inefficient because the information contained in the signals that directors' receive is not aggregated and therefore it is wasted. Herding may be one of the reasons why no empirical relation exists between board composition and firm performance.

In the second chapter of this dissertation, I argue that when financial markets are not well developed and when minority shareholders are not well protected, the role of the board of directors becomes more important as the only available control mechanism for management opportunism. Venezuela is an ideal case study to test this proposition because both of these issues are particularly severe. The specific question that I want to answer in this chapter is: Does corporate the governance mechanism work well in Venezuela? That is, is there evidence that board directors and CEOs are removed after a period of poor performance? The answer I found is not conclusive. In the case of directors, I found a strong negative relationship between poor performance and turnover; however, for the case of CEO turnover, I find little support for the hypothesis that they are removed because poor performance.

Chapter 1

Herding Behavior and Board Effectiveness

1.1 Introduction

Three empirical facts motivate this study: First, increasing the number of outside (independent) directors in the board does not increase the firm's performance (Bhagat and Black, 2000; Hermalin and Weisbach, 1991, 1998, 2000). Some of the arguments these authors posit as explanation for their findings is that the proportion of insiders could add more value to firm performance due to the stronger incentives and better access to information they have when compared to outside directors. Also, independent directors are relatively ignorant about the company affairs and are more likely to make mistakes. Finally, these authors discuss the endogeneity between performance and board composition and the fact that firm' performance is a function of too many factors for the effect of the board composition to be noticeable.

Second, disagreements in the board room are fairly rare (Noe and Rebello, 1997; Warther, 1998). Sometimes directors, although suspicious about a particular decision, have little evidence to build a strong case for debate (Pound, 1995). The lack of open dissent could also be due to the fact that open criticism could lead to termination.

Parrino, et al. (2001) show that large investors are more likely to leave rather than to be involved in forcing changes within the firm, in this sense, liquidity is more important than monitoring.

Third, experimental research has shown that group decision making dynamics in cohesive and small group of individuals with strong civility and cooperation norms (such as a board of directors) value consensus more greatly than they do realistic appraisal of alternatives (Bainbridge, 2001). Therefore, although there is strong evidence from experimental psychology (e.g., Miner (1984) and Kiesler and Sproul (1992)) and experimental economics (e.g. Blinder and Morgan, 2000) that not only do group decisions outperform average individuals in a given sample, but also they produce synergies that makes experimental groups sometimes outperform even the best individual decision maker, it is also true that groups such as a board of directors emphasize politeness and courtesy at the expense of oversight (Jensen, 2000), so the impact of board decisionmaking in a firm's performance will dependent on whether the desire to maintain group cohesion does not overcome the critical judgement of its members.

I conjecture that one reasons why increasing the proportion of outsiders in the board does not produce an increase in the firm's performance, is because independent directors tend to do whatever everyone else is doing in the board even when their private information suggests doing something different (herd behavior).

Because the signals (e.g., project quality) that outside directors receive are imperfect, in the aggregate, residuals cancel out, and therefore the efficient policy must prevail (e.g., approve the good projects and reject the bad ones). However, this is not true in the presence of herding because much of the information brought about in the form of private signals is wasted[1].

---

[1]Mueller put the matter very graphically when he stated that "...outside directors are birds of uncommon plumage, but they tend to flock together even though they may represent separate individual interest" Mueller (1974; p. 75).

In my setting none of the directors knows exactly the quality of their decisions. If they vote against the rest of the board members in a given matter, and the decision proves to be correct, their human capital enhances. But if the decision proves to be wrong, their human capital (reputation) shrinks. However, the weights given to the risk of making the wrong decision are not necessarily linear. In other words, "it is better for reputation to fail conventionally than to succeed unconventionally" (Keynes, 1936; p.158).

Moreover, under conditions of complexity and uncertainty, which are usually the case in board meetings, outside directors with limited information tend to wait and see the actions taken by presumptively better inform directors (e.g., CEO or more experienced outside directors) and free ride by following the latter decision (Bainbridge, 2000).

1.2 Literature Review on Theoretical Models on Boards of Directors

In this section I will comment on the existing theoretical literature on board of directors.

1. Hirshleifer and Thakor (1994)

The paper discusses maintenance of management quality through the simultaneous functioning of internal (board dismissals) and external (takeovers) corporate control mechanisms. The information set of the board and the bidder are noisily aggregated, and this situation affects the behavior of the board. The board is treated as a unity and it can be either vigilant or lax. A vigilant board will sometimes oppose takeovers, and this opposition can be good news for the firm in the sense that shareholders' interests are well served. In the model I present below, I concentrate on the board's dynamics rather than the board monitoring abilities. However, in both models the individual belief is updated after observing the actions of other actors. In the setting

of my model, the board members do not act as an unity and each director gets individual signals.

2. Maug (1997)

The paper analyzes the combination of internal and external control mechanisms in a firm in which assets can have alternative uses that might be more profitable than the current one. However, the incumbent manager is potentially opposed to reallocating the assets since he has invested a high level of specific human capital, implying that his value to the outside labor market has decreased. The author shows the cost and benefits for the shareholders of different organization structures. The optimal governance is a function of the restructuring potential and the cost of information acquisition. Independent directors are optimal solutions if two conditions are satisfied: 1) assessing manager's decision by obtaining information must be positive at a sufficiently low acquisition cost; and, 2) the expected restructuring potential must be large. The center of the analysis of this model, as opposed to mine, is the CEO not the directors and the board is also assumed to act as a unity.

3. Noe and Rebello (1997)

Outside directors are effective when they possess sufficient votes to block management proposals and are able to coordinate their actions. This holds true even when they are uninformed about the quality of the project and even when they do not have any monitoring abilities. The optimality of the board structure is based on the formation of factions (insiders and outsiders decision groups). An interesting feature of this model is that under normal circumstances board members exhibit passive behavior. In my model, although I do not include inside directors, also the board will exhibit passive behavior (unanimous decision making); however, they do receive signals about the quality of the project, but sometimes they decide not to use this information and just do whatever other board members are doing.

4. Warther (1998)

This paper evaluates management's power in the selection and retention of board members and their focus on the effect of this power on board discussion and effectiveness in disciplining management. As in my model, this analysis focuses on the frequency of open dissent, and it is shown that there are critical levels for which board members are willing to dissent with management no approving the projects management propose. Boards swing between the extremes of passivity and action. The main differences between this model and mine will be outlined below.

5. Hermalin and Weisbach (1998)

Board effectiveness is a function of its independence, which is in turn a function of negotiations between existing directors and the CEO who will fill vacancies on the board. The CEO bargaining power will come from his perceived ability relative to a potential successor. The model concentrates on the intensity with which the board monitors the CEO. They showed that this monitoring intensity is decreasing on the mean value of the prior estimates of CEO's ability, the precision of this ability estimate and the collective lack of independence of the board. However, this monitoring intensity is increasing in the quality of the signal the board (as a whole) receives about the CEO. In the bargain game between the CEO and the board, they agree on the level of independence and the CEO's salary. The more independent the board, the higher the cutoff point for which the CEO will not be fired. But, if board does not fire the CEO, the new board (after the bargain game) will be less independent so in the long run the board will tend to be passive if the CEO stays in the job. The center of the analysis of this model, as opposed to mine, is the CEO and his ability to bargain with the board. In this case, the board is assumed as a compact unity.

6. Gillette, Noe and Rebello (2000)

Using laboratory experiments with business students, the authors showed that multi-agent voting mechanisms can implement efficient policies, that is, accepting projects after receiving good signals and rejecting projects after receiving bad signals.

The two conditions for the implementation of the efficient policies is that there are penalties when insiders dissent and the existence of what they call "watchdogs", with majority voting rights, who are uninformed agents but their interests are aligned with those of the shareholders. Also, these watchdogs have incentives to veto the policy choice made by insiders. This result encourages organizational designs that give independent directors majority voting power in boards. The authors showed that insiders and watchdogs each act as if each group were a single agent. In my model, I allow outside directors to receive signals but also, as in this study, I give them the possibility of blocking management proposed projects. However, the insider plays no role in my analysis because I am concentrating only on the dynamics of the outside directors.

7. Raheja (2000)

This is an unpublished working paper that deals with the interaction between inside and outside members of a corporate board and studies how board composition affects the board monitoring abilities. She considers two board functions: monitoring and selection of the new CEO. The main point in her argument is that the competition among insiders to become the CEO's successor and the risk involved (getting fired) if they decided to back up an inferior project, motivates insiders to inform outside board members about the quality of the project to be approved. In this model, outside board members receive the benefit of reputation from higher firm values, but the monitoring cost and the CEO influence prevent them from always monitoring. This model differs with mine in the sense that it deals mainly with board composition and all outside members behave as a cohesive group; my model, in contrast, deals more with the voting dynamics of outsiders.

8. Adams (2000)

This is an unpublished working paper that analyzes the consequence of the board's dual role as an advisor as well as a monitor. As a result of this dual role, the CEO faces a tradeoff concerning the amount of information he disclose to the board. The more information he provides, the better the advice he can receive from the board, but

also, if he gives too much information, the board will adjust their belief whether he is a good or bad CEO. This revision could lead to termination and because the CEO does not know exactly his own type, giving up too much information to the board is risky for him. This model predicts why sometimes the boards are "friendly" and why sometimes they are not. The more friendly is the board, the more information the CEO is willing to reveal and therefore the better the policy decisions the firm will make. Also, the author showed that in some circumstances the board monitoring role should be separated with the board advising role, giving some merits to the two-tier systems of corporate governance in some countries.

9. Gutierrez (2000)

This is an unpublished working papers very similar in spirit to Adams (2000) with the difference that she explicitly modeled the advisory role of the board. In her model, the CEO obtain private benefits from undertaking a project and he, strategically, provides information to the board in order to get the project approval. The presence of independent directors has two effect in the information flow; on the one hand, a high proportion of outsiders will improve the advisory role of the board; but on the other, a high proportion of independent directors will make more difficult for the CEO to get bad project approved (the ones that only himself will benefit from). This analysis differ from mine, not only in that she assumes that the outside board members as a cohesive group, but also, she assumes that a greater fraction of outside directors translate directly into a better decision making group due the expertise they bring into it; however, this is exactly my argument, if they herd among themselves, then this value added they bring to the board is wasted.

10. Almazan and Suarez (2002)

They modelled the relation between CEO entrenchment and turnover policy in firms where severance pay are used. The key insight in their analysis is that in certain circumstances shareholder (through the use of weak or strong board of directors) find it convenient to let go some power in favor to the CEO in order to save on overall compensation cost for the firm. Using adequate levels of severance payments, strong

board are prevented to replace too frequently the CEO; when weak boards are in place, an adequate level of severance payments prevent the CEO to resist excessively his own replacement. Among the predictions of this models are that strong boards are optimal governance structure when incentive compensation is effective or when control rents are large. In the case when incentive compensations are not effective, or when control right are not too large, weak boards are preferred. As opposed to my model, the board here is analyzed as a unity.

1.3 Literature Review on Herding Behavior

The main story of my analysis is that outside board members have incentive to herd on the decisions of other directors. For this reason, in this subsection I review some of the literature on herding behavior. Following Welch (2000), the theory on herding can be divided into six groups: 1) Utility interaction, 2) sanction on deviants, 3) direct payoff externalities, 4) irrational agent behavior, 5) principal-agent payoff externalities, and 6) informational externalities. I will discuss here the last two groups of papers because they are the most related to the development of my model.

Principal-agent payoff externalities

1. Scharfstein and Stein (1990)

This papers examines managers' mimicking the investment decisions of other managers, ignoring substantive private information. Managers act rationally considering their reputation risk in an active labor market. Their framework is very general and applicable to a wide range of economic settings. I derived much of my analysis from this model; however, as I will explain below, the key difference is that in my setting the labor market can not observe each board member's individual decision.

2. Froot, Scharfstein and Stein (1992)

The model is based on short term trading and study the inefficiencies created by short-horizon speculation where investors focus on one source of information, rather than on a diverse set of data. They show that horizon speculators may mimic others trying to learn what other informed traders know.

3. Hirshleifer, Subrahmanyam and Titman (1994)

They proved that under certain conditions, investors will focus only on a subset of securities, while neglecting other securities with identical exogenous characteristics. This behavior makes investors follow the leader.

4. Trueman (1994)

This author develops a model where he shows that analyst tend to make earnings forecast closer to the prior earnings expectations even when they have information that makes this action nonoptimal. Also, he shows that analyst tend to release forecasts similar to those previously announced by other analyst.

5. Zwiebel (1995)

In a labor market setting, the author shows that reputational concerns may lead managers to refrain from deviating from the herd. They may take inferior (standard) production technology, if in doing so, the market will have an accurate benchmark with which to evaluate them. Very high or very low ability managers are more likely to deviate from heard behavior. In this analysis, as opposed to mine and other herding models, managers derive reputation from good relative performance rather than from a "follow-the-rest" strategy, therefore in his setting managers are unwilling to share private information.

6. Grenadier (1999)

In a set of n market participant holding perpetual call options, each must determine the optimal moment at which to exercise. The tension of the model relies in that the more each agent waits, the more information leaks out through the actions of the

others, but in doing so, the agent loses the benefit of early exercise. The author shows that the equilibrium exercise will be sequential, with the more informed agent allowing the least informed agent to free ride on the information conveyed by the early exercise (or failure to exercise). In this framework, an information cascade can arise in which all agents, regardless of their private information, exercise immediately. Although the general model is very different from ours, we both let the agents (directors) differ in the quality of their private information, that is, the precision with which they assess the value of the option (project).

Information externalities

1. Banerjee (1992)

The author proposes a sequential decision model in which each decision maker looks at decisions made by previous decision makers. Some of them will have imperfect but informative signals that together with the information conveyed by the choices of the previous players will determine the optimal choice. He shows that optimizing individuals will be characterized by herd behavior, resulting in an inefficient equilibrium. As opposed to mine model, the agents here capture all the rewards from their actions and not all of them receive signals.

2. Bikhchandani, Hirshleifer and Welch (1992)

In a fairly general setting, these authors show that at a certain stage of a sequential decision making process, agents will ignore their private information and will act only on the information obtained from the other agents previous decisions. Once this stage is reached, the decisions of the next agents will be uninformative to others (cascades). These authors focus their analysis on the fragility of cascades with respect to different types of shocks, therefore using this model, they can explain not only uniform behavior but also drastic change such as fads.

3. Welch (1992)

This author found that when IPO shares are sold sequentially, later potential investors can learn from the purchasing decisions of early investors. This leads to formation of "cascades" in which subsequent investors ignore their private information and follow early investors. For example, he shows that a successful IPO imply that early investors had favorable information about the offering, this give additional incentives to later investors to forget about their signal and invest in the IPO. Additionally, He shows that the contrary is also true, that is, an IPO can fail rapidly if the initial demand for the issue is weak.

Some empirical findings on herding behavior in the investment industry are that older analyst are less likely to herd (Hong, et al., 1998), analyst are willing to sacrifice some prediction accuracy to protect their reputation (Graham, 1999), analyst herd on little information (Welch, 2000), and analyst herd following the release of forecast made by superior analyst (Cooper, et al., 2001).

1.4 Model

This model is similar in spirit to those of Warther (1998) and Grenadier (1999), and specially that of Warther because we both focus on open dissent among board members. However, the model presented below differs in the way directors acquire information, the voting setting, and the costs and benefits of dissent. Although my analysis supports many of the conclusions of Warther (1998), my model generates an additional set empirical of implications. The differences and similarities of both models will be stressed as I proceed with the analysis.

The technology that I will use to represent the dynamics of the boardroom is a signaling game that very closely follows Scharfstein and Stein (1990)[2].

[2]Other general models on herding behavior are Banerjee (1992) and Bikhchandani, et al. (1992)

1.4.1 Setting and players

Consider a project that must be approved by the board of directors, which represents a diffuse group of shareholders.

The firm is run by a manager who proposes a project and has private information about it. The manager extracts private benefits from the project even when it is a $NPV < 0$ venture. Assume the interest rate is zero ($r = 0$).

The board is composed of only two risk neutral independent directors (A and B) and the manager[3].

The sequence of events is as follows:

In $t = 0$ the manager proposes the project to the board. The project is state-contingent and it can be of high quality (high payoff), which generates a net cash flow equal to $x_h > 0$, or of low quality (low payoff), which generates a net cash flow equal to $x_l < 0$. It is common knowledge that $P\{x_h\} = \alpha$ and $P\{x_l\} = 1 - \alpha$.

In $t = 1$ each director gets private signals about the quality of the project[4]. Let us suppose that there are only two possible signals, a good signal (s_g), which will be perceived as conveying positive information about the project, and a bad signal (s_b), which will be perceived as conveying negative information about the project. However, the directors will interpret the signals differently depending on their types (see for similar approaches Berjaree, 1992; Warther, 1998; Grenadier, 1999). Let's

[3]You can also think of this as being a special committee set up by the rest of the board members to evaluate the project. It is common practice for boards in the US to set up special committees for purposes such as nomination, compensation, and auditing (Lorsh, 1989). Normally, the recommendations of these committees are followed by the rest of the board members.

[4]Usually directors appointed to these committees get a package of information about the project. This package may include demand estimates, cost structures, cash flow projections, and other financial information. However, this package is prepared by management and it may not include all the relevant information due to the management's desire to invest in the project. Similar assumptions are made in Gutierrez (2000) and Adams (2000).

suppose that directors can be competent (smart) with probability θ or incompetent (dumb) with probability $1-\theta$. These prior probabilities are common knowledge to all players, even the directors themselves[5]; that is, the only difference between the information set of the directors and the information set of the labor market is the private signal received by each director. Also, if both directors are competent they will receive exactly the same signal.

In $t = 2$ the directors vote to accept or reject the project. It is assumed that director A votes first, and director B, after observing A's vote, follows[6]. Note that the voting protocols are not modeled here; the critical feature, however, is that from the discussion preceding the actual voting, director B can infer correctly director A's vote. We will assume that the manager, who is also a member of the board, will always vote in favor of the project[7].

---

[5]Although there is evidence that directors are very successful business persons, it is also true that they usually join boards in businesses very different from their own (see Lorsch, 1989). John Pound makes this point with the following example "...in 1993 CalPERS's CEO Dale Hanson asked IBM board members how many of them had a personal computer on their desk; the answer was none" Pound (1995; p. 94). This situation is similar to the assumption made by Hermalin and Weisbach (1998) about the CEO information set in their model. They argued that the CEO knows only the distribution parameters of his own ability. Also, Adams (2000) made similar assumptions for the CEO in her model.

[6]This is consistent with the existence of leaders in board rooms (lead directors) who may or may not be the chairman of the board. Actually, this board leader is sometimes formally appointed as such (see Lorsch and Lipton, 1993) and in some cases this director will lead committees formed only of outside directors who will communicate with management and recommend actions to the full board (see Lorsch, 1995; Henderson et al., 1995; Conger et al., 1998). Also, Noe and Rebello (1997) argue that high profile directors may become "focal" in policy discussion and they can facilitate board coordination.

[7]In Warther (1998), there are two stages, one in which the directors "declare" what to vote, and one in which they simultaneously vote; however, it is very unlikely that the weight given by directors to each other "declaration" is the same, and therefore it seems very reasonable to argue that the board leader's declaration could be substantially more influential.

In $t = 3$ the state of nature is realized. Let's define $\hat{\theta}_i$ as the revised probability belief about outside director i's competence. Let's suppose that the market value of these directors is a function of this revised probability (see Holmstrom and Ricart i Costa, 1986) . Therefore the decision they made when they voted for the project is geared to maximizing the expected value of $\hat{\theta}_i$[8].

1.4.2 Information acquisition

As I mentioned above, the precision of the information conveyed by the signal depends on the director's type, d. If they are competent directors ($d = C$) the signal will convey the necessary information to make the right decision (accepting or rejecting the project). However, if the they are incompetent directors ($d = I$), the signal will convey no information at all. To formalize these arguments, let me define the probability of receiving a good signal, given a high value state and being a competent director, as:

$$P\{s_g|x_h, d = C\} = p \tag{1.1}$$

In other words, if a director is competent and the project is in fact of high value, there is a probability p that he will receive a good signal[9]. Let's also define the probability of a competent director receiving a good signal when the project is in fact of low value as

$$P\{s_g|x_l, d = C\} = q \tag{1.2}$$

Let $p > q$. In other words, when a competent director receives a good signal, there is a higher chance that the project is of high value[10].

[8]The compensation of board members (even including the stock options) are a small fraction of the directors' current and expected wealth; therefore prestige and other intangibles seem to play an important role in the decision to join a board of directors (see Sahlman, 1990).

[9]You can think of this as the signal's precision (see for similar treatment Bikhchandani et al., 1992; Gutierrez, 2000)

[10]In this setting, $1 - p$ represents the probability of a competent director receiving a bad signal

For an incompetent director, the signals will convey no information at all. That is, if he receives a good signal, it could be either that the project is of high value or that the project is of low value. Formally:

$$P\{s_g|x_h, d = I\} = P\{s_g|x_l, d = I\} = z \tag{1.3}$$

Using the same rationale, if he receives a bad signal, it must be the case that:

$$P\{s_b|x_h, d = I\} = P\{s_b|x_l, d = I\} = 1 - z \tag{1.4}$$

To show that this means that the signal conveys no information, I need to show that

$$P\{x_h|s_g, d = I\} = P\{x_h\} = \alpha \tag{1.5}$$

and

$$P\{x_l|s_b, d = I\} = P\{x_l\} = 1 - \alpha \tag{1.6}$$

That is, the posterior belief is unchanged after the signal is received. For (1.5), applying Bayes's rule yields:

$$\begin{aligned} P\{x_h|s_g, d = I\} &= \frac{P\{s_g|x_h, d = I\}P\{x_h\}}{P\{s_g|x_h, d = I\}P\{x_h\} + P\{s_g|x_l, 1-\theta\}P\{x_l\}} \\ &= \frac{z\alpha}{z\alpha + z(1-\alpha)} = \alpha \end{aligned} \tag{1.7}$$

Similar argument shows that $P\{x_l|s_b, d = I\} = P\{x_l\} = 1 - \alpha$.

I can now define these probabilities as $z = \alpha p + (1 - \alpha)q$, which represents the likelihood of a competent director receiving a good signal, and $1 - z$ which represents the likelihood for a competent director receiving a bad signal.

Both directors use Bayes's rule to update their belief about the quality of the project after observing their signal. Before going to the analysis of the specific problem

---

when the project is of high value and $1-q$ represents the probability of a competent director receiving a bad signal when the project is of low value.

I am trying to solve in this study, let me review the mechanics of how beliefs are updated.

Consider first the case of a director who had received a good signal (s_g); what is the probability that the project is of high value given this signal and his uncertainty about his own type (d)? Formally, how could he calculate $P\{x_h|s_g\}$?

We can directly apply Bayes's rule. Formally

$$\begin{aligned} P\{x_h|s_g\} &= \frac{P\{s_g|x_h\}P\{x_h\}}{P\{s_g|x_h\}P\{x_h\} + P\{s_g|x_l\}P\{x_l\}} \\ &= \frac{[\theta p + (1-\theta)z]\alpha}{[\theta p + (1-\theta)z]\alpha + [\theta q + (1-\theta)z](1-\alpha)} \\ &= \frac{\theta p + (1-\theta)z}{z}\alpha \\ &= \mu_g \end{aligned} \tag{1.8}$$

which represents the probability of a project being of high quality given that a good signal was received and the director is uncertain about his ability.

Consider now the problem of updating the belief about the quality of the project when a bad signal is received. Formally

$$\begin{aligned} P\{x_h|s_b\} &= \frac{P\{s_b|x_h\}P\{x_h\}}{P\{s_b|x_h\}P\{x_h\} + P\{s_b|x_l\}P\{x_l\}} \\ &= \frac{[\theta(1-p) + (1-\theta)(1-z)]\alpha}{[\theta(1-p) + (1-\theta)(1-z)]\alpha + [\theta(1-q) + (1-\theta)(1-z)](1-\alpha)} \\ &= \frac{\theta(1-p) + (1-\theta)(1-z)}{1-z}\alpha \\ &= \mu_b \end{aligned} \tag{1.9}$$

Assume that only positive signals will make the independent directors vote in favor of the proposed project (efficient policy). That is:

$$\mu_g x_h + (1-\mu_g)x_l > 0 > \mu_b x_h + (1-\mu_b)x_l \tag{1.10}$$

Also assume that director A moves first. If the two independent directors are competent, the signals they receive are the same[11]. However, when they are incompetent directors, both signals are independent.

Directors have market value that depends on their perceived quality (Holmstrom and Ricart i Costa, 1986). Let $\hat{\theta}_i$ represent the market's revised probability that director i is competent[12] (which is related to the director's market value).

Suppose each state has equal probability of occurring ($\alpha = 0.5$) and note that $p = 1 - q$. Remember that $z = \alpha p + (1 - \alpha)q$ and therefore $z = 0.5$. That is, when the incompetent director gets signal z, there is equal probability that the signal refers to a high quality or to a low quality project.

1.5 Analysis

1.5.1 No reputational considerations

To begin, let me suppose there are no reputational concerns and both directors are risk neutral. Director A will choose to vote in favor of the project only if he receives a good signal (see equation 1.10). Then, director B will infer director's A signal just by observing his actions[13], but he will still have uncertainties about director's A competence.

---

[11] Consider the case when the signal is received after analyzing financial information. If both directors are competent financial analysts, it is natural to assume that both will receive the same signal.

[12] I am assuming explicitly that directors care about their reputation. There are many theoretical and empirical arguments in favor of reputation factors being one of the most important considerations for outside directors. See for example Fama (1980), Fama and Jensen (1983), Lorsch (1989), Sahlman (1990), Kaplan and Reishus (1990), and Kaplan (1994).

[13] See for similar treatment Bikhchandani, et al. (1992).

Suppose director B receives a bad signal but he observes director A voting in favor of the project. In this case, his decision will be based on the following information set (s_g, s_b). The probability that the project is high quality given this information set is given by

$$P\{x_h|s_g \cap s_b\} = \frac{P\{s_g \cap s_b|x_h\}P\{x_h\}}{P\{s_g \cap s_b|x_h\}P\{x_h\} + P\{s_g \cap s_b|x_l\}P\{x_l\}} \tag{1.11}$$

where

$$\begin{aligned} P\{s_g \cap s_b|x_h\} &= P\{s_g|x_h\}P\{s_b|x_h\} \\ &= [p\theta + z(1-\theta)][(1-p)\theta + z(1-\theta)] \end{aligned} \tag{1.12}$$

and

$$\begin{aligned} P\{s_g \cap s_b|x_l\} &= P\{s_g|x_l\}P\{s_b|x_l\} \\ &= [q\theta + z(1-\theta)][(1-q)\theta + z(1-\theta)] \end{aligned} \tag{1.13}$$

Plugging (1.12) and (1.13) into (1.11) and using the assumption stated before that $\alpha = 0.5$ and $p = 1 - q$ yields[14]

$$P\{x_h|s_g \cap s_b\} = 0.5 \tag{1.14}$$

therefore, director B will also vote in favor of the project whenever

$$0.5x_h + 0.5x_l > 0 \tag{1.15}$$

By symmetry, I can show that if director B's information set is given by (s_b, s_g), the decision will also depend on the expected value given in (1.15). In summary, whenever there are no reputational considerations involved in the decision, the project will be accepted if its expected value is positive (efficient policy).

[14]This and all other results are available from the author in .nb format (Mathematica file).

1.5.2 Reputational considerations

Now consider the case when director B is concerned about his reputation. The directors are primarily concerned about their market value[15]; therefore, their objective is to maximize $E\{\hat{\theta}_i\}$. In this regard, I will study director B's decision conditional to director A's actions[16].

From (1.10) we know that director A will approve the project only when he receives a good signal. Because the manager will always vote in favor, the project will be accepted whenever one of the independent directors votes to accept it. Although the market cannot observe the individual voting of the board, it can see whether or not the decision was unanimous among the independent directors.[17]

In the rest of this section, I prove that director B will follow the decision made by director A regardless of his own signal; that is, director B will herd.

From the above discussion, it will be common knowledge that if both directors are competent they will both receive the same signal (they both interpret the same information in similar ways). However, if the market observes a divided decision in the outcome (in this case the approval of the project), the reason can be because director A is competent and director B is not, which I will present as (A_C, B_I), director A is incompetent and director B is competent (A_I, B_C), both directors are incompetent

[15]See Holmstrom and Ricard i Costa (1986) to support this assumption.

[16]We will assume that the market for directors is competitive but sufficiently large, therefore the market assessment of quality of director B is independent of the market assessment of quality of director A.

[17]Although it is very difficult for an outside observer to distinguish whether a given decision is approved or rejected unanimously, usually it can be inferred analyzing subsequent actions of directors such, as for example leaving the board. Director's turnover after critical events have been studied in Warner et al. (1988) and Gilson (1989). In the theoretical literature on board behavior it is usually assumed that unsuccessful dissent parties are fired (see Noe and Rebello (1997) and Warther (1998). Also, the popular press has documented many cases where a director's dissent leads to termination, e.g., Pound (1995).

(A_I, B_I) or both directors are competent (A_C, B_C). Because the market cannot observe each director's decision, the probability that the director B is competent after an unanimous decision has been observed will be $P\{B_C\} = P\{(A_C, B_C) \cap (A_I, B_C)\}$, with these assumptions and market beliefs, I present the first result.

Theorem 1 *In a board composed of the CEO and two independent directors and where voting is sequential, whenever reputation is valuable* $(\theta > 0)$*, director B, regardless of his own signal, will mimic director A's decision to accept or reject the project.*

Proof. Suppose both parties vote based on their signals[18]. Rational expectations require that the market correctly conjecture this behavior. Consider the problem of director B who has received a bad signal but sees director A voting to approve the project. If director B votes based on his signal, the market will know that (s_g, s_b). In this case, the market makes the following belief assignment: $\hat{\theta}(B_C \mid s_g, s_b)$. If director B deviates (herds) and follows the decision made by director A, the market will think that the probability of director B being competent is: $\hat{\theta}(B_C \mid s_g, s_g)$. Therefore, if a separating equilibrium exists, it must be the case that:

$$\hat{\theta}(B_C \mid s_g, s_b) > \hat{\theta}(B_C \mid s_g, s_g) \tag{1.16}$$

From (1.10) we know that director A received a good signal and voted to approve the project. The Bayesian update made by the market when director B separates is given by

$$\begin{aligned}
\hat{\theta}(A_I \cap B_C \mid s_g, s_b) &= \frac{z(1-p)(1-\theta)\theta}{z(1-p)(1-\theta)\theta + p(1-z)\theta(1-\theta) + (1-z)z(1-\theta)^2}\alpha \\
&+ \frac{z(1-q)(1-\theta)\theta}{z(1-q)(1-\theta)\theta + q(1-z)\theta(1-\theta) + z(1-z)(1-\theta)^2}(1-\alpha) \\
&= \frac{(1-p)\theta}{1+\theta} + \frac{p\theta}{1+\theta} \\
&= \frac{\theta}{1+\theta}
\end{aligned} \tag{1.17}$$

[18]Remember that they are uncertain about their own ability and for this reason separating equilibrium is in respect to their signals and not in respect to their types.

and $\hat{\theta}(B_C \mid s_g, s_g)$ which equals to

$$= \frac{(zp(1-\theta)\theta + p\theta^2)\alpha + (q(1-z)(1-\theta)\theta + q\theta^2)(1-\alpha)}{(2zp(1-\theta)\theta + p\theta^2 + z^2(1-\theta)^2)\alpha + (2q(1-z)(1-\theta)\theta + q\theta^2 + (1-z)^2(1-\theta)^2)(1-\alpha)}$$
$$= \frac{(1+\theta)\theta}{1+\theta^2} \tag{1.18}$$

From (1.17) and (1.18), inequality (1.16) does not hold for any value of $\theta > 0$. *Q.E.D.*

The intuition is straight forward: on the one hand, if the market recognizes a split decision, then the signals are different. Therefore, one or both directors are incompetent. On the other hand, if the market perceived a unanimous decision among directors, then the signals are the same. Therefore, both directors are likely to be competent. This logic is known to director B, who is unsure about his own abilities. In this case, he receives a different signal than director A received, and director B will be safer herding on A's decision.

Next, I will show that there is a pooling equilibrium for which director B always herd; that is, he votes to reject the project if director A rejects it or to accept the project if director A accepts it.

Theorem 2 *In a board composed of the CEO and two independent directors, and where voting is sequential and reputation is valuable* ($\theta > 0$), *a pooling equilibrium exists where director B always follows director A's decision.*

Proof. In a pooling equilibrium director A votes based on his signal. Director B votes whatever director A has voted. Thus, rational expectations requires that the market correctly conjecture this behavior. Thus, if director A votes yes (accepts the project) and director B follows the equilibrium path strategy of voting yes, then the market updates its probability belief that director B is competent, calculating

$$\hat{\theta}(B_C \mid s^A = s_g) = \frac{Pr\{B_C \cap s^A = s_g\}}{Pr\{s^A = s_g\}} = \theta \tag{1.19}$$

but $\theta > 0$, and therefore it is greater than the probability belief for all out-of-the-equilibrium path strategies, which is zero, then the pooling equilibrium holds. The

exact same argument works for the case when director A votes to reject the project. *Q.E.D.*

This result corroborates that director B will have incentives to herd, not only when his signal is different than the signal received by director A, but also, when the signals are the same.

1.6 Example

Let us imagine a world with the following parameters:

$$\begin{aligned} p &= 0.6 \\ \theta &= 0.7 \end{aligned}$$

In this setting, the probability of a competent director getting a good signal, when the project is in fact of high value is 0.6 (signal precision). Also, the market for directors assigns a prior probability of 0.7 that director B is competent and remember that I assume $p = 1 - q$.

There are four cases to analyze:

Case 1: Director B receives a good signal and observes director A voting in favor of the project.

The information set in this situation is given by (s_g, s_g). If director B also vote to approve the project will get a new evaluation from the market about his competence. Particularly, the new market's assessment about director B's competence will be given by (1.18). In the case of a high output this equation becomes

$$\begin{aligned} \hat{\theta}(B_C|s_g, s_g, x_h) &= \frac{zp(1-\theta)\theta + p\theta^2}{2zp(1-\theta)\theta + p\theta^2 + z^2(1-\theta)^2} \\ &= 0.8068 \end{aligned} \tag{1.20}$$

and in the case of low output, this equation becomes:

$$\begin{aligned}\hat{\theta}(B_C|s_g, s_g, x_l) &= \frac{q(1-z)(1-\theta)\theta + q\theta^2}{2q(1-z)(1-\theta)\theta + q\theta^2 + (1-z)^2(1-\theta)^2} \\ &= 0.7868 \end{aligned} \tag{1.21}$$

In both cases the ex-post probability belief about director B's competence will increase; therefore, he does not have incentives to deviate from the equilibrium path.

Case 2: Director B receives a bad signal and observes director A rejecting the project.

The information set of this situation is given by (s_b, s_b). If director B votes also to reject the project, the market will produce a new evaluation about director B's competence. Particularly, the new market assessment about director B's competence will be given, in the case of a high outcome, by

$$\begin{aligned}\hat{\theta}(B_C|s_b, s_b, x_h) &= \frac{(1-z)(1-p)(1-\theta)\theta + (1-p)\theta^2}{2(1-z)(1-p)(1-\theta)\theta + (1-p)\theta^2 + z(1-z)(1-\theta)^2} \\ &= 0.7868 \end{aligned} \tag{1.22}$$

and in the case of low output, the probability assessment becomes:

$$\begin{aligned}\hat{\theta}(B_C|s_b, s_b, x_l) &= \frac{(1-q)(1-z)(1-\theta)\theta + (1-q)\theta^2}{2(1-q)(1-z)(1-\theta)\theta + (1-q)\theta^2 + (1-z)^2(1-\theta)^2} \\ &= 0.8068 \end{aligned} \tag{1.23}$$

In both cases the ex-post probability belief about director B's competence will increase, therefore in this case he does not have incentives to deviate from the equilibrium path.

Case 3: Director B receives a bad signal but observes director A voting in favor of the project.

The information set of this situation is given by (s_g, s_b). If director B votes also to accept the project (herd) the market's new assessment of his competence is 0.8068 in the case of a hight output and 0.7868 in the case of low output (see equations 1.20 and 1.21). If he decides to deviate (rejecting the project) the ex-post market assessment of his quality will be given by (1.17). If the state of he world proves high, then

$$\begin{aligned}\hat{\theta}(A_I \cap B_C | s_g, s_b, x_h) &= \frac{z(1-p)(1-\theta)\theta}{z(1-p)(1-\theta)\theta + p(1-z)\theta(1-\theta) + (1-z)z(1-\theta)^2} \\ &= 0.3294 \end{aligned} \tag{1.24}$$

and if the state of the world proves low, then

$$\begin{aligned}\hat{\theta}(A_I \cap B_C | s_g, s_b, x_h) &= \frac{z(1-q)(1-\theta)\theta}{z(1-q)(1-\theta)\theta + q(1-z)\theta(1-\theta) + z(1-z)(1-\theta)^2} \\ &= 0.4941 \end{aligned} \tag{1.25}$$

In both cases the ex-post probability belief about director B's competence will decrease substantially, therefore he will always be better off herding.

Case 4: Suppose director B receives a good signal but observes director A voting to reject the project.

The information set of this situation is given by (s_b, s_g). If director B votes also to reject the project (herd) the market's new assessment of his competence is 0.7868 in the case of a hight output and 0.8068 in the case of low output (see equations 1.22 and 1.23). If he decides to deviate (accepting the project) the ex-post market assessment of his quality will be given by (1.17) which, after using the similar calculations as in (1.24) and (1.25) yields

$$\hat{\theta}(A_I \cap B_C | s_g, s_b, x_h) = 0.4941 \tag{1.26}$$

if the state of the world proves high and

$$\hat{\theta}(A_I \cap B_C | s_g, s_b, x_h) = 0.3294 \tag{1.27}$$

if the state of the world proves low. In any case, director B will be better off herding.

1.7 Conclusion

Three empirical facts motivate this study: First, increasing the number of outside (independent) directors in the board does not increase the firm's performance (Bhagat and Black, 2000; Hermalin and Weisbach, 1991, 1998, 2000); second, disagreements in the board room are fairly rare (Noe and Rebello, 1997; Warther, 1998); and, third, the dynamics of group decision making in cohesive and small groups with strong civility and cooperation norms (such as a board of directors) value consensus over realistic consideration of alternatives (Bainbridge, 2001). The model I present in this study is consistent with these empirical facts.

It is not surprising that performance does not improve when new independent directors are appointed on the board. If the new directors herd, then the decision will still be based on the signal of the leader of the board, and the others will follow whatever decision this leader made. With this setting, there is no surprise either that disagreements will be rare. The new comer will likely agree to accept or to reject the board plans (projects) regardless of his own signals. And finally, this is an example that supports the thesis that dynamics of small and cohesive groups value consensus more than the critical evaluation of alternatives.

This model is difficult to test empirically because the participant voting and signals received by directors are not observable from the outside. However, the model provides several useful implications for the design of corporate board of directors. These implications can be tested using experimental designs:

1. Board members who are industry experts will have better correlated signals. Therefore, outside directors will be more effective in the decision-making process when they have industry-related expertise.

2. Boards can benefit with the appointment of an expert as the lead director.

3. The formation of board committees will have a positive effect on board decision because these groups tend to be composed of people competent in the area.

1.8 Extensions and Research Agenda

There are at least four possible extensions from the previous analysis:

1. **Cost of herding:** As I mentioned before, the real cost of herding is the waste of the information conveyed in the signals. This situation creates the possibility of inefficient policy implementation, that is, letting bad projects be approved or good projects be rejected. I need to calculate analytically the magnitude of these costs.

2. **Performance related compensation:** Typically, the only compensation of board members is reputational. The salary of board members is insignificant when compared with their total annual compensation. However, performance related compensation could play a role in the motivation for herding and needs to be addressed in further analysis.

3. **Prior wealth:** A rich, retired director is subject to a different incentive structure than a young director half way through his professional career. A model of herd behavior within the board based on prior wealth will capture this effects.

4. **Experimental test using human subjects:** Empirical data for actual board activities is hard to find. Even if this data becomes available, it is possible that the impact of board dynamics in stock performance will not be detectable (Hermalin and Weisbach, 2000). An alternative way to test my model's predictions is to use laboratory experiments where a group of people "play" board roles. This extension will be similar in spirit to the setting of Gillete, Noe and Rebello (2000).

Chapter 2

Corporate Governance in Venezuela: The case of CEO and Director Turnover

2.1 Introduction

After an extensive survey of corporate governance around the world, Shleifer and Vishny (1997) concluded that advanced economies have partially, although not perfectly, solved the problems related to corporate governance, but not so for the rest of the economies. On the one hand, firms in the small group of developed countries have an assured flow of huge amounts of capital to invest in all kind of projects. On the other hand, firms in emerging countries sometimes can not even fund superb projects. Why? Because investors are afraid they will not get their money back. This risk is the essence of corporate governance and the empirical evidence shows that there are great differences among corporate governance mechanisms around the world.

La Porta, et al. (1997) found, after studying 49 developed and developing countries, that those with French civil law (weakest investor protection) have less-developed debt and equity markets than common law countries (strongest investor protection).

Demirguc-Kunt and Maksimovic (1998), based on a sample of 30 developed and developing countries, showed that legal systems and capital markets influence to a great degree the external financing of firms.

These findings have important implications for the study of corporate governance outside the US and other advanced economies. For example, external control mechanisms are very important to ensure the alignment of interests between managers and shareholders, but what happens when these mechanisms are not sufficiently developed? La Porta et al. (1998) provide evidence that small, diversified shareholders are unlikely to participate massively in the financial markets of countries that fail to protect their rights; concentrated ownership is one of the answers posted by these researchers. The explanation is simple: large or dominant shareholder tends to be more prompt to monitor management even at the cost of non-optimal diversification. The empirical evidence supports this claim; in French civil-law countries the ownership is more concentrated than in those common-law countries.

The capacity for a given legal system to enforce the law has also proved important in explaining the difference in the effectiveness of corporate governance around the world (La Porta et al. (2000)). Once again, richer countries under the common-law legal system have better mechanisms of law enforcement than poor countries under the French civil-law legal system. In this regard, there is substantial evidence that corporate governance mechanisms work in developed countries other than the US such as Germany (Kaplan, 1994a) and Japan (Kaplan and Minton, 1994; Kaplan, 1994b; and Kang and Shivdasani, 1995). In particular, in these countries poor performance has been proven strongly related to top management turnovers.

However, from the theoretical side, Gomes (2000) argues that in emerging economies the agency problems are not between the shareholders and managers but between minority shareholders and large shareholders. In his model, corporate governance mechanisms could still work because large shareholders could implicitly commit not to expropriate minority shareholders. The underlying rationale is that these large shareholders (usually management or a family) know that if they start extracting

high levels of private benefits from the firm, investors will discount the stock price accordingly and therefore these large shareholders' remaining shares will depreciate in value and their access to external equity would be restricted. In equilibrium, these large shareholders hold concentrated equity ownership to provide a signal that they are willing to build reputation for not extracting wealth to the minority shareholders.

Gibson (1999) finds support for this claim after analyzing eight emerging economies. Particularly, he found that poor performing managers are more likely to be replaced, leading him to the conclusion that corporate governance in these emerging economies were not ineffective[1].

The aim of this research is to continue the effort to achieve better understanding of corporate governance structures and mechanisms outside the US and the rest of the developed economies by looking at a specific emerging economy: Venezuela. This contribution is important because it will be the first country-specific analysis of corporate governance in Latin America[2].

My main hypothesis in this study is that when financial markets are not well developed as an efficient external control mechanism and when the shareholders are not well protected because of a weak legal system and poor law enforcement[3], the role of the board of directors becomes more important as an internal control mechanism. Venezuela is an ideal case study because both of these issues are particularly severe. The specific question that I want to answer is: Does the corporate governance mechanism work well in Venezuela in removing poor performing CEOs and directors?

---

[1]This author analyzed the largest public firms in Brazil, Chile, India, Korea, Malaysia, Mexico, Taiwan, and Thailand, using the Worldscope data base.

[2]See Brunello et al. (2000) and Volpin (2001) for similar investigation in Italy and Renneboog (2000) for similar investigation in Belgium. Also Claessens and Djankov (2000) and Crespi and Gispert (1998) for a some what similar studies in the Czech Republic and in Spain, respectively.

[3]La Porta et al. (1999) show that these characteristics are typical in economies around the world.

The remainder of this study is organized as follows: in section 2, I present a literature review that examines corporate governance theory in general; in section 3, I focus more closely on corporate board literature; in section 4, I discuss the main institutional difference between Venezuela and the US and other developed economies; in section 5, I present the database used in this research; in section 6, I formally post and test two hypotheses; in section 7, I discuss my findings; and in section 8, I propose several extensions of this research.

2.2 Corporate Governance Theory

Corporate governance theory stems from two main sources: property rights theory and agency theory. The general aim in studying corporate governance is to explain how different corporate structures develop and what influence they have on corporate stakeholders. A particularly important issue is how corporate governance structure influences the relations between management and owners.

The first stream of research involves property rights. The problem in this case is how to allocate costs and rewards among the participants in a given venture. This allocation generally is determined by designing and implementing contracts[4] (explicitly or implicitly). The other stream of research is agency theory. Here, the manager is called the agent, and the owner is called the principal. This theory overturns the assumption that interests of the manager are aligned fully with the interests of the owners. Within this framework, managers pursue their own interest, and therefore the principals must incur in costs to ensure that their wealth is being maximized.

Milgrom and Roberts (1992) argue that it would be possible to reach an optimal relation within the context of agency theory if we could design complete contracts where all possible courses of action and outputs were taken into account. However, such a contract cannot exist in any real-life situation, and therefore owners must

[4]A comprehensive survey of this literature is given in Milgrom and Roberts (1992) and Megginson (1997).

develop incentives and structures that reduce the possibility of a manager pursuing his or her own interest at their expense. One way to reduce this agency cost is to create a board of directors who will monitor the manager and ensure that the interests of shareholders are well served.

In their theory of the firm, Jensen and Meckling (1976) argue that we must see organizations as *legal fictions* that serve as a nexus for a set of *contracting relations* among individuals. This complex set of relations and interdependence between the utility function of agents and principals can reach equilibrium with an efficient set of incomplete contracts. The greater the difference between the interest of managers and the interest of owners, the more complicated will be the contracts necessary to reach equilibrium.

When firms grow there is a natural separation between ownership and control. The two roles are interdependent, but the decision-making process is separate (Fama and Jensen, 1983). In the first stage, managers generate long-term plans (initiation) given the financial and operating constraints of the firm; in the second stage, owners ratify those plans; in the third stage, management implements those specific courses of action and plans; and finally, there is a evaluation process where owners distribute rewards and penalties.

Fama and Jensen (1983) argue that this separation is efficient because of the accessibility of information. Managers who are better informed than owners about the investment opportunity set and the operating and financial constraints take the initiative and make implementation decisions. In order to ensure that these decisions are aligned with their interests, the owners ratify decisions and reward efforts. The reward system must generate efficient incentive contracts and the capital market must *inform* owners about the relative performance of management.

When the production factors and product markets are efficient, the monitoring and reward system can help owners ensure that the managerial decisions are geared to the maximization of owners' wealth (Fama, 1980). If a manager has a good track record, his or her market price will increase; however, if a manager has performed

poorly, his or her market value (human capital) will decrease. Empirical support for this theory can be found in Gilson (1989) who shows that managers experience a large personal cost when their firm defaults. After analyzing 381 firms that experienced a large decline in their stock price, he found that 52 percent of them had some type of top management turnover and those managers that left these firms did not hold a senior management positions in any exchange-listed firm during the next three years.

Also, firms that are performing poorly are more likely to be subject of corporate takeovers (Mork, Shleifer and Vishny, 1989) and for these firms, the turnover rate of corporate official increases substantially (Martin and McConnell, 1991; Denis and Denis, 1995; Denis and Serrano, 1996). Therefore, the existence of corporate raiders prevents top management from extreme deviation from shareholder interests.[5] However, recent evidence on the importance of takeovers as a control mechanism is controversial. On the one hand, there is documented evidence of a significant decline in the disciplinary role of takeovers (Mikkelson and Partch, 1997). On the other hand, Huson et al. (2001) show that the sensitivity of forced CEO turnover to firm performance does not vary with the intensity of the takeover market. They examined 1,316 CEO successions during 24 year period (1971-1995) and found that although the frequency of forced CEO turnover and outside succession have increased in this period, the likelihood of poor performing managers getting fired has been relatively stable over time.

This line of reasoning can be translated to the market for boards of directors. In the next section I provide a more focused analysis of the literature related to corporate board of directors.

---

[5]Denis and Kruse (2000) studied a sample of 350 poor-performing firms in 1985-1988 (active takeover market) and in 1989-1992 (less active takeover market) and they found that 57 percent of the firms in their sample were subject to some sort of corporate control activity (e.g. takeover, shareholder activism, management turnover) while only 44 percent of the firms in the inactive period experienced one or more of these events.

2.3 Corporate Board of Directors

Boards are the agent of the owner and their principal task is to monitor management's performance. Board members also have a market value, and through their performance put their human capital at risk. However, the problem with boards in practice is that directors can negotiate with management in ways that do not align with the interests of owners. But if this is the case, why do we need boards? Why do they exist? Agency theory provides at least three reasons.

First, the existence of well-functioning markets for board directors will to some extent prevent undesirable internal negotiation when reputation is a valuable asset. Kaplan and Reishus (1990) found evidence of the existence of reputation value when they studied a sample of approximately 160 firms, half of which had reduced dividends (a proxy for poor management performance) and half of which did not (a proxy for well-performing firms). Analyzing the likelihood of the top management team being asked to participate in other boards, they found that top management from firms where dividends were not reduced had a significantly better chance to get outside directorships. This evidence confirms that reputation is valuable[6].

Also, the theory of group decisionmaking argues that although sometimes individual shirk as a rational response to incentives (see below), when they work together within a small and cohesive group such as a board of directors, this tendency could be constrained (Bainbridge, 2001). This argument posits that not only do reputation considerations in relation to the outside world matter, but it is also important to consider the reputation consideration within the director's network.

---

[6]Earlier, Hermalin and Weisbach (1988) found for a sample of 142 firms that outside directors were more likely to enter the board (and insiders to leave) after a period of poor firm performance. Also, Gilson (1990) showed after analyzing 111 publicity traded companies that suffered financial difficulties that directors that leave these firms serve less often as directors in other companies.

Second, the existence of an active takeover market will also prevent wealth-reducing activities due to internal negotiation between board members and management. Hirshleifer and Thakor (1994) developed a model in which the board of directors represents the internal control mechanism and the takeover market acts as the external control mechanism for management behavior. In this model, directors and outside raiders aggregate information and therefore influence the control function of boards.

Evidence of this complementary role is found in Morck, Shleifer and Vishny (1989) and Martin and McConnell (1991). The former provide evidence that board of directors (internal control mechanism) and takeovers (external control mechanism) are substitute control devises. Takeovers come to play a role in replacing ineffective managers when the board is unwilling to discipline. After studying 371 firms, they find that internally precipitated turnover of the complete management team is more likely to occur in firms that underperform their industry. In contrast, hostile takeovers (board's failure to discipline management) are predictable based on poor performance of the whole industry. Furthermore, "one-man" management teams (proxy of strong leader) are less likely to be turned out by boards than by takeover. The latter study found that the turnover rate for top management of target firms increases following takeovers, which supports the argument that the takeover market plays an important role in controlling management[7].

A question that arises is whether this market-forced alignment of interests is present when the board or the management team has enough voting power to prevent any negative action from the market. In another study, Morck, Shleifer and Vishny (1988) analyzed the relationship between board ownership and firm value. They found a significant nonmonotonic relation where performance (using Tobin's Q as a proxy) first increases with ownership, which is consistent with the "convergence-of-interest-

[7]Supporting evidence of this argument can also be found in Denis et al. (1997). They study the relation between ownership structure and management turnover in a sample of 1,394 firms in the U.S. and found that ownership structure has an important influence on internal monitoring mechanisms; specifically, top executive turnover is negatively related to the ownership stake of officers and directors and positively related to the presence of an outside blockholder.

hypothesis" but then decreases for ownership levels around 20 to 30 percent, which is consistent with "entrenchment hypothesis" because there is very little that the market can do if the management team has enough voting power. Finally, they found that for very high levels of ownership the relation again was positive. From these results we can argue that when managers have very little ownership, market forces are present to ensure the alignment of interest with firm's owners (Fama, 1980; Fama and Jensen, 1983; Hirshleifer and Thakor, 1994), and when they have a large stake in the firm the same self-interested motives will help ensure that they will make optimal decisions (Jensen and Meckling, 1976).

In addition, the presence of large shareholders could influence the probability of a takeover. Shleifer and Vishny (1986) showed that although large shareholders can not effectively monitor top management and the board of directors, their sole presence can facilitate third party takeovers because they can divide the benefits of the improvement with the bidder. Also, Denis and Serrano (1996) showed, after analyzing 98 unsuccessful control contests, that there was an unusually high incidence of top management turnover. This turnover is concentrated among poorly performing firms in which outside blockholders obtain an ownership stake after the control contest[8]. Further, Parrino et al. (2001) found after studying 583 CEO turnovers that large shareholders (institutional investors) tend to "vote with their feet" in the sense that that they tend to abandon poor performing firms and this action pressures the board to fire the CEO. In their paper, they found strong statistical and economical negative relation between the reduction of institutional ownership and the subsequent appointment of outside CEO. This evidence shows that the board of directors react to external pressure.

All these external factors play a very important role. After analyzing 909 firms, Denis and Denis (1995) showed that most of the improvement in management monitoring should not be attributed to board effectiveness because for all top management

[8]See also Denis, Denis and Sarin (1997) for more empirical evidence on the influence of blockholders and internal control mechanism.

resignations, only 13 percent could be labelled as forced. Moreover, from those forced resignation, more than two-thirds are due to factors such as blockholder pressures, takeover attempts, financial distress and shareholder law suits rather than to normal board monitoring.

A third reason why internal negotiation could be discouraged is board compensation. Salary package designs can be used to align director's interests with shareholder's interests. Board directors are usually subject to performance-based salaries in the same way management teams are. In this regard, Bryan et al. (2000) found after studying the compensation package of more than 1,700 board of directors in the US, that stock option awards are positively related to firm's growth opportunities, institutional stock holdings and threat of takeovers. They also found that stock option awards were negatively related to firm size, managerial stock ownership, and whether the industry where the firm operates is regulated or not. Overall, they concluded that outside board compensation packages are designed with the specific aim to reduce the corporate agency cost[9].

In summary, agency cost theory gives a sound economic foundation for the existence of corporate boards as a representative body of the shareholders. Reputation concerns, takeover possibilities, and compensation designs will help ensure that board members will be fully aligned with shareholders in the monitoring of management.

2.3.1 Current research on board of directors

The current research literature on boards of directors can be classified very broadly into three areas: first, the composition of boards, and especially the effect of independent directors on performance; second, board activities, principally how the selection process and the compensation of CEOs impact firm performance and stockholder' assessment of quality of management; and finally, the impact of board size on

[9]Mehran (1995) found evidence, studying 153 randomly chosen firms, that the form rather than the level of compensation is what motivates top managers.

performance.

Board composition

Bhagat and Black (2002), in studying the effect of independent directors on firm performance, found that low-profit firms are more likely to increase the percentage of independent directors on their boards, though without finding any evidence that this strategy actually works. That is, there was no statistical support for the common belief that independent boards improve performance. In this study, the authors used data from 934 firms for the period 1985 to 1995. Denis and Sarin (1999) also performed a long-term study on boards, using data from 583 firms during 1983 to 1992. They found that ownership and board changes are strongly related to corporate events such as top executive turnover and prior stock performance, and weakly related to corporate control threats. Similar results were found in Eisenberg, Sundgren and Wells (1996), where higher levels of director appointments and departures were both associated with poor performance.

Perry (2000) reports, for a sample of 94 firms with financial problems during 1994 to 1996, that firms with outsider-dominated boards (at least half of the directors independent) show positive changes in operating performance two years following financial crisis. In contrast, using a subsample of firms with inside boards, this relation was negative. However, the author could not find any difference between the two groups when tested together. Other interesting results were that after the crisis, the percentage of independent director increased and the percentage of inside directors decreased. Perry also found that firms with boards dominated by outsiders were more likely than firms with insider boards to respond to declines in performance by initiating actions such as asset sales and employee layoffs. In a sample of 355 companies in the insurance industry, Mayers, Shivdasani and Smith (1997) found that changes in board composition are strongly related to changes in the ownership structure. They also found that operating costs (including salary expenses) were lower in firms with more outside directors.

These recent results are all consistent with Weisbach (1988), who after analyzing a sample of 367 U.S. firms found that the probability of CEO turnover after a period of poor performance was much greater with outsider-dominated boards than with insider-dominated boards.

However, there is evidence that the ratio of outside directors can be too high. Byrd and Hickman (1992) reported, based on a sample of 128 tender offer bids by 111 firms, that it is possible to have too many outside (independent) directors, leading to negative effects on the firm's value. More recently, in a study of 400 U.S. firms, Agrawal and Knoeber (1996) explained that there are internal and external mechanisms to control agency problems in a firm. Externally, the factors are: human capital, where the existence of an active labor market controls management activities; corporate raiders, where an active takeover market also controls management decisions; and, large shareholders, who will directly monitor management's performance. Internally, the factors are: debt, insider shareholdings, and external representation of board members. The optimal mix of these factors requires that their marginal benefit equates to the marginal cost of implementing them. While the firm can not control the outside factors, it can adjust the internal factors to maximize firm value. Theoretically, if the internal factors are optimality selected, no significance should be found when each of these factors are regressed with the firm's performance[10] (after controlling for other variables).

This raises the question of whether or not there is an optimal board composition. Noe and Rebello (1997) analyzed this problem theoretically and the answer seems to be affirmative. These authors argued that governance mechanisms can ensure the implementation of efficient policies if independent outsiders participate in the decision process, if conflicts and disagreement between board members can lead to termination, and finally, if the group of insiders on the board are dividend into interest groups.

[10]In a study of 134 firms in the U.S., Hermalin and Weisbach (1991) showed that there was no significant relation between board composition and firm performance. A possible explanation for this result is the optimal selection of board structure by these firms.

An interesting result is that while outside board members may not have any inside information or monitoring ability, they must as a group have sufficient power to block management-sponsored policies.

Board activities

Researchers are interested not only in board composition, but also in board activities. Vafeas (1999) recently investigated how the frequency of board meetings affects board composition and performance. Using data from 1990 to 1994 for 307 firms, this author found that board activity is increasing with board size, number of positions in other boards held by outside directors (proxy for human capital), and number of committees. Vafeas also found that board activity is decreasing with inside ownership and positive past performance. Surprisingly, no correlation was found between the number of meetings and variables such as number of outside directors, Chairman-CEO dummy, incentive plans for board members, independent blockholders, and firm size. In his paper, Vafeas showed that changes in performance are followed by changes in board meetings. The intuitive explanation for this finding is that when the firm suffers from poor financial performance, the board becomes more active. Because the board members response is belated, Vafeas found a negative relation between board activity and firm value.

Another important activity performed by boards is the selection of new board members. When the CEO is involved in this selection process, there would seem to be an obvious bias for the CEO to select new board members who are less likely to monitor management aggressively. However, the empirical evidence on this aspect of the selection process is mixed. Rosenstein and Wyatt (1990) found, after studying the impact of 1,251 new outside director appointments, a significant increase in share price after the announcement. In a recent paper, Shivdasani and Yermark (1999) found that when the CEO is involved in the nominating committee, or no such committee exists, firms tend to appoint fewer independent outside directors and more *gray* directors. After analyzing 341 firms for a total of 1,012 first-time appointments during the

period 1994 to 1996, they found that CEO involvement lowers the probability of an independent director being appointed from 71 percent to 63 percent, and raises the probability of a gray director being appointed from 7 percent to 12 percent.

In a study of 969 CEO successions during the period 1970 to 1988 in 588 large U.S. firms, Borokhovich, Parrino and Trapani (1996) found a significant positive relation between the proportion of outsiders on the board and the appointment of an outsider as CEO. These outside CEO successions produced a positive stock price reaction. In contrast, the authors reported that when the replacement was from inside the corporation, the price reaction was negative. This findings are consistent with the conventional wisdom that outsiders are more likely to change the firm's status quo in ways beneficial to stockholders.

Researchers have also studied the role of board of directors in designing the CEO's compensation package. If the CEO dominates the board (weaker governance structure), we will expect to find higher compensation and weaker performance because the greater agency conflicts. Analyzing this problem, Core, Holthausen and Larcker (1999) found significant evidence that variables such as Chairman-CEO dummy, larger boards, and outside directors appointed by CEO, all of which are proxies of CEO power over the board, were associated with higher levels of CEO compensation. This relation was present also when they analyzed ownership variables. For example, they found that CEO compensation is a decreasing function when the CEO has a higher ownership stake and when there is a strong outside shareholder (5 percent or more of total equity). They also found a negative relation between CEO compensation and firm performance.

Board size and firm performance

Another factor usually investigated in the research literature on boards of directors is the impact of board size on performance. With a sample of 452 large U.S. firms during 1984 to 1991, Yermack (1996) found that board size was negatively related to firm value. He showed that smaller boards are more likely to dismiss the CEO following

periods of poor performance and to key CEO compensation to firm performance.

Eisenberg et al. (1998) similarly found significant negative correlation between board size and profitability. For a sample over the period of 1992 to 1994 of approximately 900 firms in Finland—including of course many smaller firms—these authors studied possible effects of larger boards such as problems of communication and coordination and greater control by the CEO. These findings support the interpretation that board size influences firm value (and not the reverse).

Interestingly, the results of Eisenberg et al. were consistent with Yermack's despite being based on a very different sample, namely smaller and non-US firms. But the question remains whether smaller and non-US firms can be assumed to be affected in the same way, by the same factors, as the larger US firms that typically constitute research samples.

Although there is considerable empirical research on corporate governance in general and on boards of directors in particular, this research is almost exclusively based on major US corporations, and it is very likely that the conclusions drawn will be not be applicable in different contexts.

2.3.2 Other academic literature on boards

All the literature reviewed so far has been dedicated exclusively to finance and economic research. However, corporate governance in general and board of directors in particular are studied in other areas such as management, organizational behavior, and law. Although a comprehensive examination of these literature will not be attempted here[11], three set of theories are particularly important for companies in the emerging markets: social capital and network theory, resource dependence theory, and institutional theory.

[11]See Rediker and Seth (1995) and Macey and O'Hara (2000) for a comprehensive review of the management and legal literature, respectively, on board of directors.

Social capital and network theory

The network perspective is relevant for the study of board of directors in the emerging markets for three main reasons: First, when the markets are not well developed the external control mechanisms (e.g., management being monitored continuously through the stock price) are very imperfect or just do not exist. For this reason, stockholders must rely on boards of directors to guard their interest. One effective and reliable way directors can gather information about the relative performance of management is through the networks where they are members. In this view, networks help to reduce the transaction costs involved in the policy making decision process (Mizruchi and Galaskiewcs, 1994). Some have argued (Pondy, 1977; cited in Boje and Whetton, 1981) that information is the medium through which influence and control are transmitted. Also, as we mention before, when individuals work together within a small and cohesive group such as a board of directors, the natural tendencies to shirk their job could be constrained (Bainbridge, 2001).

Second, directors are "social assets" that management can use for their purpose (and shareholders'). These assets constitute a competitive advantage that emerges from the connections of certain people or groups of people among each other (Burt, 2000). When markets are not well developed these "connections" can indeed be a very powerful competitive tool. Burt puts it in terms of what he called "social holes" where those individuals with relations that can "cross" these holes are very valuable and help to create a competitive edge for the firm. Individuals with contact networks rich in structural holes are individuals who "know about, have a hand in, and exercise control over, more rewarding opportunities" (Burt, 2000; p. 11). In the environment of emerging markets these "social assets" are exactly the people you want to have in your boardroom.

In developed economies, these individuals, as any productive resource, are very costly. For example in USA a director makes an average of $44,000 dollars for each board they attend (ranging up to more than $350,000 in some cases) and they participate on an average of 2.48 boards (Brickley, Linck and Coles, 1999). Then the

question that arises is whether hiring "bridge builder" (term coined by Burt, 2000) over structural holes compensates the cost they represent. Also, Burt (2000) argues that social capital is a decreasing function of the number of peers. This argument relates to the same idea of designing an optimal board of directors we discussed above but in the context of social capital and network theory.

The third reason why network theory is relevant to the understanding of boards is that experimental research has shown that groups are superiors to individuals in the decision making process (Bainbridge, 2001). It is well known that although individuals are considered as a rational decision makers, their rationality is bounded. Among other things, individuals are unable to observe, recall, compute, and communicate every one of the relevant facts before making a decision. However, when decisions are made by groups instead of by individuals, certain economies of scales appear to be in play. There is strong evidence from experimental psychology (e.g., Miner, 1984; Kiesler and Sproul 1992) and experimental economics (e.g., Blinder and Morgan, 2000) that not only do group decisions outperform average individual decisions in a given sample, but also at times they outperform even the best individual decisionmaker.

The network among individuals in different organizations has been identified as an important element in explaining how organizations come to look alike and behave similarly (Mizruchi and Galaskiewicz, 1994). It is argued that this is not because the institutional characteristics but "...the ambiguity of market information underlies social contagious explanations of firms adopting policies in imitation of other firms" (Burt, 2000: p. 5). In Latin America for example, there are a relative small number of big firms (e.g., trading actively in the stock markets) so it is likely that there exist a close network of top management and directors, probably with family ties. This is, however, an empirical question.

The board structure can also be influence by a legitimatizing process. In this respect, a new board member can be brought in to give prestige to the organization. For example, a CEO can invite to participate in the firm's board a person who

can legitimize the CEO's decisions not only in front of the shareholders, but also in front of any external constituents (Oliver, 1990). In this respect, directors can serve as a signal devise to the "market" to promote a favorable organizational image. These actions reflect "financial worth, dependability, and prestige" (Oliver, 1990; p. 257). Other studies (Aldrich, 1979 and Galaskiewcz, 1979; cited in Boje and Whetten, 1981) found that "organization concerns for improving its prestige among other organizations strongly influence its policy and programs decisions.

Resource dependence theory

The problem of who controls the firms, discussed above using the property rights and agency paradigms, can also be explained in the context of the resources needed to succeed and the external environment where the organization operates. Resource dependence literature explains that the answers to this question are more of a result of pattern of resource exchanges than a cause of such exchanges (Pfeffer and Salancik, 1978). Of course, organizations are also controlled and constrained by external and institutional factors that we must consider to fully understand why boards are the way they are in the context of these organizational theories.

Resource dependence perspective has been used to examine a number of forms of intercorporate relations such as mergers and joint ventures (Pfeffer and Salancik, 1978). In these cases, firms are looking for an important resource or discretion over the resource allocation and use. We can understand corporate board composition as a tool to gain access to important resources as well. For example, a start-up firm may hire a prestigious director in order to facilitate access to capital. In the context of emerging markets, this is particularly a relevant issue due the larger asymmetries of information among market participants.

Another factor that can be explain in the context of this theory is the use of outside directors for their political background (political resource). Agrawal and Knoeber (2001) found that the incidence of outside directors with political and law background was higher among the firms in economic sectors where politics were more relevant (e.g.,

electric utilities, large manufacturing firms). They found support for this conjecture studying 264 large manufacturing firms in the US. They divide the total sample in 11 different industries groups and studied for each firm the bibliographic background of each outside director. Finally, they create different measures of the importance of politics for each firm[12]. As conjectured, the result of their statistical analysis showed that outside directors with background in politics were positively correlated with firms where politics were more important, given another evidence of the importance of the resource dependence theory to fully understand the board of directors.

Furthermore, Klein (1998) found that firms place affiliated (gray) directors on their board to serve the specific, strategic needs of the firm. After studying 442 biggest firms in U.S. she showed a positive relation between the percentage of affiliated directors and the degree to which the firm depends on its external environment. She used four proxy to perform her empirical analysis: firm debt, firm specific risk, firm size, and whether the firm is in a regulated industry (utility). An specific example of her result which is consistent with Agrawal and Knoeber (2001), was a strong positive relation between the presence of ex-politicians directors in firms such as utilities and defense.

Institutional theory

Board composition can also be understood from the institutional theory perspective. The key argument here is that organizations are constrained by "social rules" and "taken for granted" conventions that shape their practice and structure (Ingram and Simons, 1995). The legitimization of norms and practices within an "organizational field" increases with the degree of their diffusion in the field (DiMaggio and Powell, 1983; cited in Infram and Simons, 1995). As diffusion continues, the propriety of norms and practices becomes widely accepted, and organizations face greater pressure to adopt them to maintain legitimacy (Oliver, 1990). In the context of board design,

[12]For example, firm size, percentage of sales to government, percentage of exports, capital expenditure and operating costs related to pollution abatement, public affairs office in Washington, D.C., among others.

for instance, bigger firms are likely to set the standards and the smaller ones to follow.

2.4 Institutional Difference

Venezuela's institutional setting, as with most of the developing economies in the world, differs a great deal from those in advanced economies, specially the US[13]. Venezuela's legal origin is French civil-law, which is generally characterized as having the weakest investor protection and leading to less developed capital markets (La Porta et al., 1997).

In order to assess institutional differences among different countries, La Porta et al. (1997) constructed two variables that assess the legal protection an individual shareholder has in different countries in the world. The first of these variables is called *antidirector rights*[14] and the second is the perceived quality of the legal system and law enforcement of the country, which they called *rule of law*[15]. As seen in Table I, an individual investor will be less protected in Venezuela than in an average Latin America country, based on the antidirector rights index, and much less protected when compared with the US.

---

[13]Also, there are substantial institutional differences when compared to other well-studied economies such as Japan and Germany. In these countries the corporate governance model is generally described as relationship-oriented where banks play a major role in monitoring management (Shleifer and Vishy, 1997).

[14]This index is constructed adding one if: a) shareholders can mail their vote, b) shareholders are not required to deposit their shares prior to the general shareholder meetings, c) cumulative voting is allowed, d) an oppressed minorities mechanism is in place, e) the minimum percentage of capital that entitles the shareholders to call for an extraordinary shareholders meeting is less than 10 percent, and f) the shareholders have preemptive rights. The maximum value of this index is 6 and the minimum is 0.

[15]This variable assesses the law-and-order tradition in the country and is constructed by the *International Country Risk Guide*. The lowest possible score is 0 and the maximum is 10.

The other four variables in Table I, represent proxies for size and depth of the capital market, and try to measure the effect of legal protection in the development of the capital market. The first variable is the ratio of domestic firms listed in the stock exchange as a ratio of the population (in millions) for the year 1996. Venezuela falls very far from the US standard and below the Latin America average (taken out Ecuador and Chile which are outliers of the Latin America sample with index 13.18 and 19.92 respectively, the index goes down to 4.89). This is initial evidence that less protection induces fewer public companies in a given country.

Table I

Institutional Variables

This table compares the Antidirector Rights, Rule of Law index, Domestic firms listed to the country population, IPO's to the country population and Bank debt outstanding for the private sector to GNP in 1994, for Venezuela, Latin America average and U.S. The data is taken from La Porta et al. (1997).

Variable	Venezuela	Latin America	U.S.
Antidirector rights	1.00	1.89	5.00
Rule of Law	6.37	5.03	10.00
Dom./Population (millions)	4.28	7.48	30.11
IPO's./Population (millions)	0.00	0.08	3.11
Debt/GNP	0.10	0.29	0.81
External Cap/GNP	0.08	0.27	0.58

The second variable is the ratio of the initial public offerings of equity in a given country to its population (in millions) for the year 1996. In this period Venezuela did not have any IPO offering, which is the typical case in Latin America. Both, the Venezuelan and the Latin American average are well below that of US, which confirms the conclusion of La Porta et al. (1997) that legal protection and law enforcement

are positively related to the development of the capital markets.

The third variable is the ratio of all bank debt in the private sector to the GNP in 1994; the ratio for Venezuela is 0.10 which is lower than the Latin American average of 0.29, and much lower than the U.S. average of 0.81. Finally, we present the ratio of the stock market capitalization held by minorities to the GNP for 1994. In this last case, the Venezuelan ratio is 0.08, which is considerably lower than the US ratio of 0.58 and the Latin American ratio of 0.27 (taking out Chile, which is a sample outlier with a index of 0.8, this index falls to 0.18).

Taken together, Venezuelan's numbers are generally lower, in both legal protection and market development, than those for the other countries in Latin America[16] and much below the numbers for US, which is the standard of the developed world. These statistics give us the opportunity in this research to contrast two very different environments (US and Venezuela) and to further analyze the relative importance of the internal control mechanism (e.g., board of directors) in a small and underdeveloped capital market. Furthermore, Venezuela is a representative economy in Latin America region and therefore the conclusions drawn from this study are important to other Latin American countries as well.

2.5 Data

In order to study the effectiveness of corporate governance in Venezuela, we need to evaluate CEO and director turnover and its relation with corporate performance. To achieve this goal I have constructed a panel data set. The initial sample was all the public companies that were traded in the *Caracas Stock Exchange* (CSE) during the period 1984-2000. This represented 93 companies in various economic sectors

[16]The other Latin America countries included in this sample are Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Uruguay.

in 1984[17]. After deleting all companies without public annual financial proxies and information of the board of directors (CEO and principal directors names) and less than eight years of data, the sample was reduced to 42 firms and 642 observations (see Table II).

Table II

Database Description

The database used in this study is composed of 642 firm-year observations of a sample of 42 firms listed in the Caracas Stock Exchange from 1984 to 2000.

Firms	Years in the sample	Observations
31	17	527
1	15	15
1	14	14
1	12	12
4	10	10
2	9	18
2	8	16
42		642

Although the size of the sample may seem small relative to the studies done in the US and other developed economies, it is not small relative to the number of firms in the Caracas Stock Exchange. Actually, the firms in the sample represent close to 98 percent of the total market capitalization for each of the years included in the study.

I classified the information needed in three groups of variables: A) Board and CEO specific, b) Performance and accounting specific, and c) Economy-wide specific.

[17]Some firms in the sample are less than seventeen years old therefore the panel is unbalanced.

2.5.1 Board and CEO specific information

In this subsection I will concentrate on the variables involving board-specific information[18].

A.01. Board size ($BOASIZ_{it}$)

This variable is constructed simply by adding the principal members of the board for each firm i and year t.

A.02. Fraction of outsiders ($OUTDIR_{it}$)

To construct this variable, I checked each board member's names with the company's top-management team, auditors, and lawyers (if available in the proxy statement). If they did not match, I then consider him or her as an outside director. Once I found the total number of outsiders in the board, I divided it by the board size and obtained for each firm-year, $OUTDIR_{it}$.

A.03. Fraction of insiders ($INSDIR_{it}$)

To construct this variable, I checked the board member's names with the company's top-management team. Also, I considered as an insider all past CEOs and chairmen that remained or rejoined the board and all past inside directors that rejoined the board. Advisory directors are excluded. Once I found the total number of insiders on the board, I divided it by the board size and obtained $INSDIR_{it}$.

A.04. Fraction of gray ($GRADIR_{it}$)

To construct this variable, I checked the board member's names with the company's chairman or CEO. If they have the same last name or there is some known family relation among them, I will consider him or she as gray director. Once I find the number of grey directors in the board, I divided it by the board size and obtained

[18] I collected a total of 32 variables involving board and CEO specific information; however, I will report here only those variable that were explicitly used in the study; I will discuss some of the other variables in section 8 below.

$GRADIR_{it}$.

A.05. Board independence ($INDEPE_{it}$)

To construct this variable, I calculated $INDEPE_{it} = OUTDIR_{it} - INSDIR_{it}$. For highly independent boards, this value will be close to 1, and for highly dependent boards, this value will be close to -1.

A.06. Average director tenure ($DIRTEN_{it}$)

For each firm i and for each principal director in 1984, I found the appointment year. For a great percentage of firms I used old proxy statements (for some firms, I used proxies as old as 1958) and I followed the principal directors' names all throughout 1984. The first time the name of a given director appeared in the proxy statement (of those existing directors in 1984), I set that year as the appointment year. For some companies, this information was not available; in those cases, I contacted the companys shareholder attention office by a formal letter and follow-up by phone calls. After I had the tenure for each director in 1984, it was simple matter to calculated the mean and median director tenure for the rest of the years (adding 1 for each director's tenure if he or she was still on the board in the year $t + 1$ or began counting when a new director was appointed).

A.07. CEO tenure ($CEOTEN_{it}$)

The procedure is the same as explained above.

A.08. CEO turnover ($CEOTUR_{it}$)

This is a dummy variable that keeps track of all CEO changes in company i during a given year t. For example, if for company i in the year t, the name of the CEO is not the same as the name of the CEO in year $t - 1$, then $CEOTUR_{it} = 1$.

A.09. CEO age ($CEOAGE_{it}$)

This variable is needed in order to control for natural turnovers. The intuition is that older CEOs will tend to be subject to turnover more than younger ones. This variable was generally obtained using a government database of all Venezuelan citizens

that voted in the last presidential election. In the case when the CEO was not in the database, then I contacted the firm by a formal letter to the shareholder attention office and follow-up by phone calls.

A.10. Director's turnover ($DIRTUR_{it}$)

The procedure is the same as above, except $DIRTUR_{it}$ is not a dummy variable because there could be $1, 2, \cdots, BOASIZ$ changes.

A.11. Outside director's turnover ($OUTTUR_{it}$)

The procedure is the same as above, except only outside turnover will be considered.

A.12. Inside director's turnover ($INSTUR_{it}$)

The procedure is the same as above, except only inside turnover will be considered.

A.13. Percentage turnover of the board ($BODITU_{it}$)

This variable is calculated dividing, for each firm i, the total number of departures in year t by the total members of the board in year $t-1$.

For a summary of these variable see Table III.

Table III

CEO and Board-Specific Variables

This table reports the summary of all firm-year variables to be used in this study related to the CEO and the board of directors.

Ref.	Description	Name
A.01	Board Size	*BOASIZ*
A.02	Fraction of outsiders	*OUTDIR*
A.03	Fraction of insiders	*INSDIR*
A.04	Fraction of gray	*GRADIR*
A.05	Independents	*INDEPE*
A.06	Average director tenure	*DIRTEN*
A.07	CEO tenure	*CEOTEN*
A.08	CEO turnover	*CEOTUR*
A.09	CEO age	*CEOAGE*
A.10	Director turnover	*DIRTUR*
A.11	Outside director turnover	*OUTTUR*
A.12	Inside director turnover	*INSTUR*
A.13	Percentage board turnover	*BODITU*

2.5.2 Company-specific performance and accounting information

For each company i and each year t, I collected the annual proxy statement and constructed the following variables:[19]

[19] I collected a total of 36 variables involving performance or accounting information; however, I will report only those variable that were explicitly used in the study.

B.01. Company size proxy 1 ($FSIZE1_{it}$)

This will represent the *ln* of firm's total assets in millions of local currency.

B.02. Company size proxy 2 ($FSIZE2_{it}$)

This will represent the *ln* of firm's net sales in millions of local currency.

B.03. Change in earnings ($CHAEAR$)

This variable is calculated as $CHAEAR_{it} = \frac{EBIT_{it} - EBIT_{it-1}}{|EBIT_{it-1}|}$

B.04. Return on assets (ROA_{it})

This is the result of dividing net return of company i in year t by total assets. I also consider lag values for this variable.

B.05. Return on sales (ROS_{it})

This is the result of dividing net return of company i in year t by total sales. I also consider lag values for this variable.

B.06. Return on equity (ROE_{it})

This is the result of dividing net return of company i in year t by total book value of equity and then calculating the log to the result. I also consider lag values for this variable.

B.07. Changes in firm's cash flow ($CHACAS_{it}$)

This variable is calculated as $CHACAS_{it} = \frac{CASFLO_{it} - CASFLO_{it-1}}{|CASFLO_{it-1}|}$.

B.08. Cash flow to assets ($CAFLAS_{it}$)

This is the result of dividing $CASFLO$ of company i in year t by total book value for assets.

B.09. Cash flow to sales ($CAFLSA_{it}$)

This is the result of dividing $CASFLO$ of company i in year t by total sales. I also consider lag values for this variable.

B.10. Dummy variable if net income is negative ($NEGINC_{it}$)

This variable will take the value of 1 if the net income is negative and 0 otherwise. I also consider lag values for this variable.

B.11. Capital structure proxy 1 ($CASTR1_{it}$)

To proxy the capital structure of each firm-year, I divide total debt by total assets for each company i in year t.

B.12. Years since constitution ($YEACON_{it}$)

This variable reports the age of the firm.

For a summary of these variable see Table IV.

Table IV

Performance and Accounting-Specific Variables

This table reports the summary of all firm-year variables to be used in this study related to the performance and accounting information.

Number	Description	Name
B.01	Company size proxy 1	$FSIZE1$
B.02	Company size proxy 2	$FSIZE2$
B.03	Changes in earnings	$CHAEAR$
B.04	Return on assets	ROA
B.05	Return on sales	ROS
B.06	Return on equity	ROE
B.07	Change in cash flow	$CHACAS$
B.08	Cash flow to assets	$CAFLAS$
B.09	Cash flow to sales	$CAFLSA$
B.10	Dummy for negative income	$NEGINC$
B.11	Capital structure proxy	$CASTR1$
B.12	Years since constitution	$YEACON$

2.5.3 Economy-wide information

The next set of variables referee to the economic environment in Venezuela during the period 1984 to 2000.

C.01. Industry control ($INDCON_i$)

This is a dummy variable which takes the value of 1 if the firm i is in the non-financial sector, and 0 otherwise.

C.02. Inflation ($INFLAT_t$)

Annual inflation reported by the *Banco Central de Venezuela.*

C.03. Changes in the GNP ($GONAPO_t$)

Annual changes in the GNP reported by the *Banco Central de Venezuela.*

C.04. Exchange rate bolivares/dollars ($EXCRAT_t$)

Annual (average) exchange rate reported by the *Banco Central de Venezuela.*

C.05. Unemployment rate ($UNEMPL_t$)

Annual reported unemployment rate reported by the *Banco Central de Venezuela.*

C.06. Average oil price ($OILPRI_t$)

Annual average oil price reported by the *Banco Central de Venezuela.*

For a summary of these variable see Table V.

Table V

Economy-wide Variables

This table reports the summary of all variables to be used in this study related to the economy of Venezuela during the period 1984 to 2000.

Number	Description	Name
C.1	Industry control	*INDCON*
C.2	Inflation	*INFLAT*
C.3	GNP	*GONAPO*
C.4	Exchange rate	*EXCRAT*
C.5	Unemployment rate	*UNEMPL*
C.6	Average oil price	*OILPRI*

2.5.4 Comments on the database

The database has some problems that must be kept in mind. First, the exact day of the appointment of the CEO and directors were not generally given, and, therefore, I only used the year of appointment. The same happen with the CEO and director turnover. In other words, I am assuming that all new directors or CEOs started the first day of January, and all CEO or director turnover occurred on the last day of December.

Second, the great majority of companies ended their fiscal years on December 31th; however, there were several firms that ended their fiscal year on other days. Because I had information for the twelve-month fiscal year, I assumed that all firms finish their fiscal year on December 31th.

Third, the age of the CEO was calculated subtracting year t and the year of birth; therefore, the age may have been over or under estimated.

Fourth, the classification of directors as outsider, insider, or gray is not perfect. For example, it is possible that some directors who were classified as outsiders work for other related companies that are not traded on the stock market. Therefore, it is impossible for me to determine the true classification. This will tend to overestimate the degree of independence of the board.

Fifth, the data set was introduced in the spread sheet by hand; therefore, there could be typing errors. I devoted great time and effort to check and double check that the database was free of typing errors.

To my understanding, none of these problems will cause significant biases in the statistical test.

2.5.5 Summary statistics

Table VI shows the mean, median, and standard deviation of some selected variables. The average size of the board of directors is smaller than in the US[20] and stays fairly stable throughout the years. The maximum board size in the whole sample is 14, and the minimum is 5. The fraction of the board that is classified as outsiders is 56 percent and remains stable during these years; for the US firms, this fraction is 45.6 percent, which is a little less than what I report here. However, as I argued before, this fraction for the Venezuelan market tends to be higher because it is difficult to determine if a given director is truly an outsider. The fraction of inside and gray directors remains stable at approximately 38 percent and 6 percent, respectively. The independence of the board (which is calculated as $OUTDIR - INSDIR$) is positive, that is, the average board of directors tends to have more outsiders than insiders. Also note that this number tends to increase during the sample period. The average tenure of board members decreased from 10 years to 8 years, approximately.

[20]See Shivdasani and Yermack (1999) for similar statistics but in the US market as of 1994.

The CEO tenure for this sample is 12 years for 1984, 13 years for 1992, and decreases to 6 years for 2000. In the US, the mean CEO tenure is 8.22 years but the median value is 6. The age of the CEO in this sample remains fairly stable through the years and is similar to the age of the US CEOs.

It is also interesting to notice the increase in CEO turnovers. In 1984, only 2 turnovers were reported (5 percent of the CEOs in the sample changed in that year). This number increased to 5 in 1992 (12%) and to 12 in 2000 (33%), that is, one out of three CEOs changed in that year. Directors' turnover also changed substantially, passing from 12 in 1984 to 78 in 2000. Another interesting variable is the average performance of firms in the sample measured by ROA, ROS, and ROE. These measures have been deteriorating since 1984; furthermore, the average ROA and ROS were negative in 2000.

Table VI

Summary Statistics for Selected Variables

This table reports the mean (MEA), median (MED) and standard deviation (SD) of a set of select variables calculated as of 1984, 1992, and 2000. The identification of these variables is given in tables II, III, and IV. The other variables are total number of CEO turnovers in each year (*NUCETU*). In parenthesis is reported the percentage CEO turnover with respect to the total number of CEOs in the sample for each year; the total number of board of director turnover is given by (*NUBOTU*). The variables *FSIZE*1 and *FSIZE*2 are calculated in dollars using the average exchange rate for the year. I also report here the total number of firms in the sample for each year.

	1984			1992			2000		
Variable	MEA	MED	SD	MEA	MED	SD	MEA	MED	SD
BOASIZ	7.81	7.00	1.71	8.55	8.50	1.77	8.47	8.50	1.87
OUTDIR	0.56	0.57	0.14	0.56	0.56	0.17	0.58	0.59	0.17
INSIDR	0.39	0.40	0.12	0.38	0.36	0.15	0.36	0.32	0.17
GRADIR	0.05	0.00	0.08	0.06	0.00	0.09	0.06	0.00	0.09
DIRTEN	10.04	9.60	4.26	9.62	9.57	5.11	8.03	6.91	4.98
INDEPE	0.17	0.14	0.25	0.19	0.21	0.31	0.21	0.26	0.32
CEOTEN	12	6	10.34	13	9	12.00	6	4	8.63
CEOAGE	55	53	9.87	58	60	11.12	54	55	9.71
NOCETU		2(5%)			5(12%)			12(33%)	
NUBOTU		15			48			78	
*FSIZE*1	242	65	402	387	125	628	810	155	1,337
*FSIZE*2	44	26	47	115	56	155	142	60	199
ROA	0.04	0.01	0.11	0.05	0.13	0.14	-0.02	0.00	0.10
ROS	0.13	0.09	0.12	0.04	0.10	0.14	-0.10	0.02	0.51
ROE	0.12	0.12	0.17	0.06	0.15	0.16	0.02	0.03	0.48
YEACON	39.19	31.00	22.02	47.18	40.50	23.02	56.44	50.00	23.23

Finally, the firms included in the sample increased to 41 in 1992 but decreased to 36 in 2000. Looking at these statistics the question of this investigation arises: does the decrease in corporate performance have any relation with CEO and director turnover?

2.6 Empirical Analysis on Turnover

In this section I concentrate on a specific hypothesis directly drawn from the Hermalin and Weisbach (1998) model:

Hypothesis 1: *A CEO whose firm performs poorly will have greater probability of being replaced than a CEO whose firm has performed well.*

The second hypothesis I investigate is whether or not director turnover is also associated with poor performance, specifically:

Hypothesis 2: *Director turnover will be greater when firm performance is poor.*

These hypotheses are fundamental to corroborate that in Venezuela shareholders are protected against bad corporate performance. In what follows, I seek to find evidence that will help to answer, among others, these questions: Is the CEO at risk when poor corporate performance strikes? Are directors good monitors of the CEO? Do shareholders remove directors when company performance deteriorates?

These hypothesis have already been tested in different markets. For instance, Coughlan and Schmidt (1985), Furtado and Rozeff (1987), Weisbach (1988), Hermalin and Weisbach (1988), Warner, Watts and Wruck (1988), Mork, Shleifer and Vishny (1988), Gilson (1989), Kaplan and Reishus (1990), Jensen and Murphy (1990), Martin and McConnell (1991), Murphy and Zimmerman (1993), Denis and Denis (1995), Denis, Denis and Sarin (1997), and more recently, Gibson (1999) and Huson, Parrino and Starks (2001) have all found empirical evidence in the US supporting Hypothesis 1.

Also, using international data sets, Kaplan (1994a), Kaplan and Minton (1994), and Kang and Shivdasani (1995) found evidence in Japan supporting Hypothesis 1; Volpin (2002) and Brunello, Graziano and Parigi (2000) found support in Italy; Kaplan (1994b) found support in Germany; and Ronneboog (2000) confirms this hypothesis in Belgium. However, to my knowledge, no studies testing this hypothesis in any Latin American country have been published.

The empirical analysis will follow four steps: first, I present evidence using an univariate test of the relationship between corporate performance and CEO and director turnover; second, I use a Poisson regression model with several performance measures and control variables to determine the relationship between the number of director turnovers ($NUMDIR$) and corporate performance; third, I further investigate the relationship between director turnover and corporate performance, but this time I use an OLS regression model and, as a dependent variable, the fraction of director turnovers ($BODITU$). Results two and three provide evidence to test Hypothesis 2. Four, I explore, using a Logit regression model, the relationship between the likelihood of CEO turnover and corporate performance; this result provides evidence to test Hypothesis 1.

2.6.1 CEO and director turnover, a univariate approach

I first approximate the relationship between corporate performance and CEO and board of director turnover by determine the correlations between my proxies of performance and the turnover variables. In Table VII, I present the correlation matrix for the pooled data set.

Table VII

Correlation Matrix for the Pooled Turnover and Financial Variables

The total sample consists of 642 firm-year observations of 42 firms listed on the Caracas Stock Exchange from 1984 to 2000. Correlations are calculated pooling all observations in the sample. The selected variables are CEO turnover ($CEOTUR$), director turnover ($DIRTUR$), percentage turnover in the board directors ($BODITU$), lag negative income ($LNEGAT$), change in ROA ($DROA$), cash flow to asset ($CAFLAS$), and change in ROS ($DROS$). The significance of these correlations was calculated using the Pearson test. ***, **, and *, represent significant coefficients at the 1, 5 and 10 percent levels, respectively.

	$CEOTUR$	$DIRTUR$	$BODITU$	$LNEGAT$	$DROA$	$CAFLAS$	$DROS$
$CEOTUR$	1.000	0.564***	0.575***	0.101***	−0.074*	−0.040	−0.009
$DIRTUR$		1.000	0.971***	0.105***	−0.221***	−0.099***	−0.110***
$BODITU$			1.000	0.082**	−0.111***	−0.086**	−0.024
$LNEGAT$				1.000	0.008	−0.165***	−0.004
$DROA$					1.000	−0.301***	0.835***
$CAFLAS$						1.000	0.215***
$DROES$							1.000

The turnover variables $CEOTUR$, $DIRTUR$, and $BODITU$ have the correct expected correlation sign (negative) with the performance measures $DROA$, $CAFAS$ and $DROS$. Also, they have the correct correlation sign (positive) with the performance measure $LNEGAT$. In terms of significance, $DIRTUR$ shows the strongest correlation with the performance variables; in all cases, the correlation is significant at the 1 percent level. The variable $BODITU$, which also measures the director turnover, but in relative terms, is also significant in all cases except for $DROS$.

In general, I cannot infer causality using these correlation; however, I can say that these coefficients show a strong (linear) association between corporate performance and director turnover.

The correlations between corporate performance and CEO turnover are less strong. Only *LNEGAT* and *DROA* are statistically significant, and the latter, only at the 10 percent level. However, as I said before, the signs at least are correct for all the performance variables.

In the next two subsections, I explore further the relationship between director turnover and corporate performance and, in the last subsection, I concentrate on the CEO turnover.

2.6.2 Director turnovers, a Poisson approach

The first model I use is the Poisson Regression Model[21]. This model is appropriate to analyze director turnovers for at least one reason: the dependent variable, *DIRTUR*, is a count variable with values $0, 1, 2, \cdots, n$ where $DIRTUR = 0$ (no director turnover) which is a natural outcome of the Poisson process.

This statistical model is a generalization of the Poisson distribution, where the events occur randomly and independently in time. Consider the Poisson parameter λ with the following specification

$$Ln\lambda = \mathbf{X}'_{\mathbf{it}}\beta \tag{2.1}$$

where, $\mathbf{X}$ is a vector of regressors that describes the characteristics of an observation unit (firm) i in a given time period t. Denote η_{it} as the observed unit count for firm i and time t (e.g., *DIRTUR*). In this case:

$$E\{\eta_{it}|\mathbf{X_{it}}\} = \lambda_{it} \tag{2.2}$$

Note that the "zero problem," that is $\eta_{it} = 0$, is a natural outcome of the Poisson distribution, and the only assumption I need to make is the time independence of

[21] For a complete exposition of the specification of this model, see Hausman, Hall and Griliches (1984) and Neter et al. (1996).

observations.

The Poisson probability density function is given by

$$Pr\{\eta_{it}\} = \frac{e^{-\lambda_{it}}\lambda_{it}^{\eta_{it}}}{\eta_{it}!} \tag{2.3}$$

Substituting (2.1) into (2.3) and taking logs in both sides give:

$$\begin{aligned} \ln(Pr\{\eta_{it}\}) &= \ln[\frac{e^{e^{-\mathbf{X}'_{it}\beta}}(e^{\mathbf{X}'_{it}\beta})^{\eta_{it}}}{\eta_{it}!}] \\ &= [-\eta_{it}! - e^{\mathbf{X}'_{it}\beta} + \eta_{it}\mathbf{X}'_{it}\beta] \end{aligned} \tag{2.4}$$

Letting $C = -\eta_{it}!$ and summing for a sample of N firms over T periods, the log likelihood function for the Poisson model is given by:

$$L(\beta) = \sum_{i=1}^{N}\sum_{t=1}^{T}[C - e^{\mathbf{X}_{it}\beta} + \eta_{it}\mathbf{X}_{it}\beta] \tag{2.5}$$

Hausman, Hall and Griliches (1984) have shown that this function is globally concave, as long as $\mathbf{X}$ is a full column rank and $e^{\mathbf{X}_{it}\beta}$ does not go to zero for all $\mathbf{X}_{it}$.

In a cross section investigation like this, it is usually necessary to include firm-specific fixed effects. It can be shown that (2.5) takes the form of

$$L(\beta) = C - \sum_{i=1}^{N}\sum_{t=1}^{T}\eta_{it}\ln[\sum_{s=1}^{T}e^{-(\mathbf{X}_{it}-\mathbf{X}_{is})\beta}] \tag{2.6}$$

after I include the firm-specific effect into the model (for technical details, see Hausman, Hall and Griliches, 1984). Model (2.6) ignores the variations among firms and only studies the within firm variation; this omission substantially reduces the variability of our sample. I present, however, the results using both models' specifications.

In Table VIII, I report the result of these regressions.

Table VIII

Panel Data Poisson Regression on the Number of Director Turnovers

The total sample consists of 642 firm-year observations of 42 firms listed on the Caracas Stock Exchange from 1984 to 2000. I perform a Poisson model regression using the number of directors turnovers, $DIRTUR$, as a dependent variable. The performance variables are ROA, ROE, and $NEGINC$. I used $FSIZE2$, $CASTR1$ and $INDCON$ as control variables. ***, **, and * represent significant coefficients at the 1, 5 and 10 percent levels, respectively.

	$DIRTUR$					
	Random Effects	Fixed Effects	Random Effects	Fixed Effects	Random Effects	Fixed Effects
Intercept	-0.5126		-1.0408^{***}		-0.9712^{***}	
	(z=-1.475)		(z=-3.012)		(z=-2.895)	
ROA	-2.5598^{***}	-2.0663^{***}				
	(z=-6.778)	(z=-5.347)				
ROE			-0.4857^{***}	-0.4038^{***}		
			(z=-4.799)	(z=-3.839)		
$NEGINC$					0.6707^{***}	0.5337^{***}
					(z=5.493)	(z=4.155)
$FSIZE2$	0.1470^{***}	0.2000^{***}	0.1580^{***}	0.2115^{***}	0.1467^{***}	0.1981^{***}
	(z=6.147)	(z=7.248)	(z=6.560)	(z=7.749)	(z=6.149)	(z=7.134)
$CASTR1$	-0.5685^{**}	0.2156^{***}	0.0165	0.8664^{**}	-0.1194	0.6564^{*}
	(z=-1.973)	(z=5.578)	(z=0.058)	(z=2.460)	(z=-0.431)	(z=1.850)
$INDCON$	-0.5779^{***}		-0.5006^{**}		-0.5619^{***}	
	(z=-2.891)		(z=-2.349)		(z=-2.735)	
	χ =	χ =	χ =	χ =	χ =	χ =
	104.81^{***}	104.11^{***}	77.68^{***}	87.63^{***}	86.11^{***}	88.82^{***}

In Table VIII, not only are the correct signs for each of the performance measures present, but all the coefficients are significantly different from zero at the 1 percent level. These results confirm the inverse relationship between corporate performance

and director turnovers found in the univariate test. In addition, the control variables show significant effect on the size and industry variables for all regressions.

In the three models presented in Table VIII, I find the presence of a serial correlation in the random effects models, but this problem is not uncommon on panel data analysis (Hausman and Griliches, 1984). However, the results remain almost identical when I include firm-specific fixed effects.[22]

As a second robustness check, I ran the regressions using the Huber-White Sandwich estimator of variance; this method produces valid standard errors even if the correlation within groups are not as hypothesized by the model correlation structure (AR(1)process in this case), and all the results held.

A final robustness check of these results was the use of other performance measures (e.g., ROS, lag value of ROA, lag value of ROE, lag value of ROS, EBIT/Assets, and EBIT/Sales), and the signs and the statistical significance of these measures remained.

The first conclusion I draw from these results is that Hypothesis 2 cannot be rejected; that is, performance seems to affect director departures. In the next subsection, I will investigate whether or not these results still hold when I change the turnover measure and the model specification.

Ordinary least squares regressions

Here I perform an OLS estimation of the percentage turnover of the board ($BODITU$) as a dependent variable. This model can be written as

$$\mathbf{y_i} = \beta' \mathbf{X_i} + \epsilon_i \tag{2.7}$$

[22]Remember that fixed effect models substantially lower the amount of variation in the data, because they ignore variations among firms and only use within firm variations.

Also, I need to assume here that $E\{\epsilon_i\} = 0$ and

$$E\{\epsilon_i \epsilon_j'\} = \frac{\sigma_{ij}}{1-\rho_i\rho_j} \begin{pmatrix} 1 & \rho_j & \cdots & \rho_j^{T-1} \\ \rho_i & 1 & \cdots & \rho_j^{T-2} \\ \vdots & \vdots & \vdots & \\ \rho_i^{T-1} & \rho_i^{T-2} & \cdots & 1 \end{pmatrix}$$

here I also assume that $e_{it} = \rho_i e_{i,t-1} + v_{it}$ for $i = 1, 2, \ldots, N$ where $E\{v_{it}\} = 0$, $E\{v_{it}v_{jt}\} = \sigma_{ij}$ and $E\{v_{it}v_{js}\} = 0$ for $t \neq s$.

In Table IX, I report the result of this model.

Table IX

Panel Data OLS Regression on the Percentage of Director Turnover

The total sample consists of 642 firm-year observations of 42 firms listed in the Caracas Stock Exchange from 1984 to 2000. I perform a OLS regression using as a dependent variable the percentage of director turnovers *BODITU*. The performance variables are *ROA*, *ROE*, and *NEGINC*. I used *FSIZE2*, *CASTR1* and *INDCON* as control variables. ***, **, and * represent significant coefficients at the 1, 5, and 10 percent levels, respectively.

	BODITU					
	Random Effects	Fixed Effects	Random Effects	Fixed Effects	Random Effects	Fixed Effects
Intercept	0.1797***	-0.0901	0.1460***	−0.1206*	0.1331***	−0.1129*
	(z=3.729)	(t=-1.285)	(z=3.269)	(t=-1.795)	(z=2.945)	(t=-1.649)
ROA	−0.3091***	−0.2417**				
	(z=-3.277)	(t=-2.451)				
ROE			−0.0827***	−0.0616**		
			(z=-3.062)	(z=-2.223)		
NEGINC					0.0852***	0.0569**
					(z=3.145)	(t=1.960)
FSIZE2	0.0086**	0.0228***	0.0092***	0.0234***	0.0094***	0.0224***
	(z=2.481)	(t=4.369)	(z=2.662)	(t=4.508)	(z=2.698)	(t=4.225)
CASTR1	−0.1103***	0.0431	−0.0657*	0.0800	−0.0758*	0.0578
	(z=-2.628)	(t=0.633)	(z=-1.699)	(t=1.225)	(z=-1.909)	(t=0.858)
INDCON	−0.0843***		−0.0863***		−0.0902***	
	(z=-3.761)		(z=-3.873)		(z=-3.902)	
	χ =	F =	χ =	F =	χ =	F =
	31.31***	9.62***	30.11***	9.25***	30.20***	8.87***

As Table IX shows, the coefficients of all performance measures are significantly different from zero at the 1 percent level. These confirm the inverse relationship between corporate performance and director turnover found using the Poisson regression

model. Also, the control variables show significance effect on size and industry for all regressions.

In the three models presented in Table IX, I find serial correlation in the random effect models; however, the results still hold when I include firm-specific fixed effects.

I also verify these results running the regressions using the Huber-White Sandwich estimator of variance; this method, as I said before, produces valid standard errors even if the correlation within groups is not as hypothesized by the model's specified correlation structure (AR(1)process in this case) and all the results hold.

As a final robustness check of these results, I test whether or not the results depended on the performance measure used. I ran the regressions with different performance measures (e.g., ROS, lag value of ROA, lag value of ROE, lag value of ROS, EBIT/Assets, EBIT/Sales) and the signs and the statistical significance of the test remained.

The univariate test, the Poisson regression, and the OLS regression provide strong evidence that Hypothesis 2 cannot be rejected; that is, performance affects the departure of directors. The empirical evidence shows that the poorer the firm performance the higher the incidence of director turnovers in our sample.

In the next subsection I test Hypothesis 1, that is, whether or not I obtain the same results in the case of CEO turnover.

2.6.3 CEO tunover, a Logit approach

The model I use in this test is a Logit regression; this model estimates the likelihood of CEO turnover given a set of regressors. The multivariable logistic response function is given by

$$E\{Y_{it}\} = \frac{e^{\beta' \mathbf{X}_{it}}}{1 + e^{\beta' \mathbf{X}_{it}}} \tag{2.8}$$

The log-likelihood function is given by (see Neter et al., 1996, for details)

$$L(\beta) = \sum_{i=1}^{N}\sum_{t=1}^{T} Y_{it}(\beta' \mathbf{X_{it}}) - \sum_{i=1}^{N}\sum_{t=1}^{T} \ln[1 + e^{\beta' \mathbf{X_{it}}}] \tag{2.9}$$

Using the MLE procedures I obtain the vector $\hat{\beta}$ that maximizes (2.9).

After regressing $CEOTUR$ with the proxies for performance and controlling for firm specific factors, I could directly test Hypothesis 1. I report the results in Table X.

Table X

Panel Data Logit Regression on CEO Turnover

The total sample consists of 642 firm-year observations of 42 firms listed in the Caracas Stock Exchange from 1984 to 2000. I perform a Logit regression using as a dependent variable, *CEOTUR*, which takes the value of 1 if the CEO is removed and 0 otherwise. The performance variables are *ROA*, *ROE*, and *NEGINC*. I used *CEOTEN*, *DIRTEN*, *BODITU*, *DIRTEN* (not reported), and *FSIZE*1 (not reported) as control variables. ***, **, and * represent significant coefficients at the 1, 5, and 10 percent levels, respectively.

	CEOTUR					
	Random Effects	Fixed Effects	Random Effects	Fixed Effects	Random Effects	Fixed Effects
Intercept	2.5798*		2.4029*		2.6281*	
	(z=1.912)		(z=1.844)		(z=1.573)	
ROA	−1.2758	−2.8282				
	(z=-0.670)	(z=-1.280)				
ROE			−0.1952	−0.6687		
			(z=-0.428)	(z=-1.069)		
NEGINC					0.8964*	1.4130**
					(z=1.826)	(z=2.319)
CEOTEN	0.0847***	0.1071***	0.0839***	0.1033***	0.0874***	0.1116***
	(z=3.686)	(z=3.782)	(z=3.698)	(z=3.705)	(z=3.681)	(z=3.969)
CEOAGE	−0.1222***	−0.1742***	−0.1206***	−0.1747***	−0.1260***	−0.1762***
	(z=-4.931)	(z=-5.668)	(z=-4.921)	(z=-5.684)	(z=-4.955)	(z=-5.694)
BODITU	6.4678***	5.7546***	6.4836***	5.8282***	6.5194***	5.8148***
	(z=7.382)	(z=6.017)	(z=7.436)	(z=6.161)	(z=7.366)	(z=6.116)
	χ =	χ =	χ =	χ =	χ =	χ =
	80.69***	178.92***	81.63***	178.23***	79.93***	182.47***

As table X shows, the relation between CEO turnover and firm performance is weak. Only the *NEGINC* shows a significant coefficient with the correct sign. The coefficients of the other two performance measures (*ROA* and *ROE*) have the correct

sign but are not statistically significant.

It is interesting to note the statistically strong positive relationship between CEO turnover and the percentage of turnover on the board ($BODITU$). The z-statistics are robust to various performance measures and model specifications. For example, in the first model, I interpret the slope coefficient of 6.4678 as follows: If $BODITU$ increases by 1 percent while the other coefficient in the model remains constant, then the probability that a CEO turnover happens ($CEOTUR = 1$) increases by 644 times ($\approx e^{6.4678}$). In my sample, there are several companies that were acquired during the period 1984-2000. In these cases, usually the CEO and the whole board left the firm.

Another interesting result is the relationship between CEO turnover and CEO tenure. This relationship is positive and significantly different from zero at the 1 percent confidence level. Also, this result is robust to all model specifications, and it is also robust when I estimate the coefficients using the Huber-White Sandwich estimator of variance. I interpret this result as follows: consider the first model, if the tenure of the CEO increases by one year, and all other variables remain constant, then the likelihood of a CEO turnover ($CEOTUR = 1$) increases by 8.84 percent ($\approx e^{0.0847}$).

Finally, $CEOAGE$ is strongly and negatively related to CEO turnover. The $CEOAGE$ coefficient was significant at the 1 percent level for all model specifications. Relatively old CEOs are less likely to leave the firm than relatively young CEOs for this sample of Venezuelan firms.

A closer look at these two variables ($CEOTEN$ and $CEOAGE$) suggests some evidence of CEO entrenchment. The retirement effect is captured with $CEOTEN$; in this case, the longer the CEO is in office the more likely he will retire and leave the firm. However, $CEOAGE$ is negative, that is, after controlling for the retirement effect, the older the CEO the less likely he will leave the firm, suggesting a possible entrenchment effect.

The other two variables not reported in the table, $FISIZE1$ and $DIRTEN$, were not statistically significant.

I find little support for the hypothesis that CEO are removed because poor performance; that is, for the firms in my sample there is not strong evidence that the CEO turnover is related to firm performance. The only performance measure that seems to affect CEO turnover is $NEGINC$. Also, I found some preliminary evidence of CEO entrenchment.

2.7 Conclusions

The univariate test and the Poisson and OLS regression tests provided strong evidence that Hypothesis 2 cannot be rejected; that is, performance seems to affect the departure of directors. However, from the results using the Logit model, I reject Hypothesis 1; that is, I did not find strong evidence to show that CEOs turnover was related to firm performance. The analysis of CEO turnover captured some evidence of CEO entrenchment.

These conclusions are consistent with the realities of the Venezuelan market. Venezuelan firms are usually young companies. For example, for the year 1984, the median firm had operated for 31 years, for the year 1992, 41 years, and for the year 2000, 50 years (see Table VI). The relative youth of these companies increase the likelihood that the CEO is the founder of the firm or is a member of the founder's family. In contrast, countries with bigger and better developed markets have older median firm ages. These firms are run by professional managers with no family ties to the firm's founders. The CEOs of the poor performing firms are typically fired and replaced by a new CEO. This logic does not necessarily apply when the CEO of the poor performing firm is the founder or has family ties to the founder, as in the case of Venezuela.

Second, the existence of block holders is not unusual in Venezuela. Although I could not obtain sufficient information about firm ownership, the media, when reporting takeovers[23], have informed the public about negotiations between block holders (usually a family or a business group) of a target firm and acquisition companies; these negotiations usually involve stakes of 20 to 40 percent of the total shares of the target firm. Also, the evidence presented in Table I locates Venezuela below the average Latin American country in terms of shareholder protection; therefore, only through a large stockholding are investors able to protect themselves from management opportunism[24].

If large stock holdings is the case in Venezuela, what is the role of firm directors? The results of this study show that the role of a director is not to monitor the CEO. Moreover, when performance is poor, the directors are the ones who leave the firm, not the CEO. One reason for this situation could be that a directors role is not to monitor but to advise the CEO[25]; if performance deteriorates, the CEO changes directors to gain better counseling.

Another plausible reason is that a CEOs change directors to draw attention away from his own poor performance[26]; in this scenario, directors takes all the blame for poor firm performance.

Still another possibility is that directors are appointed to meet specific reason (e.g. political relations or financial connections), and once these objectives has been

[23]There have been relatively few takeovers in Venezuela; however, the press coverage of these (rare) events has been intense.

[24]Similar finding was reported in Volpin (2002). He shows that in Italy, the sensitivity to performance of top management was low when the controlling shareholder was also a top executive.

[25]This situation will be consistent with the performance based theories such as Adams (2000) and empirical evidence such a Bhagat and Black, (2002).

[26]This is consistent with the "scape goat" theories such as Gilson (1989) and Gilson (1990).

achieved, the directors leave the firm[27]; for example, in a period of poor performance the firm could dismiss directors and replace them with new directors with financial connections to gain better access to capital.

More research is required (see next section) to better understand these results and to provide empirical evidence to test the possible reasons why directors, instead of the CEO, leave the firms after a period of poor firm performance in Venezuela. Also, more research is required to find stronger models to test the entrenchment effects found in this analysis.

2.8 Extensions and Research Agenda

This study is among the few studies on corporate governance done in Latin America and provides more questions than answers. In this section, I explain a few of the possible extensions of this study, given the database I constructed:

1. Appointments of independent directors

Hermalin and Weisbach (1988) found empirical evidence in favor of the hypothesis that independent outside directors are more likely to be appointed after a period of bad company performance. Is there any distinction between outside or inside directors' appointments after a period of poor performance?

2. Board independence and CEO tenure

One of the empirical implications of Hermalin and Weisbach (1998) is that board independence declines over the course of CEO's tenure. In their model, board independence is a function of negotiations between existing directors and the CEO over whom will fill the vacancies of the board and what the CEO's salary will be. The intuition is that if firm performance is poor, it lowers the board's assessment of CEO

[27]This is consistent with the resource dependence theory such as Pfeffer and Salancik (1978) and Agrawal and Knoeber (2001).

ability, reducing his bargaining position. However, if the CEO keeps his job, he does so because retaining him is more cost-efficient than replacing him with another CEO in the labor market. The longer the CEO stays with the firm, the greater his bargaining position and therefore the lesser the board independence over time. Can I verify if this trend is happening also in Venezuela? The evidence of this study provides a partial answer: the longer the CEO tenure, the less likely he or she will leave the firm.

3. Board characteristics and firm performance

Hermalin and Weisbach's (1998) model states that there must be a positive relationship between board independence and corporate performance; that is, firm performance increases as board independence increases. Is there any evidence in the Venezuelan market that could verify this relationship?

4. Event studies

In 1994, half of the banks in Venezuela went bankrupt or received government intervention. After this period, a great number of irregularities and fraudulent operations were discovered. If reputation is valuable in Venezuela, the probability of seeing a director in a Venezuelan firm who was formally employed by a bankrupt bank before 1994 must be substantially lower than the probability of finding a director in any Venezuelan firm who was formally employed by a board that did not go bankrupt or receive government intervention. Can I find empirical evidence for this argument?

5. Origin of the CEO

An important question is how board independence affects the likelihood that the new CEO will be hired from outside the firm. Borokhovich et al. (1996) found that the greater the proportion of outside directors on the board, the greater the probability that the new CEO will come from outside the firm[28]. Does this finding hold true in Venezuela?

---

[28]See Huson et al. (2001) for a recent paper dealing with this issue.

6. Earning management and board composition

Another issue that has recently arisen in academic literature is the relationship between the board composition and what researchers call "earning management" (see Peasnell et al. 2000). The main problem here is to study whether or not the board of directors contributes to the integrity of financial statements. In Venezuela, the problem of "earning management" could be exacerbated not only because the legal protection is weak (see section 2.4), but also because the lack of development of the financial market means that only a few companies are closely followed by professional financial analysts. In this case, the presence of independent directors becomes crucial to alleviate an agency's problem generated by earning manipulations.

7. Networking, resource dependence and board interlocking

As explained in subsection 2.3.2, another theoretical framework that can be used to understand the mechanics of boards of directors involves networking and resource dependence theories. This framework is a natural one for the growing literature on board interlocking.[29] A study of board interlocking in Venezuela is feasible because much of the information needed to perform this investigation will be already available in my database. Furthermore, the relatively small number of firms in my sample allows me to follow the career path of board members, thus providing me with information that can be used later to investigate whether specific backgrounds (e.g., politician, lawyers, academics) are more or less valuable than others for certain firms and for certain industries. Do board directors background play specific roles in Venezuela? Can we find evidence of severe interlocking in Venezuelan boards? Does this interlocking have any relationship to board composition and size? Do banks seat directors in highly leveraged firms?

[29]See for example Fich and White (2000), Agrawal and Knoeber (2001), and Loderer and Peyer (2001).

8. Other Latin American Countries

A natural step after finishing this research program on the Venezuelan market is to include other Latin American countries in my sample and to perform comparative studies among countries in the region. This extension is very valuable because there has not yet been any attempt in the corporate governance literature to go in this direction.[30] I have done preliminary investigations of the feasibility of gathering data from Colombia and Mexico[31].

[30]See Claessens et al. (2000) for a similar investigation in Asia.

[31]In Colombia, there is a government office called "Superintendencia de Sociedades", where all firms in the country (public and private) must file their proxy statements in addition to other valuable information about the board of directors. This information is of public domain and easily obtainable. The case of Mexico is useful because the stock market is bigger than the stock markets in Venezuela and Colombia, and there are many public companies that could potentially be used in the sample.

Bibliography

Adams, R. (2000), The dual role of corporate boards as advisors and monitors of management, *Unpublished working paper*, Federal Reserve Bank of New York.

Agrawal, A. and C. Knoeber (1996), Firm performance and mechanism to control agency problems between managers and shareholders, *Journal of Financial and Quantitative Analysis* 31, 377-397.

Agrawal, A. and C. Knoeber (2001), Do some outside directors play a political role?, *Journal of law and economics* 44, 179-198.

Almazan, A. and J. Suarez (2002), Entrenchment and severance pay in optimal governance structures, *Journal of Finance*, forthcoming.

Anders, G. (1992), The "barbarians" in the boardroom, Harvard Business Review, July-August, 79-87.

Baingridge, S. (2001), Why a board? group decision making in corporate governance, *Unpublished working paper*, University of California at Los Angeles.

Banerjee, A. (1992), A simple model of herd behavior, *Quarterly Journal of Economics* 156, 797-817.

Bhagat, S. and B. Black, (2000), Board independence and long term firm performance. *Unpublished working paper*, University of Colorado and Stanford University.

Bhagat, S. and B. Black (2002), Board independence and long term firm performance, *Journal of Corporation Law*, forthcoming.

Bikhchandani, S., D. Hirshleifer and I. Welch (1992), A theory of fads, fashion, custom, and cultural change as information cascades, *Journal of political economy* 100, 992-1026.

Blinder, A. and J. Morgan, (2000), Are two heads better than one? An experimental analysis of group vs. individual decisionmaking, *NBER Working paper*, 7909.

Brickley, J., J. Linck and J. Coles (1999), What happens to CEOs after they retire? New evidence on career concerns, horizon problems, and CEO incentives, *Journal of Financial Economics* 52, 341-377.

Brunello, G., C. Graziano and B. Parigi (2000), Ownership or performance: What determines board of directors turnover in Italy? *Discussion paper No. 105*, Institute for the Study of Labor (IZA).

Boje, D. and D. Whetten (1981), Effects of organizational strategies and contextual constraints on centrality and attributions of influence in interorganizational networks, *Administrative Science Quarterly* 26, 378-395.

Borokhovich, K., R. Parrino, and T. Trapani (1996), Outside directors and CEO selection, *Journal of Financial and Quantitative Analysis* 31, 337-355.

Bryan, S., L. Hwang, A. Klein, and S. Lilien (2000), Compensation of outside directors: An empirical analysis of economic determinants. Unpublished working paper, University of New York.

Burt, R. (2000), The network structure of social capital. In R.I. Sutton and B.M. Staw (eds), *Research in Organational Behaviour*. Greenwich, CT: JAI Press.

Bryd, J. and K. Hickman (1992), Do outside directors monitors managers? Evidence from tender offer bids, *Journal of Financial Economics* 32, 195-221.

Claessens, J. and S. Djankov (1999), Enterprise performance and management turnover in the Czech Republic, *European Economic Review* 43, 1115-1124.

Claessens, J., S. Djankov, and L. Lang (2000), The separation of ownership and control in East Asian Corporation, *Journal of Financial Economics* 58, 81-112.

Core, J.E., R.W. Holthausen and D.F. Larcker (1999), Corporate governance, chief executive officer compensation, and firm performance, *Journal of Financial Economics* 51, 371-406.

Conger, J., D. Finegold and E. Lawler (1998), Appraising boardroom performance, *Harvard Business Review* January-February.

Cooper, R., T. Day, and C. Lewis (2001), Following the leader: a study of individual analysts' earnings forecast, *Journal of financial economics* 61, 383-416.

Coughlan, A.T. and R.M. Schmidt (1985), Executive compensation, management turnover and firm performance: An empirical investigation, *Journal of Accounting and Economics* 7, 43-66.

Crespi, R. and C. Gispert (1998), Board remueration, performance measures, and corporate governance in large spanish companies, *Unpublished manuscript:* Universitat Autonoma de Barcelona.

Demirguc-Kunt, A. and V. Maksimovic (1998), Law, finance, and firm growth, *Journal of Finance* 53, 2107-2137.

Denis, D. and D. Denis, (1995) Performance changes following top management dismissals, *Journal of Finance* 50, 1029-1057.

Denis, D, D. Denis and A. Sarin (1997), Ownership structure and top executive turnover, *Journal of Financial Economics* 45, 193-221.

Denis, D and T. Kruse (2000), Managerial discipline and corporate restructuring following performance declines, *Journal of Financial Economics* 55, 391-424.

Denis, D. and D. Sarin (1999), Ownership and board structures in publicly traded corporations, *Journal of Financial Economics* 52, 187-223.

Denis, D. and J. Serrano (1996), Active investors and management turnover following unsuccessful control contest, *Journal of Financial Economics* 40, 239-266.

Eisenberg, T., S. Sundgren, and M. Wells (1998), Larger board size and decreasing firm value in small firms, *Journal of Financial Economics* 48, 35-54.

Fama, E. F., (1980), Agency problems and the theory of the firm, *Journal of Political Economy* 88, 288-307.

Fama, E. F. and M. Jensen (1983), Separation of ownership and control, *Journal of Law and Economics* 26, 301-325.

Froot, K., D. Scharfstein and J. Stein (1992), Herd on the street: Informational ineffciciencies in a market with short-term speculation, *Journal of finance* 47, 1461-1484.

Furtado, E. and M. Rozeff (1987), The wealth effects of company initiated management changes, *Journal of Financial Economics* 18, 147-160.

Gibson, M. (1999), Is corporate governance ineffective in emerging markets?. *Paper presented at the meeting of the Western Finance Association, Idaho, USA.*

Gilson, S. (1989), Management turnover and financial distress, *Journal of Financial Economics* 25, 241-262.

Gilson, S. (1990), Bankruptcy, boards, banks, and blockholders: Evidence on changes in corporate ownership and control when firms default, *Journal of Financial Economics* 27, 355-387.

Guillette, A., T. Noe and M. Rebello (2000), Corporate board composition, protocols, and voting behavior: Experimental evidence. *Unpublished working paper*, Georgia State University and Tulane University.

Gomes, A. (2000), Going public without governance: Managerial reputation effects, *Journal of Finance* 55, 615-646.

Graham, J. (1999), Herding among investment newsletters: theory and evidence, *Journal of finance* 54, 237-268.

Grenadier, S. (1999), Information revelation through option exercise, *Review of financial studies*, 95-130.

Gutierrez-Urtiaga, M. (2000), Managers and directors: A model of strategic information transmition. *Unpublished working paper*, Universidad Complutense, Madrid.

Hausman, J., B. Hall and Z. Griliches (1984), Econometric models for count data with an application to the patents-R&D relationships, *Econometrica* 52, 909-938.

Hermanlin, B. and M. Weisbach (1988), The determinant of board composition, *RAND Journal of Economics*, 589-607.

Hermalin, B. and M. Weisbach (1991), The effects of board composition and direct incentives on firm performance, *Financial Management* 20, 101-112.

Hermalin, B. and M. Weisbach (1998), Endogenously chosen boards od directors and the monitoring of the CEO, *American Economic Review* 88, 96-118.

Hermalin, B. and M. Weisbach (2000), Boards of directors as an endogenously determined institution: A survey of the economic literature. Unpublished working paper, University of California at Berkeley and University of Illinois.

Henderson, D., D. Johnson, B. Marcus, A. Patricof and J. Smale, (1995), Redraw the line between , *Harvard Business Review* March-April.

Hirshleifer, D., and A. Thakor (1994), Managerial performance, boards of directors and takeover bidding, *Journal of Corporate Finance* 1, 63-90.

Hirshleifer, D., A. Subrahmanyam, and S. Titman (1994), Security Analysis and trading patterns when some investors receive information before others, *Journal of Finance* 49, 1665-1698.

Holmstrom, B. and J. Ricart i Costa (1986), Managerial incentives and capital management, *Quarterly Journal of Economics* 101, 835-60.

Hong, H., J. Kubik, and J. Salomon (1998), Security analysts' career concerns and herding on earnings forecasts, *Unpublished working paper*, Stanford University.

Huson, M., R. Parrino, and L. Starks (2001), Internal monitoring mechanisms and CEO turnover: A long-term perspective, *Journal of Finance*, forthcoming.

Ingram, P. and T. Simons (1995), Institutional and resource dependence determinants of responsiveness to work-family issues, *Academy of Management Journal* 38 (5), 1466-1482.

Jensen, M. (2000), A theory of the firm: governance, residual claims, and organization forms Harvad Business Press: Boston.

Jensen, M. and W. Meckling (1976), Theory of the Firm: managerial behavior, agency cost and ownership structure, *Journal of Financial Economics* 3, 305-360.

Jensen, M. and W. Murphy (1990), Performance pay and top management incentives, *Journal of Political Economy* 98, 225-264.

Kang, S. and A. Shivdasani (1995), Firm performance, corporate governance and top executive turnover in Japon, *Journal of Financial Economis* 38, 29-58.

Kaplan, S. (1994a), Top executives, turnover, and firm performance in Germany, *Journal of Law, Economics and Organizations* 10, 142-159.

Kaplan, S. (1994b), Top executive rewards and firm performance: A comparison of Japan and the United State, *Journal of Political Economy* 102, 510-546.

Kaplan, S. and D. Reishus (1990), Outside directorships and corporate performance, *Journal of Financial Economics* 27, 389-410.

Kaplan, S. and B. Minton (1994), Appointments of outsiders to Japanese boards: Determinants and implication for managers, *Journal of Financial Economics* 36, 225-258.

Keynes, J. (1936), *The general theory of employment, interest, and money.* Mcmillan: London.

Kiesler, S. and L. Sproul (1992), Group decision making and communication technology 52, *Organizational Behavior and Human Decision Process* 27, 97-123.

Klein, A. (1998), Affiliated directors: puppets of management or effective directors, Unpublished manuscript: New York University.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1997), Legal determinants of external finance, *Journal of Finance* 52, 1131-1150.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1998), Law and finance, *Journal of Political Economy* 106, 1113-1155.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1999), Corporate ownership around the world, *Journal of Finance* 54, 471-517.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (2000), Investor protection and corpotate governance, *Journal of Financial Economics* 58, 3-27.

Lorsch, J.W. (1989), *Pawns or Potentates: The reality of America's corporate boards*, Massachusetts: Harvard Business School Press.

Lorsch, J.W. (1995), Empowering the board, *Harvard Business Review* January-February.

Lorsch, J.W. and M. Lipton (1993), On the leading edge: the lead director, *Harvard Business Review* January-February.

Macey, J. and M. O'Hara (2000), A survey of the legal literature on board of directors, *Unpublished working paper*, Cornell University.

Maug, E. (1997), Board of directors and capital structure: Alternative forms of corporate restructuring, *Journal of Corporate Finance* 3, 113-139.

Martin, K. and J. McConnell (1991), Corporate performance, corporate takeover, and management turnover, *Journal of Finance* 46 (2), 671-687.

Mayers, D., A. Shivdasani and C. Smith (1997), Board composition and corporate control, *Journal of Business* 70, 33-62.

Megginson, W. (1997), *Corporate Finance Theory*. New York: Addison-Wesley.

Mehran, H. (1995), Executive compensation structure, ownership, and firm performance, it Journal of Financial Economics 38, 163-184.

Miner, F. (1984), Group versus individual decision making: An investigation of performance measures, decision strategies, and process losses/gains *Organizational Behavior and Human Decision Process* 33, 112-124.

Mizruchi, M. and J. Galaskiewcz (1994), Network of interorganizational relations. In S. Wasserman and J. Galaskiewcz (eds), *Advances in Social Network Analysis: Research in the Social and Behavioral Science*. Newbury Park, C.A.: Sage, 230-253.

Mikkelson, W., and M. Partch (1997), The decline of takeovers and disciplinary managerial turnover, *Journal of Financial Economics* 44, 205-228.

Milgrom, P., and J. Roberts (1992), *Economics, Organization, and Management.* New York: Prentice Hall.

Mork, R, A. Shleifer and R. Vishny (1988), Management ownership and market valuation: An empirical analysis, *Journal of Financial Economics* 20, 293-315.

Mork, R, A. Shleifer and R. Vishny (1989), Alternative mechanism for corporate control, *American Economic Review* 79, 842-852.

Mueller, R.K. (1974), *Board life: realities of being a corporate director*, New York: Amacon.

Morphy, K. and J. Zimmerman (1993), Financial performance surrounding CEO turnover, *Journal of Accounting and Economics* 16, 273-315.

Neter, J., M. Kutner, C. Nachtsheim and W. Wasserman (1996), *Applied Linear Statistical Models.* 4th. Ed. New York: McGraw Hill.

Noe, T. and Rebello, M. (1997), The design of of corporate boards: composition, factions, and turnover, *Unpublished working paper*, Tulane Unversity.

Oliver, C. (1990), Determinants of interorganizational relationships: Integration and future directions, *Academy of Management Review* 15, 241-265.

Raheja, C. (2000), The interaction of insiders and outsiders in monitoring: A theory of Corporate boards. *Unpublished working paper*, New York University.

Parrino, R., R. Sias and L. Starks (2001), Voting with their feet: Institutional investors and CEO turnover, Unpublished working paper. University of Texas at Austin.

Peasnell, K., P. Pope and S. Young (2000), Board monitoring and earning management: Do outside directors influence abnormal accruals?, Unpublished working paper. Lancaster University.

Perry, T. (2000), Board composition and corporate restructuring following a decline in performance, *Paper presented at the meeting of the Western Finance Association, Idaho, USA.*

Pfeffer, J. and G. Salancik (1978), Chapter 2 and 3, In *The external control of organizations: A resource dependence perspective*, 23-61. New York: Harper and Row.

Pound, J. (1995), The promise of the governed corporation, *Harvard Business Review* March-April.

Rediker, K. and A. Seth (1995), Board of directors and substitution effects of alternative governance mechanism, *Strategic Management Journal*, 16, 85-99.

Renneboog, L. (2000), Ownership, managerial control and the governance of companies listed on the Brussels stock exchange, *Journal of Banking and Finance* 24, 1959-1995

Rosenstein, S. and J. Wyatt (1990), Outside directors, board independence, and shareholder wealth, *Journal of Financial Economics* 26, 175-191.

Sahlman, W. (1990), Why sane people shouldn't serve on public boards, *Harvard Business Review* May-June.

Schardstein, D. and J. Stein (1990), Herd behavior and investment, *American Economic Review* 80, 465-479.

Shivdasani, A. and D. Yermack (1999), CEO involvement in the selection of new board members: An empirical analysis, *Journal of Finance* 52, 187-223.

Shleifer, A. and R. Vishny (1986), Large shareholders and corporate control, *Journal of Political Economy* 94, 461-488.

Shleifer, A. and R. Vishny (1997), A survey of corporate governance, *Journal of Finance* 52, 737-83.

Vafeas, (1999) Board Meeting frequency and firm performance, *Journal of Financial Economics* 53, 113-142.

Volpin (2002), Governance with poor investor protection: Evidence from top executive turnover, *Journal of Financial Economics* 64, 61-90.

Warner, J., R. Watts, and K. Wruck (1988), Stock prices and top management changes, *Journal of Financial Economics* 20, 461-492.

Warther, V. (1998), Board effectiveness and board dissent: A model of board's relationships to management and shareholders, *Journal of Corporate Finance* 4, 53-70.

Weisbach, M. (1988), Outside directors and CEO turnover, *Journal of Financial Economics* 20, 431-460.

Welch, I. (2000), Herding among security analysts, *Journal of Financial Economics* 58, 369-396.

Yermack, D. (1996), Higher market valuation of companies with a small board of directors, *Journal of Financial Economics*, 40, 185-211.

Zwiebel, J. (1995), Corporate conservatism and relative compensation, *Journal of Political Economy* 103, 1-25.

Biography

Maximiliano González was born in Caracas, Venezuela on November 16th, 1970. He attended Univerdidad Metropolitana and graduated with a degree in Management Science in 1994. He obtained his M.B.A. from Instituto de Estudios Superiores de Administración (IESA) in 1998 and his Master in Management from Tulane University in 2001. In 2002 he was appointed Assistant Professor of Finance at IESA.