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CORPORATE GOVERNANCE AND VALUE IN BRAZIL (AND IN CHILE)

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Abstract*

This paper constructs a corporate governance practices index (CGI) from a set of 24 questions that can be objectively answered from publicly available information. The goal is to measure the *overall* quality of corporate governance practices of the largest possible number of firms. CGI levels have improved over time in Brazil, and an examination of CGI components demonstrates that Brazilian firms perform much better in disclosure than in other aspects of corporate governance. This paper finds very high concentration levels of voting rights leveraged by the widespread use of indirect control structures and non-voting shares. The paper does not find evidence for either entrenchment or incentives in Brazil using ownership percentages, but evidence is found that the separation of control from cash flow rights destroys value. The CGI maintains a positive, significant, and robust relationship with corporate value. A worst-to-best improvement in the CGI in 2002 would lead to a 0.38 increase in Tobin's q. This represents a 95 percent increase in the stock value of a company with the average leverage and Tobin's q ratios. Considering our lowest CGI coefficient, a one-point increase in the CGI score would lead to a 6.8 percent increase in the stock price of the average firm in 2002. No significant relationship is found between governance and the dividend payout. The results are placed in context by offering a comparative analysis with Chile.

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1. Introduction

Do better corporate governance practices lead to a lower cost of capital and a greater market valuation? This paper presents evidence that this is the case in Brazil, and that efforts by regulators, stock exchanges, multilateral organizations, and others to improve corporate governance practices do pay off. The paper also discusses why better corporate governance practices may not be a panacea for all firms. There are many ways to represent corporate governance. One of them is through the relationship between the concentration of cash flow rights (voting and non-voting shares) and control rights (voting shares), the so-called voting and cash flow rights separation (or wedge) of major shareholders. Cash flow and control rights, however, may be just part of the story. Good corporate governance practices may also be represented by indexes based on charter measures and company practices. These indices consider many different aspects of corporate governance and may gauge the quality of *overall* corporate governance practices better. This paper develops a corporate governance score, or index (CGI). The CGI includes information from a very representative sample of Brazilian public firms, and it consists of items that can be objectively assessed without the need for qualitative evaluations. The design of the score is intended to be objective; although response rates can be quite low, respondents may be able to provide valuable information. Another goal was to obtain the largest sample possible.

This approach stands in contrast to qualitative surveys that evaluate corporate governance practices, which are becoming more common. For example, CLSA (Credit Lyonnais Securities Asia) uses a questionnaire that is filled out by its analysts and that involves qualitative evaluations on their part or on the part of respondents. Similarly, the Brazilian Institute of Corporate Governance (IBGC, in Portuguese) conducts bi-annual corporate governance surveys, but the sample is limited and may suffer from the usual survey biases and low response rates. Durnev and Kim (2003) and Patel, Balic, and Bwakira (2002) report on a transparency and disclosure index computed by Standard and Poor's (S&P) using 98 "0 or 1" questions. Durnev and Kim (2003) consider the CLSA index partially subjective, while they define the S&P index as largely objective. Brown and Caylor (2004) build a governance score for US firms from the Institutional Shareholder Services database. Gompers, Ishii and Metrick (2003) and Bebchuk, Cohen and Ferrell (2004) use a corporate governance index built from provisions followed by the Investors Responsibility Research Center (IRRC). Bauer, Günster and Otten (2004) use the

Deminor ratings of about 300 items related to corporate governance practices for companies included in the FTSE Eurotop 300 index. Black, Jang and Kim (2003) use a subset of 38 objective questions from a survey conducted by the Korean Stock Exchange, leaving out all subjective questions.

Alternatively, some authors prefer to compute their own indexes. Barontini and Siciliano (2003) define a number of dummies representing the risk of expropriation that depend on the existence of a controlling shareholder, the share of voting rights of large outside shareholders, and the existence of either pyramids or non-voting shares. Their dummies are a reduced version of our index. What we do is also methodologically similar to what La Porta, López-de-Silanes, Shleifer, and Vishny (1998), henceforth LLSV, and Gompers, Ishii and Metrick (2003) have done. Like Black, Jang and Kim (2003), this paper includes only features that can be objectively assessed without the need to interview or survey interested parties. This paper also provides a short time series of its index; obtaining such information retroactively is not an option with subjective surveys or the use of current website information.

This paper further investigates the relationship of its corporate governance measures with corporate valuation and performance. More concentrated control (voting rights) may be associated with external shareholders' expropriation and poor corporate governance practices. This is sometimes called managerial entrenchment. More concentrated cash flow rights may be associated with an alignment of controlling shareholders interests with those of external shareholders, possibly leading to better corporate governance practices. This is sometimes labeled managerial incentives. The separation between voting and cash flow rights is large in Latin America, and it is usually achieved with the combined use of indirect control structures and non-voting shares, allowing a reduced investment in the total capital of the company by controlling shareholders without the loss of control.

Finally, Chilean corporate governance data from Lefort and Walker (2005) are used in a brief comparative analysis of the two markets. The objective of this section of the paper is to put the results in a regional context. Chile was chosen instead of Argentina or Mexico because of the differences between Chile and Brazil, because the Argentinean market is much smaller than those in the other large Latin American economies, and because comparable studies of Mexico

were not available.¹ Brazil represents a large Latin American economy, while Chile has had a more stable economy in the last 20 years despite being smaller. The two countries have the same legal origin, but they differ greatly in investor protection. LLSV (1998) created an “anti-director rights” index to measure the degree of shareholder protection in 49 countries, including Brazil and Chile. The index is the sum of six dummies that assume the value of 1 if a given form of shareholder protection is present. Brazil and Chile present very different levels of anti-director rights in the region. The value of the index is 2 for Brazil and 5 for Chile.² Argentina scored 4 and Mexico 1 in LLSV (1998). This large difference was the motivation to select Chile in order to provide the paper with a Latin American context.

This paper contributes to the existing literature by presenting a case study of a French civil law developing country (Brazil), which is compared to another country (Chile) at a similar stage of development, and with similar law enforcement quality and legal origin, but with a different level of legal investor protection. For Brazil, very high concentration levels of voting rights are found, leveraged by the widespread use of indirect control structures and non-voting shares. In addition, control concentrated between 1998 and 2002, the period examined. It is shown that a worst-to-best improvement in the CGI in 2002 would lead to a 0.38 increase in Tobin’s q , which represents a 95 percent worst-to-best increase in the market value of equity for a company with the average leverage and Tobin’s q ratios. A one-point increase in the CGI would lead to a 6.8 percent increase in the stock price of the average firm; this result seems to be robust. On the other hand, no significant relationship is found between the dividend payout and the CGI, which suggests that the payout is endogenously determined. A scale factor appears to affect for the impact of corporate governance on value, with larger firms benefiting the most. In the comparative analysis with Chile, as there are no major differences in legal origin and judiciary quality, it is concluded that the key difference lies in investor protection, largely due to the almost exclusive use of voting shares by Chilean firms, while Brazilian law used to allow for

¹ At the end of 2002, the last year for which this paper’s governance scores were computed, Brazil’s market capitalization was \$127 billion, Argentina’s was \$17 billion, Chile’s was \$50 billion, and Mexico’s \$103 billion, according to the World Federation of Exchanges. End of 2003 GDP in US\$ billion was \$492 for Brazil; \$626 for Mexico; \$130 for Argentina; and \$72 for Chile, according to the World Bank.

² The index is recalculated here because there was a misconception involving the “dual shares” dummy reported by LLSV (1998) for Brazil. The so-called Brazilian preferred shares are actually non-voting shares that do not possess the characteristics of preferred shares in the US; in addition, those shares usually make up more than 50 percent of outstanding shares in the market.

two-thirds of non-voting shares in the equity capital. This level has been reduced to 50 percent, however, for firms that went public after 2001.

This paper offers a positive answer to the question of whether good corporate governance practices lead to a greater market valuation and a lower cost of capital in Brazil. The paper is divided into seven sections. The following section reviews some of the relevant literature on the association between corporate valuation and governance and presents the paper's working hypotheses. Section 3 presents the data, the methodology for building a corporate governance practices index for Brazil, a review of the supporting literature for the index components, and a discussion of the evidence derived from applying the index questionnaire. Section 4 presents the empirical analysis, including the ownership concentration tabulations and the results for the relationship between corporate governance practices and value as well as initial robustness tests. Section 5 presents the endogeneity tests and additional robustness checks. Section 6 compares this paper's findings with those reported elsewhere for Chile, and Section 7 concludes and presents policy implications.

2. Brief Review of Literature and Working Hypothesis

Recent studies suggest that the Berle and Means (1932) model of widely dispersed ownership is uncommon even in developed countries. Large shareholders control a significant number of firms in the wealthier countries as well. La Porta, López-de-Silanes, and Shleifer (1999), hereafter referred to as LLS, identified the ultimate owners of cash-flow and voting rights of firms in 27 developed countries. There are systematic differences among countries in the structure of laws and their enforcement, such as the historical origin of their laws. LLS find that relatively few firms are widely held, except in economies with very good shareholder protection; most firms are controlled by families or by the state. Controlling shareholders typically have control rights that considerably exceed their cash flow rights, mainly through the use of pyramids.

Recent research highlights the importance of corporate governance in developed and emerging markets and suggests empirical relationships between governance and corporate performance. Results indicate that better corporate governance is associated with better performance and higher corporate valuation. LLSV (1998, 2000a, 2002) evaluate the influence of investor protection and ownership by the controlling shareholder on corporate valuation. They

conclude that better shareholder protection is associated with higher valuation of corporate assets and with more developed and valuable financial markets. When shareholder rights are better protected by the law, outside investors are willing to pay more for financial assets such as equity and debt.

Gompers, Ishii and Metrick (2003) compute a corporate governance index for 1,500 US companies consisting of 24 anti-takeover provisions and shareholder's rights compiled by the Investor Responsibility Research Center (IRRC) that can be objectively assessed. Each index item is a dummy variable, and the index is the simple sum of those variables. These authors find that better shareholder rights are associated with greater corporate valuation, and this association increases over time in the 1990s. The authors further find that pro-shareholder governance practices are positively related to profits and sales growth and negatively related to capital expenditures and the amount of acquisitions. Their results are confirmed by Brown and Caylor (2004), among others, who find that firms with better governance practices are worth more, perform better, are less risky and volatile, and pay out more dividends. Bebchuk, Cohen and Ferrell (2004) use a subset of six provisions from the 24 employed by Gompers, Ishii and Metrick (2003) as an "entrenchment index" and conclude that entrenchment is negatively associated with firm value, while the remaining 18 provisions are not associated with firm value.

Using a different sample and approach, Claessens, Djankov, and Lang (2000) traced back ultimate ownership and control of East Asian corporations. In particular, they examined the extent of deviations from the one-share-one-vote rule, the use of pyramiding and cross-holdings, the presence of single and multiple controlling owners, and the presence of controlling shareholders as top managers of the company. Their study showed that most East Asian firms are controlled by a single shareholder that often turns out to be a family. Pyramidal and cross-holding structures are common. In contrast, the use of dual-class shares is very limited. The authors further documented a significant separation of ultimate ownership and control, which is most pronounced among family-controlled firms and smaller firms. In a similar study, Faccio and Lang (2002) analyzed ultimate ownership and control in Europe and reported that families are the most frequent type of controlling shareholders, and that there is a significant separation of ownership and control, mainly through the use of pyramids and cross-holdings.

Claessens et al. (2002) separate the effects of control and cash flow ownership on the market valuation of firms in several East Asian countries and find that more concentrated control

adversely affects valuation, while cash flow ownership affects it positively. Wiwattanakantang (2001) investigates the effects of controlling shareholders on corporate performance in Thailand. Her results indicate that the presence of controlling shareholders is associated with better performance when assessed by accounting measures such as return on assets (ROA) and the sales-to-assets ratio. Since most firms in her sample do not implement mechanisms to separate voting from cash flow rights, controlling shareholders might be self-constrained and do not extract private benefits.

The measures of corporate performance used in these and other studies include the ROA, the dividend payout, and proxies for Tobin's q . Himmelberg, Hubbard, and Palia (1999), Black, Jang, and Kim (2003), and Klapper and Love (2004), among others, argue that there may be an endogeneity problem when performance measures are correlated with proxies for good governance practices, such as control and cash flow rights concentration or a governance practices index. Klapper and Love (2004) give the example of firms with good growth potential. To finance growth, insiders may decide in favor of costly better governance practices, which could please investors and lead to a rise in the firm's Tobin's q as well as a simultaneous improvement in their corporate governance practices index. Thus, at a given point in time, there could be a positive correlation between Tobin's q and the governance practices index. Himmelberg, Hubbard and Palia (1999, pp. 357-358) provide other examples. In standard cross-section analysis, it is difficult to determine if there is causality between performance and governance practices or if they are simply being affected by unobserved heterogeneity, that is, firm-specific common factors that are not observed or measured by the analyst. A more detailed discussion of how different authors have dealt with this problem is presented later in this paper.

Shleifer and Vishny (1997, p. 770) state that corporate governance in Italy must be much closer to the rest of the world than corporate governance in the US, Japan, or Germany. Barontini and Siciliano (2003) test if the risk of expropriation is associated with stock returns and Tobin's q in a sample of public Italian firms between 1991 and 2000. The authors use dummies to represent the risk of expropriation, and their dummies are associated with the proportion of voting rights by the controlling shareholder and the stock ownership of large outside shareholders, as well with the presence of pyramids and non-voting shares. These researchers find no relationship between stock returns and the risk of expropriation and conclude that this is consistent with rational investors discounting stock prices in anticipation of expropriation, as

discussed by Jensen and Meckling (1976). They also find that Tobin's q is lower for companies that present a higher risk of expropriation, particularly if they are holding companies or are controlled by the state or families.

Previous literature documents that there are both costs and benefits associated with ownership concentration. The presence of controlling shareholders may be harmful to the firm because their interests may not align with those of non-controlling shareholders (Shleifer and Vishny, 1997; LLSV, 1998, 2000a, and 2002). However, the presence of controlling shareholders may not always be detrimental to the firm. Large shareholders may mitigate the free rider problem of monitoring a management team, and hence reduce agency costs. LLS (1999) argue that in countries where the law and its enforcement do not offer sufficient protection to outside investors, concentrated ownership can mitigate shareholder conflicts.

In early literature that focused largely on shareholder-manager conflicts, Jensen and Meckling (1976) and Morck, Shleifer, and Vishny (1988) have provided important early contributions for the understanding of the relationship between ownership structures and corporate valuation. Jensen and Meckling (1976) concluded that concentrated ownership is beneficial to corporate valuation because large investors are better at monitoring managers. Morck, Shleifer, and Vishny (1988) distinguish between the negative control effects and the positive incentive effects of ownership concentration. They suggest that the absence of separation between ownership and control reduces conflicts of interest and increases shareholder's value.

Recent research (Shleifer and Vishny, 1997; LLSV, 1998, 2000a, and 2002; and Claessens et al., 2002) suggests that greater cash flow rights are associated with greater valuation (the incentive effect). In contrast, concentration of control rights and the separation of voting rights from cash flow rights have a negative effect on firm value (the entrenchment effect). This latter literature focuses on the conflicts between controlling shareholders and outside shareholders. When large investors control a corporation, their policies may result in the expropriation of outside shareholders' wealth. Such companies are not attractive to outside shareholders, and their shares may present lower market valuations.

Dispersed ownership is rare in Brazil, and the inside-outside shareholder conflict is here considered the most relevant issue. Thus, the review of the impact of ownership and governance practices on value above leads to the following hypotheses:

H1: Higher concentration of voting rights among controlling shareholders is associated with lower corporate valuation and worse performance.

H2: Higher cash flow ownership by controlling shareholders is associated with higher corporate valuation and better performance.

H3: Higher separation of voting from cash flow rights by controlling shareholders is associated with lower corporate valuation and worse performance.

H4: Better corporate governance practices are associated with higher corporate valuation and better performance.

3. A Governance Practices Index for Brazil

This paper presents an index based on information that can be objectively obtained from public sources, such as the mandatory filings with the Brazilian Securities Commission (CVM, in Portuguese) and company annual and periodic reports. The index is structured according to manuals of best practices, particularly the Code of Best Practices of the Brazilian Institute of Corporate Governance (IBGC). The Organization for Economic Cooperation and Development (OECD) code of best practices and the CVM code of best practices are used as well. These codes provide the framework to select the items to be measured in the index. It was decided to have a number of items that is neither too small to capture the multivariate nature of corporate governance, nor too large to render data gathering difficult, time-consuming, and costly.

A set of 24 questions is developed. If the answer is “yes” to any given question, it is interpreted it as a pro-shareholder provision or action and assigned a value of 1. Negative answers are assigned a null value. The index is the simple sum of the values assigned to each question. Although the relative impact or importance of each question is not assessed, an unweighted index is easier to reproduce and less subjective than a weighted index. Indexes constructed in other studies have also followed this method, beginning with LLSV (1998) and proceeding with Gompers, Ishii and Metrick (2003), Black, Jang and Kim (2003), and Barontini and Siciliano (2003), among others. Klapper and Love (2004) use a similar method to adapt the CLSA index for their study. This paper will consider sub-indices as well as a partial index obtained with the deletion of questions that do not greatly differentiate companies.

Agrawal and Knoeber (1996) recognize that mechanisms to control agency problems, such as board composition and block shareholding, are interdependent. Correlations between any one of these mechanisms and performance may be spurious because they may be compensated for or offset by some other mechanism that is not considered. The method used in this paper does

not ignore this substitution effect, also described by John and Senbet (1998, p. 391), as the existence of alternative mechanisms is simultaneously and additively considered.

Initially considered was including two questions that determined whether companies had level II or III ADRs listed in the United States or belonged to the São Paulo Stock Exchange's (Bovespa) *Novo Mercado* (New Market) trading lists.³ Those questions were omitted, however, because of their redundancy with many other questions that were retained, such as the use of international accounting standards. In any case, Doidge (2004) and Doidge, Karolyi, and Stulz (2004) provide evidence that foreign firms that list in the United States present, respectively, lower control premiums and greater value. The present analysis uses two separate control dummies for ADRs and the *Novo Mercado*.

This section presents the data sources, the criteria for selecting index questions, and selected supporting literature for each item included, then discusses the empirical findings for the answers to each question.

3.1 Data Sources

The sample of public Brazilian firms is drawn from the universe of companies listed at Bovespa. The sample includes both financial and non-financial institutions and does not include companies with incomplete or unavailable information, with negative book value of assets, negative book value of common equity, and firms that did not trade. The final sample consists of firms that represent most of the market capitalization.⁴

The questionnaire is answered with information from the InfoInvest Database (www.foinvest.com.br). This database is freely available except for the most recent filings, quarter and semi-annual filings, and a few other items; a subscription to the database provided

³ Bovespa created two new trading lists for existing firms in December 2000 called Levels 1 and 2. It also calls "New Market" the trading list for companies that adhere essentially to its level 2 requirements and issue only voting shares when they first list. Level 1 requirements have to do with better disclosure and liquidity. Level 2 requirements are much more demanding and include all Level 1 requirements plus accounting according to international standards, tag along rights, voting rights to non-voting shares in some cases, such as mergers and acquisitions, a unified one-year term to board members, and submission to an arbitrage court. In September 2004, Bovespa had 358 listed firms, of which only five were in the Level 2 trading list, 31 in the Level 1 trading list, and only four in the *Novo Mercado*. Voluntary adherence to better governance and disclosure practices has been slow, although there is some precarious empirical evidence that such adherence may have a positive impact on corporate value (Carvalho Jr., 2003). See more details at www.bovespa.com.br.

⁴ The average daily trading volume was US\$272.7 million in 2003. The 10 largest market capitalization companies account for approximately 47 percent of market capitalization and 51.2 percent of trading volume. This paper's sample of about 250 firms each year accounts for more than 90 percent of the market capitalization.

full access to all information. Data on Brazilian annual filings was obtained for 1998, 2000, and 2002. Publicly companies are required to file information about the previous calendar year by the end of April of each year. These filings must supply, among other data, information about equity capital and ultimate ownership greater than 5 percent. The market and accounting information comes from the Economática database (www.economática.com), available by subscription, which contains time-series data on companies and company financial statements.

3.2 Index Components

Table 1 shows the questionnaire used. The criterion for including questions was whether they could be objectively answered through access to the Infoinvest database, CVM filings, company annual or periodic reports and websites. Many of the questions included in the CLSA index, for example, require analysts to make qualitative assessments or interview company officers and directors. This type of procedure was avoided in order to include the largest possible number of firms in the sample.⁵ Of course, time and cost concerns were also an issue.

Based on the IBGC's Code of Best Practices, our 24 questions are grouped in Table 1 according to four dimensions: disclosure; board composition and functioning; ethics and conflicts of interest; and shareholder's rights. This organization turned out to be very similar to others in the literature, such as in Black, Jang and Kim (2003). These dimensions define the sub-indices used in the tests in this paper but bear no influence on the weighing of individual questions in the index. The criteria and sources used to answer each question in are outlined in Table 1.

A preliminary list of questions was submitted to a number of practitioner panels in both Rio de Janeiro and in São Paulo that consisted of lawyers, controlling shareholders, representatives of IBGC, Bovespa, institutional investors, and CVM officers. These panels helped in refining the questions that were included in the final version of the questionnaire. Not all prescribed practices present in best practice codes or in listing requirements are fully supported by the empirical academic literature, free of contradiction or of measurement problems. In any case, it was decided to proceed with the questions listed in Table 1.

⁵ For example, the latest IBGC survey started with a sample of 285 firms and about 1,500 questionnaires were mailed. Responses totaled 110 questionnaires, representing 70 firms.

The substitution effect described by John and Senbet (1998: 391) is the idea that different corporate governance mechanisms are not independent from each other. Agrawal and Knoeber (1996) identify seven alternative, but not mutually exclusive, mechanisms of agency control: shareholdings of insiders, institutions, and outsiders; use of outside directors; debt policy; the labor market for executives; and the market for corporate control. When the internally defined mechanisms (insider shareholding, use of outside directors, debt policy, and reliance on the external labor market) are optimally set, there should be no effect on the value of corporations in a cross-section analysis. The index used in this paper accounts for two of these dimensions simultaneously (insider shareholding and the use of outside directors) and uses leverage as a control variable. In Brazil, there are no takeovers because control, as will be shown, is very concentrated and not really traded in stock exchanges, and the number of public firms per industry may be relatively small to implement a meaningful proxy for the labor market for executives in any specific industry.

The remainder of this section provides a brief review of the literature associated with each of the four dimensions used for grouping questions. To keep the number of citations low, a limited number of survey papers are used and cited to support the inclusion of specific questions or sets of questions. Obviously, not all papers provide evidence in support of each question in itself but rather review the literature. Page numbers of supporting citations are provided in case the interested reader would like to consult other articles. Also presented is a brief discussion of findings for each of the dimensions in this section. The percentages of “yes” answers to each question in each year are reported only in the text, but not in the tables, for reasons of space. Full tabulations are available upon request.

Disclosure Questions

The first set of six questions in Table 1 is listed under the “Disclosure” dimension. This set of questions deals with related party transactions, company sanctions against governance malpractice, compensation disclosure, the auditors, and accounting practices.

Greater disclosure in general leads to more value. Doidge, Karolyi and Stulz (2004) and Carvalho (2003) present evidence about listing in the US and at Bovespa’s *Novo Mercado*, respectively. Firms that issue ADRs must meet a number of requirements that make them disclose more information and be more transparent. Klapper and Love (2004) find that an ADR

dummy is positively and significantly related to a governance index. Disclosing CEO pay is a good governance practice given the monitoring function of boards. Hermalin and Weisbach (2003: 16) state that firms with weaker governance structures tend to pay CEOs more. However, in time, CEOs may acquire more leverage over boards, particularly when they are very successful. Shleifer and Vishny (1997: 745) maintain that there is a weak, but positive relationship, between executive pay and performance.

The selection of an auditor with a global reputation may convey better disclosure practices. For instance, Michaely and Shaw (1995) find that more prestigious auditors are associated with US IPOs that are less risky and that perform better in the long run. Coffee (2003) presents a thorough legal and economic discussion about the role of external auditors. Newman, Patterson, and Smith (2003) show that investment levels and outside shareholding are greater in countries where penalties for auditor failures and insider fund diversion are stiffer. Kolhbeck and Mayhew (2004) provide evidence that weak corporate governance practices are associated with more frequent related party transactions.

The answers to the questions in the disclosure dimension reveal that most firms include factual information about related party transactions in their annual reports; in most cases they disclose related party transactions in a specific chapter of the explanatory notes. Companies often disclose transactions and their value, but they do not provide many details. Additionally, most companies do not specify any sanctions in their charters against management for corporate governance malpractice. About 30 percent of companies use international accounting standards, and about 75 percent use one of the leading global auditing firms. Most companies disclose information about their CEO and directors' compensation. However, because highly paid corporate officers see detailed disclosure of their compensation as a threat to their family and their own personal safety, the disclosure usually reports on the types of compensation schemes used and on the total values paid to the chief officers and directors, without specifying individual amounts and compensation packages for each individual.

Board Composition and Functioning

Becht, Bolton, and Röell (2002, p. 95) and Hermalin and Weisbach (2003, p. 7) state that the empirical work in this area is partially based on practical and policy insights, rather than on theory-based hypothesis. The evidence regarding the link between board characteristics and

performance does not always support such relationship, particularly in the US and in the UK. For example, Weir and Laing (2001, p. 93) report that there is no direct effect of the governance structure on performance, with an exception for the use of board committees. Brown and Caylor (2004) find that the main board characteristics studied in the literature (independence, director compensation, and audit committees) do not explain performance in the US. In Brazil, Leal and Oliveira (2002) review board practices and report that most firms do not adhere to best practice recommendations and Da Silveira, Barros, and Famá (2003) find that the dual role of CEO and Chair of the Board reduces firm value. Becht, Bolton and Röell (2002, p. 96) present evidence that boards play a role in critical situations, while Klapper and Love (2004) include various board composition and functioning dummies in their study, which finds a positive relationship between governance practices and value. Black, Jang and Kim (2003) conclude that the proportion of outside directors is positively and significantly associated to corporate value in Korea.

Gillette, Noe, and Rebello (2003) find, through experiments, that boards with outsider representation, even when they are not a majority, lead to the rejection of insider favored projects and the acceptance of institutionally preferred projects. A majority of outsiders improves their results. Xie, Davidson, and DaDalt (2003) find that the composition and the qualifications of board and committee members are associated with lower management compensation. Hermalin and Weisbach (2003, p. 17) believe that the composition of the board may not be important on a day-to-day basis but that it is instrumental for infrequent and crucial situations. They present evidence that board composition and size are important in CEO turnover, takeovers, and CEO compensation issues.

Shleifer and Vishny (1997, p. 751) argue that board effectiveness is a controversial issue and that boards may take too much time to act and be dominated by managers. Hermalin and Weisbach (2003, p. 17) believe that board size proxies for the board's activity, explaining why smaller board sizes are better than larger boards that may be plagued with free rider and monitoring problems. The optimal board size is an open question, although the authors of this paper adhere to a size within the five to nine member recommendation of the IBGC. John and Senbet (1998, p. 386) report empirical evidence showing that the presence of monitoring committees (audit, nominations, and compensation committees) are positively related to factors associated with the benefits of monitoring. Klein (2002) shows that independent audit

committees reduce the likelihood of earnings management, improving transparency. Finally, the fiscal board is an optional device included in Brazilian corporate law. This device, which may resemble the U.S.-style audit committee, is formed by request of minority shareholders. However, the fiscal board “is formed to assure that minority shareholders’ rights are respected and their voice heard and it performs a superficial role in the supervision of the company’s financial reporting and control structure providing virtually no monitoring or understanding of the audit processes” (IBGC Newsletter, March/April, 2003).

The board questions used in this paper reveal that in 36 percent of the cases in 2002 the chairman of the board and the CEO were the same person. Most companies do not use committees, and seventy percent of the boards are not clearly made up of a majority of outside directors. About 37 percent of the boards do not fit the IBGC’s recommended board size of five to nine members. In most boards, directors do not serve consecutive one-year terms, and most companies do not have a minority shareholder-mandated fiscal board.

Ethics and Conflicts of Interest

Eisenberg (1998) states “obedience to legal and ethical principles is consistent with maximization, even if greater gains could have been achieved by acting unlawfully or unethically, because law and ethics are channels through which maximization must flow.” In line with this statement, two questions were included about inquiries and convictions by the CVM. Also asked was whether the company submits to the faster and cheaper dispute resolution system of arbitration instead of the usual legal proceedings, which are very slow, expensive and offer countless opportunities for delays and appeals.

The questionnaire further included three questions about concentration of control; the questions related to the conflict of interests between controlling and outside shareholders. There is a very large literature on conflicts of interest, and the introduction to this paper reviewed some of that literature and its main implications for this paper. Morck, Shleifer, and Vishny (1988) find that in the US profitability first rises and then falls as the concentration of ownership increases. The rise is consistent with the incentive hypothesis, but after a point there is too much voting power concentration (entrenchment), which leads to the fall in corporate value due to a greater likelihood of expropriation. Claessens et al. (2002) find evidence for this relationship in Asia, while Lins (2003) finds stronger evidence for entrenchment than for incentives in 18

emerging markets. Leal, Carvalhal-da-Silva, and Valadares (2000) find some evidence for entrenchment in Brazil. Shleifer and Vishny (1997, pp. 758-759) also review empirical evidence for the United States and believe that the ability of controlling shareholders to take advantage of minority shareholders is greater if they have superior voting rights, if the concentration of their voting rights is greater than the percentage of their cash flow rights, or if they use indirect control structures or non-voting shares. Shleifer and Vishny (1997, pp. 754-755) also comment that monitoring by large minority shareholders is effective only in countries with good investor protection. In countries with poor investment protection, only majority ownership would be effective. Lins (2003) maintains that the presence of large non-managerial block holders mitigates the negative effect of control concentration on value, particularly in countries with poor legal protection.

In the six questions under the “Ethics and Conflict of Interests” dimension of the index, most companies are not under investigation by the CVM and were not convicted by the CVM or the judiciary on charges of securities laws violations. This appears to be largely due to the low quality of law enforcement in Brazil and does not necessarily represent good behavior on the part of Brazilian companies. This is probably also the reason why most companies refuse to submit to arbitration courts. While arbitration decisions are quicker—and final—court decisions take a long time and offer many possibilities for appeals. According to stock exchange officers, controlling shareholders also believe that arbitration may be biased in favor of minority shareholders.

In 75 percent of the companies, controlling shareholders own more than 50 percent of the voting shares, and the percentage of non-voting shares is greater than 20 percent in nearly 80 percent of the firms. Consequently, in almost 90 percent of cases there is a control leverage with the proportion of voting shares relative to the proportion of total capital indirectly held by the largest shareholder being greater than 1 due to indirect control structures and non-voting shares.

Shareholder Rights

Shleifer and Vishny (1997, p. 764) state that providing minority shareholders with the ability and incentives to vote for the board of directors, as well as ensuring minority shareholders’ ease in voicing, is a common governance arrangement to grant minority shareholders voice, because their investment is sunk in the firm. This also applies to inferior voting rights. When voting is

concentrated, it is easy for controlling shareholders to be heard and to monitor management. Consequently, a question is included about shared control and agreements among major shareholders, as shareholder agreements may be good or bad for minority shareholders. We specifically ask if the terms of existing agreements are beneficial to minority shareholders. Shleifer and Vishny (1997, pp.748, 759) present evidence of private benefits of control that materialize in large control premiums. Nenova (2001) reports very high control premia for Brazil in a period in which tag-along rights have been removed from the law.⁶ When these rights were reinstated, the control premium decreased. Questions are thus included questions about voting procedures, voting rights, and tag-along rights, beyond what was legally required. Becht, Bolton and Röell (2002, p. 35) find that indirect ownership structures, particularly when coupled with the presence of non-voting shares, may create strong incentives for expropriation of minority shareholders. For instance, Claessens et al. (2002), Lins (2003), and Leal, Carvalhal-da-Silva and Valadares (2000) find evidence that these structures are negatively related to value in Asian countries, emerging markets, and Brazil, respectively. One question about the presence of indirect control structures is thus included. Finally, Becht, Bolton and Röell (2002, p. 86) list evidence that liquidity is positively associated with firm value and negatively associated with ownership concentration. Thus included is a question on whether the “free float” is greater than 25 percent, the minimum required in Bovespa’s level 1 trading list.

The results for the shareholder rights dimension reveal that more than 90 percent of the companies do not facilitate voting by all shareholders beyond what is legally required and nearly 90 percent of the companies do not grant any voting rights beyond what is legally required. Most companies do not grant better tag along rights than what is mandated in the law. All of these numbers decreased (improved) a little since 1998. Some indirect control structures actually dilute control instead of increasing it. This is the case in about 20 percent of the cases. However, most shareholder agreements do not reduce control concentration. About 30 percent of companies offer insufficient liquidity to shareholders.

The following section discusses the overall characteristics of the data and of the CGI built from the questionnaire. The section also presents an initial analysis of the relationship between corporate governance practices, value, and performance.

⁶ Tag-along rights basically relate to a minimum proportion of the price paid to controlling shareholders to be paid to minority voting shareholders in acquisitions.

4. Empirical Results

4.1 Ownership Measures

Direct and indirect shareholding are analyzed. Direct shareholders are those who own shares in the public company itself. Considered here are all shareholders with 5 percent or more of voting capital, as this is the threshold for mandatory identification of shareholders in Brazil. Indirect shareholding represents stockholders who ultimately own the company. This is determined by accounting for voting shares ownership (control rights) and for voting and non-voting shares ownership (cash flow rights). The ultimate percentage ownership is computed differently for cash flow and control rights. For example, if a shareholder has 51 percent of the total capital of company B that owns 80 percent of the total capital of company A, the shareholder ultimately owns 40.8 percent of the total capital of company A (51 percent times 80 percent). Assuming that all shares have the same voting rights, this shareholder controls 51 percent of company A (the minimum between 51 percent and 80 percent). The computation of ultimate control ownership uses the weakest link method commonly employed in the literature. The ultimate control ownership is the sum of an ultimate shareholder's indirect control percentage, or percentages, when there is more than one control chain, with its direct control holdings, if any. This procedure is similar to the one used by LLS (1999) and Claessens, Djankov and Lang (2000), among others. In addition, to calculate ultimate ownership percentages, both for control and cash flow rights, it is necessary to adjust them for the terms of existing shareholders' agreements. The conditions in each agreement are considered to adjust the cash flow and voting rights percentages for the entire controlling block.

This ownership analysis is possible because mandatory annual filings with the regulatory authority show the shareholding composition of parent companies when they exist, even if they are not public. Thus, we shareholding composition is analyzed backwards through public and non-public parent corporations until it is possible to classify the ultimate owners into one of the following groups: individuals, institutional investors (banks, insurance companies, pension funds, foundations or investment funds), foreigners (either individuals or entities) and the government. This is done for the filings relative to 1998, 2000, and 2002.

Results for ownership percentages in Brazil may be unusual when compared to other countries. The use of non-voting shares is rampant. The law still allows companies that went public before 2001 to have two-thirds of non-voting shares, while the current legal maximum is

50 percent for companies that went public after 2001. More than 90 percent of trading volume is in non-voting shares, while voting shares of a dual-class company trade very little, if they trade at all. Thus, it is not surprising that direct control ownership percentages are very high. There are very few companies that have only voting shares. Saito (2003) presents evidence that the price differential between voting and non-voting stocks is negative due to the low liquidity of voting stocks.

Table 2 shows the ownership results. As expected, ownership is very concentrated. The largest shareholder has a median of 71 percent (50 percent) of the voting (cash-flow) rights in direct ownership and 68 percent (34 percent) of the voting (cash-flow) rights indirectly, indicating that the use of non-voting shares and indirect control structures leads to a large separation (wedge) of voting and cash flow rights with a median of 2 times. It is interesting to note that the very high median direct ownership of the largest controlling shareholder in Brazil seems to be much higher than those reported in the ownership examples in LLS (1999) and Claessens, Djankov and Lang (2000) and that the direct control percentage of the largest direct shareholder is larger than the control percentage of the larger ultimate shareholder. This happens in all but one of the ownership map examples displayed in Valadares (2002) and Valadares and Leal (2000) for 1996. As noted above, the inordinate use of non-voting shares in Brazil appears to explain this phenomenon.

An example of an ownership structure that is more in line with the international evidence occurs when there is more than one control chain. Suppose company A is owned by companies B and C with 30 percent and 25 percent of voting rights, respectively. Company B is then owned by family F with 50 percent of the votes, and company C is also owned by family F with 60 percent of the votes. In the chain from the family to B and on to A the family owns 30 percent of A. In the other chain the family owns 25 percent of A. Their ultimate ownership of A is 55 percent. In Brazil, the most common type of ownership structure is one in which there already is a shareholder who directly controls more than 50 percent of votes. Then, departing from that large direct shareholder, ultimate shareholders own a smaller percentage of the firms higher up in the chain. Because the weakest link method is used (i.e., the smallest percentage in the chain is the control percentage of the ultimate shareholder), it is quite common to see indirect ultimate control ownership percentages that are less than direct control ownership percentages.

The point is illustrated by two ownership maps in Figure 1. In the first one, for CELPE (Companhia Energética de Pernambuco), an energy utility, there is one single direct controlling shareholder, the privately held company Guaraniã, with 94.94 percent of voting rights (V) and 85.08 percent of the total capital (T). Indirectly, the largest shareholder is 521 Part, a holding company, with 20.85 percent of the votes. The research presented here does not aim to classify firms as widely held, and 50 percent is used as a cut-off to identify the nature of the ultimate controlling shareholders. This cut-off percentage is usually lower in other studies, such as 20 percent in LLS (1999). This cut-off does not affect the ownership percentages presented here. The second example is Brasmotor. It is directly controlled by Whirlpool Brasil (55.08 percent) and Whirlpool Indústria & Comércio (4.92 percent). However, both are controlled by US Kitchenaid with 100 percent of the votes in both cases; Kitchenaid also owns 39.45 of Brasmotor directly. Thus, the ultimate controlling shareholder of Brasmotor is Kitchenaid with 99.45 percent of the votes. The latter case is less common in Brazil and probably more common worldwide because the ultimate ownership control percentage is larger than the direct control percentage.

When we consider the three largest shareholders, the cash flow rights concentration is larger than with the largest shareholder alone and the wedge is lower. This indicates that the other large shareholders hold more of the total capital and leverage less their voting rights than the largest shareholder, suggesting that there could be more conflicts of interest between the largest shareholder and other large shareholders than between the other large shareholders and the outside shareholders. If the Brazilian evidence is consistent with the international evidence, this wedge should be negatively related to value.

Voting rights concentration has slightly increased in time. A more detailed analysis of ownership is presented in Valadares and Leal (2000) for 1996, Leal, Carvalhal da Silva and Valadaresi (2000) for 1998, and Carvalhal da Silva and Leal (2004) for 2002. The 1996 data used in Valadares and Leal (2000) was hand collected and is not available in the database used here; these authors neither adjusted for shareholders' agreements nor included government-owned companies.

Table 3 shows other ownership characteristics of our sample. Ultimate foreign ownership hovers between 25 percent and 29 percent. Ultimate government as well as institutional ownership stays between 8 percent and 9 percent of the total number of firms. About 75 percent

of firms present an indirect control structure, and 20 percent of firms have agreements amongst their largest shareholders. Voting shares have typically represented a little less than 50 percent of the total number of shares, while free-floating shares outstanding are about 50 percent of total shares. These last two percentages must not be a coincidence. Most shares that trade in the stock exchange are non-voting shares anyway. About 90 percent of trading volume at the Bovespa Stock Exchange represented non-voting shares in the last few years.

4.2 Value, CGI, and Control Variables

Researchers have employed Tobin's q to measure the discount in market values resulting from expropriation (Morck, Shleifer, and Vishny, 1988, and LLSV (2002)). It is constructed as the market value of assets divided by the replacement cost of assets. DaDalt, Donaldson, and Gamer (2003) assert that Tobin's original intent was to measure the firm's propensity to invest. However, q has been used as a general measure of relative value of firms and its original intent is not inconsistent with our own purposes to measure the relative market valuation of firms.

An estimate of the numerator of Tobin's q is the book value of assets minus the book value of common equity plus the market value of common equity. The denominator is the book value of assets. Other forms of computing q are described in DaDalt, Donaldson and Lang (2003). These authors find that simpler computations of q should be preferred over more complex estimates, particularly when data availability is a concern, which is our case. In our robustness tests, we used the price-to-book (P/B), price-to-sales (P/S), and price-to-cash-flow (P/CF) ratios, as defined in the appendix, as alternate proxies for relative firm market value.

To estimate Tobin's q , we used the market value of equity computed by Economática. They use the market price of the most liquid stock (be it voting or non-voting) times the total number of shares (voting and non-voting). In Brazil, the most liquid shares are often the non-voting shares. Voting shares are held by controlling shareholders and are rarely traded in the market. One may think that the equity market value we used may show a control discount as it largely reflects non-voting shares market prices. However, it is actually just the opposite. While there is a control premium in Brazil, these premiums are not strongly by daily market prices but show in private control transfer transactions that are not enacted in the stock exchange, as shown by Nenova (2001) and Valadares (2002). However, as Saito (2003) shows, the most liquid shares, the non-voting, usually trade at premium over the voting shares on a day-to-day basis in

the market. There is a liquidity discount applied on most voting shares in the Brazilian exchanges. Thus, our proxy for Tobin's q and relative market value is not affected by a control discount. We also have no reason to believe that the use of book values to compute Tobin's q is affected by inflation any more than in any other country; this proxy has been used because inflation rates in Brazil have been relatively low since 1995.

Table 4 presents the descriptive statistics of our variables. For brevity, we present the statistics computed for each firm-year. Thus, the observations for the same firm in 1998, 2000, and 2002 are considered as different observations. The median Tobin's q is 0.87, the median P/B is 0.55, and the median dividend payout is 24 percent. Most Brazilian firms have traded below book value for a long time. The P/B ratio for the entire market has fluctuated between 0.5 and 1.6 between 1993 and 2002, according to Standard and Poor's (2003) for firms included in the S&P/IFCG Brazil index (70 or so, usually among the largest). Low liquidity, a series of economic crises, volatility, and very high real interest rates have kept stock prices depressed for a long time. Thus, Brazil's Tobin's q is also relatively low when compared to other emerging markets, and it offers the lowest ROA of 14 emerging markets studied by Klapper and Love (2004). All profitable Brazilian firms in a given year must pay at least 25 percent of tax-adjusted net income to shareholders, and most pay only pay this minimum. It is not surprising that the median dividend payout is 24 percent of unadjusted net income.

The average CGI is 10 out of 24 possible points, ranging between 4 and 19. As we have seen before, there is a very high concentration of voting rights and the value of the median indirect wedge between voting rights and cash flow rights is 1.72 for the largest shareholder and 1.54 for the five largest shareholders. We also highlight the median for some of our control variables: 59 percent for leverage; 15% for sales growth per year; and 10 percent for the ROA. The average for the ADR and the *Novo Mercado* dummies shows that 20 percent of the firms have ADR programs, while 14 are listed in Bovespa's *Novo Mercado*.

In Table 5 we show the progress of the CGI over time. The number of companies with a score above 16, the upper third of potential scores, went from zero in 1998 and 2000 to 3 in 2002. All three are listed in the *Novo Mercado*. This shows that the score distribution is becoming slightly more skewed to the right, with a few outlying firms achieving better levels of corporate governance practices. This trend is slowly moving the sample to higher scores of corporate governance. Even though the median is constant at 10 points, both the minimum and

the maximum have gone up, as well as the first and the third quartiles, demonstrating that there was a modest general improvement in the corporate governance practices captured by our index. When we examine the sub-indices, we notice that Brazilian firms score better in disclosure, although they are below the S&P disclosure index average for emerging markets reported by Patel, Balic and Bwakira (2002). The number of firms in the upper third of the possible score for this sub-index is by far the largest. On the opposite end are shareholder rights. This sub-index shows the lowest number of firms in the upper third of the score range. The other two sub-indices, “Board Practices” and “Ethics and Conflicts of Interest” have shown some improvement as well. These figures show that Brazilian firms may have a long way to go in terms of the quality of their corporate governance practices.⁷

Figures 2 and 3 illustrate the relationship between the CGI and Tobin’s q and the CGI and firm size. Both figures suggest a positive relation between the CGI and these variables. In fact, firm size will be a variable that will particularly concern us in our ensuing analysis. Table 6 shows the correlations between selected variables. The correlations between the indirect voting and cash flow rights holdings with the CGI are negative. Better governance practices are inversely associated with ownership concentration. Curiously, the correlation between the CGI and the wedge is positive, but very low. We would like at least some of the control variables to be strongly correlated with the governance variables and to be weakly correlated with Tobin’s q to be potential candidates for instrumental variables in our robustness checks. That seems to be the case from the correlation evidence. The GGI is negatively related to volatility and positively related to size. Actually, the two largest correlations in the table are those between size and the CGI (0.50) and between voting and non-voting shares concentrations (0.74).

We use four control variables. We expect “Leverage” to be positively related to governance because better governed and more transparent firms may use more debt and debt may mitigate agency conflicts. In Brazil debt financing is very scarce and expensive because the federal government takes most of the savings available in the market. It is reasonable to expect that larger and more transparent firms are in a better position to use more debt than others. Table 6 shows a positive correlation between “Leverage” and the CGI. We expect riskier firms to

⁷ In a related paper, we used a reduced CGI with the 15 most discriminating questions computed for every year between 1998 and 2002. It shows the same trends we described above. There is a modest improvement in corporate governance practices, particularly with an increase in the number of firms with much better practices than most. See Carvalho da Silva and Leal (2005) for details.

present poorer governance practices because greater risk may lead to more control concentration and greater expropriation of minority shareholders. We find a negative correlation between “volatility” and the CGI. Growing firms may find greater need for external finance and may benefit from improving their corporate governance practices. We find a positive but very low correlation between our proxy for growth and the CGI. We also used the ROA as a proxy for growth and profitability in some of our models and find a positive relationship between the ROA and the CGI.

Klapper and Love (2004), Durnev and Kim (2003), and Black, Jang and Kim (2003) investigate if their control variables are determinants of corporate governance practices in order to control for endogeneity. They believe that if governance is determined by their control variables, then, when those are included in a model of performance as a function of governance and governance turns out to be significant, that would control for endogeneity. Klapper and Love (2004) dealt with the problem with control variables such as size, past growth, capital intensity, an ADR dummy, legal system effectiveness measures, and an interaction term between the legal system and the existence of ADRs. They also stated that unobserved country effects account for a large variation in firm level governance rankings. Himmelberg, Hubbard and Palia (1999) maintain that it is likely that unobserved factors may still affect both value and corporate governance practices, even if one uses an extensive list of control variables.

Table 7 presents our OLS analysis for the relationship between our control variables and the corporate governance variables. We also included two dummies for listing in Bovespa’s *Novo Mercado* and for the existence of ADR programs. None of the variables maintains a consistent significant association with all corporate governance variables for every year. We find it very difficult that these variables are joint determinants of the CGI, and other governance variables, and corporate value. The ADR dummy is negatively and significantly related to the ultimate voting rights percentage for the largest shareholder in the three years analyzed. Only size is positively and significantly related to the CGI for the three years. The ADR and the *Novo Mercado* dummies are positively and significantly related to the CGI in 2002.

We expect that the inclusion of size, at least, may help control for endogeneity. Actually, we will build an instrumental variable based on size in our robustness checks. We will maintain the other variables in our empirical models as well. We will return to the endogeneity problem in

our robustness checks section, but first we present our empirical exercises with a set of models with ownership data, the CGI, and control variables.

4.3 Multivariate Regression Analysis

Market Valuation

We first analyzed value as a function of our ownership measures and the CGI. We run our regressions separately for each year, 1998, 2000, and 2002. Table 8 presents our results for Tobin's q for 2002. The results for 1998 and 2000 are practically the same and we consequently omitted them. Model 1 includes only the CGI and the control variables. For a one-unit increase in the CGI, q goes up by 2.3 percent. This corresponds to an increase of 5.75 percent in the share value of a company with the sample average q and leverage. Volatility and ROA are positively related to q as well. Models 2, 3, and 4 omit the CGI and include the largest shareholder ultimate percentage of voting rights, cash flow rights, and the wedge, respectively. None is significant. Model 5 includes these three ownership variables together, with no significance as well. Models 6, 7, and 8 include these three ownership variables and the CGI. Still, the CGI is significant and positively related to q . For a 1 unit CGI score change, q would increase between 2.7 percent and 3.1 percent, depending on the model. Model 9 includes the ADR and *Novo Mercado* dummies with no tangible effect. Some of our control variables are significant and present the expected signs. Despite their significance, the CGI is always significant. For the range of coefficients in Table 8, the stock price would go up from 5.75 percent to 7.75 percent for each one-point increase in the CGI score. This is a statistically and economically significant result. We find support for the positive relationship of overall governance practices and value in this set of models. Our overall corporate governance practices measure includes ownership-related questions. We do not find, however, any evidence that indirect control and cash flow rights holdings by the largest shareholder influence value.

Our index was then divided into four groups of six questions each. The groups represented disclosure practices; board functioning and composition; ethics and conflicts of interest; and shareholder rights. In Table 9 we reproduced Model 8 in Table 8 for 2002, using each of the four groups of the index separately; our intention was to verify which sub-indices matter most. Our findings show that the results are largely dominated by our disclosure sub-index. This should come as no surprise. Firms scored higher in disclosure, and the scoring is

more discriminating among firms than the remaining portions of the index related to other aspects of corporate governance practices. While a one-point rise in the overall CGI has an impact of 2.73 percent on Tobin's q, which is about the same magnitude for the corporate governance sub-indexes of the CGI, a one-point increase in the disclosure sub-index has an impact of 7.24 percent on Tobin's q. In Brazil, the largest impact so far comes from disclosure, probably because the use of best practice corporate governance is still limited.

It is possible that some of our disclosure questions are related to company size, particularly questions 4 and 5 that inquire about the auditors being one of the big 6 auditing companies and if the company uses international accounting standards. We computed the correlation of the answers for each question with our proxy for company size. We do not show the detailed results here but questions 4 and 5, as we suspected, presented the two largest correlation coefficients at 0.53 and 0.51, respectively. No other correlation coefficient was larger than 0.35 and most were close to zero. We proceeded to compute a reduced version of the CGI by excluding questions 4 and 5. The result is in Model 6 of Table 9. The CGI coefficient is of the same order of magnitude as in Model 8 in Table 8, however, the CGI coefficient is not significant anymore. Company size, as will be discussed further, is a factor in terms of the impact of good corporate governance practices. We also determined whether the removal of additional questions according to their correlation to company size would substantially affect our results. We excluded all questions with correlations above 0.25 (questions number 1, 4, 5, 7, 8, 9, 12 and 20). The results obtained are essentially the same as with the removal of Questions 4 and 5 only and are not reported.

As yet another initial robustness check, we obtained the principal components from the set of 24 questions for each firm for 2002. We selected those principal components that showed an eigenvalue greater than 1 (10 components) and that explained 5 percent or more of the variance, resulting in six principal components. We then performed our analysis once again using these six principal components. The results are shown in Model 7 in Table 9. The appendix defines each one of the 6 principal components, provides their correlation with the original variables, and the rationale for their interpretation. Principal components 1, 2, and 4 were positively related to Tobin's q, but only components 1 and 4 were significant. Principal component 1 was named "one share one vote" and has to do with the use of non-voting shares to separate control from cash-flow rights. It shows the largest positive coefficient and the strongest

significance. Principal component 4 has the second largest positive coefficient and significance level and was named “disclosure supervision;” it has to do with use of international accounting standards, board size, and presence of a fiscal board. Principal component 2, named board independence, did not show a significant relationship with Tobin’s q.

The three remaining principal components show negative coefficients with Tobin’s q. Only principal component 3, named “Malpractices free”, which had to do with being free of corporate governance malpractices inquiries and convictions, was marginally significant at the 10 percent level. Because the number of firms actually under inquiry or convicted by the authorities in the last 5 years is very small, it is possible that the negative sign may be interpreted as a “market judgment” for companies that have poor practices but that are not under any investigation. Principal components 5 (“shareholder rights enforcement”) and 6 (“related party transactions potential”) showed no significant relationship with Tobin’s q.

Our principal component analysis showed that the largest coefficients had to do with the coincidence of controlling shareholders interests (control rights) with minority shareholders rights (cash flow rights) through their parsimonious use of non-voting shares and with the ability of minority shareholders to supervise disclosure. Of course, principal components are labeled according to the analyst’s subjective interpretation. Nevertheless, we believe that our principal component analysis favors our conclusion, up to this point, that good corporate governance practices and less separation between control and cash flow rights lead to greater corporate valuations.

Dividend Payout

In addition to the relationship between ownership and corporate valuation, recent literature also studies the effect of corporate governance on the dividend payout. LLSV (2000b) suggest that dividend policies may address agency problems between corporate insiders and outside shareholders. Firms in countries with better investor protection show higher dividend payouts than firms in poor investor protection countries. The agency perspective of dividends asserts that cash payments to shareholders may help reduce agency problems. Fluck (1998) and Myers (2002) present theoretical agency models of dividend behavior where managers pay dividends in order to avoid disciplining action by shareholders. Additionally, Jensen (1986) sees expected,

continuing dividend payments as a good use of cash, which might otherwise have been wasted in value-reducing projects.

The presence of large shareholders with a large concentration of voting rights and a low concentration of cash-flow rights may be harmful to the firm because they can expropriate minority shareholders, by, for example, adopting low dividend payout strategies. On the other hand, when controlling shareholders have large stakes of cash-flow rights they have an incentive to pay a greater fraction of net income as dividends. By the same token, it is reasonable to expect that firms with better governance practices may also show a higher dividend payout as a costly sign of those practices. Thus, the dividend payout, as suggested in the literature, may be another governance practice that is simultaneously determined with other governance practices considered in this paper. In our robustness tests, we will not assume that the dividend payout is caused by corporate governance practices and we will consider it simultaneously with value and governance practices. In this section, however, we will analyze it as a dependent variable.

Table 10 presents our results for the dividend payout in 2002. For the sake of brevity, once again we omit the results for 1998 and 2000. The CGI is positively related to the dividend payout for all models in 1998 and 2000 but that is not the case in 2002. For all years and models the relationship between the CGI and the dividend payout is not significant. This is consistent with the findings of Black, Jang and Kim (2003) for Korea. We have included one new control variable, current assets over total assets, to account for liquidity. More liquid firms may pay more dividends. Many of our control variables are significantly and positively related to the dividend payout, such as liquidity as well as size and the ROA. Leverage is negatively and significantly related to the dividend payout. The larger shareholder percentage of ultimate control and cash flow rights present a significant and negative relationship with the dividend payout at the 10 percent and the 5 percent levels, respectively, when alone, indicating a larger payout when there is less control concentration and more separation of control rights from cash flow rights. We find no significant evidence that the dividend payout is influenced by the identity of the controlling shareholder. When we consider the ownership variables jointly with the overall corporate governance practices we find no significant relationship between the dividend payout and these corporate governance variables. Because of the nature of the dividend payout, with a minimum mandatory payout of 25 percent of net income computed for tax purposes, and its potential use in mitigating conflicts of interest, it is quite possible that it is endogenously

determined and that it is not adequately represented by the models in Table 10. We also run regressions of the dividend payout on our corporate governance sub-indices and found no significance for any of them. This analysis is available upon request.

In our computation of the dividend payout we did not consider stock repurchases because they differ greatly in Brazil from their U.S. equivalents. First of all, repurchases may generate capital gains, which are taxed at 20 percent, while dividends are not taxed. So, taking only taxation into consideration, stock repurchases do not maximize shareholders' wealth, and extra dividends would be a better alternative. The motivations for stock repurchases may also be quite different. Possibly, they may be used for delisting or for the expropriation of minority shareholders. For instance, repurchases may be a way to pay controlling shareholders a dividend even when the company had no profits, or they may be a way to reduce the number of outside shareholders with the company's cash, concentrating the equity position of controlling shareholders and facilitating a future sale of the company associated with an ongoing private move by the new controlling shareholders.⁸

The Brazilian corporate law granted tag-along rights to all minority voting shareholders when the intent of a repurchase was delisting or transfer of control. These rights have been deleted from the law in May 1997 in order to facilitate privatizations. Minority shareholders would have no right to sue to receive the same amount for their shares when control was transferred. Tag-along rights have only been reinstated in 2001, with the corporate law reform. In February 1999, CVM introduced new regulation to mandate more disclosure of stock repurchases due to abuses in these types of transactions, particularly with a motivation to take a company private. Many privatized companies and other companies acquired or controlled by foreigners went private to avoid the costs of keeping the company public and of greater transparency. The reader is reminded that during this period real interest rates have been very high and equity fundraising in the domestic capital market quite modest.

Disclosure and data availability about repurchases is limited. Announcements are made to Bovespa, or to the CVM, depending on the period and type of repurchase but no announcement about the completion of the bid is made. There is no data readily available on the actual result of the bid. Procianoy and Moreira (2004) report that repurchase bids average about 7.1 percent of

⁸ We thank Professor Jairo Procianoy for a discussion about share repurchases and their use to expropriate minority shareholders.

the stock outstanding from the announcement information published by the company. They also report that there are no wealth effects on the announcement day. Saito (2002) presents evidence that minority shareholders of firms that repurchased stocks experience a significantly lower market valuation when the separation of control rights and cash flow rights is greater, while we did not find any significance in our own findings in the same period for the overall sample of listed companies. Finally, the number of stock repurchase offers is not large anyway. Procianny and Moreira (2004) analyzed offers from 48 companies in the 1997-1998 period, many with a motivation towards delisting, while Saito (2002) examined offers from 30 firms in the 1994-1999 period. Data for the offers, particularly for the actual percentage of shares outstanding bought, are not readily available and would have to be hand collected. If our omission of repurchases introduces any bias, Saito's (2002) findings suggest that it would be towards making our findings for the separation of control and cash flow rights significant, confirming our hypothesis.

Individual Question Analysis and Concluding Remarks

We close this section with an analysis of the impact of individual questions in the CGI on Tobin's q and the dividend payout for each question alone and with all the other questions simultaneously. We include all control variables in the analysis. Each question admits only a zero or 1 answer and therefore provides a dummy variables for the specific subject addressed. We highlight that different governance practices are substitutes for each other and, therefore, they may behave differently when studied in isolation or together with other practices. Our results are summarized in Table 11. Five questions show individual significance at the 5 percent level for Tobin's q . The two largest coefficients belong to disclosure questions. Question 1 inquires about substantial disclosure of related party transactions and Question 5 about the use of leading global auditing firms. When we control for the remaining questions, only Question 5 remains significant. Two questions about the board composition show individual significance: board independence and size. Only board size remains significant after controlling for the remaining questions. Da Silveira, Barros and Famá (2003) find a non-linear relationship between the square of the number of directors in the board with Tobin's q , suggesting an optimal size for the board. Curiously, our dummy for the use of the recommended board size shows a negative impact on performance. Question 22, about using pyramids to *decrease* control concentration, is positively related to value. Our individual question analysis shows that disclosure and the use of

indirect control structures dominate the positive impact of corporate governance practices on Tobin's q .

Our analysis for the dividend payout shows less consistency. Two questions show significance individually but when we control for the remaining questions, three different questions show significance. The three questions showing significance when we control for the other questions address the existence of committees, with a positive sign, and board size and additional voting rights, with a negative sign. These opposite signs reveal an inconsistent impact of individual CGI components on the dividend payout. We have already stressed that the dividend payout may be endogenously determined as a potential corporate governance practice in itself. We will address this issue further when we perform our endogeneity checks.

We conclude from all previous exercises that value seems to be determined by overall good corporate governance practices. Our results are significant statistically and economically but we still need to verify if they stand the endogeneity tests and additional robustness checks. Disclosure seems to be the kind of practice that has the greatest impact in Brazil so far. However, our factor analysis test revealed that limiting the use of non-voting shares and reducing the ability of controlling shareholders to take advantage of related party transactions are also related to value. Our findings for the dividend payout are mostly not significant and not consistent when the CGI is a dependent variable but suggest that dividends are larger when there is more control concentration. We now turn to our endogeneity checks and additional robustness checks.

5. Extensions and Additional Robustness Checks

In this section we discuss alternate empirical implementations and potential problems that may affect our results. We begin by checking if additional variables, such as a quadratic version of our ownership variables, are related to corporate value. We also check if the results change in the absence of outliers and experiment with other definitions of our firm value proxy. We proceed to verify if our results are affected by endogeneity through a panel data analysis and the use of a simultaneous equation system with a size dummy instrumental variable. We also use a reduced version of the CGI in which we drop the questions that present little variation among firms. We close discussing potential survivorship bias.

5.1 Alternative Implementations of the Multivariate Model

We reproduced the analysis in Table 8 and in Table 9 with the squares of the voting and cash flow rights concentration variables plus the square of the wedge to control for a potential non-linear relationship of ownership and Tobin's q . Our results do not change with the inclusion of these variables, and they are not significant in all models except for the dividend payout in 1998. In Table 8 we show the coefficients with the quadratic variables in Model 9 and in 2002. We do not show this analysis for the remaining years and for the dividend payout.

We considered the price-to-book ratio (P/B) as an alternative measure of relative firm value. We reproduced the analysis for model 8 in Table 8 as well as the analysis in Table 9 replacing Tobin's q with P/B. In Table 6 one can see that P/B is not correlated with the CGI and that it shows a 0.44 correlation with q . Possibly, the P/B ratio reflects other factors, such as risk, and may not be a very good proxy for relative firm value. In fact, Rodrigues and Leal (2003) show that low P/B (value) stocks are riskier than high P/B stocks in Brazil.

Our analysis in Table 12 shows that the P/B ratio is not significantly related to the CGI and its sub-indices but the coefficient with the disclosure sub-index and with the CGI are positive. Interestingly, the P/B is significantly and positively related to the cash flow rights concentration and negatively but not significantly related to the voting rights concentration. It is also positively and marginally significantly related to principal component 1, which we named "one share one vote." The P/B seems to be a proxy for risk as well, and it is negatively related to performance (ROA). If the P/B was our proxy of choice for relative value, our findings in Table 8 would be weakened, but the hypothesized signs would be maintained.

We also used the price-to-sales (P/S) and the price-to-cash-flow (P/CF) ratios as proxies for market value. We reproduced all the models in Table 8 for these variables. We do not show these results here, but they are available upon request. All CGI coefficients were positive but not significant. We also found positive coefficients for the principal components that showed positive and significant coefficients in our initial analysis. If these variables were our proxies of choice for relative value, our findings in Table 8 would be weakened, but the hypothesized signs would be maintained.

We proceed to check for the effect of outliers. We regress Tobin's q , the dividend payout ratio, and the price-to-book ratio on the CGI alone and a constant term and delete the observations whose studentized residual exceed ± 1.96 , as has been done by Black, Jang and

Kim (2003). Table 13 shows that our main result for Tobin's q does not qualitatively change although the coefficient and its significance drop. Seven outliers have been removed in the Tobin's q analysis. An exam of the removed outliers did not reveal any particular patterns.

5.2 Endogeneity Checks

Claessens, Fan and Lang (2002: 2764) address the issue of reverse causality by dismissing it as very unlikely. They consider ownership changes and their impact on corporate value and believe that these changes are slow when compared to value changes. Our analysis in Table 2 supports this view. Ownership percentages increase very slightly in time, remaining very high. We really doubt that our results are affected by endogeneity in the case of the ownership concentration given its magnitude. The CGI is also very stable over time. In any case, we proceed to check for endogeneity.

Himmelberg, Hubbard and Palia (1999) affirm that panel data in a firm fixed-effects model could deal with the presence of endogeneity despite the use of control variables. Their argument is put forward in a very simple way. If corporate governance practices, be they ownership concentration measures or the CGI, are described by a linear relationship such as in

$$G_{i,t} = \beta_1 x_{i,t} + \gamma_1 u_i + e_{i,t} \quad (1)$$

where $G_{i,t}$ are the governance practices of firm i in time t ; $x_{i,t}$ is a vector of observed control variables while u_i represents time invariant unobserved factors. Because these factors are fixed firm effects, Himmelberg, Hubbard and Palia (1999) claim that using panel data analysis with fixed firm effects could identify if the relationship between corporate governance and firm value is endogenous. The firm value equation is represented by

$$Q_{i,t} = \alpha G_{i,t} + \beta_2 x_{i,t} + \gamma_2 u_i + v_{i,t} \quad (2)$$

where $Q_{i,t}$ is the firm relative value, such as in Tobin's q. However, the model represented in Table 8 takes the form of equation 3 in most empirical tests, including our own.

$$Q_{i,t} = a_1 G_{i,t} + a_2 x_{i,t} + \varepsilon_{i,t} \quad (3)$$

This equation will only be a valid representation of the corporate governance practices and value relationship if the correlation between G and ε is zero, which happens only if the coefficients of the unobserved variables in equations 1 and 2 are null. Himmelberg, Hubbard and Palia (1999) maintain that this is very unlikely. They model unobserved firm heterogeneity by

assuming that the omitted firm effects are fixed in time and use the fixed firm effects panel data analysis to verify the behavior of their cross-section coefficients.

We follow the same procedure and use a reduced version of our index, with 15 questions, including those that are more discriminating among firms, and perform a balanced panel data analysis for every year from 1998 to 2002. We include the same control variables. We find that the coefficients in the fixed firm effects model are no longer significant, although they remain positive. These results suggest that our findings in the cross section model may be endogenous. Our results are not reported here but are available in a companion paper (Carvalho da Silva and Leal, 2005).

Himmelberg, Hubbard and Palia (1999, p. 378) believe that the endogeneity suggested by our panel data analysis imposes the need for more structure to identify the impact of corporate governance variables on firm value. They use size as an instrumental variable. Their proxies for size are non-linearly related to corporate governance practices but are not strongly related to firm value when their corporate governance variables are present. The same is true in our analysis. In Table 7, size is positively and significantly related to the CGI. In Table 8 size is not related to Tobin's q when the CGI is included in the model. This is exactly the property we would expect from an instrumental variable. In our case, it should directly predict the CGI but only indirectly predict firm value, through the CGI.

Black, Jang and Kim (2003) use a size dummy induced by a peculiar Korean regulation that requires certain governance practices only for firms larger than a pre-defined asset size. Even though Brazil does not have this type of regulation, in practice things work that way, as the correlation between size and the CGI suggests. We believe that there is a "scale factor" that renders adopting better corporate governance practices easier and more advantageous for larger firms. We remind the reader that both the credit and the capital markets in Brazil are very small relative to its GDP, and that the government absorbs most savings through treasury securities. External financing is expensive and scarce and largely available only to larger firms. An illustration of this scale factor is the cost of short-term credit. While the average interest rate for working capital loans with an average maturity of 305 days was 35 percent per year in July 2004, the rate for vendor credit was 21 percent, according to Brazilian Central Bank statistics. Vendor credit is a typical form of loan made to suppliers of very large Brazilian and multinational firms who guarantee these loans and are their ultimate debtors. Thus, our belief in the existence of this

scale factor. Another reason for this scale factor would be the large fixed costs to keep a company public and listed reported in the Brazilian literature (see Carvalho, 2000). We decided to use a size dummy that is equal to 1 if the firm is in the top size quartile and zero otherwise. We also experimented with other definitions for this size dummy.

A system of simultaneous equations was estimated via 3SLS. Tobin's q and dividend payout measures can be included in this specification, as well as our size dummy instrumental variable. The endogenous model can be represented using the circular notation of Hermalin and Weisbach (2003) combined with the simultaneous equation notation used by Agrawal and Knoeber (1996).

$$c_j = \alpha + \sum_{i \neq j} \phi_i c_i + \sum_{i=1}^N \varphi_i X_i + \varepsilon \quad (4)$$

Equation 4 represents the kind of test performed in our Table 8 and by many others, such as Klapper and Love (2004), with \mathbf{c} as a vector of governance practices measures, such as the CGI or ownership percentages, and \mathbf{X} as a vector of control variables that are associated with governance practices as well. Such equations, one for each governance practice measure, may be included in a simultaneous equation system, as in Agrawal and Knoeber (1996), with the firm value or performance equation represented by equation 5. If the coefficients of \mathbf{c} in equation 5, simultaneously determined, are still significant, this will be an indication that the net effect of alternate governance practices is significant over the value of the firm.

$$Q_i = \alpha + \sum \beta_i c_i + \sum_{i=1}^N \lambda_i X_i + \xi \quad (5)$$

The results of our simultaneous equations analysis are show in Table 14 for the year 2002 alone. The results for the other years are essentially the same and available upon request. With the size dummy instrumental variable, the coefficient for the impact of the CGI on Tobin's q is even larger than the one found in our multiple regression study. The coefficient of Tobin's q in the CGI equation, however, is not significant. The size dummy behaves as expected. It helps predict the CGI, but it is not related to Tobin's q in the presence of the CGI. We repeated the analysis for the dividend payout and confirmed what we have already suspected from our analysis in Table 10: the dividend payout is unrelated to the CGI and, quite possibly, should be considered as an additional corporate governance practice indicator, simultaneously determined with other items in the CGI.

We experimented with size dummies defined as 1 for firms in the top decile, top third, and top half of the sample. We also computed the correlations between all our size dummies and the ADR and the *Novo Mercado* (NM) dummies. Correlations are below 0.30 for the NM dummy and below 0.50 for the ADR dummy. Finally, we included the ADR, the NM, and an ADR*NM interaction in our simultaneous equations analysis with all size dummies. None of these variables was significant in any model. The results obtained with this new formulation are consistent with the previous ones presented in Table 8. It is worth noticing that the coefficients for the top decile, top quartile, and top third largest firms in the sample are lower with the inclusion of the dummies for ADR, NM, and their interaction at 0.0161, 0.0257, and 0.0250, respectively. The dummy for the top half largest firms in the sample does not work as an instrumental variable because q becomes significantly and negatively correlated with the CGI when we use it. Finally, we repeated the panel data analysis with the size dummies with no change in the results.

As in Black, Jang and Kim (2003) for Korea, we conclude, after checking for endogeneity, that our evidence supports a causal relationship between corporate governance practices and firm value. We also present evidence that this relationship is exogenous in the presence of a “scale factor,” represented by a size dummy that is robust to most definitions we used. The impact of an increase in the CGI is larger for larger firms.

5.3 Discussion of Potential Biases

The number of public corporations in Brazil has increased in the last 10 years. There were 844 public corporations in January of 1995, and in April of 2004 there were 928. The maximum number in the period was 1,046 in January of 1998. Carvalho (2000) demonstrates that this rise in the number of public companies in 1998 was an illusion. He shows that many of the corporations created in this period were state-owned corporations and syndicates related to the privatization program, corporations that became public to issue ADRs, securitization and leasing companies, and corporations that issued less than US\$1 million. He deletes these companies and shows that the number of public corporations in Brazil declines. However, after this combined privatization and ADR phase, and a subsequent decline in the number of public companies, the number of companies stabilized and increased. We do not believe that the dynamics of the number of public companies in Brazil introduces any biases into our results because in most

cases these companies were not listed or did not have any market liquidity that allowed for the computation of some of the variables we need in our research.

The number of Bovespa listed firms has been decreasing in Brazil. It starts at 545 companies and was at 364 in March of 2004. Carvalho (2000) reports that the costs of keeping the company listed and public are cited by 88 percent of the respondents surveyed as the main causes that prevent companies from becoming or remaining public. Among these costs, the largest burdens are publication costs, mandated overhead, external auditors, and the shareholder services department. The law makes public corporations publish their financial statements in major newspapers as well as in the official registry of the state or county where they are incorporated. Many of these official publications charge exorbitant prices, becoming a de facto tax on public companies levied by states and counties. Another reason for de-listing is acquisition by foreigners. Siffert Filho (1998) shows an increase in ownership by foreigners in Brazil. Our Table 3 shows a decline in foreign ownership of listed companies. Many companies that de-listed have been acquired by foreign investors that saw no advantage in incurring the costs of keeping the subsidiary public in Brazil. Given this combination of circumstances, we believe that the companies in our sample are survivors. Their governance practices are probably better than that of companies that de-listed or of companies that remained private. Therefore, our results are representative of currently listed companies in Brazil but most likely overstate the quality and importance of corporate governance practices for other public Brazilian companies that are not listed or that are listed and were not included in the sample.

6. Comparative Analysis with Chile

In this section we provide a brief comparative analysis with the results obtained by a similar study for Chile. Our intention is to put our findings in context in Latin America. While Chile has many similarities with Brazil, it also has some key important differences, namely, it is a smaller and more stable economy, and it may offer better shareholder protection. Other differences will emerge in the ensuing paragraphs.

In the small sample of Brazilian and Chilean companies used by Klapper and Love (2004), relative market valuations of companies were low, while their CGI level was high, suggesting a weak relationship between market value and governance in these countries. However, our own findings in this article and those of Lefort and Walker (2005) suggest the

opposite for much larger samples. Patel, Balic and Bwakira (2002) report an average firm-level S&P transparency and disclosure score of 32 percent for Brazil and Chile in 2000, low when compared to an average of 43 percent for emerging Asian markets and to the 55 percent score of South Africa, the highest-ranking emerging market. They find that the S&P index is negatively correlated with large shareholdings and positively correlated with price-to-book in Brazil. They included 30 Brazilian firms and 19 Chilean firms.

Klapper and Love (2004) have noted that there is a large variation in CLSA's measure of governance practices quality within specific countries. However, Brazil and Chile present, respectively, the third highest and the highest within-country homogeneity in the firm-level governance index computed by CLSA. These authors also note that Brazil and Chile present low relative market valuations while showing relatively high firm level governance indicators. These results, nevertheless, should be taken with caution because the number of companies covered in that study in Brazil (24) and in Chile (13) is very small, including mostly companies that listed ADRs in the US and are, therefore, very similar in terms of their governance practices. Durnev and Kim (2003) included 30 Brazilian firms and 15 Chilean firms in their sample, with similar results. Our study advanced this research by verifying if better governance practices bring about benefits to a much larger sample of firms in Brazil. Lefort and Walker (2005) did the same for Chile. This brief comparative analysis with Chile uses findings from the latter authors and our own. We also use the World Bank's Corporate Governance Country Assessment for Chile from 2003.

Brazil and Chile share the same legal origin and traditions, and that should bear no influence in our analysis. We assume that the quality of the legal system is the same in Chile and in Brazil. Klapper and Love (2004) report that the "Legality" index for both countries is about the same and that the "Judicial Efficiency" index for the two countries is not very far apart, being higher in Chile.⁹ Similar ratings are reported by Durnev and Kim (2003). We also verified that the disclosure quality is about the same according to the S&P ratings. Our reading of the World Bank's (2003) assessment led us to conclude the same.

As in Brazil, cross-holdings are not allowed and indirect control structures are very common in Chile; however non-voting shares are unusual while they dominate the Brazilian

⁹ The "Legality" index was computed by Berkowitz, Pistor, and Richard (2003). The "Judicial Efficiency" index was obtained from the International Country Risk Guide for 2000.

stock market. Chilean economic groups control 70 percent of listed companies and 90 percent of their assets while group affiliation and conglomerates are not important in Brazil. Control concentration is also very high in Chile but larger in Brazil. The five largest shareholders control 57 percent indirectly in Chile and 89 percent on average in Brazil. Control concentration has been increasing in the two countries.

Lefort and Walker (2005) used a 67-question questionnaire that, in part, needed to be answered by firm representatives to compute their corporate governance score. Their response ratio was 29 percent. The companies that responded, however, tended to be larger, representing 42 percent of Chilean market capitalization, and these may be the companies with the best corporate governance practices. This experience shows the problems with this methodology, which we tried to avoid. Lefort and Walker (2005) were well aware of that and broadened their response ratio by answering about one third of the questions themselves on the basis of public information, thus increasing their sample size to 106 companies and 76 percent of market capitalization. This also suggests that data availability is probably better in Brazil than in Chile, as our reading of the World Bank's (2003) assessment also seemed to indicate.

The overall non-weighted average company score in Chile was 58 percent, while ours was 42 percent of the maximum score value used in each country. Although the questionnaires used by Lefort and Walker (2004) and by ourselves are not directly comparable, it is possible that Chilean firms actually offer better protection to investors than Brazilian firms, as has been previously suggested elsewhere. As in Brazil, Chilean companies score higher in disclosure than in other areas of corporate governance practices. In terms of board functioning and composition, Chilean boards are also dominated by insiders and rarely use committees. In what Lefort and Walker (2005) classified as shareholders' rights, Chilean companies scored well, at 60 percent, while Brazilian companies scored 33 percent on average. This is the most distinctive category between the two countries in the sub-groups that make up each questionnaire used. From the World Bank's assessment of Chile (2003) we noticed that some practices seemed better in Chile while others did not. There was no clear superiority of Chilean practices, with the notable exception of the use of non-voting shares.

Lefort and Walker (2000, 2005) find that firm affiliation to groups tends to decrease their value but this is mitigated when there is little separation between control and cash flow rights and when pension funds are present as minority shareholders. In our study, we found that

institutional investors ultimate control bears no impact on firm value. They find that the relationship between ownership and separation of control and cash flow rights is nonlinear, while we essentially found no significant relationship, even for quadratic versions of these variables. Probably, because ownership concentration is so much higher in Brazil, it does not discriminate firm value very well among firms.

In Chile there is a minimum dividend payment of 30 percent instituted by law, similar to the minimum of 25 percent in Brazil. The payout ratios in 2002 are at 36 percent, close to the 31 percent average in Brazil. Payout ratios are larger in firms affiliated with conglomerates and when pension funds are present as minority shareholders in Chile. Like us, Lefort and Walker found that payout ratios increase with the control and cash flow rights separation, up to an inflection point of 70 percent of voting rights in the case of Chile. This decrease in the payout for very high concentration values is consistent with our findings in Table 10. In our endogeneity checks we found no significant relationship between payout and corporate governance proxies in the presence of the CGI in Brazil, while they maintain a significant relationship with ownership variables in Chile, even when their CGI is absent. The Chilean authors find very little in terms of the impact of their CGI on corporate value.

The Chilean results seem to confirm previous findings that investor protection is better in Chile than in Brazil even though the two countries are comparable in terms of the quality of their judiciary. The Chilean practice of “one share one vote” and other shareholder rights seem to be the key differences in governance practices between the two countries. In general, the findings in Lefort and Walker (2005) confirm the Brazilian findings that market values are higher when corporate governance practices are better and when controlling shareholders are less entrenched. They also point to an important policy recommendation: non-voting shares should be banned by regulators. In our opinion, they have been among the key factors that explain inadequate investor protection in Brazil.

7. Conclusion and Policy Implications

Do good corporate governance practices pay in Brazil? Our answer is yes. We built a corporate governance practices index from a set of 24 objective questions. Our intent was to stay clear of questionnaires that would need to be responded by analysts or company officers and directors. The response rates of those questionnaires may be quite low, the results may be biased to

represent companies with better governance practices, and they are costly to repeat on an annual basis. Besides, it would not be possible or reliable to have answers from previous periods. Finally, these types of questionnaires have already been used in the Brazilian Institute of Corporate Governance studies. Our goal was to produce a questionnaire that we could answer ourselves from publicly available data. This allowed us to build a short time series of our CGI for the 1998-2002 period. It also allowed us to have a very large sample of firms and provided us with an instrument that can be used in the next few years to gauge the evolution of corporate governance practices in Brazil.

The answers to our questionnaire reveal that most companies do not specify any sanctions against management relating to corporate governance malpractice. They disclose related party transactions in explanatory notes but provide only overall information about chief officer and director's compensation. About 30 percent of the companies use international accounting standards, and about 75 percent use one of the leading global auditing firms. Board practices are worse than those in the larger markets. The chairman of the board and the CEO were the same person in about one third of the companies. In most companies, boards do not use committees, are not made up of a majority of outside directors, directors do not serve consecutive one-year terms, and do not have a minority shareholder mandated fiscal board. About 37 percent of the boards do not fit the IBGC's recommended board size. The number of companies under investigation or convicted by the securities authorities is very small, but this is not an indication of good corporate behavior and is almost certainly due to the low levels of law enforcement in Brazil. This is probably the reason for companies not to submit to arbitration courts as well. While arbitration decisions are quicker and final, court decisions take a long time and there are many possibilities for appeals. Most companies do not facilitate voting by all shareholders and do not grant any additional voting rights and tag-along rights beyond what is legally required. About 30 percent of the companies offer insufficient liquidity to its shareholders. Our overall corporate governance practices analysis shows a modest general improvement in firm practices captured by our index in the 1998-2002 period. We also show that Brazilian firms score much better in the disclosure dimension of our index than in the other dimensions of board practices; ethics and conflicts of interest; and shareholder rights.

In our study of voting and cash flow rights, as expected, we found very high concentrations. The percentage of indirect control rights for the five largest shareholders has

increased from 1998 to 2002, approaching a median of 90 percent in 2002. There was an increase in the proportion of cash flow rights in the same period, reaching a median of 54 percent in 2002. Because 75 percent of the firms sampled have indirect control structures, entrenchment in Brazil is considerable. There is widespread use of non-voting shares as well. The Brazilian economy has been one of the riskiest among the large emerging markets and its stock market is very volatile. Greater risk favors greater concentration of control as well as the use of mechanisms to leverage it. Finally, we show that the separation between control and cash flow rights is more pronounced for the largest shareholder alone than when other large shareholders are considered.

In our regression analysis, we used proxies for leverage, growth, risk, size, and profitability as well as other control variables. We first related these variables to our corporate governance practices variables. Most of them do not maintain any significant and consistent relationship with the CGI over the years. Only size is significant for every year. We included these variables in a set of models, having Tobin's q as our proxy for firm value. We found that the CGI shows a positive and significant relationship with Tobin's q . A one-point increase in the 24-point CGI leads to a 2.3 percent to 3.1 percent increase in Tobin's q , depending on the model used. A one-point increase in the CGI score leads to a 5.75 percent to 7.75 percent increase in the value of the company's shares for this range of Tobin's q increase for a company with the average sample q and leverage. A minimum to maximum increase in the CGI for 2002 leads to a 95 percent increase in the share value of the average company. Good corporate governance practices may lead to a substantial increase in value and a reduction in the cost of capital of Brazilian firms. This result is robust to a number of different formulations and does not seem to be plagued by endogeneity after we control for it using a size dummy instrumental variable and 3SLS simultaneous equations, which revealed that there is a scale factor, with the impact of better corporate governance practices being greater for larger firms in the upper size quartile.

We also found that disclosure has a much larger impact on corporate value than other corporate governance practices, such as board composition and voting procedures. This last result may be due to the very low scoring of most firms in the questions pertaining to corporate governance practices in general, while their median disclosure score is much higher. Better disclosure practices were introduced in the mid-1970s with a new corporate law and have been perfected since then, while better corporate governance practices are a recent issue in Brazil, with very little being introduced in the new corporations law passed in 2001. Most new measures

have been included in pension funds' regulation and private contracting, as in the *Novo Mercado*. In a principal component analysis we found that factors named "one share one vote" and "disclosure supervision" had a large impact on Tobin's q, emphasizing the importance of aligning control and cash flow rights and of oversight.

We did not find a significant relationship between our ownership concentration variables and value. In most models, ultimate voting rights percentages of the largest shareholder and the wedge are negatively related to Tobin's q while the total capital percentages are positively related. However, these relationships have never shown strong significance except for one model in one year. We do not find evidence for entrenchment and incentives as measured by the concentration percentages of the largest shareholder. However, as stated above, few firms abide to the "one share one vote" rule. Maybe one reason for this surprising result is the very high concentration percentages owned by the largest shareholders. We do not find any significant evidence that the dividend payout is caused by corporate governance practices, it should probably be included as one of the corporate governance practices determined simultaneously with other measures. Dividends seem to be greater when control is more concentrated.

Investors in countries with poor legal protection, such as in Latin America, discount the prices of firms to compensate for expropriation. However, lower stock prices may not raise demand for stocks enough in these countries, keeping the supply of outside equity limited (see Shleifer and Wolfenzon, 2002). It would be reasonable to assume that outside equity financing would increase if the risk of expropriation were reduced through better legal protection and better corporate governance practices. Our comparison with Chile revealed that this country scores better in investor protection because of shareholder rights, by and large due to their predominant use of non-voting shares, while the levels of disclosure and the quality of the judiciary in Chile are very similar to those in Brazil.

One of the authors has been requested to comment on a recent statement by the Brazilian Association of Public Companies (ABRASCA) on good corporate governance practices. ABRASCA essentially represents controlling shareholders, given the ownership structure of Brazilian companies depicted here. The document from ABRASCA is mostly quite generic and bland; however, when they comment on the issuing of new shares, they use stronger words and state that companies should use whatever securities are legally allowed in Brazil without adopting *dogmatic* (the emphasis is ours) positions regarding non-voting stocks. We are

obviously not surprised by this statement, coming from ABRASCA, but strongly disagree and take the kind of *dogmatic* view they try to avoid. Brazilian regulators have always been indulgent about non-voting shares and our market is dominated by them while showing very poor investor protection levels. We believe that it is time for bolder actions to inhibit their issuance. Our comparative analysis with Chile also suggests that this is the case.

There are initiatives in Brazil and in other Latin American markets to improve corporate governance practices. One key policy question is whether they pay off. Our analysis indicates that they do. The very high concentration levels of voting rights and the widespread use of indirect control structures and non-voting shares may deter most firms from adopting better corporate governance practices in Brazil. However, a small number of companies have improved their practices and are benefiting from a lower cost of capital. In fact, the Brazilian primary stock market has experienced a renaissance in 2004, with many strong brand-name private companies (in the cosmetics, airline, logistics, energy, apparel, health care, insurance, and other industries) going public to list in the *Novo Mercado*. It is too early to say if this is a new trend, but it is nevertheless a good sign.

According to Morck and Yeung (2004), dividends are taxed each time they are paid in the United States. So, in a chain of firms in a pyramid, dividends are taxed every time they are paid in the chain so that when they are paid to ultimate shareholders at the apex of the pyramid, they have been taxed many times, creating a disincentive for pyramids. The United States was also plagued with control pyramids but introduced this taxation system in the 1930s precisely to fight them. Legislation banning pyramids from utility companies was also introduced in the US at the same time. Both measures are interesting policy issues. In Brazil, as we have already discussed, dividends are not taxed at all. Therefore, dividends can be paid as many times as necessary, facilitating the transfer of earnings among firms in the same indirect control structure or group; this is an incentive for tunneling. Public utilities are regulated by independent agencies in Brazil. Given the nature of their business and their close to monopolistic situation in many cases, banning indirect control structures could be considered by the authorities in the different regulated public services industries, according to their characteristics and market competition. Morck and Yeung (2004) also suggest that increasing competition through globalization may undermine the value of political connections, reducing the attractiveness of control pyramids.

Obviously, policy makers should stimulate a greater number of firms to adopt better corporate governance practices. Our evidence of a scale factor shows that greater stimuli should be devised for smaller public and listed firms as well as for non-public family-controlled firms. Another general suggestion is to proceed, at least gradually, towards the elimination of non-voting shares in Brazil. The recent corporate law change lowering the maximum amount of non-voting shares issued and outstanding from 67 percent to 50 percent is a step in the right direction but a long way from the ideal. However, some measures, such as the initiative of the National Development Bank (BNDES) to reduce the cost of debt of firms that commit to adopting better governance practices, have been left aside since the Lula administration took office. Considering the size of its financing operations, estimated at US\$ 20 billion in 2004, we believe that this bank is instrumental in improving corporate governance practices in Brazil, particularly because other sources of long-term financing are scarce and expensive. It should have an active role in promoting better corporate governance practices, and it should put its “points for governance” system in practice. Asset allocation regulatory limits for institutional investors, particularly pension funds, should motivate acquisitions only of new issues for listing in the *Novo Mercado* and provide higher ceilings for voting shares holdings. The continuous improvement of corporate governance practices depends on the permanent vigilance of the Securities Commission, whose resources and oversight have been insufficient, according to some of its own past chief commissioners, and on perfecting corporate laws and their enforcement. Lowering the costs firms incur to be more transparent and to adopt better corporate governance is another key line of action for policy makers, particularly to make it viable for smaller corporations to raise funds in the Brazilian capital markets. One of these measures could be to lower the “hidden taxes” of the very high publication costs in official state registrars. A substantial reduction in the cost of capital may be waiting for firms that improve their corporate governance practices and the recent movement of strong brand-name companies going public to list in the *Novo Mercado* is real evidence of that.

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Table 1. Index Questions Applied to Brazilian Companies

#	Question (<i>Remarks about what was really done</i>)
Dimension: Disclosure	
1	Does the company's annual report, website or publicly disclosure include information about potential conflicts of interest such as related party transactions? (<i>We verified if the annual report contained a section on related party transactions</i>)
2	Does the company specify in its charter, annual reports or other means sanctions against management in the case of violations of its desired corporate governance practices? (<i>We verified if the corporate charter included any sanctions</i>)
3	Does the company produce its legally required financial reports by the required date? (<i>We verified if the company published its legally required reports up to April 30th of each year, which is the legal limit date</i>)
4	Does the company use an international accounting standard (IASB or US GAAP)?
5	Does the company use one of the leading global auditing firms? (<i>the leading companies considered were PWC, Coopers & Lybrand, Arthur Andersen, KPMG, Ernst & Young, Deloitte, Touche & Tohmatsu</i>)
6	Does the company disclose in its website or annual report compensation information for the CEO and board members? (<i>We verified in the annual filings with the CVM, called IAN, if any compensation information was disclosed, even if not by individual executives</i>)
Dimension: Board composition and functioning	
7	Are the Chairman of the Board and the CEO different persons? (<i>We verified if the name of the chairman and of the CEO were the same in the annual CVM filings</i>)
8	Does the company have monitoring committees such as a compensation and/or nominations and/or audit committee? (<i>We verified the existence of such committees in the corporate charter</i>)
9	Is the board clearly made up of outside and possibly independent directors? (<i>We verified if directors were key executives in the company</i>)
10	Is the board size between 5 and 9 members, as recommended by the IBGC Code of Best Practices? (<i>The size of the board was obtained from the annual filings with the CVM</i>)
11	Do board members serve consecutive one-year terms, as recommended by the IBGC Code of Best Practices? (<i>We verified the term for directors in the corporate charter</i>)
12	Is there a permanent Fiscal Board? (<i>we verified with the fiscal board was permanent according to the corporate charter</i>)

Table 1., continued

#	Question (<i>Remarks about what was really done</i>)
Dimension: Ethics and Conflicts of Interest	
13	Is the company free of any undergoing inquiries at CVM regarding governance malpractices? (<i>we verified if the company was listed among those being investigated in the CVM website</i>)
14	Is the company free of any CVM convictions and/or fining for governance malpractices or other securities law violations in the last five years? (<i>we verified if the company was listed among those convicted or fined in the CVM website</i>)
15	Does the company submit to arbitration in place of regular legal procedures in the case of corporate governance malpractices? (<i>We verified if the corporate charter privileges arbitration over regular legal proceedings</i>)
16	Do ultimate controlling shareholders, considering shareholder agreements, own less than 50% of the voting shares? (<i>we computed this percentage from the annual filings with the CVM, we considered 50% as the threshold for control</i>)
17	Is the percentage of non-voting shares in total capital less than 20%? (<i>We computed this information from the number of shares in the annual CVM filings</i>)
18	Is the ultimate controlling shareholders' ratio of cash-flow rights to voting rights greater than 1? (<i>we computed this information using the procedure described in this paper, with the threshold of 50% for control</i>).
Dimension: Shareholder rights	
19	Does the company charter or verifiable actions facilitate the process of voting to all shareholders beyond what is legally required? (<i>we compared what is in the corporate charter, if anything, with the legal requirements at the time</i>)
20	Does the company charter grant additional voting rights beyond what is legally required? (<i>we compared what is in the corporate charter, if anything, with the legal requirements at the time</i>)
21	Does the company grant tag along rights beyond what is legally required? (<i>we compared what is in the corporate charter, if anything, with the legal requirements at the time – 80% for voting shares and no tag along for non-voting shares</i>)
22	Are pyramid structures that decrease control concentration present? (<i>we used the annual filings to verify if there were indirect control structures and if they reduce control concentration of the ultimate controlling shareholder</i>)
23	Do shareholder agreements that decrease control concentration exist? (<i>we used the annual filings to verify if there were shareholder agreements and the terms of the agreements to check if they reduce control concentration of the ultimate controlling shareholder</i>)
24	Is the free-float greater than or equal to what is required in Bovespa's Level I trading list (25%)? (<i>we verified in the annual CVM filings if the declared free float was greater than 25%</i>)

Note: Each question corresponds to a “yes” or “no” answer. If the answer is “yes”, then the value of 1 is attributed to the question, otherwise the value is 0. The index is the sum of the points for each question. The maximum index value is 24. Index dimensions are simply for presentation purposes and there is no weighing among questions. All questions are answered from public information disclosed by listed companies and not by means of potentially subjective interviews. Sources of information are company filings, charters, and annual reports, for example, made available by Infoinvest.com.br.

Table 2. Direct and Indirect Shareholding Composition of Brazilian Companies 1998-2002

Year	N	Direct Ownership			Ultimate Ownership		
		Voting	Cash Flow	Voting/ Cash Flow	Voting	Cash Flow	Voting/ Cash Flow
<i>Major shareholder</i>							
1998	240	69	47	1.47	66	33	2.00
2000	238	70	47	1.49	65	37	1.77
2002	214	71	50	1.42	68	34	2.00
<i>Three largest shareholders</i>							
1998	240	87	59	1.47	83	50	1.66
2000	238	88	60	1.47	84	50	1.68
2002	214	89	60	1.48	85	51	1.67

Note: Median percentage direct and indirect shareholding concentration of Brazilian companies listed on the São Paulo Stock Exchange. Such participation was analyzed backwards until the shareholder was identified to be from one of the following groups: (i) individuals or families; (ii) foreign investors (individuals or institutions); (iii) government; (iv) institutional investors (banks, insurance firms, pension funds or investment funds). The “voting/cash flow” ratio is the median percentage of voting rights divided by the median percentage of cash flow rights concentration.

Table 3. Ownership Characteristics of the 1998, 2000, and 2002 Samples

Year	FOR	GOV	INST	PYR	AGR	VOTE	FREE
1998	28.8%	8.8%	8.3%	75.4%	20.0%	47.3%	50.7%
2000	28.4%	8.9%	8.5%	77.5%	19.5%	46.9%	50.3%
2002	24.9%	8.0%	8.9%	75.2%	21.5%	46.3%	49.0%

Note: Ultimate ownership by foreigners (FOR), institutions (banks, insurance companies, pension funds, foundations or investment funds) (INST), and the government (GOV) is represented after considering indirect control structures and shareholder agreements. The remaining balance is owned by families. The percentage of companies with indirect control structures (PYR) and shareholder agreements (AGR) is also presented. VOTE is the percentage of voting shares in the total capital. Free float is the percentage of shares outstanding, voting and non-voting, available for trading in the market (FREE). The information was compiled from company filings with the Brazilian Securities Commission (CVM).

Table 4. Descriptive Statistics of All Variables

Variable	Mean	Median	S.D.	Minimum	Maximum
Performance Measures:					
Q	0.91	0.87	0.40	0.07	4.77
Payout	31%	24%	47%	0%	460%
P/B	0.95	0.55	2.14	-5.85	26.20
P/S	1.25	0.37	5.03	0.00	62.72
P/CF	5.72	1.75	47.17	-227.89	604.03
Governance and Ownership Measures:					
CGI	10	10	2	4	19
1VDIR	70%	70%	22%	9%	100%
1TDIR	50%	48%	26%	3%	100%
1V/TDIR	1.68	1.40	0.76	0.72	10.29
3VDIR	83%	88%	18%	18%	100%
3TDIR	61%	60%	25%	8%	100%
3V/TDIR	1.58	1.34	0.70	0.83	10.29
5VDIR	85%	90%	16%	18%	100%
5TDIR	63%	64%	24%	9%	100%
5V/TDIR	1.56	1.32	0.69	0.83	10.29
1VIND	65%	66%	26%	6%	100%
1TIND	41%	34%	27%	1%	100%
1V/TIND	2.81	1.72	4.89	0.84	56.94
3VIND	78%	84%	21%	18%	100%
3TIND	51%	50%	26%	2%	100%
3V/TIND	2.16	1.59	2.73	0.62	46.32
5VIND	82%	88%	19%	18%	100%
5TIND	55%	53%	26%	4%	100%
5V/TIND	1.90	1.54	1.30	0.83	15.37
FOR	0.28	0.00	0.45	0.00	1.00
GOV	0.09	0.00	0.28	0.00	1.00
INST	0.09	0.00	0.28	0.00	1.00
PYR	0.76	1.00	0.43	0.00	1.00
AGR	0.20	0.00	0.40	0.00	1.00
ADR	0.20	0.00	0.40	0.00	1.00
NM	0.14	0.00	0.35	0.00	1.00
FREE	48%	50%	26%	0%	100%
VOTE	55%	47%	23%	27%	100%

Table 4., continued

Variable	Mean	Median	S.D.	Minimum	Maximum
Control Variables					
CA/TA	38%	36%	21%	0%	91%
Growth	20%	15%	40%	-86%	778%
Leverage	60%	59%	26%	1%	270%
ROA	10%	10%	9%	-41%	38%
Size	13.52	13.59	1.70	8.96	18.62
Volatility	86%	70%	62%	10%	520%

Note: The averages pool the values for all firm-years used, that is, the values for the same firm in 1998, 2000, and 2002 are considered as three different observations. The definition of each variable is in the Appendix.

**Table 5. Score Distribution for the Corporate Governance Index
and for Four Sub-Indices for 1998, 2000, and 2002**

Year	Min	First Quad	Med	Third Quad	Max	# in Upper Third Score
CGI						
1998	4	8	10	11	15	0
2000	5	9	10	11	16	0
2002	5	9	10	12	19	3
Disclosure Sub-Index						
1998	1	3	4	4	5	43
2000	0	3	4	4	6	50
2002	1	3	4	5	6	55
Board Practices Sub-Index						
1998	0	1	2	3	5	5
2000	0	1	2	3	5	4
2002	0	1	2	3	6	12
Ethics and Conflicts of Interest Sub-Index						
1998	0	2	2	3	5	1
2000	0	2	2	3	5	3
2002	0	2	2	3	5	5
Shareholder Rights Sub-Index						
1998	0	1	2	2	5	2
2000	0	1	2	2	5	1
2002	0	1	2	2	6	2

Note: The statistics are: the minimum, first and third quartile, median, maximum, and number of firms with score greater than the upper third score range (16 for the CGI and 4 for the sub-indices). The CGI score ranges between 0 and 24. Each sub-index score ranges from 0 to 6.

Table 6. Correlations Among Selected Variables

#	Variable	2	3	4	5	6	7	8	9	10	11	12	13	14	Size
1	Q	-.11	.44	.17	-.03	.03	.02	.17	.03	-.11	.09	.09	-.01	.13	.10
2	Payout		-.02	.03	-.02	-.01	.00	.04	.00	-.06	-.17	-.06	-.07	.04	.05
3	P/B			-.03	.04	.07	.00	-.02	-.01	-.02	.07	.24	-.02	-.12	-.03
4	CGI				-.36	-.22	.11	.04	.12	.09	.13	-.22	.06	.19	.50
5	1VIND					.74	-.10	.07	-.13	.07	-.04	.07	-.03	-.14	-.07
6	1TIND						-.38	.25	-.04	.07	.00	.00	.01	-.05	.02
7	1V/TIND							-.11	-.01	-.06	.05	.07	.05	.00	.02
8	FOR								-.19	-.19	.02	-.07	-.03	.26	.15
9	INST									-.09	.05	-.03	.00	-.01	.07
10	GOV										-.01	-.07	-.03	-.06	.28
11	Leverage											-.12	.04	.18	.20
12	Volatility												-.03	-.28	-.31
13	Growth													.00	.11
14	ROA														.25

Note: The correlations are for the pooled values for all firm-years used, that is, the values for the same firm in 1998, 2000, and 2002 are considered as three different observations. A list of the variable definitions is in the Appendix.

Table 7. Control and Corporate Governance Variables

	2002			2000			1998		
<i>IVIND on</i>	<i>Coeff.</i>	<i>t</i>	<i>p</i>	<i>Coeff.</i>	<i>t</i>	<i>p</i>	<i>Coeff.</i>	<i>t</i>	<i>p</i>
Intercept	0.0541	0.2948	0.7685	0.2167	11,985	0.2320	0.4000	25,243	0.0123
Volatility	0.0434	13,486	0.1789	-0.0151	-0.4182	0.6762	-0.0303	-10,452	0.2970
Growth	0.0025	0.0753	0.9401	-0.0776	-13,749	0.1705	0.1042	16,498	0.1003
ROA	-0.1088	-0.5234	0.6013	-0.0891	-0.4046	0.6862	-0.4372	-19,869	0.0481
Size	0.0290	22,046	0.0286	0.0199	15,611	0.1199	0.0115	0.9852	0.3255
Leverage	-0.0053	-0.0776	0.9382	-0.0124	-0.1626	0.8710	-0.1639	-22,863	0.0231
ADR	-0.1485	-29,652	0.0034	-0.1235	-25,102	0.0128	-0.1583	-31,057	0.0021
NM	-0.0565	-0.9751	0.3307						
Adj R2	0.0327			0.0110			0.0566		
F	20,302		0.0528	14,353		0.2020	33,890		0.0032
<i>IV/TIND on</i>	<i>Coeff.</i>	<i>t</i>	<i>p</i>	<i>Coeff.</i>	<i>t</i>	<i>p</i>	<i>Coeff.</i>	<i>t</i>	<i>p</i>
Intercept	0.9528	0.2866	0.7747	-34,046	-0.9718	0.3322	27,383	10,574	0.2914
Volatility	0.4197	0.7192	0.4728	16,044	22,885	0.0230	0.1844	0.3886	0.6979
Growth	0.4228	0.6916	0.4900	26,624	24,351	0.0157	-13,177	-12,763	0.2031
ROA	14,508	0.3849	0.7007	-0.9546	-0.2236	0.8232	42,969	11,949	0.2334
Size	0.0014	0.0058	0.9954	0.3191	12,927	0.1974	-0.1563	-0.8217	0.4121
Leverage	12,552	10,157	0.3110	0.5191	0.3521	0.7251	31,154	26,589	0.0084
ADR	0.9508	10,471	0.2963	-0.2210	-0.2317	0.8169	0.0228	0.0274	0.9782
NM	0.5755	0.5476	0.5846						
Adj R2	0.0198			0.0228			0.0199		
F	0.5938		0.7606	19,128		0.0797	18,105		0.0978

Table 7., continued

<i>CGI on</i>	2002			2000			1998		
	<i>Coeff.</i>	<i>t</i>	<i>p</i>	<i>Coeff.</i>	<i>t</i>	<i>p</i>	<i>Coeff.</i>	<i>t</i>	<i>p</i>
Intercept	34,090	23,429	0.0201	23,473	18,240	0.0694	14,960	13,545	0.1769
Volatility	-0.4714	-18,459	0.0663	-0.2565	-0.9959	0.3204	0.0048	0.0239	0.9810
Growth	0.0223	0.0835	0.9336	0.4183	10,415	0.2987	-0.4118	-0.9353	0.3506
ROA	13,926	0.8442	0.3995	0.3700	0.2360	0.8137	28,961	18,884	0.0602
Size	0.4807	46,098	0.0000	0.5601	61,782	0.0000	0.5857	72,202	0.0000
Leverage	0.3174	0.5868	0.5579	0.2673	0.4935	0.6221	0.6773	13,556	0.1766
ADR	0.7716	19,417	0.0535	0.3071	0.8765	0.3817	0.5002	14,077	0.1606
NM	14,673	31,899	0.0016						
Adj R2	0.3198			0.2259			0.2351		
F	153,033		0.0000	124,265		0.0000	132,403		0.0000

Note: OLS regressions of control variables and the indirect voting rights percentages of the largest shareholder; the wedge; and the CGI. The Novo Mercado (NM) dummy appears only in 2002 because this listing category did not exist in 2000 and 1998. All variables are defined in the Appendix. Significant coefficients up to the 10% level are shown in boldface.

Table 8. Results from OLS Regressions of Tobin's q on Corporate Governance Measures for 2002

Independent Variable	Dependent Variable = Q								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	0.2185 (0.4007)	0.1823 (0.5024)	0.2080 (0.4264)	0.2532 (0.3321)	0.2320 (0.3995)	0.1194 (0.6669)	-0.0897 (0.7265)	-0.1199 (0.6533)	0.2213 (0.5070)
CGI	0.0228* (0.0837)					0.0311** (0.0280)	0.0265** (0.0407)	0.0273** (0.0367)	0.0254* (0.0635)
1VIND		0.1040 (0.3590)			-0.0569 (0.7467)	0.0404 (0.8225)	-0.0105 (0.9493)	0.0071 (0.9666)	-0.0324 (0.9609)
1TIND			0.1558 (0.1422)		0.2087 (0.2402)	0.2013 (0.2526)	0.2105 (0.1925)	0.1891 (0.2605)	-0.5667 (0.4213)
1V/TIND				-0.0021 (0.7223)	0.0020 (0.7680)	0.0009 (0.8945)	-0.0013 (0.8287)	-0.0017 (0.7880)	-0.0176 (0.4175)
(1VIND) ²									0.1327 (0.7844)
(1TIND) ²									0.6367 (0.2622)
(1V/TIND) ²									0.0002 (0.5440)
Leverage							0.6121*** (0.0000)	0.6000** * (0.0000)	0.5997** * (0.0000)
Dummy Foreigner								0.0343 (0.6281)	0.0380 (0.6111)
Dummy Government								-0.0693 (0.5332)	-0.0483 (0.6697)

Table 8., continued

Independent Variable	Dependent Variable = Q								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dummy Institutional								-0.0126 (0.9010)	-0.0017 (0.9866)
Dummy ADR									0.0994 (0.1920)
Dummy NM									0.0225 (0.8045)
Volatility	0.2369*** (0.0000)	0.2206*** (0.0000)	0.2172*** (0.0000)	0.2257** *	0.2160*** (0.0000)	0.2297** *	0.1900*** (0.0001)	0.1913** *	0.1818** *
Growth	-0.0702 (0.1811)	-0.0688 (0.1921)	-0.0704 (0.1805)	-0.0688 (0.1928)	-0.0719 (0.1747)	-0.0713 (0.1740)	-0.0529 (0.2719)	-0.0534 (0.2716)	-0.0417 (0.3967)
ROA	0.5865* (0.0686)	0.6376** (0.0500)	0.6249* (0.0529)	0.6100* (0.0599)	0.6125* (0.0606)	0.6115* (0.0586)	0.8004*** (0.0075)	0.7346** (0.0178)	0.7495** (0.0163)
Size	0.0207 (0.2950)	0.0362** (0.0423)	0.0348** (0.0500)	0.0364** (0.0422)	0.0340* (0.0593)	0.0136 (0.4974)	0.0062 (0.7356)	0.0086 (0.6617)	-0.0059 (0.7896)
F-statistic	51,978 (0.0002)	47,154 (0.0004)	50,093 (0.0002)	45,561 (0.0006)	35,676 (0.0012)	37,933 (0.0004)	84,203 (0.0000)	63,200 (0.0000)	46,514 (0.0000)
Adjusted R ²	0.0897	0.0802	0.0860	0.0770	0.0778	0.0950	0.2387	0.2306	0.2257

Note: All variables are defined in the Appendix. ***, **, * denote statistical significance at the 1%, 5% and 10%, respectively; p-values in parenthesis.

Table 9. Results from OLS Regressions of Tobin's q on Corporate Governance Sub-Indices for 2002

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Constant	-0.0264 (0.9200)	-0.0100 (0.9699)	-0.1263 (0.6805)	-0.0337 (0.8989)	-0.1199 (0.6533)	-0.1451 (0.5999)	0.5175 (0.0983)
Disclosure	0.0724** (0.0294)						
Board		0.0236 (0.3282)					
Conflicts			0.0275 (0.5036)				
Sh. Rights				0.0327 (0.2730)			
CGI					0.0273** (0.0367)		
CGI Reduced						0.0210 (0.1368)	
Prin 1							0.1239*** (0.0008)
Prin 2							0.0012 (0.9717)
Prin 3							-0.0549* (0.0748)
Prin 4							0.0675** (0.0234)
Prin 5							-0.0182 (0.5739)
Prin 6							-0.0197 (0.5308)
1VIND	-0.0891 (0.5871)	-0.0733 (0.6586)	0.0058 (0.9780)	-0.08678 (0.6003)	0.0071 (0.9666)	-0.0134 (0.9377)	0.1439 (0.4446)
1TIND	0.2325 (0.1680)	0.2060 (0.2245)	0.1311 (0.5086)	0.2458 (0.1592)	0.1891 (0.2605)	0.1889 (0.2639)	0.0574 (0.7864)
1V/TIND	-0.0003 (0.9610)	-0.0010 (0.8676)	-0.0014 (0.8296)	-0.0008 (0.8979)	-0.0017 (0.7880)	-0.0012 (0.8486)	-0.0066 (0.3135)
Leverage	0.6350*** (0.0000)	0.6035*** (0.0000)	0.61099*** (0.0000)	0.6016*** (0.0000)	0.6000*** (0.0000)	0.5993*** (0.0000)	0.6083*** (0.0000)

Table 9., continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dummy Foreigner	0.0355 (0.6168)	0.0193 (0.7886)	0.0329 (0.6487)	0.0355 (0.6210)	0.0343 (0.6281)	0.0370 (0.6055)	-0.0486 (0.5266)
Dummy Government	-0.0340 (0.7610)	-0.0839 (0.4622)	-0.0697 (0.5363)	-0.0471 (0.6769)	-0.0693 (0.5332)	-0.0712 (0.5247)	-0.1378 (0.2509)
Dummy Institutional	-0.0021 (0.9832)	-0.0273 (0.7924)	-0.0074 (0.9424)	0.0057 (0.9562)	-0.0126 (0.9010)	-0.0075 (0.9414)	-0.0738 (0.4726)
Volatility	0.1826*** (0.0001)	0.1824*** (0.0001)	0.1799*** (0.0002)	0.1846*** (0.0001)	0.1913*** (0.0001)	0.1878*** (0.0001)	0.1640*** (0.0005)
Growth	-0.0425 (0.3830)	-0.0583 (0.2362)	-0.0499 (0.3115)	-0.0560 (0.2529)	-0.0534 (0.2716)	-0.0552 (0.2586)	-0.0452 (0.3553)
ROA	0.6717** (0.0309)	0.7294** (0.0198)	0.7551** (0.0159)	0.7870** (0.0123)	0.7346** (0.0178)	0.7459** (0.0167)	0.7639** (0.0134)
Size	0.0042 (0.8374)	0.0217 (0.2422)	0.0264 (0.1433)	0.0209 (0.2622)	0.0086 (0.6617)	0.0178 (0.3418)	-0.0155 (0.4622)
F-statistic	63,642 (0.0000)	59,313 (0.0000)	58,738 (0.0000)	59,591 (0.0000)	63,200 (0.0000)	60,739 (0.0000)	53,889 (0.0000)
Adjusted R ²	0.2321	0.2174	0.2154	0.2184	0.2306	0.2223	0.2594

Note: All variables are defined in the Appendix. ***, **, * denote statistical significance at the 1%, 5% and 10%, respectively, and p-values in parenthesis.

Table 10. Results from OLS Regressions of the Dividend Payout on Corporate Governance Measures for 2002

Independent Variable	Dependent Variable = Payout							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-492,372 (0.0134)	-401,497 (0.0467)	-445,075 (0.0231)	-511,422 (0.0091)	-441,803 (0.0296)	-411,779 (0.0489)	-347,463 (0.0934)	-377,839 (0.0699)
CGI	0.1061 (0.9027)					-0.5641 (0.5410)	-0.4316 (0.6353)	-0.4597 (0.6146)
1VIND		-12.4990* (0.0878)			-6.5398 (0.5628)	-8.2664 (0.4787)	-67,475 (0.5575)	-100,914 (0.3906)
1TIND			- 14.4733** (0.0347)		-61,690 (0.5885)	-61,099 (0.5926)	-63,958 (0.5696)	-29,114 (0.8024)
1V/TIND				0.7300* (0.0608)	0.5608 (0.2003)	0.5746 (0.1908)	0.6398 (0.1399)	0.6402 (0.1418)
Leverage							-18.2930*** (0.0074)	-17.0541** (0.0147)
Dummy Foreigner								-47,246 (0.3413)
Dummy Government								-35,267 (0.6595)
Dummy Institutional								-110,538 (0.1168)
Volatility	-0.7289 (0.8252)	-0.3153 (0.9226)	-0.1066 (0.9737)	-10,118 (0.7542)	-0.4172 (0.8979)	-0.7088 (0.8295)	0.4701 (0.8857)	0.4530 (0.8900)
Current Assets/Total Assets	33.8491*** (0.0012)	33.4845** (0.0011) *	33.5070** (0.0011) *	36.1554** (0.0005) *	35.4220** (0.0006) *	34.4247*** (0.0011)	34.2450*** (0.0010)	32.5916*** (0.0025)
Growth	0.4242 (0.9011)	0.3219 (0.9243)	0.4948 (0.8835)	0.1596 (0.9624)	0.1962 (0.9538)	0.1857 (0.9564)	-0.3639 (0.9134)	-0.7478 (0.8238)
ROA	76.1068*** (0.0006)	72.8532** (0.0009) *	74.8262** (0.0006) *	74.1207** (0.0007) *	72.1804** (0.0010) *	72.7963*** (0.0010)	67.2575*** (0.0020)	70.9753*** (0.0016)
Size	3.5343*** (0.0087)	3.5636*** (0.0040)	3.6994*** (0.0027)	3.5788*** (0.0038)	3.6092*** (0.0036)	3.9376*** (0.0036)	4.1522*** (0.0019)	4.5918*** (0.0010)
F-statistic	80,586 (0.0000)	86,603 (0.0000)	89,844 (0.0000)	87,863 (0.0000)	69,409 (0.0000)	61,926 (0.0000)	64,777 (0.0000)	51,931 (0.0000)
Adjusted R2	0.1659	0.1775	0.1836	0.1799	0.1824	0.1799	0.2046	0.2038

Note: All variables are defined in the Appendix. ***, **, * denote statistical significance at the 1%, 5% and 10%, respectively, and p-values in parenthesis.

Table 11. OLS Regressions of Tobin's q and the Dividend Payout on Individual Items of the Corporate Governance Index for 2002

Question	Tobin's q		Dividend Payout	
	Alone	With other items	Alone	With other items
1	0.2816* (0.0620)	0.2158 (0.1673)	-18.7461* (0.0730)	-169,525 (0.2116)
2	0.0297 (0.8148)	0.0572 (0.6746)	-111,637 (0.1993)	-126,829 (0.1285)
3	0.0359 (0.7688)	0.0291 (0.8185)	66,198 (0.4278)	81,206 (0.1828)
4	0.0756 (0.2873)	0.0151 (0.8492)	-47,835 (0.3451)	-73,493 (0.3596)
5	0.2298*** (0.0027)	0.1945** (0.0179)	13,279 (0.8011)	15,336 (0.2007)
6	-0.0305 (0.6981)	-0.0761 (0.3575)	13,099 (0.8068)	54,206 (0.7868)
7	0.0932 (0.1466)	0.0394 (0.5961)	-63,358 (0.1525)	-110,054 (0.3469)
8	0.0266 (0.7593)	0.0003 (0.9976)	32,047 (0.5910)	0.7778** (0.0369)
8	0.1190* (0.0571)	0.0723 (0.3261)	61,157 (0.1625)	110,703 (0.9001)
10	-0.1267** (0.0296)	-0.1359** (0.0259)	-58,492 (0.1414)	-4.2860** (0.0320)
11	-0.0084 (0.8943)	-0.0639 (0.3501)	-52,828 (0.2220)	-456,534 (0.3096)
12	0.1760** (0.0422)	0.1118 (0.2396)	10,466 (0.8619)	16,216 (0.3378)
13	0.1225 (0.3607)	0.1648 (0.3098)	60,771 (0.5116)	80,046 (0.8068)
14	0.1099 (0.6456)	-0.0965 (0.7336)	61,323 (0.7079)	-41,452 (0.4803)
15	0.0172 (0.9181)	-0.0298 (0.8798)	-145,189 (0.2169)	41,419 (0.8339)

Table 11., continued

Question	Tobin's q		Dividend Payout	
	Alone	With other items	Alone	With other items
16	0.0585 (0.5836)	-0.0526 (0.6444)	72,419 (0.3265)	-0.2092 (0.7637)
17	-0.0158 (0.8326)	-0.0226 (0.7918)	-38,641 (0.4484)	27,915 (0.9797)
18	0.0469 (0.6425)	0.1315 (0.2219)	-99,579 (0.1476)	-96,407 (0.6388)
19	-0.1201 (0.3258)	-0.2032 (0.1316)	-17.3284** (0.0374)	-224,958 (0.1999)
20	0.0173 (0.8511)	0.0324 (0.7415)	-47,630 (0.4555)	-5.9470** (0.0172)
21	0.0579 (0.4875)	0.0926 (0.3131)	-47,823 (0.4145)	-15,479 (0.3894)
22	0.1749*** (0.0027)	0.1537** (0.0140)	22,383 (0.5812)	34,041 (0.8117)
23	0.0276 (0.6982)	-0.0293 (0.6922)	52,773 (0.2749)	63,222 (0.4369)
24	-0.1321* (0.0910)	-0.0919 (0.2687)	17,943 (0.7390)	28,669 (0.2206)

Note: All regressions include the control variables defined in the Appendix. Each question is show in Table 1 ***, **, * denote statistical significance at the 1%, 5% and 10%, respectively, and p-values in parenthesis.

**Table 12. Results from OLS Regressions of the Price-to-Book Ratio
on Corporate Governance Measures for 2002**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Constant	-190,379 (0.0452)	-188,438 (0.0488)	-126,720 (0.2481)	-191,134 (0.0455)	-198,209 (0.0409)	-184,175 (0.0653)	-60,055 (0.6007)
Disclosure	16,730 (0.1612)						
Board		0.2219 (0.7978)					
Conflicts			-16,826 (0.2524)				
Sh. Rights				0.4581 (0.6679)			
CGI					0.2411 (0.6083)		
CGI Reduced						0.0952 (0.8509)	
Prin 1							2.5136* (0.0616)
Prin 2							-14,512 (0.2381)
Prin 3							0.0439 (0.9689)
Prin 4							0.7607 (0.4848)
Prin 5							-0.6931 (0.5597)
Prin 6							-11,352 (0.3264)
1VIND	-63,787 (0.2813)	-61,239 (0.3037)	-115,332 (0.1267)	-62,757 (0.2914)	-54,190 (0.3770)	-65,081 (0.2915)	-71,478 (0.3021)
1TIND	10.4145* (0.0870)	97,205 (0.1106)	13.8773** (0.0500)	10.3062* (0.1000)	95,680 (0.1160)	97,139 (0.1109)	13.0025* (0.0961)
1V/TIND	0.0387 (0.8620)	0.0262 (0.9067)	0.0693 (0.7586)	0.0281 (0.9001)	0.0209 (0.9257)	0.0316 (0.8879)	-0.0598 (0.8022)
Leverage	-0.0385 (0.9915)	-0.6411 (0.8597)	-0.4635 (0.8976)	-0.7093 (0.8450)	-0.6673 (0.8536)	-0.4966 (0.8911)	-0.6948 (0.8485)
Dummy Foreigner	-18,722 (0.4640)	-21,416 (0.4067)	-24,314 (0.3456)	-19,491 (0.4499)	-20,041 (0.4350)	-21,152 (0.4118)	-39,794 (0.1591)
Dummy Government	-29,647 (0.4621)	-383,199 (0.3494)	-32,343 (0.4217)	-34,118 (0.4002)	-36,913 (0.3588)	-36,002 (0.3715)	-56,553 (0.2000)
Dummy Institutional	-23,865 (0.5132)	-27,235 (0.4646)	-26,831 (0.4631)	-23,439 (0.5262)	-25,837 (0.4808)	-25,650 (0.4842)	-38,666 (0.3063)

Table 12., continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Volatility	10.0053*** (0.0000)	9.9444*** (0.0000)	9.8137*** (0.0000)	9.9943*** (0.0000)	10.0210*** (0.0000)	9.8644*** (0.0000)	9.5041*** (0.0000)
Growth	-18,147 (0.3017)	-21,139 (0.2312)	-22,905 (0.1938)	-21,039 (0.2314)	-20,677 (0.2389)	-20,617 (0.2407)	-23,361 (0.1939)
ROA	-22.3466** (0.0461)	-20.7410* (0.0641)	-20.9152* (0.0607)	-20.0252* (0.0748)	-20.6847* (0.0642)	-20.5401* (0.0661)	-20.0055* (0.0770)
Size	0.7164 (0.3308)	1.1815* (0.0765)	1.2065* (0.0615)	1.1493* (0.0859)	10,684 (0.1341)	1.2607* (0.0628)	0.3234 (0.6758)
F-statistic	48,998 (0.0000)	46,960 (0.0000)	48,294 (0.0000)	47,086 (0.0000)	47,170 (0.0000)	46,927 (0.0000)	36,942 (0.0000)
Adjusted R ²	0.1801	0.1723	0.1775	0.1728	0.1732	0.1722	0.1770

Note: All variables are defined in the Appendix. ***, **, * denote statistical significance at the 1%, 5% and 10%, respectively, and p-values in parenthesis.

Table 13. Results from OLS Regressions of Tobin's q, Dividend Payout, and the Price-to-Book Ratio on Corporate Governance Measures for 2002

	Tobin's q		Dividend Payout		Price-to-Book	
	All Data	Without Outliers	All Data	Without Outliers	All Data	Without Outliers
Constant	-0.1199 (0.6533)	0.2215 (0.1441)	-377,839 (0.0699)	-431,012 (0.0021)	-198,209 (0.0409)	-200,296 (0.0429)
CGI	0.0273** (0.0367)	0.0126* (0.0869)	-0.4597 (0.6146)	-0.2238 (0.7190)	0.2411 (0.6083)	0.2180 (0.6482)
1VIND	0.0071 (0.9666)	0.0340 (0.7221)	-100,914 (0.3906)	-53,273 (0.4996)	-54,190 (0.3770)	-49,746 (0.4277)
1TIND	0.1891 (0.2605)	-0.0817 (0.3964)	-29,114 (0.8024)	22,350 (0.7703)	95,680 (0.1160)	95,280 (0.1283)
1V/TIND	-0.0017 (0.7880)	-0.0030 (0.3876)	0.6402 (0.1418)	0.9397*** (0.0010)	0.0209 (0.9257)	0.0178 (0.9375)
Leverage	0.6000*** (0.0000)	0.5540*** (0.0000)	-17.0541** (0.0147)	-14.0579*** (0.0024)	-0.6673 (0.8536)	-0.4192 (0.9096)
Dummy Foreigner	0.0343 (0.6281)	0.0657 (0.1025)	-47,246 (0.3413)	-33,352 (0.3116)	-20,041 (0.4350)	-21,522 (0.4143)
Dummy Government	-0.0693 (0.5332)	0.0022 (0.9718)	-35,267 (0.6595)	-69,823 (0.1992)	-36,913 (0.3588)	-37,736 (0.3574)
Dummy Institutional	-0.0126 (0.9010)	0.0263 (0.6479)	-110,538 (0.1168)	-8.0705* (0.0853)	-25,837 (0.4808)	-26,819 (0.4723)
Volatility	0.1913*** (0.0001)	0.0106 (0.7101)	0.4530 (0.8900)	0.9543 (0.6535)	10.0210*** (0.0000)	10.1348*** (0.0000)
Growth	-0.0534 (0.2716)	-0.0107 (0.6936)	-0.7478 (0.8238)	-10,058 (0.6442)	-20,677 (0.2389)	-20,931 (0.2395)
ROA	0.7346** (0.0178)	0.8425*** (0.0000)	70.9753*** (0.0016)	51.4791*** (0.0007)	-20.6847* (0.0642)	-20.3081* (0.0748)
Size	0.0086 (0.6617)	0.0085 (0.4403)	4.5918*** (0.0010)	3.8882*** (0.0000)	10,684 (0.1341)	10,704 (0.1423)
Current Assets/ Total Assets	-	-	32.5916*** (0.0025)	32.8335*** (0.0000)	-	-
F-statistic	63,200 (0.0000)	101,818 (0.0000)	51,931 (0.0000)	84,128 (0.0000)	47,170 (0.0000)	46,712 (0.0000)
Adjusted R ²	0.2306	0.3485	0.2038	0.3285	0.1732	0.1755

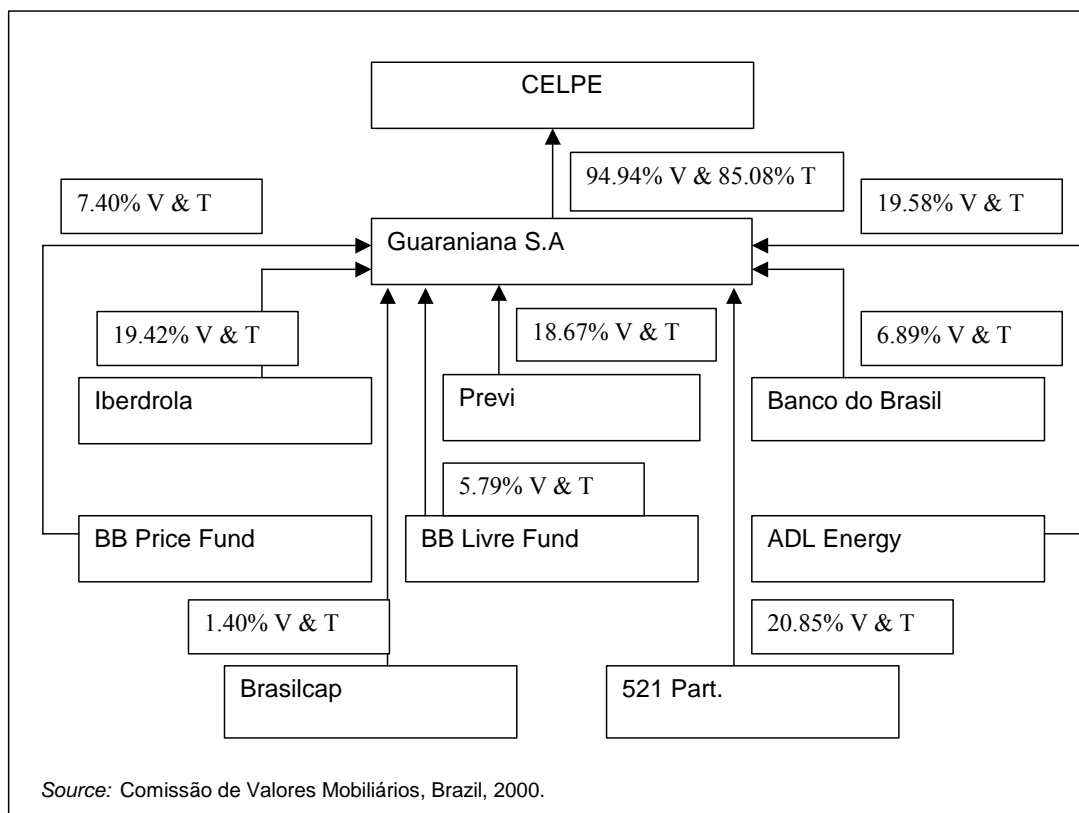
Note: We treat observations as outliers, and drop them from the sample, if a studentized residual obtained by regressing the dependent variable on the CGI and a constant term exceeds ± 1.96 . This method identifies 7 outliers for Tobin's q, 16 for the dividend payout, and 6 for the price-to-book ratio. All variables are defined in the Appendix. ***, **, * denote statistical significance at the 1%, 5% and 10%, respectively, and p-values in parenthesis.

Table 14. Results from 3SLS Regressions of Tobin's q and the Dividend Payout on Corporate Governance Measures for 2002

Tobin's q			Dividend Payout		
	CGI	q		CGI	PAYOUT
Constant	52,102 (0.3853)	-0.1596 (0.2976)	Constant	-102,166 (0.8204)	121,016 (0.7725)
q	208,764 (0.2114)		PAYOUT	0.7377 (0.6221)	
CGI		0.0401*** (0.0001)	CGI		13,760 (0.6784)
1VIND	-14,760 (0.7201)	0.0487 (0.7607)	1VIND	10,042 (0.9332)	-14,634 (0.9259)
1TIND	-38,434 (0.4647)	0.1838 (0.2644)	1TIND	49,815 (0.6939)	-65,704 (0.5602)
1V/TIND	0.0473 (0.7399)	-0.0021 (0.7255)	1V/TIND	-0.2138 (0.7221)	0.3094 (0.4632)
Leverage	-123,519 (0.2506)	0.5940*** (0.0000)	Leverage	144,805 (0.6126)	-19.5771*** (0.0039)
Dummy Foreigner	-0.8465 (0.6354)	0.0378 (0.5912)	Dummy Foreigner	47,397 (0.6469)	-61,001 (0.1974)
Dummy Government	15,020 (0.5345)	-0.0724 (0.5158)	Dummy Government	86,724 (0.6066)	-110,689 (0.1381)
Dummy Institutional	0.2517 (0.9137)	-0.0143 (0.8883)	Dummy Institutional	102,587 (0.6239)	-13.7483** (0.0459)
Volatility	-42,123 (0.1345)	0.1973*** (0.0000)	Volatility	0.2910 (0.9268)	-0.2372 (0.9501)
Growth	11,147 (0.4089)	-0.0533 (0.2587)	Growth	0.6152 (0.8163)	-0.8243 (0.7967)
ROA	-149,528 (0.3247)	0.7284** (0.0147)	ROA	-679,316 (0.6328)	90.4811*** (0.0000)
Size Dummy	0.5609*** (0.0002)	0.0025 (0.9858)	Size Dummy	-106,634 (0.6759)	14.6172** (0.0129)
Adjusted R ²	0.0000	0.2269	Adjusted R ²	0.0000	0.1670

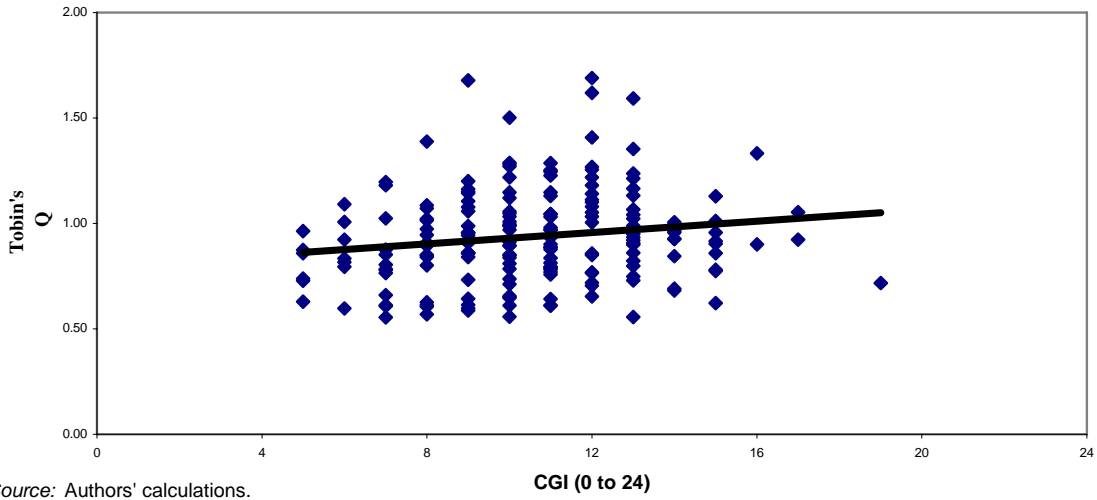
Note: All variables are defined in the Appendix. ***, **, * denote statistical significance at the 1%, 5% and 10%, respectively, and p-values in parenthesis.. Some non significant control variables omitted to save space.

Figure 1. Two Examples of Ownership Structures: CELPE and Brasmotor



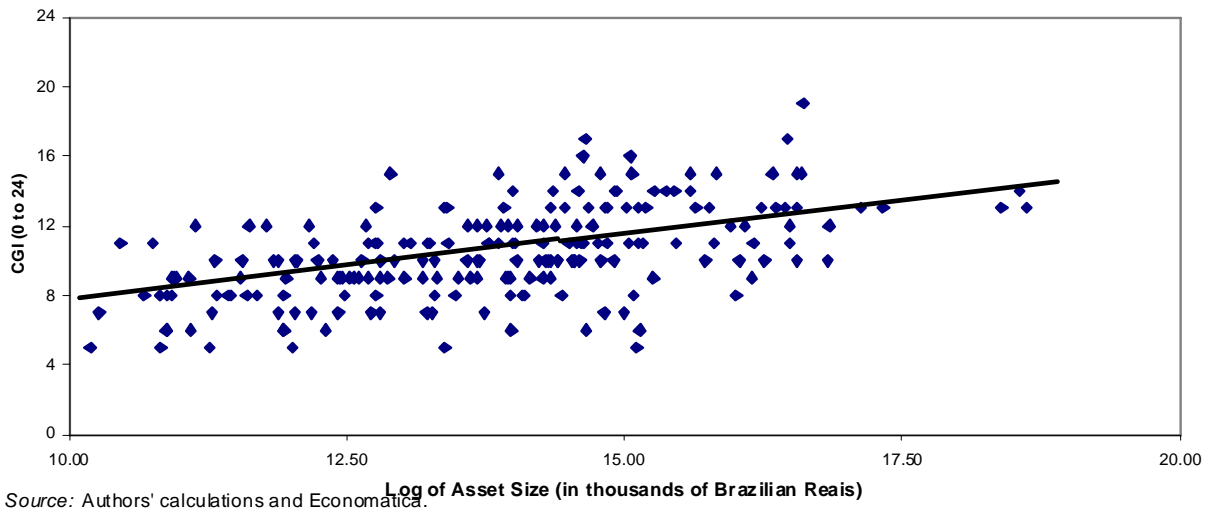
Note: The percentage of the voting capital is denoted by "V" and the percentage of the voting and non-voting capital by "T".

Figure 2. Corporate Governance Index (CGI) and Tobin's Q in 2002



Source: Authors' calculations.

Figure 3. Log of Asset Size and Corporate Governance Index in 2002



Source: Authors' calculations and Economática.

Appendix: Variable Definitions

Variable	Definition
1TDIR	Percentage of total capital (voting and non-voting) owned directly by the largest shareholder
1TIND	Percentage of total capital (voting and non-voting) owned indirectly by the largest shareholder
1V/TDIR	Ratio (wedge) of the percentage of voting capital to total capital owned directly by the largest shareholder
1V/TIND	Ratio (wedge) of the percentage of voting capital to total capital owned indirectly by the largest shareholder
1VDIR	Percentage of voting capital owned directly by the largest shareholder
1VIND	Percentage of voting capital owned indirectly by the largest shareholder
3TDIR	Percentage of total capital (voting and non-voting) owned directly by the three largest shareholders
3TIND	Percentage of total capital (voting and non-voting) owned indirectly by the three largest shareholders
3V/TDIR	Ratio (wedge) of the percentage of voting capital to total capital owned directly by the three largest shareholders
3V/TIND	Ratio (wedge) of the percentage of voting capital to total capital owned indirectly by the three largest shareholders
3VDIR	Percentage of voting capital owned directly by the three largest shareholders
3VIND	Percentage of voting capital owned indirectly by the three largest shareholders
5TDIR	Percentage of total capital (voting and non-voting) owned directly by the five largest shareholders
5TIND	Percentage of total capital (voting and non-voting) owned indirectly by the five largest shareholders
5V/TDIR	Ratio (wedge) of the percentage of voting capital to total capital owned directly by the five largest shareholders
5V/TIND	Ratio (wedge) of the percentage of voting capital to total capital owned indirectly by the five largest shareholders
5VDIR	Percentage of voting capital owned directly by the five largest shareholders
5VIND	Percentage of voting capital owned indirectly by the five largest shareholders
ADR	1 if firm has issued level 1, 2 or 3 American Depositary Receipts (ADRs); 0 otherwise

Variable	Definition
AGR	Dummy indicating the presence of a shareholder agreement
CA/TA	Ratio of current assets to total assets at year-end.
CGI	Corporate governance index, scaled to a value between 0 and 24, taking into account 24 different aspects of the corporate governance structure of the company according to Table 1
CGI Reduced	CGI without questions 4 and 5 in Table 1 which may be correlated to company size.
FOR	Dummy indicating that the largest ultimate shareholder is a foreign investor
FREE	Percentage of outstanding shares available for trading
GOV	Dummy indicating that the largest ultimate shareholder is the Government
Growth	Average annual growth of sales over the past 3 years ending on the day of measurement of Tobin's q
INST	Dummy indicating that the largest ultimate shareholder is an institutional investor
Leverage	Ratio of total (non equity) liabilities to total assets at year-end
NM	1 if firm is listed in levels 1, 2 or <i>Novo Mercado</i> at the São Paulo Stock Exchange; 0 otherwise
P/B	Market value of stock divided by book value of stock
Payout	Cash and stock dividends/Net Income ratio with year-end values.
P/S	Market value of equity divided by net sales
P/CF	Market value of equity divided by EBITDA
Prin 1	Principal component 1. Principal components extracted from the 24 questions that showed eigenvalues greater than 1 and that explained 5% or more of the questions variance. After a Varimax rotation, this factor showed absolute correlation values greater than 50% with questions 17 (0.80), 18 (0.78), and 24 (-0.68) in Table 1. These have to do with the lesser use of non-voting shares to leverage control over cash-flow rights and the free-float (question 24). We called this factor "One share one vote". It is reasonable that the free-float is negatively correlated with the factor because non-voting shares are the most liquid shares in Brazil. If they not used and control is concentrated, than the free-float is less.

Variable	Definition
Prin 2	Principal component 2. Same extraction criteria as Prin 1. After a Varimax rotation, this factor showed absolute correlation values greater than 50% with questions 7 (0.83) and 9 (0.74) in Table 1. These have to do with the board's independence. We called this factor "Board Independence".
Prin 3	Principal component 3. Same extraction criteria as Prin 1. After a Varimax rotation, this factor showed absolute correlation values greater than 50% with questions 13 (0.85) and 14 (0.81) in Table 1. These have to do with being free of corporate governance mal practices inquiries and convictions. We called this factor "Mal Practices Free".
Prin 4	Principal component 4. Same extraction criteria as Prin 1. After a Varimax rotation, this factor showed absolute correlation values greater than 50% with questions 4 (0.50), 10 (-0.63) and 12 (0.71) in Table 1. These have to do with using international accounting standards, board size, and presence of a fiscal board. Smaller companies tend to have smaller boards, no fiscal boards and no international accounting standards usage, thus the negative correlation of this question with this factor. We called this factor "Disclosure Supervision".
Prin 5	Principal component 5. Same extraction criteria as Prin 1. After a Varimax rotation, this factor showed absolute correlation values greater than 50% with questions 11 (0.63), 15 (0.57), and 21 (0.75) in Table 1. These have to do with board member terms, use of arbitration, and generous tag-along rights. We called this factor "Shareholder rights enforcement".
Prin 6	Principal component 6. Same extraction criteria as Prin 1. After a Varimax rotation, this factor showed absolute correlation values greater than 50% with questions 1 (0.71), 5 (0.61), and 22 (0.60) in Table 1. These have to do with disclosure of related party transactions, auditor quality, and pyramids. We called this factor "Related party transactions potential".
PYR	Dummy indicating the presence of a pyramid (indirect structure). LLS (1999) define a pyramid as when there is a public company in the control chain of another public company. We use the term more loosely and call any indirect control structure as a pyramid.

Variable	Definition
ROA	Ratio of operating income to total assets (return on assets) at year-end
Size	Firm size, measured by the natural logarithm of book value of total assets in thousands of Brazilian <i>reais</i> at year-end.
Size dummy	Equal 1 if firm size is in the top quartile and 0 otherwise. We also experimented with size dummies for the top decile, top third, and top half firm size in the sample. Firm size is defined as in “size” above.
Tobin’s q	Ratio of market value to book value of assets. Market value of assets is computed as market value of equity plus book value of assets minus book value of equity at year-end values. The numerator “market value of equity” was computed directly by Economática as the most liquidity stock type (voting or non-voting) market price times the total number of shares (voting and non-voting).
Volatility	Annualized standard deviation of daily Brazilian currency stock returns in the year ending on the day of measurement of Tobin’s q.
VOTE	Percentage of voting capital to total capital