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## CORPORATE VALUATION AND GOVERNANCE: EVIDENCE FROM COLOMBIA

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## Abstract<sup>1</sup>

This paper examines for the first time the association of different ownership and control measures and separation ratios with a firm's value and performance for 108 non-financial firms that traded their stock during the period 1998 to 2002. Large blockholders were found to exert a positive influence upon a firm's valuation and performance, which validates the positive monitoring approach of large shareholders, but it was also found that this relationship is not monotonic, implying that when separation of control and ownership tends to increase, a negative effect is exerted on firm's valuation. This paper also reports the first estimates of a survey of corporate governance practices conducted in 2004 for 43 Colombian non-financial companies. The corporate governance index's (CGI) scores suggest that implementation of good governance in Colombian firms has been slow and poor, as measured by an index average that is below half the maximum attainable value. Regrettably, it was not possible to find any support to recent theories that predict a positive association between good governance practices—as measured by the CGI—and performance. At most, there exists a positive relationship for the sub-index, but the results were not statistically significant in general.

**JEL Classification:** G32, L14, L22

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## **1. Introduction**

The analysis of corporate governance systems has attracted attention in recent years. Some studies have examined the connection between ownership structures and performance, while more recently others have focused on the relationship between corporate governance indexes at the firm level and a firm's valuation and performance. In the first set of papers, researchers have tested two opposite effects of ownership upon performance. On the one hand, large blockholders who have good information on their firms have incentives to monitor managers and then to minimize problems of management entrenchment. This monitoring effect is positive. On the other hand, large blockholders' incentives may be at odds with those of minority shareholders. Some of these incentives can be empire-building, excessive risk-taking, and the like. This has been called the tunneling effect, which is of course negative upon a firm's valuation and performance.

The second set of research has examined firm-level corporate governance mechanisms, and most has focused on cross-country analyses where the emphasis is on the effect upon governance of the legal systems across countries. La Porta, López-de-Silanes and Shleifer (1999) argue that an investor's protection tends to be greater when the legal environment is stronger, and therefore his willingness to invest tends to increase. They tested whether corporate governance helps explain a firm's valuation and performance, and found a strong positive association.

This paper addresses both types of research. It first reports results that link different ownership and control measures and separation ratios with a firm's value and performance for 108 non-financial firms that traded their stock during the period 1998 to 2002. After controlling for a variety of control variables, evidence was found that large blockholders exert a positive influence upon a firm's valuation and performance, which validates the monitoring approach, but it was also found that this relation is not monotonic, implying that when the separation of control and ownership tends to increase, a negative effect is exerted on a firm's valuation.

This paper then reports the first estimates of a survey of corporate governance practices conducted in 2004 for 43 Colombian non-financial companies. These practices were turned into a corporate governance index (CGI) that includes information on six different areas: independence, accountability, fairness, responsibility, transparency and discipline. The results suggest that the implementation of good governance in Colombian firms has been slow and poor,

as measured by a CGI average that is less than half of the maximum attainable value. The Colombian stock market is very undeveloped and is actually shrinking if one measures it by the number of firms that have traded their stocks in the last five years. This paper, then, tries to address the question of whether better governance practices lead to better (accounting) performance. Using standard OLS and correcting for endogeneity, the results were very disappointing. Performance is not explained by good governance practices. This is the first attempt that has been made in Colombia to try to verify that hypothesis, and despite the outcome, this study helps broaden the understanding of corporate practices in emerging economies like Colombia.

This paper is divided into four sections after this introduction. The following section consists of a theoretical review of relevant literature on the relation between ownership, control and a firm's valuation and performance, and presents three working hypotheses. Section 3 presents a sample selection, regression specifications, and a data description, while Section 4 describes the main econometric findings and presents the fourth hypotheses. Section 5 concludes and discusses policy implications.

## **2. Theoretical Framework and Working Hypothesis**

Two of the most important features of modern corporations in most economies are the separation of ownership and control, and the concentration of equity among shareholders. Berle and Means (1932) characterize the modern corporation in the United States as the diffusion of equity among a large number of small investors, none of whom could individually take control over the corporation. La Porta, López-de-Silanes and Shleifer (1999), however, find that such a characterization does not apply to other economies except the United Kingdom. Their work clearly shows that modern corporations around the world exhibit very high degrees of ownership concentration and a strong separation between cash-flow rights and control rights.

Agency problems arise in both types of corporations. On one hand, the corporations examined by Berle and Means (1932) indicate that management can be the ultimate controller of the firm, and that may create some forms of agency problems. Since small individual and dispersed shareholders cannot monitor managers, due to a free-riding problem, managers with a very small ownership or no ownership at all are able to become the ultimate controllers of firms. Management entrenchment represents an extreme form of this agency problem. On the other

hand, when ownership is very concentrated, new types of agency problems appear. Concerns are now related to the divergence of interest between blockholders and minority shareholders. Large shareholders can transfer “resources from the firm for (their) own benefit through self-dealing transactions ...but also [through] asset sales and contracts such as transfer pricing advantageous to the controlling shareholding, excessive executive compensation, loan guarantees, expropriation of corporate opportunities and so on.... [The] controlling shareholdings can increase their share of the firm without transferring any assets through delays in share issues[,]. . . insider trading ...or any other financial transactions that discriminate against minorities” (Johnson et al., 2000: 22-23). This kind of conduct has been called “tunneling” or search for private benefits of control (see also Bertrand, Mehta, and Mullainathan, 2002; and Holderness, 2003).

From a different perspective, some authors have argued that large blockholders can have a positive effect on a firm’s valuation and performance. For instance, Shleifer and Vishny (1986) argued that, based on the assumption that large shareholders are disconnected from management, a large shareholder would have an incentive to carry out some *monitoring activity* of the incumbent management. Hence, some degree of ownership concentration could improve control over management and so increase *firm value*. This second type of large blockholder behavior represents the “monitoring of management view,” which clearly must have a positive effect.

Furthermore, it has also been extensively documented (see La Porta et al., 1999; Barca and Betch, 2001; Denis and McConnell, 2003; Holderness, 2003; Chang and Choi, 1988; Ghemawat and Khanna, 1998; Khanna and Palepu, 2000a, and 2000b; Bianco and Casavola, 1999; Khanna and Rivkin, 2001; and Bae, Kang and Kim, 2002) that in addition to the fact that most firms are owned by large shareholders, they in most cases belong to business groups as well.<sup>2</sup> This dimension of ownership can deepen the agency problem of tunneling outlined above. However, as Khanna and Palepu (2000a) have found, firms associated with business groups can enjoy some benefits, what the authors call the value-added approach of being part of a group, due

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<sup>2</sup> Of course, the literature has also acknowledged that some of the main rationale behind creating business groups is finding ways to retain more control through different ownership schemes. Larger stakes in a company have not been the only way to retain control and reduce managerial rent-seeking, however. As the literature on the subject has shown (see Betch and Mayer, 2001: 7-12), incumbent shareholders can also retain control by issuing dual shares or shares with limited (or no) voting rights, by pyramidal schemes in which a holding company controlled by the controlling shareholder holds shares in the company, or by cross-shareholdings.

to a reduction in transaction costs, better chances of getting financial resources in very illiquid capital markets, reduction in diversification costs and the like.

Therefore, from a theoretical perspective, there are no expected unambiguous effects that should dominate. It will depend on whether the monitoring effect (a positive effect that supposes large blockholders can induce large profits and better share prices) will outweigh the tunneling or rent-extraction effect (a negative effect that supposes that blockholders will be rent-seekers and then be highly risk averse). In the last few years, research has been studiously examining how those agency problems have operated in firms in developed and developing countries. In particular, it has focused on how ownership relates to a firm's valuation and performance. Results have been mixed, validating either the tunneling view, also known as the monitoring effect, or the value-added approach. For instance, in terms of negative effects, Demsetz and Lehn (1985), and Demsetz and Villalonga (2001) found that, after controlling for capital structure, firm size, stock market risks, and other variables, the ownership structure of U.S. corporations had *no* significant effect on firm performance. Gibson (2003) investigated the role of large shareholders in emerging-market corporate governance, where he defined a large shareholder as one who directly holds at least 20 percent of the firm's equity (Gibson, 2003: 244). He found that the "link between earning/assets or the change in earnings/assets and CEO turnover is statistically significantly weaker at firms with a large shareholder" (Gibson, 2003: 245). This result suggests that the existence of large shareholders within a firm has a negative effect on corporate governance.

Lehman and Weigand (2000) also found a *negative* effect of ownership concentration on firm performance (ROA) for 361 German companies (183 of them listed companies). In a study of Turkish corporate governance using a sample of 257 listed companies in 1998, Yurtoglu (2000) also reported, that high stakes of ownership and pyramidal structures have a negative effect on performance measured by ROA and market-to-book ratios and dividend payments, although this effect is small.

In terms of the positive effect, i.e., the monitoring or value-added approach, Wiwattanakantang (2001: 325), using firm-level data for 270 non-financial listed Thai companies in 1996, found that the presence of controlling shareholders is *not* "detrimental to the corporate value." On the other hand, Gispert (1998: 534), who studied the Spanish case, also found that "rotation of board members is inversely related to firm performance, and therefore



large shareholders *discipline* board members as happens in other countries with similar dominant ownership structure.” Pedersen and Thomsen (2003) examined the relationship between ownership structure and firm value for a sample of 214 companies in 11 European countries. Controlling for nation effects and for system effects (stock market efficiency, or the level of investor protection), and using a simultaneous equation approach, they found that ownership concentration, measured by the fraction of shares held by blockholders, has a *positive* effect on firm value. Chen (2001) examined the relationship between ownership structure and performance for a sample of 434 manufacturing firms listed on the Chinese stock exchanges and found that ownership measured by the sole top shareholder is not statistically significant in explaining valuation of firms. However, when he used ownership concentration in terms of the 10 largest stockholders, he found a *positive* relationship, validating the value-added approach.

Empirical works on the effect of a firm’s affiliation with a business group have also flourished recently. Earlier studies on the subject were conducted on samples of Korean corporate firms, known as Chaebols, (see Chang and Choi, 1988) and Japanese corporate firms (known as Keiretsus), and showed a positive relationship between being part of a Chaebol (or Keiretsu) and economic performance, measured by the average annual rate of profits. Later, Bianco and Casavola (1999) tested how the identity of a controlling shareholder and his belonging to a business group affected company performance in Italy. They found that the identity of the controlling shareholder has a (weak) positive effect on performance, suggesting that monitoring prevails. However, they also found that firms belonging “to groups appear to be more prone to managerial error and to have a lower return on investment” (Bianco and Casavola, 1999: 1065).

More recently, Khanna and Palepu (2000a) found that for Indian groups there exists a quadratic relationship between firm performance and affiliated group diversification. However, in multivariate regression analysis, their findings clearly suggest that as “group diversification increases, the performance of group affiliates declines relatively to that of unaffiliated firms until the group reaches a threshold diversification level” (Khanna and Palepu, 2000a: 869). Recent research on East Asian economies has shown some inverse relationships. For instance, Bae et al. (2002) tested in Korea the two main competing hypotheses related to business groups: the value-added view and the tunneling view, and found that “minority shareholders of chaebol-affiliated firms lose from the acquisitions but the controlling shareholders of these firms gain from them.”

For India, Bertrand et al. (2002) also show that tunneling can be more common within business groups since the controlling shareholder(s) can transfer resources, profit, etc, from firms where the shareholder(s) have low cash-flow rights to firms where the shareholder(s) have high cash-flow rights.

Claessens, Djankov, and Klapper (2000) found for a sample of about 1,000 firms in East Asia and Chile that business groups are formed to diversify risks internally, since a firm's market risks are influenced by several factors. They note that, all in all, business groups are *not* beneficial to shareholders. In a similar study by Khanna and Rivkin (2001) for 14 emerging economies, including five Latin American countries (Argentina, Brazil, Chile, Mexico and Peru), the authors found mixed effects from belonging to a business group: 1) group affiliates enjoy higher profitability than unaffiliated firms in three countries, 2) weaker results exist in three other countries, including Peru; 3) in Argentina, group firms appear to perform worse than independents; and 4) a less negative result exists for the rest of countries, which include Brazil, Chile and Mexico.

Holderness (2003), in a very illuminating survey on blockholders and corporate control, poses four questions associated with blockholders: "How prevalent are blockholders? What motivates block ownership? What impact do blockholders have on major corporate decisions? And what impact do blockholders have on firm value?" (Holderness 2003: 60-61). After reviewing some papers on the subject, he draws the following conclusions, mostly for the United States:

- i. Insiders own approximately 20 percent of a randomly selected, exchange-listed corporation in the United States.
- ii. Block ownership is motivated both by the shared benefits of control: blockholders have the incentive and the opportunity to increase a firm's expected cash flow that accrues to all shareholders; and by the private benefits of control: blockholders have the incentive and the opportunity to consume corporate benefits to the exclusion of smaller shareholders.
- iii. Surprisingly few major corporate decisions have been shown to be different in the presence of a blockholder. One exception is that external blockholders appear to monitor the form and level of managerial compensation. Conversely, there is little evidence that blockholders affect leverage.
- iv. Ownership concentration appears to have little impact on firm value."

The following section presents the main hypotheses related to the effects of block ownership on firm valuation and performance that are tested empirically in the econometrics section.

### ***2.1 Hypotheses***

Gutiérrez, Pombo and Taborda (2005) show that ownership concentration in Colombian listed companies is high, as measured either by the percentage of the largest shareholder, *CR1*, or by *CR4*, the blockholding of the four top shareholders. They also present the first results of separation between cash-flow rights and control rights for both affiliated and unaffiliated firms, and find that this measure is high for affiliated firms (and for unaffiliated ones, too). That paper leads to the presentation of the following hypotheses in this paper:

**Hypothesis 1:** Higher cash-flow rights (direct ownership) and direct voting rights by the four largest controlling shareholders are associated with higher corporate valuation and better performance.

**Hypothesis 2:** Higher separation of voting from cash flow rights by controlling shareholders is associated with lower corporate valuation and worse performance.

**Hypothesis 3:** Affiliated firms with one or several controlling shareholders display higher valuation and better performance than non-affiliated firms.

## **3. Empirical Design, Sample Selection and Data**

This section describes regression specifications, the resulting samples of firms chosen, their sources and selection and the construction of main variables. It also briefly describes the construction of the data on ownership and control structures and separation ratios between ownership, which is explained in more detail in Gutiérrez et al. (2005).

### ***3.1 Regression Specification***

Two types of specifications will be tested. On the one hand, factors that determine valuation and performance measures will be examined. On the other, the factors that can explain corporate governance, measured by an index constructed with a survey, will be studied. In both cases, this

paper will make use of variables that capture some corporate governance mechanisms like ownership and control, and of the Colombian corporate governance index (when applicable), while controlling for industry and other standard control variables. The following cross-section regression will be estimated for *one* of the three samples:

$$Valuation_i = \alpha + \beta_1 OWN_i + \beta_2 (OWN)_i^2 + \beta_3 Wedge_i + \beta_4 BGA + \beta_5 Lyears + \sum_{k=1}^K \delta_k X_{k,i} + \sum_{j=1}^J \phi_j SIC_j + \varepsilon_i \quad (1)$$

where Valuation (or performance<sup>3</sup>) is either *Tobin's q*, market to sales (MTS) or market-to-book ratio (MTBR);  $\alpha$  is a constant; *OWN* is direct ownership by the four largest shareholders;  $(OWN)^2$  is ownership to the square; and *Wedge* is a measure of the separation of control rights from cash-flow rights. This measure takes the inverse of the *SRI* to get the estimates. *BGA* is the affiliation of a firm with a business group and *Lyears* is number of years a firm has been listed. *X*'s are control variables; *K* is the number of control variables; *SIC* is an industry dummy; *i* is the firm; and  $\varepsilon$  is an error term.

Equation (1) is estimated for three different samples that are explained in detail below. The regressions using pooled-OLS, FGLS and panel data are estimated depending on the structure of the data set and variables available. For instance, for the small sample of 40 firms that responded to the questionnaire of corporate governance, FGLS cannot be performed since only one observation per firm is available. On the other hand, FGLS and panel data regressions can be run for the balance panel data of firms for the period 1996-2002. .

To assess the relationship between corporate governance index and firm attributes, each firm's corporate governance score is run on other attributes of governance, controlling for other characteristics of firm. The following equation is estimated:

$$CGI_i = \alpha + \beta_1 SalesGrowth_i + \beta_2 Size_i + \beta_3 K / S_i + \beta_4 BGA + \beta_5 Lyears + \sum_{k=1}^K \delta_k X_{k,i} + \varepsilon_i \quad (2)$$

where the vector *X* contains a set of further control variables. As Durnev and Kim (2005) stress, one must be cautious when drawing inferences from the results of this equation because of the

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<sup>3</sup> When the dependent variable is a performance variable, returns on assets (ROA) or returns on equity (ROE) will be used. As explained in the main text, Tobin's q requires having some market valuation on common stocks, which unfortunately is not available if a firm's stocks are not listed.

potential problems of endogeneity. Nonetheless, in order to reduce endogeneity, robustness checks and regressions were run using instrumental variables that will be detailed below.

### ***3.2 Sample Selection***

The main data was taken from the Superintendence of Securities (SS), the regulatory body responsible for inspecting and overseeing Colombian publicly listed companies, and was supplemented with data from the Superintendence for Commercial Enterprises, the body responsible for overseeing other large *non-listed* companies. Data from both sources provided financial statements and information on the 20 largest stockholders for a complete sample of 108 Colombian *non-financial* firms that had their stocks traded in the stock exchanges for the period 1998-2002.

This research grouped the data in three different ways. The first sample included all Colombian non-financial companies whose stocks were traded at least *once* in a year during 1998 to 2002. It means that all Colombian companies that traded their stocks during that period were included, as were the year(s) in which the stock was actually traded, while those years in which their stocks were not traded were excluded.

This was done for the following reasons. First, Colombian companies can issue several types of securities such as stocks, bonds, and commercial papers. However, stocks are the only securities that have variable returns depending on how well a firm is managed and how well its corporate governance is conducted. Bonds and other types of fixed-return securities can be assimilated to bank loans. Second, reliable data for (average) annual market prices of stocks is almost non-existent and/or difficult to obtain for years other than the period selected. Since one of the objectives of this paper is to test how valuation-firm measures (like *Tobin's q*) are related to ownership and other control variables, it was essential to obtain the stock market prices, and that was only possible for firms that satisfied the first and second points. Third, the data were limited to just the year(s) in which the stocks were actually traded at least once during that year, making it a complete, unbalanced panel. The rationale for doing this stems from an interest in studying how the relationships of interest evolved during that period for firms that traded their stocks during all five years versus those that traded for four years or less. For all samples, the primary industry in which each firm operated was determined using the United Nations' two-digit Standard Industrial Classification (SIC) system.

The *second* sample consists of the same 108 firms but expands the number of years to make the panel as balanced as possible. Thus, 1998 was established as the starting point of research for all companies regardless of whether a firm had (or did not have) its stocks listed that year, or whether they were traded.<sup>4</sup> This makes the panel a balanced one. However, data from 1998 to 2002 do not exist for all of the firms since some of them were created during that period; therefore, their panel will be smaller. One important implication of this second sample is that it is possible to observe how different performance and ownership relationships differ when a firm's stocks were listed as opposed to when they were not. The drawback of this sample is that it is impossible to estimate a firm's valuation measure, like Tobin's  $q$ , since for some firms and for some years, market prices are not available. To overcome this, more general accounting measures were relied upon, such as return on assets (ROA) and return on equity (ROE). This will be explained in more detail below.

The last sample is composed of only 43 firms that were listed in the Colombian Stock Exchange in 2003 and 2004. That number is not arbitrary, however. It resulted from the number of companies that kindly responded to a questionnaire about corporate governance practices from a universe of about 99 non-financial firms.

Regardless of the sample, some criteria were used to exclude firms from the analysis. The first was the exclusion of financial firms, which are regrettably very important in a small stock market like the Colombian one, and of public utilities companies. The main reason is that these types of corporations are subject to very specific regulations and so their performance and valuation measures are not strictly comparable. Lastly, other firms were excluded if reliable information on either stock prices or financial statements could not be found.

### **3.3 Data**

#### *3.3.1 Ownership and Control Definitions*

Berle and Means (1932) stressed the difference between ownership and control. In their work, they estimated separation of ownership and control among the 200 largest American corporations. For them, it was clear that "Since direction over the activities of a corporation is exercised through the board of directors, we may say for practical purposes that control lies in

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<sup>4</sup> However, it has not been possible to determine whether some firms were listed on the stock exchange from 1996-1997 for issuing securities other than shares.

the hands of the individual or group who have the actual power to select the board of directors (or its majority), either by mobilizing the legal right to choose them—‘controlling’ a majority of the votes directly or through some legal device—or by exerting pressure which influences their choice” (Berle and Means, 1932: 69). However, corporate research for many years focused only on the structure of corporate ownership, setting aside the overwhelming differences between control and ownership. In the United States, the main early works were conducted by Demsetz and Lehn (1985) and Mork, Shleifer, and Vishny (1988), who used corporate ownership estimates to test whether such measures had any bearing on a corporation’s profitability. Prowse (1992) conducted similar research on Japanese corporations.

More recently, La Porta et al. (1999) returned to the seminal analyses of Merle and Means by looking at what they called “ultimate owners.” In their words “...a corporation has a controlling shareholder (ultimate owner) if this shareholder’s direct and indirect voting rights in the firm exceed 20 percent” (La Porta et al., 1999: 476). That percentage was estimated following a chain of control’s links of votes. Claessens, Djankov, Fan, and Lang (2002) also studied the separation of ownership and control and used a slightly different measure than La Porta et al. They estimated the separation ratio as follows: “suppose that a family owns 11 percent of the stock of firm B. We then say that the family controls 11 percent of firm B—the weakest link on the chain of control rights. In contrast, we say that the family owns about 2 percent of the cash-flow rights of firm B, the product of the two ownership stakes along the chain.” In both studies, researchers used different cutoff points to determine effective control.

This analysis follows a more thorough approach based on an input-output methodology that yields not only the ultimate owner, as in La Porta et al. (1999), but also any blocks of *selected* ultimate owners (see Brioschi, Buzzachi and Colombo, 1989; Ellerman, 1991; and the recent papers by Chapelle and Szafarz, 2002; and Chapelle, 2004). Gutiérrez et al. (2005) provide a thoroughly detailed explanation of the methodology and present general estimates for a sample of about 148 Colombian companies, some of which will be used here when testing the hypothesis.

The first variable estimated is direct ownership stakes (cash-flow rights) held by the largest, the two largest, the three, the four, and the 10 largest shareholders ( $CR_1$ ,  $CR_2$ ,  $CR_3$ ,  $CR_4$ ,  $CR_{10}$ ). To assess potential non-linearities, concentration ratios to the square (i.e.,  $[CR_4]^2$ ) are included. The input-output methodology also allows for an estimation of what is known as

integrated ownership (direct and indirect voting rights) and, when combined with the direct ownership, it is possible to estimate different measures of the separation ratio for all shareholders, for the largest one, for the two largest ones, and the four largest ones. The ratio of cash-flow rights to voting rights of the all shareholders, the largest one, the two largest, and four largest, respectively, are denoted by  $SR_n$ ,  $SR1$ ,  $SR2$ , and  $SR4$ . The separation ratio between ownership and control goes from zero to one; it is equal to one when the separation is complete and zero when it is nil. By assumption, firms that do not belong (or were not identified as belonging) to any (known) business group get one. Lastly, following Claessens et al. (2002), and with the above information, three additional wedge variables can be estimated. The first one is the difference between control rights and cash-flow rights, known as  $Dif1$ . This is a continuous variable. The second one,  $Dif2$ , is a dummy variable that takes the value of one if control rights exceed cash-flow rights, and zero otherwise. The last one,  $Dif3$ , is a dummy variable that takes the value of one if ownership stakes exceed the control rights of a given number of chosen shareholders and if this difference is above the median separation, and takes zero otherwise. These variables can be constructed for the (difference of ownership from control) top one, the top two, the top three shareholders and so on. Here it has been constructed only for the four largest shareholders.

Given some constraints on disclosure of information, it was not possible to provide names of individuals as ultimate owners, but a taxonomy regarding whether a firm is widely held or closed was constructed. This last information is only available for the econometric exercise of relating governance and performance. In the empirical section of this paper, dummies are included that account for firm affiliation to a business group and for the presence of a foreign stockholder among the five largest shareholders in each firm.

### *3.3.2 Valuation and Performance Measures*

This study focuses on Colombian firms listed during the period 1998 to 2002 and is supplemented with a preliminary analysis of a survey of corporate governance practices for the year 2004. The main data set is then composed of those firms that traded their stocks in at least one year during 1998 to 2002. The main reason for obtaining this sample was to be able to



estimate market valuation measures like Tobin's  $q$ .<sup>5</sup> The estimation of *Tobin's  $q$*  follows Black, Jang, and Kim (2003), who defined it as the ratio between the market value of assets to the book value of assets. As in the case of Korean firms, Colombian accounting and tax regulations require that all firms update their book values yearly, so the use of the book value of assets must be very close to replacement costs. Market value of assets was estimated as the sum of book value of debt plus book value of preferred stocks plus market value of common stock. In turn, the yearly market value of common stocks was calculated as the product of the average market price times the number of common stocks. The book value of liabilities (in Colombian pesos) was taken as the book value of debts.

Researchers in the field of finance have recently suggested that for emerging economies, Tobin's  $q$  could not be a good indicator of firm value because of some measurement problems. They have proposed further related value measures. The first one is market-to-book ratio, *MTBR*, defined as the ratio between market value of common stock (as defined above) and book value of common stock; this latter estimated as the sum of the book value of assets minus the book value of liabilities minus the book value of preferred stock. The second measure is market-to-sales ratio, *MTS*, market value of common stock divided by sales.

Unfortunately, firm market value cannot be obtained when firms are not listed or when they delist or do not trade their stocks. Since two of the samples in this paper are composed of firms that fall into one or more of those categories, two accounting performance measures were also estimated, such as Returns on Assets (*ROA*) and Returns on Equity (*ROE*) following standard definitions.

### 3.3.3 General Overview of Ownership, Voting Rights and Separation Ratios

Table 1 offers the reader a general view of the statistics on ownership, voting rights and separation ratios. The first two columns show industry classification and the number of firms in each of them. Then, the table presents averages of main ownership and control variables. These are the cash-flow rights (*CR<sub>1</sub>*, *CR<sub>2</sub>*, *CR<sub>4</sub>*, *CR<sub>10</sub>*) and the control rights (*Voting 1*, *Voting 2*, *Voting 3*, *Voting 4*) for the largest, the two largest, three and four largest shareholders. After them are the ratios of separation between ownership and control (*SR1*, *SR2*, *SR3*, *SR4*); the *Wedge* at the

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<sup>5</sup> Average market prices for Colombian firms are not quite updated and data sets usually present some differences. When a firm is not listed in the stock exchange, or retired, its market price is not reported, in which case it is impossible to obtain almost *any* market valuation.

cutoff point of 10 percent; and three variables closely related to governance and ownership and control: whether a firm is or is not affiliated with a business group, whether there is a foreign investor among the five largest shareholders, and a variable that captures how much a firm's stocks were traded in a year during the times the Exchange was open.

On average, for the period 1998 to 2002, most listed firms were located in six out of 20 industry sectors, a great deal of them in manufacturing sectors (such as the manufacture of pottery, china, glass, cement, plaster, food; beverages and tobacco, textiles, wearing apparel and leather products), and in financially related sectors such as investment funds. Direct ownership of the largest shareholder (CR1) ranged, on average, between 12 percent in firms involved in agriculture, livestock, and forestry production to 56 percent in firms involved in public administration, education, community, recreational and household services. Only in the basic metal industries was the largest blockholder on average close to directly controlling the firm. Looking at the CR2 in about eight sectors, the two largest shareholders had, on average, control of their firms. Control of the firms by the four largest shareholders was guaranteed in 11 industries. And in only *one single* sector was control not obtained by the direct ownership of the 10 largest shareholders. A similar picture can be seen with the voting rights variables, although it is a bit more concentrated because in 15 sectors the four largest shareholders represented more than 50 percent of direct and indirect votes. Firms affiliated with business groups were present in most sectors.

It is especially important to examine firms in investment funds. The dummy has a value of one, meaning that all of them belonged to business groups. This is not surprising since these types of firms are the *core holdings* of the groups. Foreign investors were very rare. In nine industry sectors, there was no firm with at least one single investor among the five largest shareholders. The presence of foreign ownership was important in firms located in paper, paper products, publishing and basic metal industries. Lastly, in only one sector—wholesale and retail trade—were a firm's shares actively traded during a year. In 12 industries, shares were very illiquid since they were traded in less than 10 percent of the number of days the Exchange was open.

Since association with a business group is a feature of listed Colombian companies, Table 2 reports the means and medians of the same variables presented in Table 1, but split into two panels: firms that are affiliated with business groups and non-affiliated firms. One surprising

result is seen. Non-affiliated firms are, on average, *more concentrated* and retain *more control* than affiliated firms. The rationale can be that those firms may feel more insecure given the weak legal corporate framework, and so their float is very low. They trade only to comply with minimum regulations. But more research must be done to discover a more in-depth explanation.

#### *3.3.4 Other Variables Related to a Firm's Governance*

The preceding section described measures of ownership, control and the separation ratios. From the separation ratios, Durnev and Kim (2005) were followed and *Wedge* was defined as a dummy equal to one if control exceeds ownership by some percentage, and zero otherwise. Two cut-off points were selected: 10 percent and 30 percent. The former is suggested by La Porta et al. (1999), while the latter was chosen because it is the average of the *CRI* measure found in Gutiérrez et al. (2005). A priori, one could either expect a positive or negative relationship with a firm's valuation.

Firm age is another control variable included in testing the relationship between governance measures and a firm's performance. It is said that older firms are likely to have lesser growth rates and so should be valued less or have lower performance. Since data availability precluded the use of that variable, it was proxied by using the number of years a firm has been listed in the stock exchange, *Lyears*. Information on this variable was found in the Colombian Stock Exchange. As in Black et al. (2003), a negative relationship between it and valuation and other performance measures is expected.

Colombian capital market restrictions on foreign capital were eliminated by the early 1990s. Recently, McKinsey & Company published the results of a survey that gathered responses about investment intentions from over 200 institutional investors, who together managed approximately US\$3.25 trillion in assets (see McKinsey & Company, 2000: 1). Among the main findings of that survey was that foreign investors would pay, to invest in Colombian companies with good governance, an average premium of 27.2 percent. The presence of foreign ownership, *FO*, was then controlled among the first five largest shareholders using a dummy with a value of one in case there was foreign ownership, and zero otherwise.

Lastly, one mechanism of governance is the board of directors. For the small sample of surveyed firms, it was possible to control for the size of the board of directors, *Members*. With respect to the number of members of board of directors, results have been ambiguous (see

Bhagat and Black, 1999; and Hermalin and Weisbach, 2003). The questionnaire (discussed below) asked how many members were on the board. In Colombia, the board of directors is composed of its principals and its representatives, and since the Commercial Code makes all of them liable as legal representatives, the sum total was included. A positive relation with performance was expected due to the incentive effects of monitoring that the board exerts on management. Lastly, *Trading* is a variable that can be seen in percentage terms. It shows the ratio of the numbers of days a firm's stocks were traded during a year to the total days the stock exchange was open.

### 3.3.5 Other Control Variables

Literature on corporate governance has determined a commonly used group of standard control variables. All variables are expressed in 1998 Colombian pesos.

Sales and assets have been extensively used as measures of firm size. Some authors provide valuable insights as to why this variable is a useful control. For instance, Klapper and Love (2004: 713) argue "the effect of size is ambiguous (on governance) as large firms may have greater agency problems and, therefore need to compensate with stricter governance mechanisms." Durnev and Kim (2005: 1474) suggest, "Because larger firms tend to attract more attention and may be under greater scrutiny by the public, size may affect governance structure." Himmelberg, Hubbard, and Palia (1999: 364) state, "Firm size has an ambiguous effect a priori on the scope of moral hazard." They argue that large firms are more prone to monitoring and agency costs so (managerial) ownership should be greater. But, on the other hand, large firms may have greater economies of scale in monitoring by large stockholders (management in their case) and by rating agencies that may lead to a lower need of large ownership stakes in the firm. This paper primarily uses sales<sup>6</sup> (*LRSales*), though assets (*LRAssets*, in 1998 Colombian pesos) is also used as an alternative. And as in most studies, firm size appears as the natural log of the variable.

A second variable controls for a firm's investment opportunities. Klapper and Love (2002); Black et al. (2003); Himmelberg et al. (2001); and Durnev and Kim (2005), among others use some type of average growth rate of sales. Of the potential effect of this variable on performance (and governance), Klapper and Love (2002) say that "small firms may have greater

opportunities and, ...(may)...be in greater need for external finance and better governance mechanisms.” A positive relation with firm value would be expected. To proxy for growth opportunities, a moving average of the three previous real annual percentage growths in operating income,<sup>7</sup> *GrSales* (in 1998 Colombian pesos) is included.

Most research on the subject tends to control for intangibles, too. Durnev and Kim (2005); Black et al. (2003); Himmelberg et al. (1999); and Demsetz and Villalonga (2001), among others, controlled for what they call discretionary spending. This category consists of expenditures in research and development, advertising, and the like. Most of the measures are flow variables but some authors also use stock variables to proxy intangibles (see De Jong, 2002). Since financial reported values for either research and development or advertising spending could not be obtained, the ratio between fixed capital (property, plant and equipment) and operating income is used. One should expect a negative relation with firm value, since the market can value intangibles more than their actual book values.

A control variable for leverage is included that proxies as the debt-to-asset ratio, *DebtRatio*. The effect of leverage on firm value is ex-ante ambiguous.

Industry dummies, *SIC<sub>i</sub>*, are controlled for to account for differences in asset structure, market competition, and other idiosyncratic aspects, which may affect firm valuation, ownership or corporate governance. Industries are classified via the two-digit United Nations Standard Industry Classification.

### ***3.4 Data and Construction of Colombian Corporate Governance Index***

#### ***3.4.1 Some Insights***

Following Jensen (1993), four mechanisms of corporate governance are worth studying. The first one refers to legal and regulatory mechanisms; the second is internal; the third is external; and the last is product-market competition.<sup>8</sup>

However, is evident that for most emerging economies, the third and last mechanisms are less valuable since the main mechanism of the third group, takeovers, is almost nonexistent given

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<sup>6</sup> Actually, this analysis makes use of operating income instead of sales. The difference between these two variables is small, though.

<sup>7</sup> To illustrate, the annual real growth rates of every of the last three years was estimated and then averaged.

<sup>8</sup> A slightly different classification of mechanisms is found in Agrawal and Knoeber (1996). These are: shareholding of insiders, institutions, and large block-holders; use of outside directors; debt policy; the managerial labor market; and the market for corporate control.

the high degree of control among the largest shareholder(s), and for the fourth group, one assumes that either in case of the agency problems of management entrenchment or in the case of ownership concentration, firms are efficient under the market structure in which they compete. This, the mechanisms belonging to the first two groups remain. Although a country's legal system is given and is the same for all the firms, firms with good governance in weak legal systems like the Colombian case would try to differentiate themselves from badly governed ones going beyond the legal system. Or else, in a more global and interrelated capital markets, firms that want to get capital in external markets need to adopt internationally recognized corporate governance standards that are usually stricter than those imposed by domestic legal rules. Regarding the second group, the main mechanisms are the board of directors, executive compensation and ownership, minority privileges, and the like.

Research on corporate governance has been mostly conducted on mechanisms like ownership and boards of directors. More recently, research has turned to the use of surveys to obtain information regarding how firms set the different governance mechanisms included in groups one and two. That information has come primarily from reports from specialized international agencies like Credit Lyonnais Securities Asia (CLSA), Deminor, Standard and Poor, and others, which calculate indices of corporate governance rankings. For instance, Klapper and Love (2002) used the CLSA ranking as a proxy of firm-level corporate governance for 495 companies across 14 emerging economies. They then address the question of how firm-level performance is explained by that index. In a cross-country study on 859 firms in 27 countries, Durnev and Kim (2005) also used the CLSA ranking as a proxy of firm corporate governance and complemented it with the Standard and Poor's measure of corporate disclosure practices (as a proxy of firm disclosure) to test whether that index could explain a firm's performance.

Country studies on corporate governance have not been abundant, however. Drobetz, Schillhofer, and Zimmermann (2004) constructed a corporate governance rating for 91 German public firms. Using a questionnaire that asked about a variety of corporate governance practices, they looked at how firms have complied voluntarily with the recently issued German corporate governance code. They also tested how the index can explain a firms' performance and valuation indicators. Black et al. (2003) also constructed an index of corporate governance for a (very large) sample of Korean listed firms from a questionnaire designed by the Korean Stock

Exchange. In this case, the authors took the survey's results and proceeded to design the index. Black (2001) used a corporate governance ranking developed by a Russian investment bank to test whether this ranking was correlated to firm value. The ranking ranges from zero to 60, with 60 being the worst corporate ranking. Finally, Gompers, Ishii and Metrick (2003) constructed an index of corporate governance for a sample of U.S. firms, based on some anti-takeover defense provisions along the lines of the third group of governance mechanisms outlined above.

### *3.4.2 Questionnaire Design and Construction of the Corporate Governance Index*

This study follows the common procedure of sending a questionnaire to Colombian public companies based on a sample of questions designed by IDB project directors. The questionnaire was clearly inspired by the CLSA questionnaire. Some key differences do exist, however.

The first difference has to do with the questionnaire's respondents. The questionnaire used here was sent directly to a company's main officers, while in the case of CLSA, its own team of financial analysts responded to the questionnaires. The second aspect regards the questions themselves. The questionnaire used here *initially* consisted of 67 questions organized around four criteria: general principles, senior management and the board, shareholders and disclosure. The second criterion consisted of 25 questions, and the third 20, with 11 for each of the two others. Unlike the CLSA, there was not any ex-ante weight assigned to any criterion. However, the questionnaire was subject to revisions and/or refinements *after* answers were received, and some questions were deleted.

The third aspect is related to the way the questions were posed. For instance, the CLSA posed some questions in this manner: "Is it true that there has been no controversy....?" A yes-answer was then assigned a one and a no-answer received a zero. In the questionnaire used here, unfortunately, some questions were posed as: "Has the board received any complaints from shareholders in the last three years?" (Survey question 32). It is clear that a yes-answer has to get less valuation than a no-answer. For all other questions, a "yes" answer is interpreted as a pro-shareholder action and was assigned a value of one.

Finally, for the final sample of questions, some refinements were made in order to reduce subjectivity and get a more robust index. First, some questions were deleted due to the fact that they had no bearing in the Colombian corporate legal framework. One example is worth illustrating. The election of the external auditor is the responsibility of the General Assembly of shareholders and so is not delegated to the board or any committee. There was a question

regarding the existence of a committee of selection for external auditor. Hence, this question and some others closely related to it did not make sense at all and were eliminated. To further reduce subjectivity, some other questions were erased due to the low or null variability of answers; it was very confusing or ambiguous as to which answer indicated better governance; or the questions overlapped highly with other question(s). Second, questions were bundled around the same criteria established by CLSA. Hence, there were six criteria: discipline (4), accountability (2), responsibility (3), independence (4), transparency (13) and fairness (5), where the number between brackets relates to the number of questions for each criterion. As a result of the refinements, transparency got a greater number of questions while accountability had very few. After the final refinements, there were six sub-indices, each one standardized to have a value between 0 and 20. The sum over those sub-indices gives the overall corporate governance index.<sup>9</sup> Table 1-A in the appendix shows the remaining questions and some survey statistics.

### *Sample of Companies*

The number of non-financial companies registered as issuers of *any* kind of securities was about 104 in 2004. The questionnaires were sent to 99 companies belonging to different industries that were listed in the second half of 2004. The criteria of selection of firms were motivated by considerations like size, measured either by sales or assets, importance within a business group, and weight within the Colombian stock market. The full list of companies that responded to the questionnaire is in Table 3.

Five companies refused to answer the questionnaire, arguing that the information was “confidential,” a response that is at odds with being a “public.” Thirty-nine of the surveyed companies kindly responded to the questionnaire. To get a higher number of companies in the final sample, it was necessary to selectively fill out the questionnaires for 10 companies that did not respond. The criteria for selecting those “extra” companies was whether the gathered information was publicly and non-publicly available and of high quality. Ten companies met the criteria, resulting in a total sample of 49 companies. However, three companies belonged to regulated industries, and for another three, the financial statements were unobtainable. So at the end, the Colombian corporate governance index presented here comes from a sample of 43 non-financial firms (see Table 3).

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<sup>9</sup> To obtain each standardized sub-index the raw sub-index was multiplied by 20. Although this method introduces a subjective weighting, it is a common procedure (see Black et al., 2003).



### ***3.5 Survey Results of Colombian Corporate Index***

Table 4 reports the first results of the corporate governance index for listed Colombian companies. The table has seven columns. The first six of them are the different sub-components taken from CLSA classification. They are: discipline, accountability, responsibility, independence, transparency, and fairness. The last column is the corporate governance index (CGI).

Looking at the mean of the CGI, 49.9, it is clear that implementation of corporate governance practices has been very poor among the sample of Colombian firms that responded to the questionnaire. In only one sub-index, accountability, did the average (11.1) reach about 60 percent of the maximum attainable (20), but that may be explained by the low number of questions in that component (two). Independence and fairness are practices that do not seem to be implemented by firms in this sample since averages are only close to 30 percent of the maximum attainable. Only half of the firms attained an average above 50 points.<sup>10</sup> Table A-1 in the Appendix presents information about the final questions from which the CGI was constructed, and the percentage of yes-answers obtained and their averages for the final 43 firms. To illustrate, only nine firms had scores between 60 and 70 points; 12 were between 50 and 60; and 17 received scores between 40 and 50 points.

## **4. Empirical Results**

This section first presents a statistical and graphical analysis of the variables used in the econometric section. Second, it reports the following: the econometric results of the relationship between firm valuation and some measures of ownership and control, and other governance measures and control variables for the period 1998 to 2002 for firms that had their stock traded in the Colombian stock exchanges. Then, for the same number of firms, the results of the relationship between performance measures and ownership and control variables for the period 1998 to 2002 are listed, regardless of whether their stocks were or not traded. Finally, the relationship between performance measures and the governance index is reported for a reduced sample of firms, as are some other governance and control variables.

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<sup>10</sup> Unfortunately, because of confidentiality agreements signed with surveyed firms, it is not possible to report their names.

#### ***4.1 Statistical and Graphical Analysis***

Table 5 presents descriptive statistics for the variables used in one of the econometric regressions. Panel A lists the statistics for the period 1998-2002 for the Colombian non-financial companies that had their stock traded for at least one year during that period. Overall, that table shows some very general results. The most important is that ownership concentration has been high because the *CR4* is about 60 percent of what represents full control of the company. Separation of ownership and control is also high. The separation ratio for the ultimate owner is about 0.92; if the indicator is close to one it means separation is almost complete. Tobin's *q* is under one, which can be understood as meaning there is a high perception of agency problems by market investors for that sample of firms. Two interesting results are *Trading* and *Bursatil*. The former shows the average percentage of days a stock was traded in a year. It is about 0.17, which means that shares on average were not traded very much. *Bursatil* is a variable that measures how much stocks were traded for a given company in terms of days and number of shares. Ten is the maximum level and zero is the minimum. The average is less than 4, which again verifies the low liquidity of stocks of Colombian listed firms during that period.

More striking results in panel B<sup>11</sup> merit comment. The first one is the *declining* trend in the number of firms that *traded their stocks*. In 1998, there were 97 non-financial firms that traded their stocks on the stock exchanges. That number decreased to 81 in the following year, and in 2002, there were only 50 firms, a decrease of 47 firms in just a few years: a reduction of about 45 percent of companies in an already tiny market. The second result is the counter-intuitive increase in stock trading (trading increased from a low of 0.13 to 0.24.). This can be explained by two opposing forces: that stocks with a very low likelihood of being traded quit the market, or that the firms (stocks) that remained in the market were the most active. Apparently both forces were in effect. A standard test of equality of means of the two groups of firms (not presented), where one group is formed by firms affiliated with a business group, and the other by non-affiliated firms, shows that statistically both means are quite different.<sup>12</sup> Therefore, the variable trading could have increased because non-affiliated firms chose to remove their stocks from the stock exchange.

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<sup>11</sup> To save space, the results for only some of the variables are reported.

<sup>12</sup> The average for trading of the business group-affiliated firms was 21.8 percent while for non-affiliated firms the average was only 4.5 percent.

The third result is the declining trend in Tobin's  $q$ . From a value close to one in 1998, it steadily declined each year to reach 0.72 in 2002, a very large reduction in the firms' valuation. The fourth result is the evolution of direct ownership concentration by the top stockholders. During the period there was a slight increase in the  $CR4$  ratio.

Figures 1 to 4 plot the relationship between Tobin's  $q$  and two variables of ownership and control: sales growth and  $ROA$ . All figures show a disappointingly flat relationship between Tobin's  $q$  and the chosen variables. These results can be compared to correlations between variables shown in Table 5, Panel C. There, it is evident that Tobin's  $q$  is (very) weakly correlated with all variables except with market-to-book ratio. In particular, the correlation between Tobin's  $q$  and ownership variables like  $CR2$ ,  $CR4$ ,  $SRI$  and  $Wedge$  is weak but positive. Tobin's  $q$  is negatively related to the number of years a stock has been listed, and to the percentage of days over the maximum a stock was traded within a year (trading). And the relationship of  $ROA$  and  $ROE$  to the rest of variables is also weak, although less weak, except in regards to leverage (proxy to debt ratio).

Figures 5 and 6 plot the association between Tobin's  $q$  and two of the measures of direct ownership,  $CRI$ , and  $CR4$ . Two different insights can be gathered. From Figure 5, it is apparent that firm valuation slightly increases with the share of ownership stake of the *largest* shareholder when this stake is less than 10 percent, but decreases with a stake of 15 percent. It again increases until it reaches 30 percent, then falls again. From a higher stake (35 percent or more), the relationship is very opaque, increasing and decreasing, but it seems to be inversely related at very high levels. One can assume that the positive incentive effects of larger cash-flow ownership on firm value prevail in some low ranges, but not in others. The relationship is slightly clearer when one examines the relationship between the stakes of the *four* largest shareholders and firm valuation presented in Figure 6. There, it is clear that stakes higher than 35 percent are associated with a higher Tobin's  $q$ , although again the relationship is not quite monotone. None of the figures validate the hypotheses presented here, but help to explain the association between ownership and firm value. The next section addresses whether the relationship is positive or negative, when allowing for other control variables.

## **4.2 Econometric Results**

### *4.2.1 Firms that Traded their Stocks during 1998-2002*

The next two sub-sections report the findings for firms that traded their stocks at least *once* in a year during the period 1998-2002. The data set is very unbalanced since some firms only traded their stock a single year, others traded two, three or four years, and a small number traded all five years. For this sample of firms, a pooled-OLS was run and corrected for heteroskedasticity. The first subsection presents the findings using a firm's valuation measures: Tobin's q, market-to-book ratio, and market-to-sales ratio as dependent variables. The second presents the findings for a firm's performance measures: Return on Equity (*ROE*) and Return on Assets (*ROA*).

#### *Relationship between Valuation Measures and a Firm's Ownership and Voting Rights*

Table 6 reports the results of regression (1) with Tobin's q as a dependent variable while Table 7 report the results for market-to-book ratio and market-t-sales. In Table 6, *nine* different runs are presented using a different set of control variables. The first basic specification includes the size of the firm, sales growth, debt-to-asset ratio, intangibles, affiliation with a business group, presence of foreign ownership, number of years the firm listed its stocks, a recession dummy, and industry dummies to capture idiosyncratic characteristics of every industry such as technology, market competition and the like. The second specification adds the direct ownership stake of largest four shareholders and its square to capture non-monotonicity. The third adds to the previous the square of sales as in Himmelberg et al. (1999). The fourth and fifth specifications drop ownership variables and replace them with voting rights of the four largest shareholders. The sixth and seventh run regressions following Claessens et al. (2002) to control for different wedge measures, and *Difl* is included. The last two regressions include *Wedge10*, a separation dummy between control and ownership proposed by Durnev and Kim (2005). This set of regressions tries to test the three hypotheses mentioned above. There should be no significant colinearities in the regressions since correlations among variables are very low.

The results of specifications (2) to (9) clearly validate Hypothesis 1, that higher cash-flow rights (direct ownership) and direct voting rights by the four largest controlling shareholders are associated with higher corporate valuation and better performance. Regardless of the variable of ownership or control taken, the stakes of the four largest shareholders are positive and are associated with higher firm valuation at significance levels of 10 percent or better. In all cases,

the coefficients are similar, ranging from a low 0.66 to a high 0.76, which shows the robustness of the results. The magnitude of the coefficients also shows that the effects are economically very significant. For instance, taking specification (2), a one standard deviation increase in ownership concentration of the four largest shareholders induces a 0.066 increase in Tobin's  $q$ , which represents an increase of about 8 percent of the average Tobin's  $q$  (0.82). However, the relationship is clearly non-monotonic since, in all specifications, increases in the direct stakes of ownership are negatively associated and are significant with Tobin's  $q$ . Thus, although the positive effect of ownership over firm value is validated, there are thresholds after which firm value starts declining. The combining effect of ownership ( $CR4$  and  $CR4^2$ ) on a firm's value is negative but economically insignificant (-0.2 percent), which means a decrease of 0.0018 points over the mean of the *Tobin's q*.

Unfortunately, these specifications do not validate Hypothesis 2 (that higher cash-flow rights/direct ownership and direct voting rights by the four largest controlling shareholders are associated with higher corporate valuation and better performance, since positive relationships were obtained in two of them (6 and 7), and negative but statistically insignificant relationships were found in the other two).

Three other findings in (2) to (9) are worth explaining. The first one refers to the positive association found between a firm's affiliation with a business group (in all specifications) and firm value. The coefficients are similar and economically significant, which strongly validates the third hypothesis, that affiliated firms with one or several controlling shareholders display higher valuation and better performance than non-affiliated firms. This finding is in line with the results of Arbeláez and Echavarría (2001), who found that firms affiliated with a business group did not face the same credit constraints as did unaffiliated firms during the 1990s.

The second finding has to do with the coefficient found on the years listed variable. It is statistically significant in all regressions and negatively associated with firm value. One can assume that this result is counterintuitive, since one would expect that the more years a firm's stock has been listed, the higher the firm's value would be, since firm reputation in the market is consolidated and so is firm value. However, Black et al. (2003) and other authors took listed years as a proxy for age. They concluded that, "more recently listed firms are likely to be faster-growing..." Apparently this is also the case in Colombia.

The third finding is the positive but non-significant association between the recession dummy and firm value. One would expect that a recession would affect performance, which would be reflected in a lower firm valuation. However, the reader must recall from Table 5 that Tobin's  $q$  steadily declined<sup>13</sup> during the period under study regardless of the overall economic environment. Therefore, the positive association stems from that declining trend.

Furthermore, other control variables were also significant. The debt-to-asset ratio was very significant and positively associated with firm value in all regressions, and the capital intensity variable was negatively associated with Tobin's  $q$ . With respect to debt-to-asset ratio, some theories have been posed to explain the relationships. De Jong (2002) summarized theories explaining the disciplinary role of leverage.<sup>14</sup> He explained that some scholars view leverage as a device used to discipline the incentives that managers have to expand firm size and obtain private benefits. Debt must be paid out of the cash flow the firm generates. On the other hand, others believe leverage can generate opposite incentives for managers or owners given the existence of corporate governance mechanisms. If managers want to retain control and increase firm's size they are forced to issue debt since issuing stocks will dilute their control. Disciplinary corporate governance devices such as the threat of takeover also lead them to increase leverage.<sup>15</sup> In the Colombian case, (founding) owners have been afraid of losing control given the weak legal framework, and have historically only traded a small amount of their firm's shares in the stock exchanges. They have expanded the firm's size and retained control via leverage. Thus, it is plausible to find a positive relationship between leverage and firm value (see similar findings for the Korean case in Black et al., 2003). The economic significance of this variable is high, since it shows that a one standard deviation increase in debt-to-ratio increases Tobin's  $q$  by 0.07 points, a 9 percent increase relative to the 0.82 sample mean.

With regard to the relationship between  $K/S$  and Tobin's  $q$ , two aspects must be analyzed. The first is the expected negative association found. Bearing in mind that the indicator measures "the alleviation of agency problems due to the fact that such assets are easily monitored and provide good collateral," the negative sign means that the stock market values the intangibles of the firm more than that what is represented in book values. Another interpretation may be that an

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<sup>13</sup> During that period the guerillas intensified their attacks against infrastructure and the civilian population, and the weakness of the government affected investors' confidence.

<sup>14</sup> This point of view stems from the theories of Jensen (1986), and Grossman and Hart (1982).

<sup>15</sup> This point of view is based on Zwiegel (1995) and Novaes and Zingales (1995).

intangible of the firms is their high collateralization of assets, which helps leverage. The second point is that the magnitude of the coefficients was low. In any case, more research must be done to disentangle this association.

Finally, a negative association between a firm's size measured by sales and *Tobin's q* was always expected, and in some of the regressions, the association was statistically significant. Larger firms are assimilated to mature industries that have lower growth opportunities and so lower market valuation. The moving average of sales growth in the past three years also had the expected positive sign but in none of the specification was it statistically significant, and the economic magnitude of the coefficient was very poor. The presence of foreign ownership was not significant, either, and had the opposite of the expected sign. The number of years a firm has been listed in the stock exchange was statistically significant in all regressions and with the expected negative sign. It is said that recently listed firms are likely to grow faster since they have better future growth.

All of the above results are very robust. From baseline specification (1), one can obtain the basic values of the coefficients of the control variables when none of the ownership or voting variables was added. The inclusion of these variables did not change any of the signs of the coefficients of control variables, and their magnitude remained. The  $R^2$  slightly larger for specifications (2) to (9), implying that the inclusion of ownership and control accounts for some slight but important differences in *Tobin's q*.

With respect to the other two firm valuation measures, the market-to-sales ratio and the market-to-book-ratio, both presented weaker results. Table 7 reports six different runs. The economic significance of ownership alone and with its square is very similar for *MTBR* as for *Tobin's q*, although the statistical significances decreased for the *CR4* variable. The table merely confirms that there is a non-linear relationship between market valuation and direct ownership concentration. None of the wedge variables turned out to be statistically significant, so Hypotheses 1 and 2 are only weakly verified. Hypothesis 3 is verified for the *MTS* measure but not statistically for the *MTBR*. That is, business group affiliation in both cases leads to better market valuation. The table shows other mixed results. Foreign ownership has the right expected sign with *MTS* and is statistically significant, but has a negative relationship with *MTBR*. Leverage has a wrong sign association with market-to-sales ratio. However, *K/S* remains

negatively associated with these two market valuations, but the statistical significance is only valid for *MTBR*.

In sum, market valuations seem to be positively affected by the level of ownership concentration (and control rights) of the four largest shareholders, suggesting that owners exert a monitoring role over management. Firms affiliated with business groups are also more valued, which is a very important fact. How can it be explained? Perhaps investors want to hedge against potential expropriation problems that arise in very weak legal and regulatory frameworks. Since they bet that large owners will exert a monitoring effect on management, and given the high level of ownership, they do not really fear a sizable tunneling effect. The next subsection reports the results for accounting measures of performance.

#### *Relationship between Performance Measures and a Firm's Ownership and Control*

This sub-section reports the results of equation (1) but uses performance measures, *ROA* and *ROE*, instead of a firm's valuations. Some findings validate the Hypothesis 1. In particular, Table 8 reports four different runs for *ROA* and for *ROE*. Specifications (3) and (7) show the economic importance of both *CR4* and its square, although their statistical significance is lower than 10 percent. Hypothesis 1 is not verified with this variable. However, using the percentage of *control* by the top four largest shareholders as a measure of governance, Hypothesis 1 is validated (specification 4). In this case, the statistical significance is at the 5 percent level or better for both the control and its square. As in the Tobin's q findings above, control concentration impacts positively on a firm's *ROA*, but this relationship is not monotonic because its square is negative. Hypothesis 2 is also validated since one of the measure of separation between control and ownership, *Wedge10*, is highly significant and has an expected negative sign for all *ROA* and *ROE* runs. Most of the remaining control variables yield the expected signs. Again, the association between *ROA* and a firm's affiliation with a business group is positive and statistically significant. This result verifies Hypothesis 3. As expected, the years the overall economy fell had a negative impact on firms' profits. The ratio of fixed capital to sales is again negatively associated with both *ROA* and *ROE*.

The effect of control concentration on performance is very weak, however. The coefficient of voting rights (in run 4) is 0.027, and a one standard deviation increase in the percentage of overall control by the top four largest shareholders is associated with a 0.0005 increase in *ROA*, which is less than 0.01 percent with respect to the *ROA* mean. The robustness



of the results still keeps being high, though, since the signs and magnitude of the coefficients remain. Lastly, the  $R^2$  increases a little bit when ownership and voting variables are included, implying an overall positive contribution of those variables to the model specification.

In summary, results on a firm's value and performance have been presented that verify that the largest four blockholders exert a positive effect on a firm's valuation and performance. However, the findings also suggest that those same blockholders can negatively affect a firm's development if the separation between cash-flow rights and control rights increases. The impact of ownership or control is, however, very small. One additional important finding is that firms that were associated with a business group seem to be more valued by investors.

#### *Results for Firms During 1998-2002*

This subsection reports the main findings for the same sample of firms mentioned above but expands the number of years for all firms whenever possible. The objective of this section is twofold. One goal is to study how firms' accounting performances evolved during a longer period regardless of whether their stocks were traded. To do so, a dummy variable was included that takes a value of one if a firm traded its stocks in a year, and zero otherwise. To illustrate, Colombina is a Colombian firm that was listed from 1998 to 2002. It had previously issued stocks and other securities, but during that period, it only traded its stocks in 1998.<sup>16</sup> However, in this subsection, it has five observations, while in the above section it only had one observation (1998). This was done by recording a one in 1998 for the dummy variable, *Stock listed*, and zero in the other years. Since some firms did not trade their stock in any of the five years, the market price of common stocks could not be found and it was thus necessary to rely on accounting performance measures like *ROA* and *ROE*. The panel is not balanced, however, because some firms were founded during that period and were immediately listed, mostly in 1998; for other firms it was not possible to obtain financial statements for the years other than when they traded their stocks; and for some firms, financial ratios were outliers. The second goal of this subsection is to test the robustness of the results found in the last subsection. There it was reported that Hypotheses 1, 2 and 3 were verified.

In that subsection, a complete set of control variables was used to control for potential endogeneity of (blockholders) ownership with respect to the contracting environment.

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<sup>16</sup> The fact that a firm's stocks were not traded in a given year does not mean that the firm's securities were not listed.

Himmelberg et al. (1999) argue that unobserved heterogeneity among firms can generate a spurious association between ownership and performance and, if so, the validation of the hypotheses presented here would be null even with the presence of control variables that capture unobserved contracting or market specific conditions. They suggest that endogeneity can be addressed in a better way with the use of panel data techniques.

Tables 9 and 10 report the findings for model (1) using *ROA* and *ROE* as dependent variables and running both FGLS and fixed effect panel data,<sup>17</sup> following the suggestions of Himmelberg et al. Each table has two panels. The left panel reports the results when running feasible generalized least square, while the right one reports results using fixed effect panel data. To save space only those variables related to the hypothesis and goals (in this subsection) will be addressed; readers may check the remaining findings.

Firstly, in both panels, Hypothesis 1 is once more verified. Ownership by the four largest blockholders is positively associated with a firm's better performance and its square is negatively related. The magnitude of the coefficients is good and so is their statistical significance. Hypothesis 2 is verified in the left panels. Three different measures of separation between control and ownership were used, following Claessens et al. (2002). In specification (3), *Dif2*, a dummy variable equal to one if control exceeds ownership and zero otherwise, is negatively related to return on assets, verifying that as a firm's wedge between control and ownership stakes increases, the firm's returns fall. Hypothesis 3 is also validated, as firms affiliated with business groups tend to obtain better accounting performances.<sup>18</sup> Lastly, all the regressions control for whether or not a firm's stocks were traded during a year, *Stock Traded*. One would expect that since public firms are more scrutinized by regulators and private investors, they would be more careful with risk-taking and so their performance (and valuation) would be better when their stocks are traded than when they are not because of public attention, which would encourage them to conduct better management and governance practices. *Stock Trade* has the expected positive relationship with both accounting measures, and in most cases there is a strong statistical significance validating this conjecture. However, more research must be conducted to better identify the presumptions and findings.

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<sup>17</sup> Regressions were also run using pooled OLS. These are available upon request. The results validate all three hypotheses.

<sup>18</sup> Coefficients for *BGA* are not reported in the right panel due to colinearity. They were automatically dropped.

To summarize, for both accounting performance measures and controlling for unobserved heterogeneity, the positive effect of ownership by the largest shareholders on performance can be confirmed, but that the relationship is not monotone. The subsection verified again that a firm's performance falls whenever there is a separation between ownership and control. The positive effect of a firm's affiliation with an economic conglomerate is also confirmed. The conjecture that firms behave better when they face more accountability was validated, but more research is warranted.

### ***4.3 Corporate Governance Index and Performance 2003-2004***

This subsection reports two main econometric specifications for the sample of 43 firms that responded to a questionnaire on corporate governance practices in 2004. The first section reports the OLS regression results on the relationship between the CGI and some control variables as specified in equation (2) above. The second specification (equation 3 below) shows the relation between *ROA* and *ROE* measures and the corporate governance index while controlling for some variables.

#### *4.3.1 Determinants of Governance*

Klapper and Love (2002: 706) raised the concern of the "likely endogeneity of corporate governance practices." They argue that "a growing firm with large needs of outside financing has more incentive to adopt better governance practices in order to lower its cost of capital. These growth opportunities would also be reflected in the market valuation of the firm, thus inducing a positive correlation between governance and Tobin's Q." To address this problem, and given that their governance data has *no time variation*, as is the case here, they suggest that one must control for it by using variables like size, growth opportunities, and the rate of investment. As mentioned, this analysis does not have any valuation measures, but only accounting performance measures that may be less prone but not impervious to endogeneity.

To address the problem, we employ the same set of variables as in the two previous sections and run OLS corrected with heteroskedasticity. But before presenting econometric findings, the next subsection provides a statistical and graphical overview of the potential relations on main variables.

### *Descriptive Statistics, figures and Econometric Results*

Table 11 presents the statistics of key variables in panel A, the matrix of correlations between corporate governance index, control variables and ownership and separation ratios in panel B, and the correlations among subcomponents of the corporate governance index in panel C. The simple correlation coefficients between CGI and control variables like growth of sales (in the two last years), size, proxy by log of sales, numbers of members of the board of directors, and type of securities shown in Panel C are all positive and some of them are significant. As expected, growth of sales is highly correlated with corporate index but less correlated with the performance measures *ROA* and *ROE*. However, other correlations are very low in relation to the governance index. Ideally, some of the control variables could be highly correlated with the governance measure but weakly correlated with the performance measures in order to be good tests of endogeneity.

On the other hand, correlations between the two performance measures and the corporate governance index are disappointingly negative (-0.20) and (-0.19). These results can be confirmed in Figure 7 and 8, which present plots of firm-level governance index plotted against returns on assets and returns on equity. The relationship is (strongly) negative, which is a disappointing finding since it suggests that firms with better level of governance have on average worse performance, a result contrary to the overwhelming evidence found in most country studies.

Table 12 reports the estimates of the governance model, equation (2) above. Growth of sales in the past three years maintained a consistent significant positive relation with the corporate governance index. Size, proxy by natural log of sales, is positively associated in all specifications but not significant. Furthermore, variables like the affiliation of a firm with a group and type of security issued (i.e., stocks versus other type of securities) were very sensitive to the inclusion of other control variables, changing signs in most cases or displaying the wrong sign. Lastly, in specifications (4) and (5), two variables were included. The first is *CGC*, which takes a value of one if the firm has voluntarily issued a code of good corporate governance practices, and zero otherwise. The second is *Bursatil*, a variable that measures the level and intensity of stock trading. Two insights are noteworthy. First, the coefficients of these two variables are very high and are positively associated to the corporate governance index, meaning that firms that issued a corporate governance code actually had better scores in governance

practices. It also means that firms that traded most of their stocks also had better governance practices. The second insight is that the  $R^2$  increased significantly when these two variables were added, which might suggest that they do help explain governance scores. However, further research must be done to find better determinants. Various regressions were run using different sets of control variables, and the results were very sensitive and unstable for most of them except growth of sales, *CGC* and *Bursatil*.

#### 4.3.2 Governance and Performance

This section addresses the relationship between firm performance and firm-level governance while controlling for size, growth opportunities, ownership and separation ratios, and several other variables. Equation (3) will be employed below and OLS will be run, taking ROA as the dependent variable. In this section, all financial variables, such as ROA, debt-to-asset ratio, natural log of sales, among others, are the 2003-2004 averages. For variables such as members of board of directors, the data included correspond to the year 2004.

$$Performance_i = \alpha + \beta_1 CGI_i + \beta_2 (OWN)_i + \beta_2 (OWN)_i^2 + \beta_4 BGA + \beta_5 Lyears + \sum_{k=1}^K \delta_k X_{k,i} + \varepsilon_i \quad (3)$$

where the description of variables is as in equation 1, and the vector X includes variables such as members of board of directors, type of security a firm traded in 2004, and *Bursatil* in the year 2003.

This is the hypothesis to be tested:

**Hypothesis 4:** Firms with better corporate governance practices reflected in an index must display higher valuation and better performance regardless of their affiliation to a business group.

Most studies testing this hypothesis have verified its validity (see Black et al., 2003, for Korea; Klapper and Love, 2002, for 14 emerging economies; and Durnev and Kim, 2005, for 25 countries) and have implemented some endogeneity tests.

Table 13 reports the first set of results. There are three panels. Panel A reports the results using OLS. Panel B reports the results correcting for endogeneity; and Panel C reports the results

for one of the sub-indices of corporate governance index.<sup>19</sup> In the first two panels, the findings are disappointing, particularly because the governance index is negatively and strongly associated with ROA. Following standard procedures, different sets of control variables were included and can be seen in specifications 1 to 3 in each panel. *Regardless of the control variables included*, the relationship between the index of corporate governance practices and the performance measure remained strongly negative. In Panel A, sales growth was the only variable that was always positively associated with ROA and statistically significant. Another variable that has statistical significance is *Listed Years*, with a negative association, which confirms the findings for the period 1998-2002. To control for ownership, the percentage of *CR4* corresponding to average of years 2001-2002 was included. In neither case was *CR* lagged significant when entered alone or when entered with its square, which is surprising given the strong association found for the period 1998-2002. The remaining control variables such as *Wedge*, *Lyears*, and *Members* were very unstable, changing in sign and being statistically insignificant most of the time. Further, three dummy variables were included that capture whether the firm's ultimate owner is a family (*UOFF*), a financial institution (*UOFIF*), or a foreign firm (*UOFO*). In no case were the findings either economically or statistically significant.

#### 4.3.3 Endogeneity Checks

A recurring issue in studies of the effects of firm-level corporate governance practices on performance is the potential presence of endogeneity. For instance, firms with high market value or better performance could implement good corporate governance rules, so the causation would run from market value to corporate governance. Since implementation of such practices is costly, only profitable firms would incur the costs, biasing the potential results upwards. Researchers have suggested some ways to address this problem. One solution is to include a robust set of control variables that may be correlated with governance but are weakly correlated with valuation or performance measures. Another way is to make use of panel data techniques, as suggested by Himmelberg et al. (1999). Lastly, researchers have made use of instrumental variables.

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<sup>19</sup> The results for the remaining sub-indices were not good and so they are not reported. The main point was that the relationship between the sub-index and the measure of performance was negative and in some cases very significant.

In Table 13, Panel A, the first approach was attempted, using different sets of control variables to alleviate the potential endogeneity concern, but as shown, the results are counterintuitive for the association between governance implementation and performance. Most of the control variables were not statistically significant. Unfortunately, since the governance data used here has no time variation, it was not possible to employ panel data techniques. The instrumental variables were thus used via a simultaneous equation model. A good instrument is one that is (highly) correlated with the potential endogenous explanatory variable but is weakly correlated with the dependent one. The use of instrumental variables is constrained because of their near non-existence. To address the problem of endogeneity, it was necessary to resort to two variables that can potentially be accepted as instruments: the first one is CGC, corporate governance code, and the second one is *Bursatil*.

In 2001, the Superintendence of Securities issued Resolution 0275, which set minimum standards of corporate governance practices that Colombian listed firms must comply with in order to have their securities acquired by Colombian pension funds. The set of standards is a code of corporate governance rules that must be part of the statutes and rules of the firms. Since pension funds have been acquiring securities from listed firms, the government thought that by making the issuing of a code of good governance practices voluntary, firms in search of funds would issue such codes in order to be eligible to sell their securities to pension funds. Hence, one can expect that firms that have voluntarily issued a code of governance rules might have actually implemented good corporate governance. Furthermore, the CGC is highly correlated with the CGI, 0.45, and is also statistically significant as shown in Table 11, Panel C above. The second instrumental variable was *Bursatil*, a variable that measures the trade intensity of stocks. Again, one can expect that listed firms that traded continuously would be more scrutinized by investors and regulators and so had in practice implemented better corporate practices. The correlation of *Bursatil* with GCI is not as high, 0.29, and is statistically significant.

Table 13, Panel B reports the results using *Bursatil* as an instrumental variable. Despite the higher correlation of CGC with the corporate governance index, regressions using this variable gave coefficients of CGI that were negative and statistically insignificant. However, the results using *Bursatil* as an instrument are also disappointing. Better corporate governance practices apparently did not lead to better returns on assets, although the coefficients are not statistically significant at accepted level of confidence either, and their economic significance is

also very tiny, implying that implementation of better governance practices has not driven accounting performance. This result is contrary to findings reported in the literature surveyed above, where it has been shown that, across countries, firms that adopted better corporate rules had, on average, better valuation and performance. How can this result be explained? First, the reader must recall that the average of the CGI was about 50 points out of a maximum of 100; only one firm was close to 70 points; half of the firms had scores greater than the mean 20; and seven got scores between 30 and 40 points. Therefore, the index shows that few firms among the sample that responded to the questionnaire have really worried about implementing good governance practices. Second, the Confederation of Chambers of Commerce, locally known as *Confecámaras*, undertook in 2001 and 2002 the first surveys of leading CG indicators for Colombian companies.<sup>20</sup> Although the number of firms surveyed was very small and few details of methodological aspects are known, the average score of the sample was also very low compared to the remaining countries also surveyed in those works. In 2001, the overall index of leading corporate indicators was 3.4, well below the average score of the top country in the sample, 8.5. In 2002, using different and not comparable methodology, the average score obtained by the participating Colombian firms was a bit better, 6.4 out of 10. In general, the surveys reveal that apparently Colombian firms have not been too prone to implementing good corporate governance practices. Therefore, the results presented here could simply be reflecting this behavior. Third, recently, the Colombian Stock Exchange (BVC) published<sup>21</sup> the results of a survey about corporate governance in corporations listed therein. A total of 40 firms were surveyed and a final set of 49 questions was computed. The results again validate our findings: the average of the sample was 33.02 out of 100 points; the higher score was 57.16, and the low was 8.5. Although the sample is different since among the surveyed firms were banks and other firms we did not include, the trend is again the same presented in our study and in the two previous surveys by Confecamaras.

A caveat is in order. Despite of the similar results found regarding the pace at which listed firms have implemented good regulatory practices, one can argue that investors may not be aware of such implementation or that the implementation of such good practices may take some time to be effective in an accounting performance measure like ROA or ROE. Both arguments

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<sup>20</sup> See Confecamaras (2001 and 2002).



might be true. One can just hope that with a larger sample of firms, or more periods the effect of good governance can be traced. For instance, one can think in an exercise where one can trace back the exact date when listed firms issued their code of good governance practices and take this variable as a proxy of how investors perceived corporate governance in those firms. But more work must be done to collect the needed information.

Furthermore, it is also disappointing that none of the control variables that helped explain valuation and performance during the 1998 to 2002 period were consistently statistically significant, although a couple of them had the expected sign, i.e., *CR4* and its square, *Wedge10*, *Years*, and business group affiliation, *BGA*. Only the three-year average of sales growth turned out to be statistically and economically significant. Despite the unexpected bad results, it is possible that endogeneity can be affecting the econometric results, but more research and fine-tuning must be done to better understand what drives those counterintuitive results.

## 5. Conclusions and Policy Implications

To what extent is valuation and performance driven by ownership and control? Do firms affiliated with business group perform better and have better valuation than unaffiliated firms? Does the implementation of good corporate governance lead to better accounting performance? The objective of this paper was to try to answer and verify those hypotheses. For the first time, this subject has been researched thoroughly for Colombia. The answer to the first two questions is positive. Evidence was found that the cash-flow rights of the top largest shareholders are positively associated with a firm's better valuation and performance, but that the relationship is not monotonic. It was also found that wedge, or separation between cash-flow rights and voting rights, has a negative effect on a firm's valuation and performance. Strong evidence was found indicating that affiliated firms also enjoyed better market valuation and had better performance. More research must be conducted to disentangle an explanation. One can hypothesize that since the Colombian legal and regulatory framework is weak as measured by international standards, investors may have feared expropriation via tunneling effects or management entrenchments. Since ownership has been highly and historically concentrated, they have realized that the second concern is not viable in Colombia, and since firms have expanded via high levels of leverage,

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<sup>21</sup> See, Bolsa de Valores de Madrid y Equipo consultor, (2005), Informe y Recomendaciones sobre Gobierno Corporativo en las Sociedades Emisoras en Colombia.

investors may have trusted firms affiliated with large and very politically influential business groups.

This study did not find evidence that firms with better standards of corporate governance enjoy better performance despite recent efforts by authorities and regulators to promote better governance practices. The results of the survey proved illuminating. The most important observation is that, on average, firms have been reluctant or very slow to implement such good practices. This result partially confirms other findings in surveys conducted by the government and chambers of commerce about the poor and low adoption of good governance rules by Colombian firms.

What can explain this conduct? The answer is complex and can be understood by examining the ways Colombian firms have traditionally financed their need for capital expansion. In the exposition of motives of the Bill of Capital Markets (presented to the Colombian Congress in 2004), the Ministry of Finance reported that only large Colombian firms have made use of bonds and other types of securities to finance their needs for capital, and even for those firms the amount collected by this type of financing has not represented, on average, more than 5 percent of total financing. Medium and small firms did not make use of the capital markets when they have looked for financing. Forty-three percent of large firms' financing has consisted of reimbursement of a company's profits and loans from suppliers. The remainder has come from financial obligations, mainly banking loans. This clearly shows that Colombian listed firms, usually the largest Colombian firms, have not been and may not be very interested in implementing better governance practices. Funds can be obtained through other sources, although it may be argued, at higher prices. Nor is it surprising that most of the firms listed in the Colombian stock exchange belonged to a business group, and it is less surprising that investors acknowledge it by paying a small premium for the stocks of those companies because those firms have traditionally faced lesser financial constraints.

New regulations by the Superintendence of Securities as well as a congressional bill on capital market can have little influence, if any, on companies adopting better corporate governance practices. It is overwhelmingly evident in all studies on the subject that firms with better governance standards get, on average, better valuation and performance, and so the attempts of the Colombian government to encourage the adoption of such good practices by Colombian firms are understandable. The government looks for better protection for investors,

more disclosure of relevant and timely information, and better information systems. To that end, it has proposed putting a limit on the number of members of boards of directors, to ensuring that minority shareholders have a greater presence and voice on the boards of directors, and increasing the number of “independents” on the boards of directors. These types of proposals follow general recommendations found in the seminal papers of La Porta, López-de-Silanes, Shleifer, and Vishny (1999, 2000a, and 2000b) and have been adopted by many countries around the world.

However, these regulations have not addressed the two main trends in the stock exchanges in recent years: listed firms (trading stocks) have been decreasing in number, and more and more the firms that remain in the stock market belong to business groups. It has been very common to criticize business groups, saying that they are the root of all problems, but the research presented here indicates that investors value them. Why has the government not made any reference to this point?

Bergloff and Von Thadden (1999: 17) argue “The relevance of shareholder protection laws for an assessment of the workings of capital markets in such economies is problematic, because the group-based corporate structure in developing economies is seen as just the response to missing capital market institutions...Business groups, with all their opacity, lack of outside accountability, insider dominance, and so on, at least do not seem to harm their own shareholders, given the environment they operate in. More generally, we believe that corporate governance problem in our broader perspective is an equilibrium problem: the absence of organized markets and small investors give rise to substitute constructs such as business groups, but the existence of these substitutes prevents capital market and market base corporate shareholdings from emerging.”

More research on the subject is needed to address and understand the many complex relationships that are present in the current Colombian corporate system. This work is just one starting point from which to formulate more hypotheses. But it does suggest that the study of corporate governance in Colombian stock markets must be addressed within the context of business group affiliation.

## References

- Agrawal, A., and C.R. Knoeber. 1996. "Firm Performance and Mechanisms to Control Agency Problems between Managers and Shareholders." *Journal of Financial and Quantitative Analysis* 31: 377-397.
- Arbeláez, M.A. and J. Echavarría. 2001. "Crédito, Liberalización Financiera e Inversión en el Sector Manufacturero Colombiano." *Coyuntura Económica*.
- Bae, K-H, J-K Kang, and J. Kin .2002. "Tunneling or Value Added? Evidence from Mergers by Korean Business Groups." *Journal of Finance* 57: 2695-2740.
- Barca, F. and M. Becht. 2001. *The Control of Corporate Europe*. New York: Oxford University Press.
- Becht, M. 1997. "Strong Blockholders, Weak Owners and the Need for European Mandatory Disclosure." Executive Report, in *European Corporate Governance Network, The Separation of Ownership and Control: A Survey of 7 European Countries. A Preliminary Report, Volume 1*.
- Becht, M. and A. Röell. 1999. "Blockholdings in Europe: An International Comparison." *European Economic Review* 43: 1049-1056.
- Becht, M. and C. Mayer. 2001. "Introduction." In: F. Barca and M. Becht, editors. *The Control of Corporate Europe*. Oxford, United Kingdom: Oxford University Press.
- Bergloff, E. and E. Ludwing von Thadden. 1999. "The Changing Corporate Governance Paradigm: Implications for Transition and Developing Countries." Working Paper.
- Berle, A. and G. Means. 1932. *The Modern Corporation and Private Property*. New York, United States: McMillan.
- Bertrand, M., P. Mehta, and S. Mullainathan. 2002. "Ferretting out Tunneling and Application to Indian Business Groups." *Quarterly Journal of Economics* 117: 121-148.
- Bhagat, S., and B. Black. 1999. "The Uncertain Relationship between Board Composition and Firm Performance." *Business Lawyer* 54: 921-953.
- Bianco, M. and P. Casavola. 1999. "Italian Corporate Governance: Effects on Financial Structure and Firm Performance." *European Economics Review* 43: 1057-1069.
- Black, B.S. 2001. "The Corporate Governance Behavior and Market Value of Russian Firms." *Emerging Market Review* 2: 89-108.

- Black, B.S., H. Jang, and W. Kim. 2003. "Does Corporate Governance Affect Firms' Market Values? Evidence from Korea." Stanford Law School Working Paper 237. Stanford, United States: Stanford University.
- Bolsa de Valores de Madrid et al. 2005. "Informe y Recomendaciones sobre Gobierno Corporativo en las Sociedades Emisoras en Colombia."
- Brioschi, F., L. Buzzachi, and M.G. Colombo. 1989. "Risk Capital Financing and the Separation of Ownership and Control in Business Groups." *Journal of Banking and Finance* 13: 747-772.
- Chang, S.J., and U. Choi. 1987. "Strategy, Structure and Performance of Korean Business Groups: a Transactions Cost Approach." *Journal of Industrial Economics* 37: 141-158.
- Chapelle, A. 2004. "Separation between Ownership and Control: Where Do We Stand?" Brussels, Belgium: Université Libre de Bruxelles. Mimeographed document.
- Chapelle, A., and A Szafarz. 2002. "Ownership and Control: Dissecting the Pyramid." *WP-CEB* 03/002. Brussels, Belgium: Université Livre de Bruxelles, Solvay Business School, Centre Emile Bernheim.
- Chen, J. 2001. "Ownership Structure as Corporate Governance Mechanisms: Evidence from Chinese Listed Companies." *Economics of Planning* 34: 53-72.
- Claessens, S., S. Djankov, and L. Klapper. 2000. "The Role and Functioning of Business Group in East Asia and Chile." *Abante* 3: 91-107.
- Claessens, S., S. Djankov, J.P.H. Fan, and L. H.P. Lang. 2002. "Disentangling the Incentive and Entrenchment Effects of Large Shareholdings." *Journal of Finance* 57: 2741-2771.
- Confecámaras, CIPE, and Davis Global Advisors. 2001. Leading Corporate Indicators 2001: Colombia Survey, Report.
- Confecámaras, DNP, McKinsey & Co, and Ministerio de Comercio Exterior. 2002. Prácticas de Gobierno Corporativo en las Sociedades Colombianas. Survey Report.
- De Jong, A. 2002. "The Disciplining Role of Leverage in Dutch Firms." *European Finance Review* 6: 31-62.
- Demsetz, H. and K. Lehn. 1985. "The Structure of Corporate Ownership: Causes and Consequences." *Journal of Political Economy* 93:1155-1177.
- Demsetz, H. and B. Villalonga. 2001. "Ownership Structure and Corporate Performance." *Journal of Corporate Finance* 7: 209-233.

- Denis, D.J., D.K. Denis, and A. Sarin. 1997. "Ownership Structure and Top Executive Turnover." *Journal of Financial Economics* 45: 193-221.
- Denis, D.K. and J.J. McConnell,. 2003. "International Corporate Governance." *Journal of Financial and Quantitative Analysis* 38: 1-36.
- Drobetz, W., A. Schillhofer and H. Zimmermann. 2004. "Corporate Governance and Expected Stock Return: Evidence from Germany." *European Financial Management* 10: 267-293.
- Durnev, A. and E. Han Kim. 2005. "To Steal or Not to Steal: Firm Attributes, Legal Environment, and Valuation." *The Journal of Finance* 60: 1461-1493.
- Ellerman, D. 1991. "The Democratic Firm: A Cooperative-ESOP Model." In: J.D. Wisman, editor. *Worker Empowerment: The Struggle for Workplace Democracy*. New York, United States: Bootstrap Press.
- Ghemawat, P. and T. Khanna. 1998. "The Nature of Diversified Business Groups: A Research Design and Two Case Studies." *Journal of Industrial Economics* 46: 35-61.
- Gibson, M.S. 2003. "Is Corporate Governance Ineffective in Emerging Markets?" *Journal of Financial and Quantitative Analysis* 38: 231-250.
- Gispert, C. 1998. "Board Turnover and Firm Performance in Spanish Companies." *Investigaciones Económicas* 22: 517-536.
- Gompers P., J. Ishii. and A. Metrick. 2003. "Corporate Governance and Equity Prices." *Quarterly Journal of Economics* 118: 107-155.
- Grossman, S.J. and O.D. Hart. 1982. "Corporate Financial Structure and Managerial Incentives" In: J.J. McCall, editor. *Economics of Information and Uncertainty*. Chicago, United States: University of Chicago Press.
- Gutiérrez, L.H., C. Pombo, and R. Tabora. 2005. "Corporate Ownership and Control in Colombian Corporation." Bogota, Colombia: Universidad del Rosario. Mimeographed Document.
- Hermalin, B.E. and M.S. Weisbach. 2003. "Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature." *FRBNY Economic Policy Review* 9: 7-26.
- Himmelberg, C., R.G Hubbard, and D. Palia. 1999. "Understanding the Determinants of Managerial Ownership and the link between Ownership and Performance." *Journal of Financial Economics* 53: 353-384.

- Holderness, C.G. 2003. "A Survey of Blockholders and Corporate Control." *FRBNY Economic Policy Review* 9: 51-64.
- Jensen, M.C. 1986. "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers." *American Economic Review* 76: 323-329.
- . 1993. "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems." *Journal of Finance* 48(3): 831-80.
- Johnson, S., R. La Porta, F. López-de-Silanes and A. Shleifer. 2000. "Tunneling." *American Economic Review* 90: 22-27
- Khanna, T. and K. Palepu. 2000a. "Is Group Affiliation Profitable in Emerging Markets? An Analysis of Diversified Indian Business Groups." *The Journal of Finance* 55: 867-891.
- . 2000b. "The Future of Business Groups in Emerging Markets: Long-run Evidence from Chile." *Academy of Management Journal* 43: 268-285.
- Khanna, T., and J. Rivkin. 2001. "Estimating The Performance Effects of Business Groups in Emerging Markets." *Strategic Management Journal* 22: 45-74
- Klapper, L. and I. Love. 2002. "Corporate Governance, Investor Protection, and Performance in Emerging Markets." *Journal of Corporate Finance* 10: 703-728.
- La Porta, R. F. Lopez-de-Silanes, and A. Shleifer. 1999. "Corporate Ownership around the World." *Journal of Finance* 54: 471-517.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1999. "Legal Determinants of External Finance." *Journal of Finance* 54: 1131-1150.
- . 2000a. "Investor Protection and Corporate Governance." *Journal of Financial Economics* 58: 3-27.
- . 2000b. "Investor Protection and Corporate Valuation." *Journal of Finance* 54: 471-517.
- Lehmann, E. and J. Weigand. 2000. "Does the Governed Corporation Perform Better? Governance Structures and Corporate Performance in Germany." *European Finance Review* 4: 157-195.
- McKinsey & Company. 2000. *Investor Opinion Survey*. June Report.
- Morck, R., A. Shleifer, and R. Vishny. 1988. "Management Ownership and Market Valuation." *Journal of Financial Economics* 20: 293-315.
- Novaes, W. and L. Zingales. 1995. "Capital Structure Choice When Managers are in Control: Entrenchment versus Efficiency." *Journal of Business* 76: 49-81.

- Pedersen, T. and S. Thomsen. 2003. "Ownership Structure and Value of the Largest European Firms: The Importance of Owner Identity." *Journal of Management and Governance* 7: 27-55.
- Prowse, S.D. 1992. "The Structure of Corporate Ownership in Japan." *Journal of Finance* 47: 1121-1140.
- Shleifer, A.; R. Vishny. 1986. "Large Shareholders and Corporate Control." *Journal of Political Economy* 94: 461-488
- Wiwattanakantang, Y. 2001. "Controlling Shareholders and Corporate Value: Evidence from Thailand." *Pacific-Basin Finance Journal* 9: 323-362.
- Yurtoglu, B.B. 2000. "Ownership, Control and Performance of Turkish Listed Firms." *Empirica* 27: 193-222.
- Zwiebel, J. 1995. "Block Investment and Partial Benefits of Corporate Control." *Review of Economic Studies* 62: 161-185.



**Table 1.**

This table shows across industries averages of main ownership, voting and separation ratios between ownership and control for the sample of companies that traded their stocks during the period 1998-2002. *CR1*, *CR2*, *CR3*, and *CR4* are the percentages of direct ownership owned by the largest, the two, three, and four largest shareholders respectively. *Voting 1*, *Voting 2*, *Voting 3*, and *Voting 4* are the percentage of direct and indirect voting of the largest, the two, three, and four largest shareholders. *SR1*, *SR2*, and *SR4* show the separation between ownership and control for the largest, the two largest and four largest shareholders. *Wedge10* is a dummy variable that takes a value of one if the control rights of the largest shareholder exceed cash flow rights by at least 10 percent, and is zero otherwise. *BGA* is a dummy variable, with a value equal to one if the firm is affiliated with a business group, or zero otherwise. *FOwners* is a dummy, with a value of one if there is one foreign stockholder among the five largest shareholders, zero otherwise. *Trading* is a percentage that shows the trading intensity of the stocks in a year. Raw data was taken from Superintendence of Securities. The industrial classification is based on The United Nations two-digit Standard Industry Classification.

Industry	SIC	Firms	CR1	CR2	CR4	CR10	Voting 1	Voting 2	Voting 3	Voting 4	SR1	SR2	SR4	Wedge10	BGA	FOwners	Trading	
Agriculture, Livestock, and Forestry Production	11	17	0,12	0,20	0,27	0,31	0,14	0,23	0,30	0,32	0,93	0,94	0,90	0,33	0,94	0,00	0,01	
	21	4	0,43	0,63	0,77	0,93	0,57	1,05	1,16	1,25	0,73	0,60	0,62	1,00	1,00	0,00	0,05	
Coal, Metal ore, Stone Quarrying, Salt and Mineral Mining	29	5	0,18	0,32	0,47	0,62	0,18	0,32	0,40	0,47	1,00	1,00	1,00	0,00	1,00	0,00	0,09	
Food, beverage and Tobacco	31	34	0,21	0,34	0,47	0,61	0,24	0,40	0,52	0,61	0,90	0,87	0,81	0,32	0,97	0,14	0,44	
Textile, Wearing Apparel and Leather Products	32	28	0,30	0,47	0,59	0,75	0,33	0,53	0,65	0,75	0,97	0,94	0,84	0,07	0,71	0,00	0,07	
Paper, Paper Products, Publishing	34	27	0,37	0,55	0,71	0,81	0,37	0,56	0,67	0,75	0,98	0,98	0,95	0,11	0,70	0,67	0,10	
Petroleum Refinement, Chemical Products, Plastics and Rubber	35	16	0,14	0,26	0,41	0,64	0,15	0,28	0,37	0,44	1,00	1,00	1,00	0,00	0,29	0,41	0,08	
Manufacture of Pottery, China, Glass, Cement, Plaster	36	46	0,43	0,60	0,73	0,80	0,52	0,80	0,93	1,02	0,80	0,77	0,75	0,44	0,77	0,29	0,28	
Basic Metal Industries	37	11	0,46	0,66	0,80	0,88	0,46	0,65	0,74	0,79	1,00	1,00	1,00	0,00	0,83	0,67	0,01	
	38	19	0,44	0,60	0,70	0,76	0,47	0,71	0,81	0,85	0,96	0,90	0,88	0,11	0,74	0,37	0,05	
Metal Products, Machinery and Equipment																		
Construction and Public Works	50	11	0,18	0,30	0,47	0,67	0,18	0,30	0,41	0,48	1,00	1,00	0,97	0,00	0,36	0,00	0,01	
Wholesale and Retail Trade	61	14	0,29	0,48	0,60	0,69	0,30	0,51	0,60	0,67	0,92	0,96	0,93	0,14	0,79	0,36	0,53	
Wholesale and Retail Trade	62	17	0,34	0,49	0,61	0,73	0,37	0,51	0,59	0,64	0,89	0,90	0,91	0,39	0,61	0,33	0,15	
Lodging, Restaurants, Recreational Services	63	2	0,34	0,61	0,89	0,97	0,34	0,61	0,79	0,89	1,00	1,00	1,00	0,00	0,00	0,00	0,10	
Transport and Storage	71	8	0,16	0,26	0,43	0,68	0,22	0,38	0,50	0,60	0,78	0,78	0,79	0,63	1,00	0,00	0,15	
Communication	72	10	0,22	0,39	0,66	0,93	0,26	0,48	0,69	0,86	0,89	0,85	0,81	0,30	0,90	0,20	0,02	
Investment Funds	81	43	0,23	0,34	0,46	0,61	0,25	0,40	0,50	0,58	0,88	0,86	0,83	0,37	1,00	0,23	0,29	
Real State, Renting and Bussiness Services	83	3	0,19	0,28	0,37	0,53	0,31	0,39	0,46	0,51	1,00	1,00	1,00	0,00	0,33	0,00	0,01	
Public Administration, Education, Community, Recreational and Household services	93	28		0,56	0,74	0,84	0,92	0,56	0,74	0,81	0,86	1,00	1,00	0,98	0,00	0,18	0,36	0,02
Other non-classified business activities	99	4	0,25	0,33	0,46	0,69	0,25	0,33	0,40	0,46	1,00	1,00	1,00	0,00	0,25	0,00	0,01	
Total		353	0,31	0,46	0,59	0,72	0,34	0,53	0,64	0,71	0,92	0,90	0,87	0,23	0,73	0,24	0,22	

**Table 2**

This table shows the means and medians of main ownership, voting and separation ratios between ownership and control for the sample of companies that traded their stocks during the period 1998-2002. The information is presented for firms affiliated with business groups, and for non-affiliated firms. *CR1*, *CR2*, *CR3*, and *CR4* are the percentage of direct ownership owned by the largest, the two, three, and four largest shareholders, respectively. *Voting 1*, *Voting 2*, *Voting 3*, and *Voting 4* are the percentage of direct and indirect voting of the largest, the two, three, and four largest shareholders. *SR1*, *SR2*, and *SR4* show the separation between ownership and control for the largest, the two largest and four largest shareholders. *Wedge10* is a dummy variable that takes a value of one if the control rights of the largest shareholder exceed cash flow rights by at least 10 percent, and zero otherwise. *BGA* is a dummy variable, with a value equal to one if the firm is affiliated with a business group, zero otherwise. *FOwners* is a dummy, with value of one if there is a foreign stockholder among the five largest shareholders, zero otherwise. *Trading* is a percentage that shows the trading intensity of the stocks in a year. Tests of mean differences are also shown. Significant results (at 10 percent level or better) are shown in boldface.

Variable	Panel A Affiliated Firms	Panel B Non-Affiliated firms
<b>n</b>	256	91
<b>CR1</b>		
Mean	0.281	0.400
(P_value)	<b>(0.00)</b>	
Median	0.2051	0.412
<b>CR2</b>		
Mean	0.426	0.566
(P_value)	<b>(0.00)</b>	
Median	0.39	0.551
<b>CR4</b>		
Mean	0.547	0.729
(P_value)	<b>(0.00)</b>	
Median	0.57565	0.780
<b>CR10</b>		
Mean	0.654	0.899
(P_value)	<b>(0.00)</b>	
Median	0.6858	0.963
<b>Voting 1</b>		
Mean	0.320	0.408
(P_value)	<b>(0.00)</b>	
Median	0.2693	0.412
<b>Voting 2</b>		
Mean	0.514	0.572
(P_value)	<b>(0.086)</b>	
Median	0.47515	0.561
<b>Voting 3</b>		
Mean	0.626	0.666
(P_value)	(0.283)	
Median	0.6265	0.674
<b>Voting 4</b>		
Mean	0.702	0.735
(P_value)	(0.402)	
Median	0.7132	0.780
<b>SR1</b>		
Mean	0.890	1.000
(P_value)	<b>(0.00)</b>	
Median	0.9968	1.000
<b>SR2</b>		
Mean	0.867	1.000
(P_value)	<b>(0.00)</b>	
Median	<b>0.94629</b>	1.000
<b>SR4</b>		
Mean	0.828	1.000
(P_value)	<b>(0.00)</b>	
Median	<b>0.8525</b>	1.000
<b>Wedge</b>		
Mean	0.319	0.000
(P_value)	<b>(0.00)</b>	
Median	-	-
<b>FOwners</b>		
Mean	0.236	0.323
(P_value)	<b>(0.096)</b>	
Median	-	-
<b>Trading</b>		
Mean	0.218	0.046
(P_value)	<b>(0.00)</b>	
Median	0.0375	0.01649

**Table 3.**  
**List of Surveyed Firms**

This table presents the list of firms that were surveyed. Firms that responded to the questionnaire are in **boldface**. Questionnaires for some firms that did not respond to the questionnaire were completed by researchers based on public information. These firms are in *boldface and italic*

	<b>Firm</b>
1	<b>ALMACENES EXITO S.A.</b>
2	<b>CARTON DE COLOMBIA S.A.</b>
3	<b>CARULLA VIVERO S.A.</b>
4	<b>CEMENTOS DEL CARIBE S.A.</b>
5	<b>CEMENTOS DEL VALLE S.A.</b>
6	<b>CEMENTOS PAZ DEL RIO S.A.</b>
7	<b>CEMENTOS RIOCLARO S.A.</b>
8	<b>CIA. COLOMBIANA DE INVERSIONES AGRICOLAS S.A.</b>
9	<b>CIA. COLOMBIANA DE TABACO S.A.</b>
10	<b>CIA. COLOMBIANA DE TEJIDOS S.A.</b>
11	<b>CIA. DE CEMENTO ARGOS S.A.</b>
12	<b>INVERSIONES NACIONAL DE CHOCOLATES S.A.</b>
13	<b>CINE COLOMBIA S.A.</b>
14	<b>COLOMBINA S.A.</b>
15	<b>COMPAÑIA DE EMPAQUES S.A.</b>
16	<b>COMUNICACION CELULAR S.A.</b>
17	<b>CONCRETO S.A.</b>
18	<b>CONFECCIONES COLOMBIA S.A.</b>
19	<b>ELECTROPORCELANA GAMMA S.A.</b>
20	<b>ENKA DE COLOMBIA S.A.</b>
21	<b>GAS NATURAL S.A. E.S.P.</b>
22	<b>INDUSTRIAS ESTRA S.A.</b>
23	<b>INDUSTRIAS METALURGICAS UNIDAS S.A.</b>
24	<b>INVERSIONES MUNDIAL S.A.</b>
25	<b>INVERSIONES REACOL S.A.</b>
26	<b>MINEROS DE ANTIOQUIA S.A.</b>
27	<b>ORGANIZACION DE INGENIERIA INTERNACIONAL S.A.</b>
28	<b>PAPELES NACIONALES S.A.</b>
29	<b>PETROQUIMICA COLOMBIANA S.A.</b>
30	<b>POLIPROPILENO DEL CARIBE S.A.</b>
31	<b>PORTAFOLIO DE INVERSIONES SURAMERICANA S.A.</b>
32	<b>PRODUCTOS FAMILIA S.A.</b>
33	<b>PROMIGAS S.A. E.S.P.</b>
34	<b>SOCIEDAD DE FABRICACION DE AUTOMOTORES S.A.</b>
35	<b>SOCIEDADES BOLIVAR S.A.</b>
36	<b>SUMINISTROS DE COLOMBIA S.A.</b>
37	<b>SURAMERICANA DE INVERSIONES S.A. SURAMERICANA</b>
38	<b>TEXTILES ESPINAL S.A.</b>
39	<b>TEXTILES FABRICATO TEJICONDOR S.A.</b>
40	<b><i>AEROVIAS DE INTEGRACION REGIONAL S.A.</i></b>
41	<b><i>BAVARIA S.A.</i></b>
42	<b><i>CARACOL TELEVISION S.A.</i></b>
43	<b><i>CARBONES DEL CARIBE S.A.</i></b>
44	<b><i>CIA. COLOMBIANA DE CLINKER S.A.</i></b>
45	<b><i>MANUELITA S.A.</i></b>
46	<b><i>SIDERURGICA DE BOYACA S.A.</i></b>
47	<b><i>PAVCO S.A.</i></b>
48	<b><i>MAYAGUEZ S.A.</i></b>

**Table 4**  
**Corporate Governance Index: Raw and Transformed Results**

This table presents information on the estimates of the Colombian corporate governance index for a sample of 45 firms and a total of 31 questions of a survey conducted in 2004. **CGI** stands for the total corporate governance index; **Discipline** is the index of the sub-component discipline; **Accountability** is the index of the sub-component, accountability; **Responsibility** is the index of the subcomponent, responsibility; **Independence** is the index of the sub-component, independence; **Transparency** is the index of the sub-component, transparency; and **Fairness** is the index of the subcomponent, fairness.

Statistic	Discipline	Accountability	Responsibility	Independence	Transparency	Fairness	CGI
<b>Minimum Value Obtained</b>	0.00	8.33	0.00	0.00	2.56	0.00	34.47
<b>Maximum Value Obtained</b>	16.67	16.67	16.67	12.50	12.82	16.67	69.21
<b>Median</b>	8.33	8.33	11.11	4.17	8.97	10.00	47.59
<b>Average</b>	7.13	10.19	8.64	6.11	8.83	8.96	49.86
<b>Standard Deviation</b>	4.67	3.50	4.52	3.15	2.45	4.01	9.65

Source: Authors' calculates from the Colombian Corporate Governance Survey

**Table 5.**  
**Descriptive Statistics 1998-2002**

**Panel A. Main Variables**

<b>Variable</b>	<b>obs</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Min</b>	<b>Max</b>	<b>Median</b>
Tobin's q	344	0.819	0.38	0.09	2.39	0.756
MTBR	343	0.748	0.64	-0.07	3.98	0.626
MTS	336	2.171	3.29	0.00	17.84	0.848
ROA	342	0.024	0.07	-0.21	0.19	0.024
ROE	349	0.009	0.16	-0.91	0.57	0.030
CR4	347	0.59	0.24	0.05	1.00	0.60
VRCR4	353	0.71	0.33	0.06	2.14	0.72
SR4	353	0.87	0.16	0.34	1.00	0.95
Dif1	354	0.13	0.21	-0.98	1.15	0.02
Dif2	354	0.62	0.48	0.00	1.00	1
Dif3	354	0.31	0.46	0.00	1.00	0.00
Wedge	353	0.23	0.42	0.00	1.00	0
Lnrsales	354	10.97	1.86	5.33	15.29	11.26
Grsales	338	0.46	6.76	-0.63	124.23	0.02
K/S	354	1.12	1.71	0.00	16.64	0.51
Debt-Ratio	354	0.34	0.24	0.00	1.96	0.29
Trading	354	0.17	0.28	0.00	0.99	0.03
bursatil	354	3.93	2.79	0.00	10.00	3.33
Lyears	354	21.30	20.66	1.00	74.00	13.50
BGA	354	0.73	0.45	0.00	1.00	1
Rdummy	354	0.50	0.50	0.00	1.00	1
FO	354	0.26	0.44	0.00	1.00	0

**Panel B. Year to Year Evolution of Some Variables**

<b>Year</b>	<b>Firms</b>	<b>tobin's q</b>	<b>grsales</b>	<b>trading</b>	<b>cr4</b>	<b>Dif1</b>
1998	97	0.945	-0.017	0.133	0.593	0.136
1999	81	0.838	1.597	0.170	0.593	0.119
2000	69	0.777	0.150	0.156	0.577	0.116
2001	57	0.716	0.242	0.196	0.598	0.141
2002	50	0.723	0.241	0.240	0.619	0.117

**Table 5 (Continued)**  
**Descriptive Statistics 1998-2002**

**Panel C. Correlation Matrix of Selected Variables**

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Tobin's q	1										
2 MTBR	<b>0.86</b>	1									
3 MTS	<b>0.12</b>	<b>0.15</b>	1								
4 ROA	0.03	<b>0.11</b>	-0.08	1							
5 ROE	0.01	0.02	<b>-0.11</b>	<b>0.86</b>	1						
6 CR4	<b>0.14</b>	0.03	<b>-0.13</b>	0.02	-0.01	1					
7 VRCR4	<b>0.17</b>	0.05	-0.07	0.09	0.02	<b>0.84</b>	1				
8 SR4	<b>-0.10</b>	-0.04	-0.08	<b>-0.15</b>	-0.05	0.01	<b>-0.48</b>	1			
9 Dif1	<b>0.14</b>	0.07	0.01	<b>0.09</b>	0.02	<b>0.19</b>	<b>0.66</b>	<b>-0.75</b>	1		
10 Dif2	<b>0.15</b>	0.08	<b>0.12</b>	0.03	-0.03	<b>-0.12</b>	<b>0.20</b>	<b>-0.62</b>	<b>0.50</b>	1	
11 Dif3	<b>0.12</b>	0.03	0.02	<b>0.15</b>	0.03	<b>0.14</b>	<b>0.53</b>	<b>-0.78</b>	<b>0.77</b>	<b>0.52</b>	1
12 Wedge	<b>0.13</b>	<b>0.13</b>	0.04	0.03	-0.04	-0.05	<b>0.23</b>	<b>-0.63</b>	<b>0.41</b>	<b>0.43</b>	<b>0.49</b>
13 Lnrsales	0.04	0.00	<b>-0.41</b>	<b>0.25</b>	<b>0.13</b>	<b>0.13</b>	<b>0.21</b>	<b>-0.26</b>	<b>0.17</b>	<b>0.17</b>	<b>0.19</b>
14 Grsales	0.01	0.01	0.08	-0.02	0.00	-0.05	-0.05	0.04	-0.04	-0.07	-0.04
15 K/S	<b>-0.16</b>	<b>-0.13</b>	<b>0.21</b>	<b>-0.21</b>	<b>-0.15</b>	<b>-0.11</b>	<b>-0.11</b>	0.05	-0.07	0.01	<b>-0.09</b>
16 Debt-Ratio	<b>0.41</b>	0.09	<b>-0.31</b>	<b>-0.29</b>	<b>-0.23</b>	<b>0.19</b>	<b>0.13</b>	0.06	-0.03	-0.06	0.02
17 Trading	-0.08	-0.06	0.07	<b>0.20</b>	0.07	<b>-0.19</b>	-0.06	<b>-0.34</b>	<b>0.09</b>	<b>0.26</b>	<b>0.26</b>
18 bursatil	<b>-0.10</b>	<b>-0.10</b>	0.04	<b>0.22</b>	0.08	<b>-0.11</b>	0.04	<b>-0.36</b>	<b>0.14</b>	<b>0.21</b>	<b>0.28</b>
19 Lyears	<b>-0.25</b>	<b>-0.30</b>	<b>-0.15</b>	0.01	0.05	<b>-0.12</b>	-0.02	<b>-0.20</b>	<b>0.12</b>	<b>0.11</b>	<b>0.19</b>
20 BGA	0.07	0.03	<b>0.15</b>	0.08	0.00	<b>-0.34</b>	-0.04	<b>-0.49</b>	<b>0.26</b>	<b>0.66</b>	<b>0.29</b>
21 Rdummy	<b>0.20</b>	<b>0.16</b>	-0.02	<b>-0.23</b>	<b>-0.11</b>	-0.01	-0.03	<b>0.11</b>	0.01	-0.05	-0.03
22 FO	-0.07	<b>-0.11</b>	0.01	-0.07	<b>-0.15</b>	<b>0.17</b>	0.02	<b>0.23</b>	<b>-0.15</b>	<b>-0.10</b>	<b>-0.18</b>
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
12 Wedge	1										
13 Lnrsales	<b>0.11</b>	1									
14 Grsales	-0.03	<b>-0.13</b>	1								
15 K/S	-0.01	<b>-0.37</b>	<b>0.18</b>	1							
16 Debt-Ratio	-0.08	<b>0.21</b>	-0.08	<b>-0.19</b>	1						
17 Trading	<b>0.18</b>	<b>0.40</b>	-0.03	<b>-0.12</b>	<b>-0.19</b>	1					
18 bursatil	<b>0.18</b>	<b>0.46</b>	-0.06	<b>-0.14</b>	<b>-0.19</b>	<b>0.86</b>	1				
19 Lyears	-0.01	<b>0.26</b>	-0.05	-0.01	0.05	<b>0.37</b>	<b>0.37</b>	1			
20 BGA	<b>0.34</b>	<b>0.21</b>	-0.09	0.08	<b>-0.12</b>	<b>0.27</b>	<b>0.26</b>	0.06	1		
21 Rdummy	-0.02	<b>-0.22</b>	0.04	0.02	<b>0.12</b>	-0.08	<b>-0.10</b>	<b>-0.11</b>	<b>-0.12</b>	1	
22 FO	<b>-0.19</b>	<b>0.28</b>	-0.04	-0.01	0.01	<b>0.10</b>	<b>0.14</b>	-0.03	<b>-0.09</b>	-0.04	1

**Table 6.**  
**Pooled-OLS Regression Results on the Relationship between Firm Performance and Colombian Corporate Ownership and Control**

The regressions are performed using pooled OLS for the period 1998-2002. The dependent variable is *Tobin's q*; *CR4* is the percentage of direct ownership owned by the four largest shareholders; *SqCR4* is the square of *CR4*; *Voting Rights(CR4)* is the percentage of control rights that the four largest shareholders own; *Sq(Voting Rights)* is the square of voting rights; *Dif1* is a continuous variable measuring the difference between the share of control rights and the share of cash-flow rights in the hands of the four largest owners; *Wedge10* is a dummy equal to one if control rights exceed cash-flow rights, and zero otherwise; *LnSales* is the natural log of operating income in Colombian pesos of 1998; *GrSales* is the three-year moving average of real annual percentage growth in operating income; *DebtRatio* is the ratio of total liabilities to total assets; *K/S* is the ratio of fixed capital to operating income; *BGA* is a dummy equal to one if the firm is affiliated with a business group, and is zero otherwise; *FOwner* is a dummy equal to one if there is a foreign stockholder among the first five largest stockholders of the firm in a given year, and zero otherwise; *LYears* is the number of years the stocks of the firm have been listed in the Colombian Stock Exchanges; *Rdummy* is a dummy equal to one for the years 1998 and 1999, and is zero otherwise. Numbers in parentheses are robust t-student. Coefficients significant at least at the 10 percent level (based on a two-tailed test) are in **boldface**.

Tobin's q									
Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(CR <sub>4</sub> )		0.7283 <b>(2.13)</b>	0.6788 <b>(1.96)</b>			0.7001 <b>(2.05)</b>	0.6579 <b>(1.90)</b>	0.7622 <b>(2.19)</b>	0.7077 <b>(2.00)</b>
Sq(CR <sub>4</sub> )		-0.6290 <b>(-2.10)</b>	-0.5847 <b>(-1.94)</b>			-0.6514 <b>(-2.17)</b>	-0.6094 <b>(-2.01)</b>	-0.6563 <b>(-2.12)</b>	-0.6081 <b>(-1.94)</b>
Voting rights				0.1469 <b>(1.97)</b>	0.1392 <b>(1.86)</b>				
Sq(Voting RightsCR <sub>4</sub> )				-0.2593 <b>(-2.07)</b>	-0.2478 <b>(-1.96)</b>				
Dif1						0.1861 <b>(1.86)</b>	0.1689 <b>(1.65)</b>		
Wedge10								-0.0182 <b>(-0.38)</b>	-0.0152 <b>(-0.31)</b>
LnSales	-0.0149 <b>(-0.90)</b>	-0.0234 <b>(-1.39)</b>	-0.1542 <b>(-2.03)</b>	-0.0171 <b>(-1.00)</b>	-0.1527 <b>(-2.01)</b>	-0.0267 <b>(-1.55)</b>	-0.1447 <b>(-1.90)</b>	-0.0230 <b>(-1.36)</b>	-0.1527 <b>(-2.00)</b>
SqLnSales			0.0062 <b>(1.76)</b>		0.0065 <b>(1.79)</b>		0.0056 <b>(1.57)</b>		0.0062 <b>(1.73)</b>
GrSales	0.0029 <b>(1.50)</b>	0.0031 <b>(1.55)</b>	0.0027 <b>(1.34)</b>	0.0028 <b>(1.48)</b>	0.0024 <b>(1.25)</b>	0.0030 <b>(1.51)</b>	0.0026 <b>(1.32)</b>	0.0031 <b>(1.55)</b>	0.0027 <b>(1.34)</b>
DebtRat	0.7591 <b>(7.86)</b>	0.7939 <b>(8.51)</b>	0.7997 <b>(8.62)</b>	0.7379 <b>(7.52)</b>	0.7450 <b>(7.59)</b>	0.7895 <b>(8.45)</b>	0.7952 <b>(8.56)</b>	0.7957 <b>(8.61)</b>	0.8012 <b>(8.71)</b>
K/S	-0.0344 <b>(-2.89)</b>	-0.0350 <b>(-2.85)</b>	-0.0378 <b>(-3.16)</b>	-0.0338 <b>(-2.84)</b>	-0.0367 <b>(-3.22)</b>	-0.0349 <b>(-2.85)</b>	-0.0375 <b>(-3.13)</b>	-0.0351 <b>(-2.86)</b>	-0.0378 <b>(-3.17)</b>
BGA	0.1804 <b>(3.13)</b>	0.2105 <b>(3.65)</b>	0.2178 <b>(3.75)</b>	0.1758 <b>(3.08)</b>	0.1835 <b>(3.21)</b>	0.1809 <b>(2.95)</b>	0.1903 <b>(3.07)</b>	0.2145 <b>(3.73)</b>	0.2211 <b>(3.81)</b>
Fowner	-0.0869 <b>(-1.65)</b>	-0.0841 <b>(-1.52)</b>	-0.0895 <b>(-1.62)</b>	-0.0870 <b>(-1.64)</b>	-0.0937 <b>(-1.75)</b>	-0.0703 <b>(-1.26)</b>	-0.0765 <b>(-1.37)</b>	-0.0880 <b>(-1.55)</b>	-0.0928 <b>(-1.63)</b>
Lyears	-0.0038 <b>(-4.75)</b>	-0.0036 <b>(-3.84)</b>	-0.0038 <b>(-4.04)</b>	-0.0033 <b>(-3.77)</b>	-0.0036 <b>(-3.96)</b>	-0.0035 <b>(-3.74)</b>	-0.0037 <b>(-3.93)</b>	-0.0036 <b>(-3.77)</b>	-0.0038 <b>(-3.96)</b>
Rdummy	0.0500 <b>(1.55)</b>	0.0378 <b>(1.21)</b>	0.0473 <b>(1.53)</b>	-0.0441 <b>(1.38)</b>	0.0542 <b>(1.70)</b>	0.0361 <b>(1.16)</b>	0.0448 <b>(1.44)</b>	0.0385 <b>(1.23)</b>	0.0478 <b>(1.54)</b>
Industry Dummy	yes	yes	yes	yes	yes	yes	yes	yes	yes
Constant	0.8179 <b>(3.63)</b>	0.7517 <b>(3.23)</b>	1.4380 <b>(3.09)</b>	0.7438 <b>(3.22)</b>	1.4512 <b>(3.15)</b>	0.8284 <b>(3.46)</b>	1.4419 <b>(3.13)</b>	0.7385 <b>(3.22)</b>	1.4204 <b>(3.05)</b>
<b>Regression Statistics</b>									
R <sup>2</sup>	0.4578	0.4931	0.4972	0.4671	0.4714	0.4973	0.5006	0.4934	0.4974
Num of firms									
Num Obs	328	321	321	328	328	321	321	321	321
F-test	17.05	22.53	22.40	16.75	15.82	21.68	20.81	21.55	21.66
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Table 7**  
**Pooled-OLS Regression Results on the Relationship between Firm's Valuation and Colombian Corporate Ownership and Control**

The regressions are performed using pooled OLS for the period 1998-2002. The dependent variables are Market-to-Book Ratio (*MTBR*) and Mark-to-Sales (*MTS*); *CR4* is the percentage of direct ownership owned by the four largest shareholders; *SqCR4* is the square of *CR4*; *Difl* is a continuous variable measuring the difference between the share of control rights and the share of cash-flow rights in the hands of the four largest owners; *LnSales* is the natural log of operating income in Colombian pesos of 1998; *GrSales* is the three-year moving average of real annual percentage growth in operating income; *DebtRatio* is the ratio of total liabilities to total assets; *K/S* is the ratio of fixed capital to operating income; *BGA* is a dummy equal to one if the firm is affiliated with a business group, and is zero otherwise; *FOwner* is a dummy equal to one if there is a foreign stockholder among the first five largest stockholders of the firm in a given year, and zero otherwise; *LYears* is the number of years the stocks of the firm have been listed in the Colombian Stock Exchanges; *Rdummy* is a dummy equal to one for the years 1998 and 1999 and is zero otherwise. Numbers in parentheses are robust t-student. Coefficients significant at least at the 10 percent level (based on a two-tailed test) are in **boldface**.

Dependent Variable	MTBR			MTS		
	(1)	(2)	(3)	(1)	(2)	(3)
( <i>CR</i> <sub>4</sub> )	-0.29558 (-1.53)	0.86628 (1.38)	0.84133 (1.35)	0.89006 (0.92)	-2.51248 (-0.71)	-2.56520 (-0.73)
<i>Sq</i> ( <i>CR</i> <sub>4</sub> )		-1.01369 <b>(-1.88)</b>	-1.03757 <b>(-1.90)</b>		2.95144 (0.93)	2.88899 (0.89)
<i>Difl</i>			0.18110 (0.94)			0.43678 (0.41)
<i>LnSales</i>	-0.17594 (-1.09)	0.00131 (0.04)	-0.00204 (-0.06)	-0.70220 <b>(-3.67)</b>	-0.69907 <b>(-3.69)</b>	-0.70533 <b>(-3.73)</b>
<i>GrSales</i>	0.00316 (1.12)	0.00386 (1.38)	0.00372 (1.33)	-0.35674 (-0.69)	-0.40273 (-0.76)	-0.39265 (-0.75)
<i>DebtRat</i>	0.37339 (1.46)	0.36338 (1.44)	0.35954 (1.43)	-1.18584 <b>(-1.82)</b>	-1.17246 <b>(-1.80)</b>	-1.18369 <b>(-1.81)</b>
<i>K/S</i>	-0.07203 <b>(-3.14)</b>	-0.06905 <b>(-2.69)</b>	-0.06913 <b>(-2.69)</b>	-0.24453 (-1.27)	-0.24223 (-1.28)	-0.24307 (-1.29)
<i>BGA</i>	0.10866 (1.01)	0.10191 (0.98)	0.07376 (0.67)	1.42541 <b>(2.72)</b>	1.42252 <b>(2.75)</b>	1.35161 <b>(2.23)</b>
<i>Fowner</i>	-0.23079 <b>(-2.27)</b>	-0.24857 <b>(-2.41)</b>	-0.23552 <b>(-2.24)</b>	1.31511 <b>(2.69)</b>	1.37779 <b>(2.67)</b>	1.41071 <b>(2.84)</b>
<i>LYears</i>	-0.00882 <b>(-5.53)</b>	-0.00847 <b>(-4.98)</b>	-0.00839 <b>(-4.89)</b>	0.00235 (0.23)	0.00226 (0.22)	0.00241 (0.24)
<i>Rdummy</i>	0.12631 <b>(1.90)</b>	0.11191 <b>(1.67)</b>	0.11040 <b>(1.63)</b>	-0.32459 (-1.18)	-0.32947 (-1.20)	-0.33069 (-1.19)
Industry Dummy	yes	yes	yes	yes	yes	yes
Constant	1.91259 <b>(2.14)</b>	0.77086 <b>(1.86)</b>	0.84588 <b>(1.98)</b>	9.54246 <b>(4.81)</b>	10.19814 <b>(4.67)</b>	10.35932 <b>(4.68)</b>
<b>Regression Statistics</b>						
<i>R</i> <sup>2</sup>	0.3361	0.3404	0.3417	0.4826	0.4850	0.4853
Num of firms						
Num Obs	321	321	321	319	319	319
F-test	9.10	9.70	9.61	9.09	8.80	9.03
Prob > F	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000



**Table 8**  
**Pooled-OLS Regression Results on the Relationship between Firm Performance and Colombian Corporate Ownership and Control**

The regressions are performed using pooled-OLS. The dependent variables are *ROA* and *ROE*; *CR4* is the percentage of direct ownership owned by the four largest shareholders; *SqCR4* is the square of *CR4*; *Wedge10* is a dummy variable that takes a value of one if control rights of the largest shareholder exceed cash flow rights by at least 10 percent and is zero otherwise; *LnSales* is the natural log of operating income in Colombian pesos of 1998; *GrSales* is the three-year moving average of real annual percentage growth in operating income; *DebtRatio* is total debt-to-total assets ratio; *K/S* is the ratio of fixed capital to operating income; *BGA* is a dummy variable, equal to one if the firm is affiliated to a Colombian business group, and is zero otherwise; *FOwner* is a dummy variable, equal to one if there is a foreign stockholder among the first five largest stockholders of the firm in a given year, and zero otherwise; *LYears* is the number of years the stocks of the firm have been listed in the Colombian Stock Exchanges; *Rdummy* is a dummy variable, equal to one for the years 1998 and 1999 and is zero otherwise. Numbers in parentheses are robust t-student. Coefficients significant at least at the 10 percent level (based on a two-tailed test) are in **boldface**.

Dependent Variables	ROA				ROE			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(CR <sub>4</sub> )		0.058 (0.89)	0.095 (1.45)			-0.029 (-0.20)	0.074 (0.51)	
Sq(CR <sub>4</sub> )		-0.054 (-0.93)	-0.084 (-1.45)			0.013 (0.10)	-0.072 (-0.59)	
Voting rights				0.027 <b>(1.69)</b>				0.029 (0.77)
Voting Rights Squared				-0.076 <b>(-2.38)</b>				-0.098 (-1.53)
Wedge10			-0.021 <b>(-2.09)</b>	-0.031 <b>(-2.81)</b>			-0.061 <b>(-2.56)</b>	-0.075 <b>(-2.60)</b>
LnSales	0.010 <b>(3.11)</b>	0.010 <b>(2.88)</b>	0.010 <b>(3.07)</b>	0.011 <b>(3.32)</b>	0.013 <b>(1.90)</b>	0.014 <b>(1.97)</b>	0.015 <b>(2.21)</b>	0.015 <b>(2.19)</b>
GrSales	0.001 (1.30)	0.001 (1.31)	0.001 (1.37)	0.001 (1.23)	0.001 (0.91)	0.001 (0.88)	0.001 (0.99)	0.001 (0.90)
DebtRat	-0.125 <b>(-5.87)</b>	-0.122 <b>(-5.60)</b>	-0.121 <b>(-5.83)</b>	-0.129 <b>(-6.04)</b>	-0.270 <b>(-4.05)</b>	-0.261 <b>(-3.80)</b>	-0.258 <b>(-3.92)</b>	-0.272 <b>(-4.15)</b>
K/S	-0.007 <b>(-2.48)</b>	-0.007 <b>(-2.38)</b>	-0.007 <b>(-2.5)</b>	-0.007 <b>(-2.60)</b>	-0.013 <b>(-2.01)</b>	-0.012 <b>(-1.88)</b>	-0.012 <b>(-2.0)</b>	-0.013 <b>(-2.13)</b>
BGA	0.016 <b>(1.63)</b>	0.020 <b>(1.82)</b>	0.025 <b>(2.22)</b>	0.020 <b>(1.96)</b>	0.003 (0.14)	-0.001 (-0.03)	0.012 (0.45)	0.014 (0.56)
Fowner	-0.025 <b>(-2.65)</b>	-0.028 <b>(-2.68)</b>	-0.032 <b>(-2.98)</b>	-0.032 <b>(-3.30)</b>	-0.062 <b>(-2.78)</b>	-0.067 <b>(-2.89)</b>	-0.079 <b>(-3.49)</b>	-0.076 <b>(-3.44)</b>
LYears	0.000 (-1.00)	0.000 (-0.99)	0.000 (-1.25)	0.000 (-1.01)	0.000 (1.07)	0.000 (0.88)	0.000 (0.52)	0.000 (0.71)
Rdummy	-0.022 <b>(-3.41)</b>	-0.024 <b>(-3.62)</b>	-0.023 <b>(-3.6)</b>	-0.023 <b>(-3.60)</b>	-0.029 <b>(-1.89)</b>	-0.030 <b>(-1.95)</b>	-0.029 <b>(-1.88)</b>	-0.030 <b>(-1.97)</b>
Industry Dummy	yes	yes	yes	yes	yes	yes		yes
Constant	-0.055 (-1.52)	-0.062 (-1.51)	-0.075 <b>(-1.84)</b>	-0.100 (-1.31)	-0.044 (-0.64)	-0.042 (-0.49)	-0.080 (-0.92)	-0.079 (-1.05)
<b>Regression Statistics</b>								
R <sup>2</sup>	0.4443	0.4469	<b>0.4573</b>	0.4657	0.3063	0.2940	0.3106	0.3269
Num of firms								
Num Obs	326	319	319	325	333	326	<b>326</b>	332
F-test	12.74	11.91	<b>11.12</b>	12.04	6.97	6.84	<b>7.34</b>	6.74
Prob > F	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

**Table 9.**  
**FGLS and Fixed Effect Panel Data Regression Results on the Relationship between Return on Asset and Colombian Corporate Ownership and Control**

The regressions are performed using FGLS and fixed effect panel data. The dependent variable is *ROA*; *CR4* is the percentage of direct ownership owned by the four largest shareholders; *SqCR4* is the square of *CR4*; *Dif1* is a continuous variable measuring the difference between the share of control rights and the share of cash-flow rights in the hands of the four largest owners; *Dif2* is a dummy equal to one if control rights exceed cash-flow rights, and zero otherwise; *Dif3* is a dummy equal to one if control is greater than ownership, and if this difference is greater than the median separation in firms where control and ownership differ (for the top four owners), and is zero otherwise; *LnSales* is the natural log of operating income in Colombian pesos of 1998; *GrSales* is the three-year moving average of real annual percentage growth in operating income; *DebtRatio* is total debt to total assets ratio; *K/S* is the ratio of fixed capital to operating income; *BGA* is a dummy equal to one if the firm is affiliated to a Colombian business group, and is zero otherwise; *FOwner* is a dummy equal to one if there is a foreign stockholder among the first five largest stockholders of the firm in a given year, and zero otherwise; *LYears* is the number of years the stocks of the firm have been listed in the Colombian Stock Exchanges; *Rdummy* is a dummy equal to one for the years 1998 and 1999 and is zero otherwise; *Stocks Traded* is a dummy equal to one for the year the firm's stocks were traded. Number in parentheses are robust t-student. Coefficients significant at least at the 10 percent level (based on a two-tailed test) are in **boldface**.

ROA Dependent Variable	FGLS				Fixed Effects			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
(CR <sub>4</sub> )	0.1379 <b>(3.18)</b>	0.1515 <b>(3.43)</b>	0.1516 <b>(3.26)</b>	0.1290 <b>(2.75)</b>	0.6161 <b>(2.57)</b>	0.6043 <b>(2.52)</b>	0.6551 <b>(2.72)</b>	0.6300 <b>(2.61)</b>
Sq(CR <sub>4</sub> )	-0.1320 <b>(-3.56)</b>	-0.1441 <b>(-3.82)</b>	-0.1360 <b>(-3.48)</b>	-0.1175 <b>(-2.89)</b>	-0.4717 <b>(-2.36)</b>	-0.4565 <b>(-2.27)</b>	-0.4945 <b>(-2.47)</b>	-0.4812 <b>(-2.40)</b>
Dif1		-0.0026 <b>(-0.28)</b>				-0.0324 <b>(-0.72)</b>		
Dif2			-0.0190 <b>(-1.98)</b>				-0.0344 <b>(-0.26)</b>	
Dif3				-0.0104 <b>(-1.61)</b>				-0.0131 <b>(-0.54)</b>
LnSales	0.0129 <b>(7.97)</b>	0.0127 <b>(7.57)</b>	0.0119 <b>(7.25)</b>	0.0131 <b>(7.74)</b>	-0.0028 <b>(-0.34)</b>	-0.0026 <b>(-0.33)</b>	-0.0021 <b>(-0.26)</b>	-0.0029 <b>(-0.35)</b>
GrSales	0.0002 <b>(0.44)</b>	0.0003 <b>(0.52)</b>	0.0003 <b>(0.46)</b>	0.0003 <b>(0.54)</b>	0.0012 <b>(2.2)</b>	0.0012 <b>(2.21)</b>	0.0012 <b>(2.20)</b>	0.0011 <b>(2.20)</b>
DebtRatio	-0.1670 <b>(-14.00)</b>	-0.1640 <b>(-13.32)</b>	-0.1682 <b>(-13.86)</b>	-0.1700 <b>(-14.47)</b>	-0.0834 <b>(-6.42)</b>	-0.0834 <b>(-6.42)</b>	-0.0842 <b>(-6.48)</b>	-0.0834 <b>(-6.42)</b>
K/S	-0.0002 <b>(-3.10)</b>	-0.0002 <b>(-2.95)</b>	-0.0002 <b>(-2.90)</b>	-0.0002 <b>(-2.47)</b>	-0.0001 <b>(-0.29)</b>	-0.0001 <b>(-0.28)</b>	-0.0001 <b>(-0.24)</b>	-0.0001 <b>(-0.29)</b>
Fowner	-0.0555 <b>(-10.03)</b>	-0.0579 <b>(-10.78)</b>	-0.0551 <b>(-9.53)</b>	-0.0544 <b>(-8.48)</b>	-0.0664 <b>(-0.84)</b>	-0.0651 <b>(-0.82)</b>	-0.0662 <b>(-0.84)</b>	-0.0671 <b>(-0.85)</b>
BGA	0.0126 <b>(2.37)</b>	0.0125 <b>(2.09)</b>	0.0300 <b>(2.94)</b>	0.0159 <b>(2.60)</b>				
LYears	-0.0002 <b>(-1.58)</b>	-0.0002 <b>(-1.77)</b>	-0.0002 <b>(-1.80)</b>	-0.0002 <b>(-1.75)</b>	0.0027 <b>(1.03)</b>	0.0027 <b>(1.02)</b>	0.0026 <b>(0.97)</b>	0.0028 <b>(1.04)</b>
Rdummy	-0.0335 <b>(-10.13)</b>	-0.0347 <b>(-10.26)</b>	-0.0329 <b>(-9.62)</b>	-0.0329 <b>(-9.40)</b>	-0.0265 <b>(-2.27)</b>	-0.0259 <b>(-2.21)</b>	-0.0264 <b>(-2.27)</b>	-0.0271 <b>(-2.31)</b>
Stocks Traded	0.0066 <b>(1.6)</b>	0.0083 <b>(1.85)</b>	0.0067 <b>(1.57)</b>	0.0070 <b>(1.54)</b>	0.0295 <b>(2.07)</b>	0.0318 <b>(2.18)</b>	0.0307 <b>(2.15)</b>	0.0295 <b>(2.07)</b>
Industry Dummy	yes	yes	yes	yes	No	No	No	No
Constant	-0.0490 <b>(-2.45)</b>	-0.0977 <b>(-4.31)</b>	-0.0606 <b>(-2.64)</b>	-0.0521 <b>(-2.33)</b>	-0.1573 <b>(-1.27)</b>	-0.1584 <b>(-1.28)</b>	-0.1562 <b>(-1.26)</b>	-0.1572 <b>(-1.27)</b>
<b>Regression Statistics</b>								
R <sup>2</sup>					0.1612	0.1589	0.1550	0.1598
Num of firms	101	101	101	101	101	101	101	101
Num Obs	455	455	455	455	455	455	455	455
F-test					6.6	6.04	6.15	6.01
Prob > F					0.00000	0.00000	0.00000	0.00000
Wald chi2 ()	1252.8	1085.7	1164.8	1163.1				
Prob > chi2	0.00000	0.00000	0.00000	0.00000				

**Table 10.**  
**FGLS and Fixed Effect Panel Data Regression Results on the Relationship between Return on Equity and Colombian Corporate Ownership and Control**

The regressions are performed using FGLS and fixed effect panel data. The dependent variable is *ROE*; *CR4* is the percentage of direct ownership owned by the four largest shareholders; *SqCR4* is the square of *CR4*; *Dif1* is a continuous variable measuring the difference between the share of control rights and the share of cash-flow rights in the hands of the four largest owners; *Dif2* is a dummy equal to one if control rights exceed cash-flow rights, and zero otherwise; *Dif3* is a dummy equal to one if control is greater than ownership, and if this difference is greater than the median separation in firms where control and ownership differ (for the top four owners), and is zero otherwise; *LnSales* is the natural log of operating income in Colombian pesos of 1998; *GrSales* is the three year moving average of past real annual percentage growth in operating income; *DebtRatio* is total debt to total assets ratio; *K/S* is the ratio of fixed capital to operating income; *BGA* is a dummy equal to one if the firm is affiliated to a Colombian business group, and is zero otherwise; *FOwner* is a dummy equal to one if there is a foreign stockholder among the first five largest stockholders of the firm in a given year, and zero otherwise; *LYears* is the number of years the stocks of the firm have been listed in the Colombian Stock Exchanges; *Rdummy* is a dummy equal to one for the years 1998 and 1999 and is zero otherwise; *Stocks Traded* is a dummy equal to one for the year the firm's stocks were traded. Number in parentheses are robust t-student. Coefficients significant at least at the 10 percent level (based on a two-tailed test) are in **boldface**.

ROE Dependent Variable	FGLS				Fixed Effects			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
(CR <sub>4</sub> )	0.1379 <b>(3.18)</b>	0.2062 <b>(3.76)</b>	0.1913 <b>(3.28)</b>	0.3745 <b>(5.89)</b>	0.6480 (1,09)	0.6337 (1,07)	0.7226 (1,21)	0.6610 (1,10)
Sq(CR <sub>4</sub> )	-0.1320 <b>(-3.56)</b>	-0.2055 <b>(-4.41)</b>	-0.1712 <b>(-3.68)</b>	-0.2937 <b>(-5.75)</b>	-0.5116 (-1,01)	-0.4822 (-0,95)	-0.5555 (-1,09)	-0.5217 (-1,02)
Dif1		0.0129 (0,73)				-0.1342 (-1,23)		
Dif2			-0.0706 <b>(-6,93)</b>				-0.0613 (-0,95)	
Dif3				-0.0661 <b>(-11,34)</b>				-0.0092 (-0,16)
LnSales	0.0116 <b>(4,18)</b>	0.0114 <b>(3,98)</b>	0.0103 <b>(3,57)</b>	0.0142 <b>(5,29)</b>	0.0165 (0,88)	0.0171 (0,91)	0.0180 (0,95)	0.0165 (0,88)
GrSales	0.0021 (0,68)	0.0021 (0,70)	0.0032 (1,07)	0.0031 (1,03)	-0.0028 <b>(-2,20)</b>	-0.0028 <b>(-2,19)</b>	-0.0028 <b>(-2,21)</b>	-0.0028 <b>(-2,20)</b>
DebtRatio	0.0200 (1,52)	0.0212 <b>(1,60)</b>	0.0183 (1,36)	0.0167 (1,20)	0.0536 <b>(4,09)</b>	0.0515 <b>(3,89)</b>	0.0505 <b>(3,74)</b>	0.0533 <b>(4,02)</b>
K/S	-0.0002 (-1,22)	-0.0015 (-1,08)	0.0000 (0,04)	-0.0001 (-0,45)	0.0003 (0,44)	0.0003 (0,47)	0.0004 (0,50)	0.0003 (0,45)
Fowner	-0.0560 <b>(-7,47)</b>	-0.0547 <b>(-7,08)</b>	-0.0570 <b>(-7,38)</b>	-0.0674 <b>(-7,89)</b>	-0.2357 (-1,26)	-0.2312 (-1,24)	-0.2350 (-1,26)	-0.2364 (-1,26)
BGA	0.0600 <b>(5,88)</b>	0.0562 <b>(5,07)</b>	0.1214 <b>(8,98)</b>	0.0991 <b>(8,16)</b>				
LYears	-0.0001 (-0,76)	-0.0001 (-0,54)	-0.0003 (-1,53)	-0.0002 (-0,74)	0.0156 <b>(2,30)</b>	0.0156 <b>(2,31)</b>	0.0152 <b>(2,24)</b>	0.0156 <b>(2,30)</b>
Rdummy	-0.0403 <b>(-8,14)</b>	-0.0392 <b>(-7,71)</b>	-0.0428 <b>(-8,56)</b>	-0.0452 <b>(-7,97)</b>	-0.0151 (-0,54)	-0.0122 (-0,43)	-0.0149 (-0,53)	-0.0155 (-0,55)
Stocks Traded	0.0291 <b>(3,28)</b>	0.0255 <b>(2,72)</b>	0.0383 <b>(4,08)</b>	0.0377 <b>(3,69)</b>	0.1207 <b>(3,57)</b>	0.1291 <b>(3,74)</b>	0.1226 <b>(3,62)</b>	0.1205 <b>(3,56)</b>
Industry Dummy	yes	yes	yes	yes	No	No	No	No
Constant	-0.1368 <b>(-3,87)</b>	-0.2279 <b>(-5,41)</b>	-0.1351 <b>(-3,59)</b>	-0.2381 <b>(-6,81)</b>	-0.7001 <b>(-2,36)</b>	-0.7126 <b>(-2,40)</b>	-0.7021 <b>(-2,37)</b>	-0.7023 <b>(-2,36)</b>
<b>Regression Statistics</b>								
R <sup>2</sup>					0.0063	0.0047	0.0060	0.0062
Num of firms	101	101	101	101	101	101	101	101
Num Obs	450	450	455	455	450	455	455	455
F-test					4,57	4,30	4,20	4,15
Prob > F					0.00000	0.00000	0.00000	0.00000
Wald chi2 ()	644.59	607.26	725.45	714.2				
Prob > chi2	0.00000	0.00000	0.00000	0.00000				

**Table 11.**  
**Descriptive Statistics 43 Firms 2003-04**  
**Panel A. Corporate Governance Index and Subcomponents**

	<b>Firms</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>	<b>Median</b>
CGI	43	49.44	9.61	34.47	69.21	47.41
Discipline	43	6.88	4.63	0.00	16.67	4.17
Accountability	43	10.08	3.43	8.33	16.67	8.33
Responsibility	43	8.66	4.25	0.00	16.67	11.11
Independence	43	6.30	3.07	0.00	12.50	4.17
Transparency	43	8.77	2.42	2.56	12.82	8.97
Fairness	43	8.76	3.99	0.00	16.67	6.67

**Panel B. Main Control Variables**

<b>Variable</b>	<b>Firms</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>	<b>Median</b>
CGI	43	49.44	9.61	34.47	69.21	47.41
ROA	43	0.07	0.06	-0.04	0.26	0.06
ROE	43	0.11	0.08	-0.07	0.32	0.09
CR4 <sub>T-1</sub>	43	0.61	0.24	0.08	1.00	0.60
Wedge	43	0.21	0.41	0.00	1.00	0.00
LNSales	43	25.59	1.14	23.20	28.40	25.58
Gsales <sub>t-3</sub>	43	0.18	0.21	-0.16	0.97	0.12
Debt-Ratio	43	0.32	0.20	0.00	0.80	0.30
K/S	43	0.82	0.92	0.00	5.07	0.66
Trading	43	0.28	0.39	0.00	1.00	0.02
Bursatil	43	3.26	3.55	0.00	9.58	2.28
Type	43	0.58	0.50	0.00	1.00	1.00
Lyears	43	24.71	21.27	1.50	75.50	18.50
BGA	43	0.79	0.41	0.00	1.00	1.00
Members	43	9.49	2.69	6.00	14.00	10.00
CGC	43	0.49	0.51	0.00	1.00	0.00

**Table 11. (Continued)**  
**Descriptive Statistics 43 Firms 2003-04**

**Panel C. Correlation Matrix of Selected Variables**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 CGI	1.00															
2 ROA	-0.19	1.00														
3 ROE	-0.20	<b>0.88</b>	1.00													
4 CR4 <sub>T-1</sub>	0.17	-0.24	-0.24	1.00												
5 Wedge	-0.07	0.20	0.12	-0.18	1.00											
6 LNSales	0.17	<b>-0.34</b>	<b>-0.27</b>	-0.02	-0.01	1.00										
7 Gsales <sub>t-3</sub>	0.24	<b>0.26</b>	<b>0.28</b>	-0.06	0.22	-0.06	1.00									
8 Debt-Ratio	-0.02	<b>-0.48</b>	-0.08	0.19	<b>-0.30</b>	<b>0.31</b>	-0.11	1.00								
9 K/S	0.15	-0.01	-0.11	<b>0.29</b>	0.21	-0.03	<b>-0.28</b>	-0.16	1.00							
10 Trading	<b>0.28</b>	-0.09	-0.19	<b>-0.28</b>	0.17	<b>0.36</b>	0.11	-0.19	0.13	1.00						
11 Bursatil	<b>0.29</b>	0.03	-0.11	-0.23	0.24	<b>0.34</b>	0.09	<b>-0.27</b>	0.17	<b>0.94</b>	1.00					
12 Type	0.18	0.20	-0.02	-0.21	0.20	0.16	0.02	<b>-0.43</b>	0.14	<b>0.61</b>	<b>0.79</b>	1.00				
13 Lyears	0.03	-0.17	-0.22	<b>-0.33</b>	-0.01	0.16	0.03	0.00	-0.16	<b>0.73</b>	<b>0.68</b>	<b>0.47</b>	1.00			
14 BGA	-0.02	0.09	0.07	0.04	<b>0.26</b>	0.20	-0.13	-0.12	0.17	<b>0.27</b>	<b>0.30</b>	<b>0.26</b>	0.13	1.00		
15 Members	-0.06	0.04	0.12	<b>-0.41</b>	-0.12	<b>0.30</b>	0.08	0.18	<b>-0.29</b>	0.16	0.15	0.05	0.10	-0.23	1.00	
16 CGC	<b>0.45</b>	-0.15	-0.15	0.08	0.07	<b>0.37</b>	0.08	-0.02	0.03	<b>0.47</b>	<b>0.42</b>	0.17	0.06	0.16	0.19	1.00

**Table 12**  
**OLS Regression Results on the Relationship between Governance and Main Determinants**

The regressions are performed using OLS. The dependent variable is *CGI*, the corporate governance index; *Wedge10* is a dummy variable that takes a value of one if control rights of the largest shareholder exceed cash flow rights by at least 10 percent and is zero otherwise; *LnSales* is the natural log of operating income in Colombian pesos of 1998; *GrSales* is the three-year moving average of past real annual percentage growth in operating income; *K/S* is the ratio of fixed capital to operating income; *BGA* is a dummy variable, equal to one if the firm is affiliated with a Colombian business group, and is zero otherwise; *CGC* is a dummy variable that takes a value of one if the firm has issued a code of corporate governance practices, zero otherwise; *DebtRatio* is total debt to total assets ratio; *TSecurity* is a dummy variable equal to one if the firm is listed as an issuer of stocks and zero otherwise; *Members* is the number of total members of firm's board of directors; *Bursatil* is a variable between 0 and 10 that measures the level of trading of a given stock. Numbers in parentheses are robust t-student. Coefficients significant at least at the 10 percent level (based on a two-tailed test) are in **boldface**.

<b>Dependent Variable: CGI</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
LnSales	1.736 (1.27)	1.623 (0.94)	2.027 (1.21)	0.716 (0.45)	0.965 (0.51)
GrSales	11.310 <b>(2.49)</b>	13.976 <b>(2.33)</b>	13.972 <b>(2.34)</b>	11.908 <b>(2.48)</b>	10.153 <b>(1.69)</b>
Lyears		-0.020 (-0.30)	-0.021 (-0.31)	-0.015 (-0.23)	-0.158 (-1.59)
BGA		-1.938 (-0.50)	-2.875 (-0.76)	-4.070 (-1.26)	-4.284 (-1.22)
Tsecurity		3.211 (0.97)	3.595 (1.08)	3.457 (1.16)	-1.774 (-0.42)
CGC				8.164 <b>(2.64)</b>	
DebtRatio		2.391 (0.23)	2.843 (0.28)	5.352 (0.64)	6.374 (0.65)
K / S		2.473 (1.59)	2.075 (1.20)	1.778 (1.14)	0.445 (0.22)
Members			-0.552 (-0.99)	-0.747 (-1.15)	-0.838 (-1.23)
bursatil					1.778 <b>(1.86)</b>
Constant	26.926 (1.63)	25.145 (1.36)	26.352 (1.46)	40.381 <b>(2.46)</b>	44.309 <b>(1.98)</b>
<b>Regression Statistics</b>					
R <sup>2</sup>	0.103	0.180	0.198	0.346	0.263
Num Obs	43.000	43.000	43.000	43.000	43.000
F-test	3.990	1.660	1.700	6.300	3.180
Prob > F	0.026	0.151	0.133	0.000	0.007

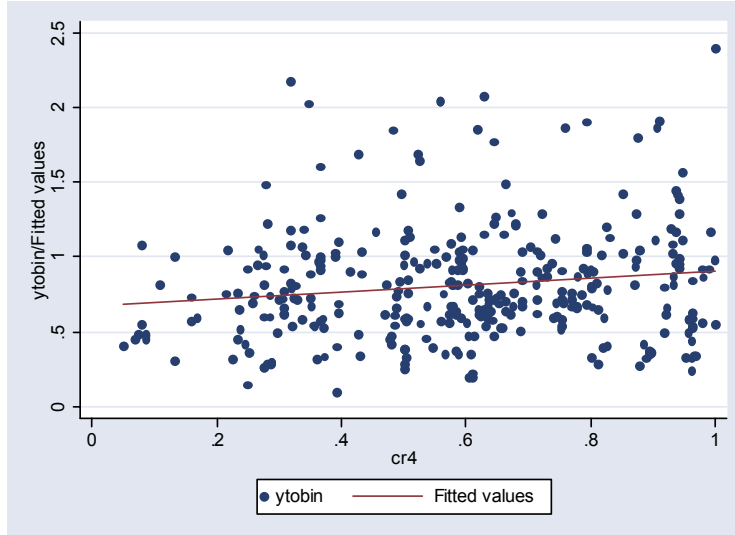
**Table 13.**  
**OLS and 2SLS Regression Results on the Relationship between Performance Measures and the Corporate Governance Index and Control Variables**

The regressions are performed using OLS and 2SLS. The dependent variable is *ROA*; *CGI* is the corporate governance index; *Wedge10* is a dummy variable that takes a value of one if control rights of the largest shareholder exceed cash flow rights by at least 10 percent and is zero otherwise; *LnSales* is the natural log of operating income in Colombian pesos of 1998; *GrSales* is the three-year moving average of past real annual percentage growth in operating income; *CR4<sub>t-1</sub>* is the percentage of direct ownership owned by the four largest shareholders in 2002-03; *SqCR4* is the square of *CR4*; *K/S* is the ratio of fixed capital to operating income; *BGA* is a dummy equal to one if the firm is affiliated with a Colombian business group, and is zero otherwise; *CGC* is a dummy that takes a value of one if the firm has issued a code of corporate governance practices, zero otherwise; *TSecurity* is a dummy variable equal to one if the firm is listed as an issuer of stocks and zero otherwise; *Members* is the number of members of the board of directors. Numbers in parentheses are robust t-student. Coefficients significant at least at the 10 percent level (based on a two-tailed test) are in **boldface**.

Dependent Variable	ROA		2SLS			ROA
	(1)	(2)	(1)	(2)	(3)	(1)
CGI	0.000 (-0.54)	-0.001 (-0.88)	-0.001 (-0.65)	-0.001 (-0.44)	0.000 (-0.2)	
Independence						0.006 <b>(3.18)</b>
LnSales	-0.010 <b>(-1.72)</b>	-0.016 <b>(-2.69)</b>	-0.009 (-1.40)	-0.010 (-1.51)	-0.016 <b>(-2.68)</b>	-0.013 <b>(-2.37)</b>
GrSales	0.082 <b>(3.48)</b>	0.100 <b>(4.12)</b>	0.093 <b>(2.81)</b>	0.099 <b>(2.72)</b>	0.095 <b>(2.73)</b>	0.111 <b>(5.38)</b>
CR4 <sub>t-1</sub>	0.007 (0.07)	-0.032 (-0.29)	0.004 (0.03)	-0.004 (-0.04)	-0.029 (-0.26)	-0.012 (-0.12)
(CR4 <sub>t-1</sub> ) <sup>2</sup>	-0.037 (-0.37)	-0.009 (-0.09)	-0.031 (-0.33)	-0.032 (-0.32)	-0.011 (-0.11)	-0.011 (-0.13)
Lyears	-0.001 <b>(-1.88)</b>	0.000 (-1.27)	-0.001 <b>(-1.84)</b>	-0.001 <b>(-1.93)</b>	0.000 (-1.22)	0.000 (-1.35)
Wedge10		-0.017 (-0.85)		-0.020 (-0.97)	-0.016 (-0.77)	-0.028 (-1.65)
BGA	0.010 (0.69)	0.026 (1.53)	0.009 (0.57)	0.014 (0.89)	0.026 (1.61)	0.035 <b>(2.52)</b>
Tsecurity	0.014 (0.77)	0.017 (0.87)	0.018 (0.90)	0.016 (0.83)	0.015 (0.77)	0.021 (1.42)
Debt-ratio	-0.048 (-1.42)	-0.050 (-1.31)	-0.049 (-1.42)	-0.052 <b>(-1.67)</b>	-0.048 (-1.21)	-0.062 <b>(-1.81)</b>
K / S	0.003 (0.32)	0.008 (0.88)	0.005 (0.50)	0.007 (0.65)	0.007 (0.71)	0.004 (0.46)
uoff		-0.032 (-1.42)			-0.033 (-1.48)	-0.048 <b>(-2.77)</b>
uofif		-0.013 (-0.44)			-0.017 (-0.61)	-0.088 <b>(-2.76)</b>
uof0		0.004 (0.15)			0.000 (0.01)	-0.024 (-0.99)
Constant	0.219 <b>(4.78)</b>	0.311 <b>(5.71)</b>	0.243 <b>(3.40)</b>	0.233 <b>(3.22)</b>	0.294 <b>(3.73)</b>	0.203 <b>(3.07)</b>
<b>Regression Statistics</b>						
R <sup>2</sup>	0.440	0.541	0.412	0.458	0.537	0.660
Num Obs	41	41	41	41	41	41
F-test	8.370	.	6.140	7.330		
Prob > F	0.000	.	0.000	0.000	0.000	

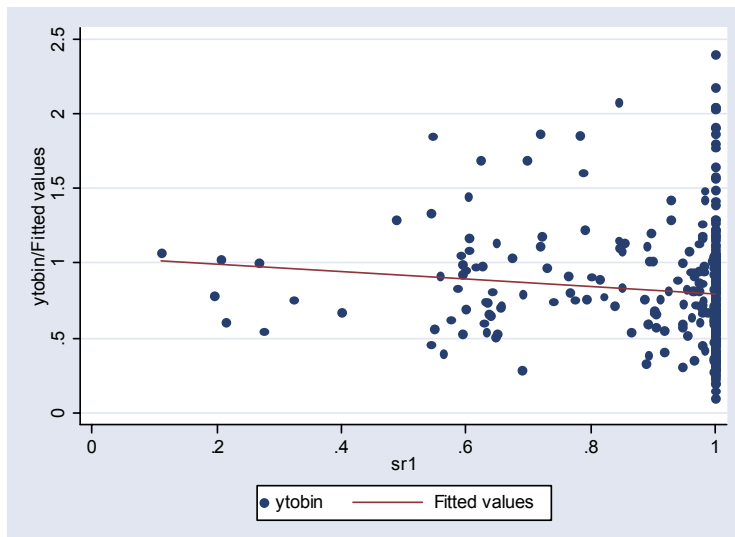
**Figure 1.**  
**Tobin's q and Cash-Flow Rights of Four Largest Shareholders**

Scatter plot of *Tobin's q* versus *CR4*. The fitted line is estimated using 108 firms.



**Figure 2.**  
**Tobin's q and Separation Ratio of Cash-Flow Rights and Voting Rights for the Ultimate Owner**

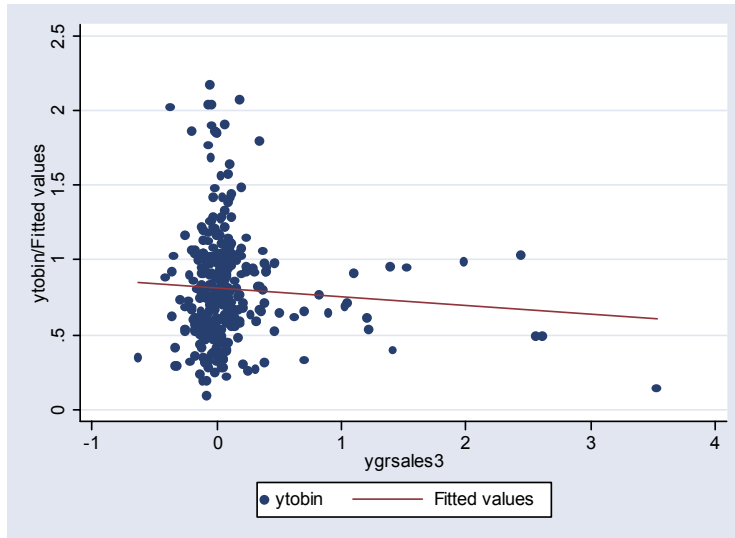
Scatter plot of *Tobin's q* versus the separation ratio of the ultimate owner. The fitted line is estimated using 108 firms.





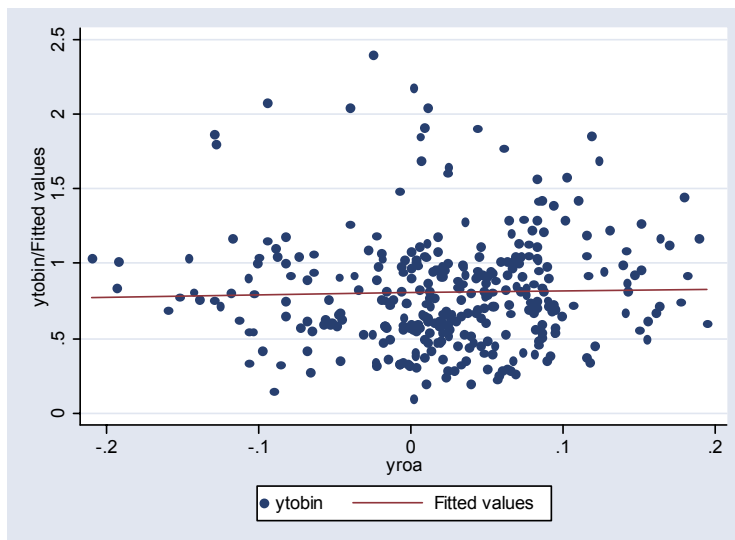
**Figure 3.**  
**Tobin's q and Annual Rate of Growth in Sales**

Scatter plot of *Tobin's q* versus the *Annual Growth Rate of Sales*. The fitted line is estimated using 108 firms.

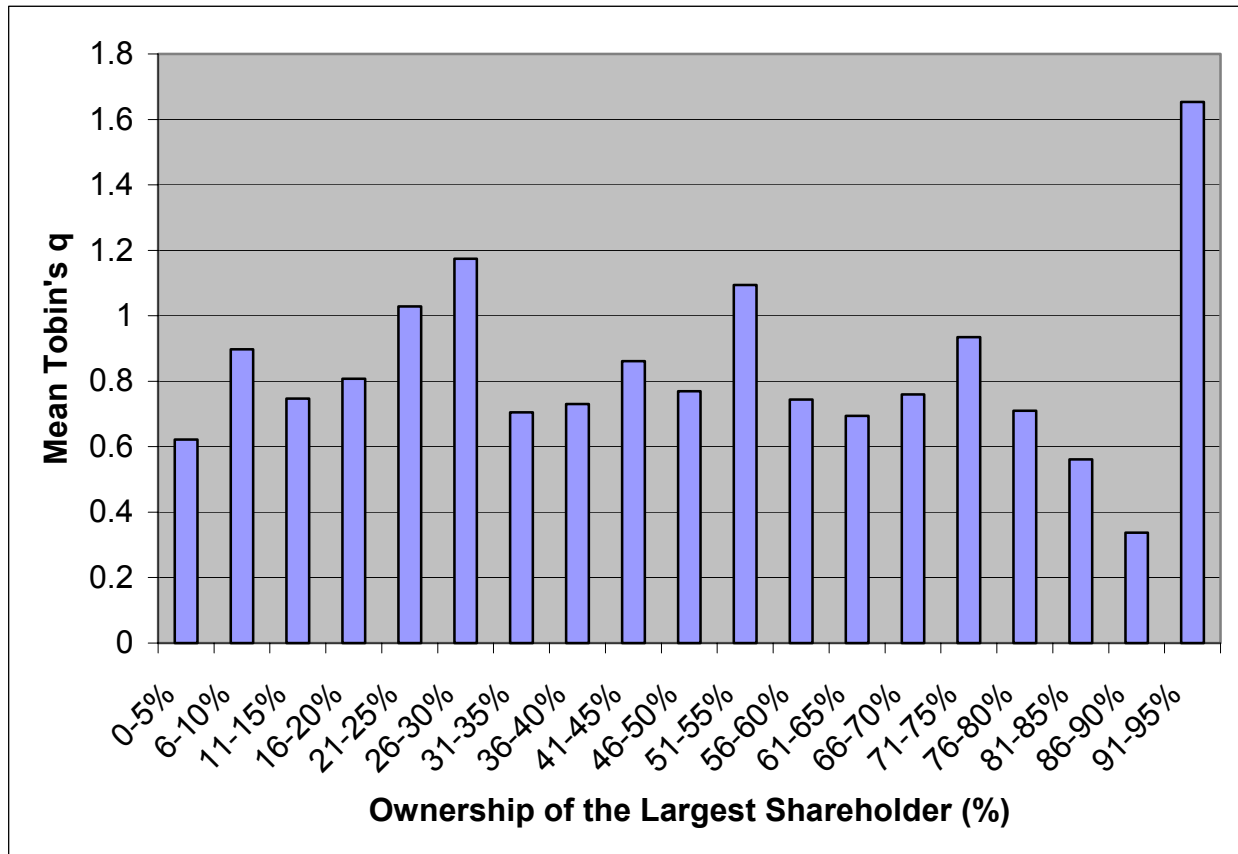


**Figure 4.**  
**Tobin's q and Return on Assets**

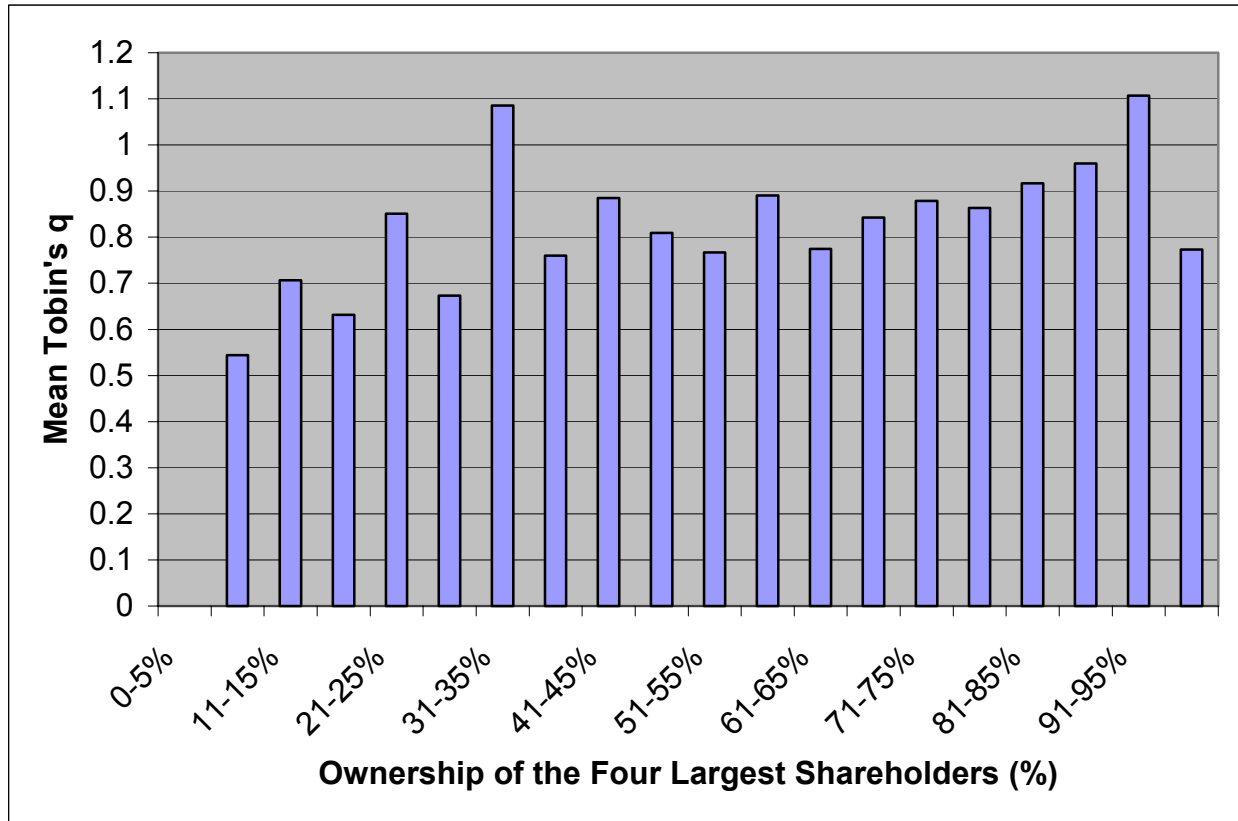
Scatter plot of *Tobin's q* versus *Return on Assets*. The fitted line is estimated using 108 firms.



**Figure 5.**  
**Company Valuation and Ownership of the Largest Shareholder**

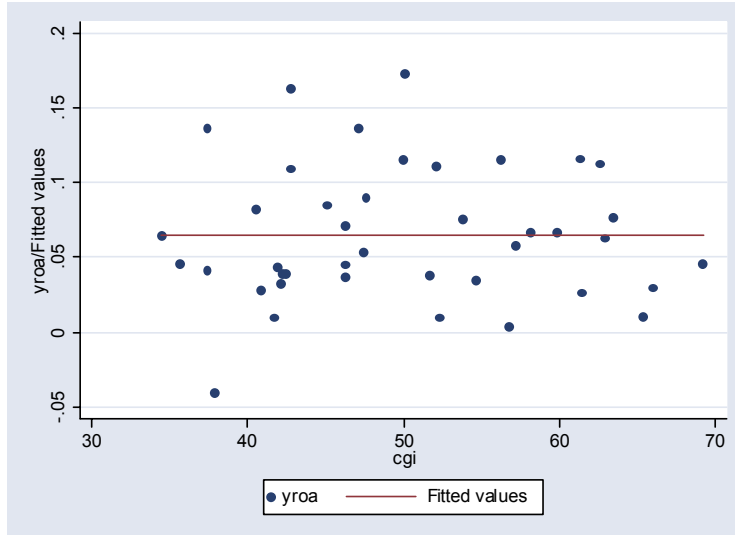


**Figure 6.**  
**Company Valuation and Ownership of the Four Largest Shareholders**



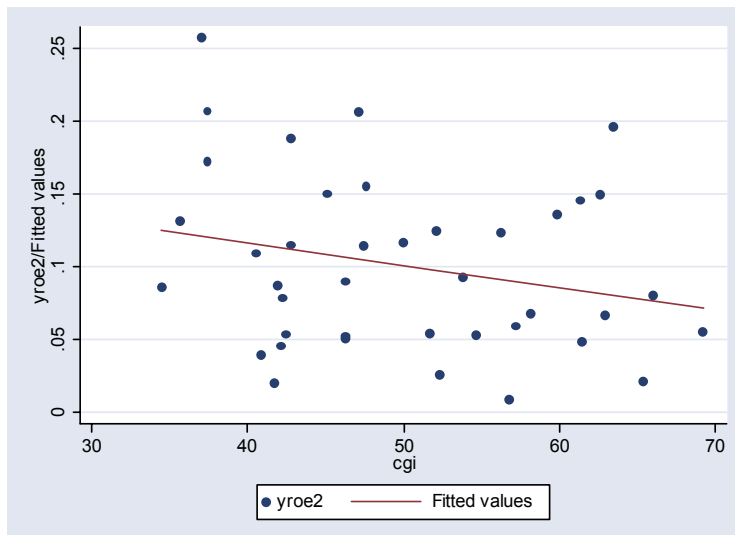
**Figure 7.**  
***CGI and Return on Assets (ROA)***

Scatter plot of *CGI* versus *Return on Assets (ROA)*. The fitted line is estimated using 41 firms.



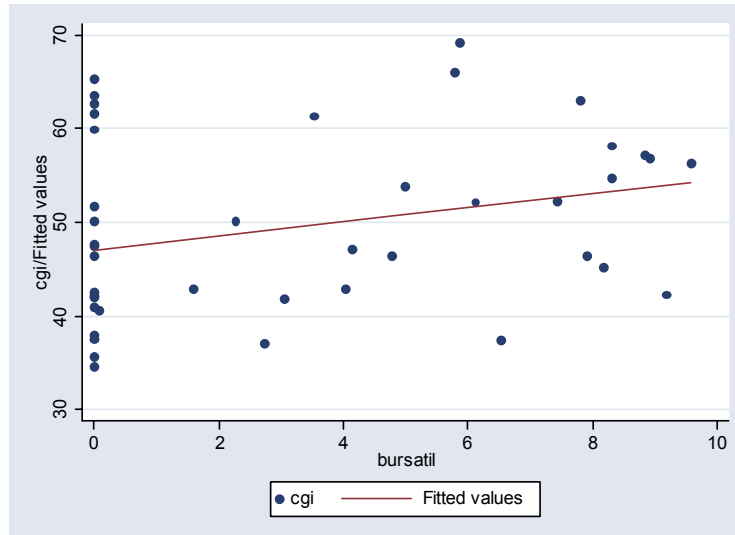
**Figure 8.**  
***CGI and Return on Equity (ROE)***

Scatter plot of *CGI* versus *Return on Equity (ROE)*. The fitted line is estimated using 41 firms.

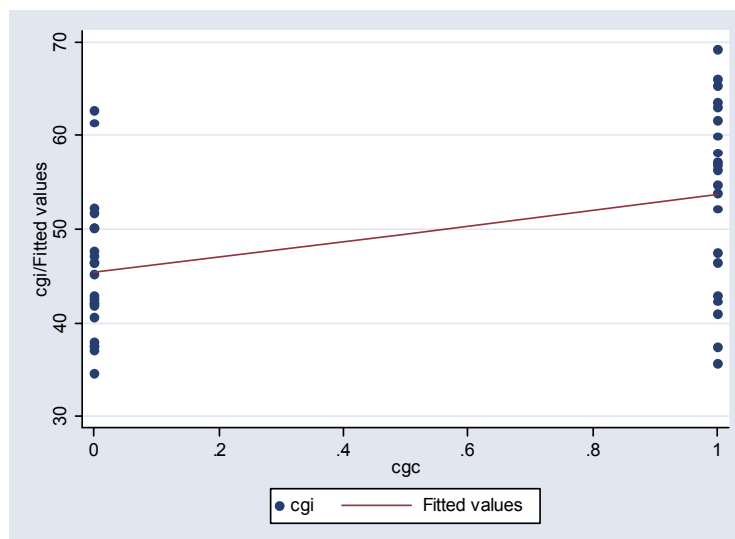


**Figure 9.**  
***CGI and Bursatil***

Scatter plot of *CGI* versus *Bursatil*. The fitted line is estimated using 43 firms.



**Figure 10.**  
***CGI and Firms that Adopted a Code of Corporate Governance (CGC)***  
Scatter plot of *CGI* versus *Code of Corporate Governance (CGC)*.  
The fitted line is estimated using 43 firms.



## Appendix A-1.

### Corporate Governance Index: Elements and Summary Statistics

This table describes the final 31 elements and the summary statistics included in the overall Corporate Governance Index for a total of 43 firms. Six firms that responded to the questionnaire were eliminated.

#### Subindex A. Discipline 4

Variable	Summary of the Variable	Yes	No	Responses	No. of "yes" Responses	Mean
A.1	Does the company's Annual Report include a section devoted to the company's performance in implementing corporate governance principles? Survey question 2.	1	0	43	14	0.33
A.2	Does the company have a code of conduct with corporate governance principles? Survey question 3.	1	0	43	23	0.53
A.3	Does the company adhere to a local code of best practice? This was the question made in Spanish. However, the question in English also asked "If so, what is its compliance rate (how many of the principles does it adhere to?" Survey question 4.	1	0	43	16	0.37
A.4	Is the firm trading in the stock market? Survey question 5.	1	0	43	18	0.42

#### Subindex B. Accountability 2

Variable	Summary of the Variable	Yes	No	Responses	No. of "yes" Responses	Mean
B.1	Are full Board meetings held at least once a quarter? In the Spanish questionnaire it was added a question initially into brackets in the English survey "Please also indicate frequency" Survey questions 8 and 8.1. However, the question 8.1 was not scored.	1	0	43	40	0.93
B.2	Are there any foreign nationals on the board? In the Spanish questionnaire the question "Which countries do they come from?" was turned into a different question. Survey question 22 and 22.1 respectively. However, the question 22.1 was not scored.	1	0	43	12	0.28

#### Subindex C. Responsibility 3

Variable	Summary of the Variable	Yes	No	Responses	No. of "yes" Responses	Mean
C.1	Are members allowed to send substitutes? Since Colombian code of commerce allows the existence of substitutes, the question seems out of place. However, there could be situations where in a complete year substitutes would not attend any single board meeting. Survey question 10.	1	0	43	12	0.28
C.2	Does the company disclose its ownership structure (i.e. the ownership by large shareholders? Under Law 222 of 1995, all companies registered at the RNVI must fulfill this obligation. Survey question 42.	1	0	43	33	0.77
C.3	Do shareholders with conflicts of interest in transactions need to disclose the conflicts if it goes to a vote to the assembly? Survey question 44.	1	0	43	22	0.51

#### Subindex D. Independence 4

Variable	Summary of the Variable	Yes	No	Responses	No. of "yes" Responses	Mean
D.1	Do the Chairman of the Board and the CEO belong to the same family/controlling group? Survey question 12.	1	0	43	13	0.30
D.2	Is the Chairman of the Board an independent, non-affiliated director? Survey question 14.	1	0	43	18	0.42
D.3	Are there any members of the board that are independent board members? Survey question 15.	1	0	43	5	0.12
D.4	Is any board member also board members/executives of firms belonging to the same economic group? How many members fall in this category? Survey question 28.	1	0	43	29	0.67

## Appendix A-1 (Continued).

### Subindex E. Transparency 13

Variable	Summary of the Variable	Yes	No	Responses	No. of "yes" Responses	Mean
E.1	If a manager or a director has a conflict of interest in a transaction (i.e. he owns, is a director of, or works in a firm with whom the company is planning to do the transaction), does he need to disclose such conflict? Survey question 23.	0	-1	43	33	0.77
E.2	Does he need to get out of the room for the deliberations on the transaction to take place? Survey question 23.1.	0	-1	43	18	0.42
E.3	Does the company disclose executive compensation and benefits? Survey question 24.	1	0	43	25	0.58
E.4	Does the company disclose board compensation and benefits? Survey question 25.	1	0	43	36	0.84
E.5	Does the company publish its Annual Report within four months of the end of the financial year? Survey question 56.	1	0	43	38	0.88
E.6	57. Does the company publish/announce semiannual reports within two months of the end of the half-year? Survey question 57.	1	0	43	29	0.67
E.7	Does the company publish/announce quarterly reports within two months of the end of the quarter? Survey question 58.	1	0	43	38	0.88
E.8	Has the public announcement of results been no longer than two working days of the Board meeting? Survey question 59.	1	0	43	15	0.35
E.9	Has management disclosed three years performance targets? Survey question 60.	1	0	43	14	0.33
E.10	Has the company hired its external auditors for consulting purposes in the last three years? Survey question 62.	-1	0	43	25	0.58
E.11	Does the company have a website where results and other announcements are updated promptly (no later than one business day)? Survey question 63.	1	0	43	20	0.47
E.12	Does the company disclose ownership information? Survey question 64.	1	0	43	30	0.70
E.13	Does the company disclose related party transactions and/or conflicts of interest of managers and directors on the board? Survey question 67.	1	0	43	24	0.56

### Subindex F. Fairness 5

Variable	Summary of the Variable	Yes	No	Responses	No. of "yes" Responses	Mean
F.1	What percentage of the shares is needed to call an Extraordinary Shareholders meeting? Under Law 222 of 1995, the minimum percentage to call ESM is 25%. However companies can opt out by determining a lower percentage. So, a one was assigned for those responses with percentage lower than 25%. Survey question 40.	1		43	11	0.26
F.2	Can shareholders ask management to include items in the list of topics to be dealt with during the shareholders' meetings? Survey question 41.	1	0	43	33	0.77
F.3	Can minority shareholders add agenda items to the meeting? Survey question 41.1.	1	0	43	30	0.70
F.4	Do minority shareholders have rights of first refusal to purchase additional shares at the same price they are offered to a third party? Survey question 49.	1	0	43	13	0.30
F.5	Can minority shareholders have tag-along rights to sell shares at the same price as the controlling shareholder when the company is sold? Survey question 51.	1	0	43	26	0.60