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CORPORATE VALUATION AND GOVERNANCE: EVIDENCE FROM COLOMBIA

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ABSTRACT

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

Keywords: Ownership, Control, Corporate Governance, Colombia

JEL Classification: G32, L14, L22

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RESUMEN

En este documento, se examina, por primera vez para el caso colombiano, la asociación que diferentes medidas de propiedad y control y las razones de separación tienen con medidas de valoración y desempeño de 108 empresas no financieras que transaron sus acciones durante el período 1998-2002. Encontramos que los grandes accionistas ejercen una influencia positiva tanto sobre el valor de la empresas como sobre el desempeño, lo que valida el enfoque positivo de supervisión que realizan los grandes accionistas, pero también encontramos que dicha relación no es monótona lo que implica que cuando la separación entre las medidas de propiedad y control tiende a aumentar, se produce un efecto negativo sobre el valor de la empresa. Adicionalmente, presentamos los primeros estimativos de prácticas de buena gobernabilidad de una encuesta realizada en el año 2004 a 43 empresas colombianas no financieras. Los índices sugieren que la puesta en práctica de una buena gobernabilidad por parte de las empresas colombianas ha sido lenta y pobre medida por el promedio del índice que no llega a ser la mitad del máximo alcanzable. Desafortunadamente, no encontramos ningún sustento a teorías recientes que predicen una asociación positiva entre prácticas de buena gobernabilidad, medidas por el CGI, y el desempeño contable de las empresas. A lo sumo, puede existir una relación positiva entre algunos de los sub-componentes del índice pero los resultados no fueron en general estadísticamente significativos.

Palabras clave: Ownership, Control, Corporate Governance, Colombia

Classificación JEL : G32, L14, L22

1. INTRODUCTION

The analysis of corporate governance systems has attracted attention in recent years. Some studies have looked at the connection between ownership structures and performance while more recently others have focused on the relationship between corporate governance indexes at firm level and firm's valuation and performance. In the first type of papers, researchers have tested two opposite effects of ownership upon performance. On one hand, large blockholders with good information on their firms have incentives to monitor managers and then to minimize agency problems of management entrenchment. This monitoring effect is positive. On the other hand, large blockholders' incentives may be in opposition to those of minority. Some of these incentives can be building empire, excessive risk-taking and the like. This has been named: tunneling effect, which is of course negative upon firm's valuation and performance. The second type of research has studied firm-level corporate governance mechanisms, and most of them have focused on cross-country analysis where the emphasis is on the effect upon governance of the legal systems across countries. La Porta, Lopez de Silanes, and Shleifer (1999) argued that investor's protection tends to be greater when legal environment is stronger and therefore his willingness to invest tends to increase. That research has tested whether corporate governance helps explaining firm's valuation and performance and they have found a strong positive association.

In this paper, we address both types of research. We first report results that link different measures of ownership and control, and separation ratios with 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, we find evidence that large blockholders exert a positive influence upon firm's valuation and performance, which validates the monitoring approach, but we also found that this relation is not monotone implying that when separation of control and ownership tends to increase, a negative effect is exerted on firm's valuation.

Then, we report first estimates of a survey of corporate governance practices conducted in 2004 for 43 Colombian non-financial companies. These practices are turned into a corporate governance index, CGI that includes information on six different aspects: independence, accountability, fairness, responsibility, transparency and, discipline. The results suggest that implementation of good governance in Colombian firms has been slow and poor as measured by the average of the Index that is below half the maximum attainable value. Colombian stock market is very undeveloped and is being shrinking if one measures it by the number of firms that have traded their stocks in the last five years. We then, try to address the question of whether better governance practices lead to better (accounting) performance. Using standard OLS and correcting for endogeneity, we found very disappointing results. Performance is not explained by good governance practices. This is the first attempt that has been made in Colombia to trying to verify that hypothesis, and nonetheless, we believe this research is helpful in the understanding of corporate practices in emerging economies like Colombia.

This paper is divided in four sections. In the following section we make a theoretical review of relevant literature on the relation between ownership, control and firm's valuation and performance and present three of our working hypothesis. In section III, we present sample selec-

tion, regression specifications, data description, main econometric findings, and present our four hypotheses. Section IV concludes and suggests some 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 concentration of equity among shareholders. Berle and Means (1932) characterized the modern corporation in the US as the diffusion of equity among a large number of small investors none of which could individually take control over the corporation. La Porta, Lopez-de-Silanes, and Shleifer (1999) found that such characterization did 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 any of the above types of characterizations. On one hand, the type of corporations found by Berle and Means (1932) suggest that management can be the ultimate controller of the firm and then they may create some forms of agency problems. Since small individual and dispersed shareholders could not embark on monitoring managers, due to a free-riding problem, managers with a very small ownership or no ownership at all became the ultimate controllers of firms. Management entrenchment turned to be the 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 block-holders and minority shareholders. Large shareholders can transfer "resources from the firm for (their) own benefit through self-dealing transactions …but also 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… and 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 transaction that discriminate against minorities (Johnson 2000, 22-23). This kind of conduct has been called "tunneling" or search for private benefits of control (see also Bertrand, Paras, and Mullainathan 2002, and Holderness, 2003).

On a different perspective, some authors have argued that large blockholders can have a positive effect on firm's valuation and performance. For instance, Shleifer and Vishny (1986) argued that, under the assumption that large shareholders are disconnected from management a large shareholder with a stake large enough in a company would have incentives to carry out some *monitoring activity* over the incumbent management. Hence some degree of ownership concentration could improve control on management and so increase *firm value*. This second conduct of large blockholders is the monitoring over management view that 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 besides the fact most of firms are owned by large shareholders, they in most cases belong or make part of business groups.[2] This dimension of ownership can deepen the agency problem of tunneling outlined at the end of the above paragraph. However, as Khana and Palepu (2000a) have found firms associated to business groups can enjoy some benefits, what they call the value added approach of being part of a group due to 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 is not ex-ante any unambiguous effect that should dominate. It will depend on whether the monitoring effect (positive effect), that suppose large block-holders can induce large profits and better share prices, will outweigh the tunneling or rent-extraction effect (negative effect), i.e., that blockholders will be rent-seekers and then be highly risk averse. In the last few years, research has been intense trying to see how those agency problems have operated in firms in developed and developing countries. In particular, it has focused on how ownership relates to firm's valuation and performance. Results have been mixed validating either the so-called tunneling view, or the monitoring effect, or the value added approach. For instance, on the negative side, for US corporations Demsetz and Lehn (1985), and Demsetz and Villalonga (2001) found that, after controlling for capital structure, firm size, stock market risks, and other variables, ownership structure 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% of the firm equity (p. 244). He found (Gibson, 245) 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." 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). Yurtoglu (2000) in a study of Turkish corporate governance also reported, for a sample of 257 listed companies in 1998, 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.

On the positive effect side, the monitoring, or the value-added approach, Wiwattanakantang (2001, 325) using firm-level data for 270 non-financial listed companies in 1996, found for listed Thai firms that the presence of controlling shareholders is *not* "detrimental to the corporate value." On the other hand, Gispert (1998, 534) studying the Spanish case also found that

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[2] Of course, literature has also acknowledged that some of main rationale to create 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 though. As the literature in the subject has shown (see Betch and Mayer 2001, 7-12), incumbent shareholders can retain control by issuing dual shares, or shares with limited (or none) voting rights, by pyramidal schemes by which a holding company controlled by the controlling shareholder holds shares in the company, or by cross-shareholdings.

"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 for eleven European countries. Controlling for nation effects and for system effects (stock market efficiency, or the level of investor protection), and using 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 relation 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 top one shareholder is not statistically significant in explaining valuation of firms but when he uses ownership concentration by the ten largest stockholders, then a *positive* relation is found, validating the value added approach.

Empirical works on the effect of firm's affiliation to a business group has also flourished recently. Earlier studies on the subject were made on samples of Korean corporate firms (Chaebols) (see Chang and Choi, 1988) and Japanese corporate firms (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) for the Italian case tested how the identity of a controlling shareholder and his belonging to a business group affected company performance. 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 (1065)."

More recently, Khana and Palepu (2000a) found, for Indian groups that 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" (Khana and Palepu, 869). Recent research on East Asian Economies has shown some inverse relationships. For instance, Bae et al. (2002) test for Korean firms the two main competing hypotheses related to business group: 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 shows that tunneling can be more common within business group since the controlling shareholder(s) can transfer resources, profit, etc, from firms where he (they) have low cash flow rights to firms where he has high cash flow rights.

Claessens, Djankov and Klapper, (1999) found for a sample of about 1,000 firms in East Asia and Chile that business groups are formed to diversify risks internally as firm's market risks is 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, that includes five Latin American countries, Argentina, Brazil, Chile, Mexico and Peru, the authors found mixed

effects of belonging to a business group: group affiliates enjoy higher profitability than unaffiliated firms for three countries: weaker results for another three countries, including Peru; for Argentina, group firms appear to perform worse than independents; and a less weaker (negative) result for the rest of countries, that 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?" (60-61). After reviewing some papers on the subject, he concludes, mostly for the United States, as follows:

"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 flows that accrue 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".

In what follows, we present the main hypotheses related to the effects of block-ownership on firm valuation and performance that we will test empirically in the econometric section. We leave for the Corporate Governance Index section, literature review and the hypothesis that in this regard will be tested.

HYPOTHESES:

Gutiérrez, Pombo and Taborda (2005) show that ownership concentration in Colombian listed companies is high 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 found that this measure is high for affiliated firms (and for unaffiliated ones too). That paper leads us to pose the following hypothesis:

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 describes briefly the construction of the data on ownership and control structures and separation ratios between ownership explained in more detail in Gutiérrez et al. (2005).

3.1 REGRESSION SPECIFICATION

Two types of specifications will be tested. On one hand, we will look for factors that determine valuation and performance measures. On the other hand, we will look at what can explain corporate governance measured by an index constructed with a survey. In both cases, we will make use of some variables that capture some corporate governance mechanisms like ownership and control, and 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:

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

where Valuation (or performance[3]) is either **Tobin's q**, market to sales, MTS, and market to book ratio, MTBR, respectively; α, a constant; **OWN**, direct ownership by fourth largest shareholders; (**OWN**),[3] is ownership to the square; **Wedge** is a measure of separation of control rights from cash-flow rights. This measure takes the inverse of the sr1 to get the estimates; **BGA** is affiliation of a firm to a business group; **Lyears** is number of years a firm has been listed. **X'**s are control variables; **K**, the number of control variables; **SIC**, industry dummy; *i*, firm; and e, is an error term.

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

To assess the relation between corporate governance index and firm attributes, we run each firm's corporate governance score on other attributes of governance, and we control for other characteristics of firm, and estimate the following equation

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

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[3] When the dependent variable is a performance variable, we will use returns on assets, ROA, or returns on equity, ROE. As explained in the main text, Tobin's q demands having some market valuation on common stocks which unfortunately is not available if firm's stocks are not listed.

where the vector X contains a set of further control variables. As Durnev and Kim (2005) stress, we must be cautions in drawing inferences with the results of this equation because of the potential problems of endogeneity. Nonetheless, in order to reduce endogeneity, we run regression using instrumental variables that will be detailed below as well as some robustness checks.

3.2 SAMPLE SELECTION

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

For this research, we grouped *three* different data samples. For the first sample, we took all Colombian non-financial companies whose stocks were traded at least *once* in a year during 1998 to 2002. It means that we included in this sample all Colombian companies that traded their stocks during that period and took the year(s) when the stock was actually traded, and excluded those years when their stocks were not traded. We do so for the following reasons. First, Colombian companies can issue several types of securities like stocks, bonds, and commercial papers. However, only stocks are securities that have variables returns that depend on how well a firm is managed and how well its corporate governance is. Bonds and other types of fixed return securities can be assimilated to banks loans. Second, reliable data for (average) annual market prices of stocks is almost non-existent or hard to get for years other than the period selected. Since one of the objectives of this research is to test how valuation-firm measures (like Tobin's q) are related to ownership and other control variables, we had to get the stock market prices, and that was only possible for firms that satisfied the first and second points. Third, we constrained data to just the year(s) were the stocks were actually traded at least once during that year, making it a complete unbalanced panel. The rationale for do this stems from our interest in studying how the relationships of interest evolved during that period for firms that traded their stocks all the five years versus those that traded them four or less years. For all samples, we determined the primary industry in which each firm operated using the United Nations' two-digit Standard Industrial Classification (SIC) system.

For the *second* sample, we stick to the same 108 firms but expanded the number of years to make the panel as balanced as possible. Thus, for all companies we took 1998 as the starting point of research regardless whether the firm had (or not) its stocks listed that year or whether they were traded.[4] This makes the panel a balanced one. However, not for all firms the data goes from 1998 to 2002 since some of them were just created during that period and correspondingly their panel can be lesser. One important implication of this second sample is that we can observe how different performance and ownership relation differ when firms' stocks were listed against when they were not. The drawback of this sample is that we *cannot* estimate a firm valuation measure like Tobin's q since for some firms and some years, market prices are

[4] However, we have not been able to determine for some firms whether for the years 1996-7, those firms were listed in the stock exchange for issuing securities other than shares.

not available. To overcome this, we rely on more general accounting measures like return on assets, ROA, and return on equity, ROE. We will explain that in more detail below.

The last sample is composed of merely 43 firms that were listed in Colombian Stock Exchange for the years 2003 and 2004. That number is not arbitrary though. It resulted from the number of companies that kindly responded 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 one refers to the exclusion of financial firms, regrettably very important in a small stock market like the Colombian one, and public utilities companies. Main reason is that this type of corporations is subject to very specific regulations and so their performance and valuation measures are not strictly comparable. Lastly, we excluded some firms whenever we could not find reliable information either on stock prices or financial statements.

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 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 influence their choice" (page 69). However, corporate research for many years focused only on the structure of corporate ownership putting aside the overwhelming differences between control and ownership. In the United States, the main early works were conducted by Demsetz and Lehn (1985), and Morck, Shleifer, and Vishny (1988) who used ownership corporate estimates to test whether such measures had any bearing on corporations' profitability. Prowse (1992) conducted a similar research on Japanese corporations.

More recently La Porta et al. (1999) came back to the seminal analyses of Merle and Means by looking at what they called ultimate owners. In their words (page 476) "…a corporation has a controlling shareholder (ultimate owner) if this shareholder's direct and indirect voting rights in the firm exceed 20 percent." 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.

In this research, we follow a more thorough approach based on an input-output methodology that renders 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, and 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 our 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 ten largest shareholders (**CR_1**, **CR_2**, **CR_3**, **CR_4**, **CR_{10}**). To assess potential non-linearities, we also include concentration ratios to the square (i.e., $[CR_4]^2$). The input-output methodology also allows to estimate what it is known as the integrated ownership (direct and indirect voting rights) and with this and the directed ownership we estimated different measures of the separation ratio for the whole number of shareholders, for the largest one, for the two largest ones, and the four largest one. We denote by **srn**, **sr1**, **sr2**, **sr4**, the ratio of cash-flow rights to voting rights of the ultimate, the two largest, and four largest blockholders respectively. The separation ratio between ownership and control goes from zero to one; it is equal to one when the separation is zero and one 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, we estimated three additional wedge variables. The first one is the difference between control rights and cash-flow rights, we called **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 is, **Dif3**, a dummy variable that takes the value of one if ownership stakes exceeds control rights of a given number of chosen shareholders and if this difference is above the median separation, and 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. We chose to construct it only for the four largest shareholders.

Given some constraints on disclosure of information, we are not able to provide names of individuals as ultimate owners, and we did a taxonomy regarding whether a firm is widely held or closed. This last information is only available for the econometric exercise of relating governance and performance. In our empirical section, we will include dummies to 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

Our study is focused on Colombian listed firms during the period 1998 to 2002 supplemented with a preliminary analysis of a survey of corporate governance practices for the year 2004. Our 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 to get this sample was to estimate market valuation measures like Tobin's q.[5] To estimate **Tobin's q**, we follow Black, Jang, and Kim (2003) who defined it as the ratio between 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 book value of assets must be very close to replacement costs. Market value of assets

[5] 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 and then *any* market valuation is almost impossible to be obtained.

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 given 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 our samples are composed of firms that fall in either category, we also estimated two accounting performance measures like returns on assets, **ROA**, and returns on equity, **ROE**, respectively following standard definitions.

3.3.3 GENERAL OVERVIEW OF OWNERSHIP, VOTING RIGHTS AND SEPARATION RATIOS

Table 1 offers the reader a general view of our 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, it presents averages of main ownership and control variables. These are the cash-flow rights (CR_1, CR_2, CR_4, CR_{10}), 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 cutoff point of ten percent; and three variables closely related to governance and ownership and control: whether a firm is or nor affiliated to a business group, whether there is a foreign investor among the five largest shareholders, and a variable that captures how much in a year over the opened days of the stocks, firm's stocks were traded.

On the average for the period 1998 to 2002, most listed firms were located in six out of twenty industry sectors, a great deal of them in manufacturing sectors like manufacture of pottery, China, glass, cement, plaster, food; beverage and tobacco, textile, wearing apparel and leather products, and in financial-related sectors like investment funds. Direct ownership of the largest shareholder, CR1 ranged, on average, between 12% in firms in agriculture, livestock, and forestry production to 56% in firms in public administration, education, community, recreational and household services. Only in basic metal industries, the largest block-holder of those firms, on average, was close of controlling directly 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 eleven industries. And in only *one single* sector, control was not obtained by the direct ownership of the ten largest shareholders. A similar picture can be seen with the voting right variables but a bit more concentrated since in fifteen sectors the four largest shareholders concentrated more than fifty percent of direct and indirect votes. Firms affiliated to business groups were present in most sectors. In especial, we want to stress 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 not any 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 just one single sector, wholesale and retail trade, firms' shares were actively traded during a year. In twelve industries, shares were very illiquid since they were traded in less than ten percent of the number of days, the Exchange was opened.

Since association to 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 in two panels: firms that are affiliated, and non-affiliated to groups. There 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 just traded to comply with minimum regulations. But more research must be done to find out what explains it.

3.3.4 OTHER VARIABLES RELATED TO FIRM'S GOVERNANCE

In section C.1 above, we described our measures of ownership, control and the separation ratios. From the separation ratios, we follow Durnev and Kim (2005) and define **Wedge**, as a dummy equal to one if control exceeds ownership in some percentage, and zero otherwise. Two cut-off points were selected: 10% and 30%. The former is suggested by La Porta et al (1999), while the latter was chosen because it is the average of the CR1 measure found in Gutiérrez et al. (2005). A priori, one could either expect a positive or negative relationship with firm's valuation.

Firm age is another control variable included in testing relationship between governance measures and 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 us to use that variable, we proxy it 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), we expect a negative relationship between it and valuation and other performance measures.

Colombian capital market restrictions on foreign capital were eliminated by the early 1990s. Recently, McKinsey & Company published the results of a survey. The survey 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, for invest in Colombian companies with good governance, an average premium of 27.2%. We control, then, for the presence of foreign ownership, **FO**, among the first five largest shareholders using a dummy with value one in case there was one, and zero otherwise.

Lastly, one mechanism of governance is the board of directors. For the small sample of surveyed firms, we 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). In the questionnaire explained below, it was asked how many members had the board. In Colombia, the board of directors is composed by

its principals and its representatives, and since the Code of Commerce make all of them liable as legal representative, we included the sum of them. We expect a positive relation with performance due to the incentive effects of monitoring that the board exerts on management. Lastly, **Trading** is a variable that is 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 opened.

3.3.5 OTHER CONTROL VARIABLES

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

Sales and assets have been extensively used as measures of firm size. Some authors provide good insights why this variable is a good control one. 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. We use primarily sales. Assets will be also used as an alternative. And as in most studies, firm size enters as the natural log of the variable. We have then, for sales,[6] **LRSales**, and for assets, **LRAssets** (in 1998 Colombian pesos).

A second variable controls for firm's investment opportunities. Klapper and Love (2004), Black et al (2003), Himmelber et al (2001), and Durnev and Kim (2005) among others use some type of average growth rate of sales. On the potential effect of this variable on performance (and governance) Klapper and Love (2004) 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, we then include a moving average of the three previous real annual percentage growths in operating income,[7] **GrSales** (in 1998 Colombian pesos).

Most research on the subject tends to control for intangibles too. Durnev and Kim (2005), Black et al. (2003), Himmelber et al. (1999), and Demsetz and Villalonga (2001) among others controlled for what they call discretionary spending. In this category falls expenditures in R&D, 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, we did not get financial reported values for either R&D or advertising spending, we make use of the ratio between fixed capital (property, plant and equipment) and operating income. One should expect a negative relation with firm value since market can value intangibles more than what they meant in book values.

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[6] Actually, we make use of operating income instead of sales. The difference between these two variables is small though.

[7] To illustrate, we estimated the annual real growth rates of every of the last three years and then averaged them.

We include a control variable for leverage that we proxy as the debt-to-asset ratio, **Debtratio**. The effect of leverage on firm value is ex-ante ambiguous.

We control for industry dummies, $\mathbf{SIC}_i$, to account for differences in asset structure, market competition, and other idiosyncratic aspects, which may affect firm valuation, ownership or corporate governance. We classify industries with the 2-digit United Nations Standard Industry Classification.

3.4 DATA AND CONSTRUCTION OF COLOMBIAN CORPORATE GOVERNANCE INDEX

3.4.1 SOME INSIGHTS

Fllowing Jensen (1993), four mechanisms of corporate governance are worth studying. The first one refers to legal and regulatory mechanisms; the second are internal ones; the third ones are external mechanisms and the last ones are product market competition.[8]

However, is evident that for most emerging economies, the third, and the last mechanisms are less valuable since the main mechanism of the third group, takeovers, are almost nonexistent given the high degree of control among the largest shareholder(s), and for the four 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 what they compete. Then, we are left with mechanisms belonging to the first two groups. Although, the legal system within a country is given and is the same for all the firms, good governed firms in weak legal systems like the Colombian case would try to differentiate from bad governed ones going beyond the legal system. Or else, in more global and interrelated capital markets, firms that want to get capital in external markets need to adopt internationally corporate governance standards that are usually above the one imposed by domestic legal rules. Regarding the second group, 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 on the field has turned to surveys to get information of how firms set the different governance mechanisms included in groups one and two. That information has come primarily of 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 (2004) used the CLSA ranking as a proxy of the firm-level corporate governance for 495 companies across 14 emerging economies. They then address the question of how performance at firm-level 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 & Poor's measure of corporate disclosure practices (as a proxy of firm disclosure) to test whether that index could explained (and was explained by) firm's performance.

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[8] 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.

Country studies on corporate governance have not been abundant though. Drobetz, Schillhofer, and Zimmermann (2004) constructed a corporate governance rating for 91 German public firms. Using a questionnaire with a variety of corporate governance practices, they look at how firms have complied voluntarily with the recently issued German corporate governance code. They also tested how the index can explain 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, being 60 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 antitakeover defense provisions in the line of the third group of governance mechanisms outlined above.

3.4.2 QUESTIONNAIRE DESIGN AND CONSTRUCTION OF THE CORPORATE GOVERNANCE INDEX

In this research, we follow the common procedure of sending a questionnaire to Colombian public companies based on a sample of questions designed by IADB project's directors. The questionnaire was clearly inspired upon CLSA questionnaire. There exist some key differences though.

The first difference is who responded the questionnaire. In our research we sent them directly to main company's officers while in the case of CLSA its own team of financial analysts responded the questionnaires. The second aspect regards questions. In our questionnaire, *initially*, there were 67 questions organized around four criteria: general principles, senior management and the board, shareholders and disclosure. The second criterion had 25 questions, the third 20, and the remaining between the two others. Contrary to the CLSA there were not any ex-ante weight assigned to any criterion. However, the questionnaire was subject of revisions or refinements *after* we received them filled out and some questions were deleted.

The third aspect is related to the way questions were posed. For instance, the way CLSA posed some questions is "Is it true that there has been no controversy….?" A yes-answer is then assigned a one and a no-answer gets a zero. In our case, unfortunately, some questions were posed as "Has the board received any complains 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 we assign it a value of one.

Finally, for the final sample of questions, we made a couple of refinements in order to reduce subjectivity and get a more robust index. First, we deleted some questions due to the fact that they had no bite in Colombian corporate legal frame. One example is worth illustrating. The election of the external auditor is a 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 of external auditor. Hence, this question and some closely related did not make sense at all and were eliminated. To further reduce subjectivity some other questions were erased due to the low o null variability of answers; were very con-

fuse or ambiguous as to which answer indicated better governance; or overlapped highly with other question(s). Second, we bundle questions around the same criteria established by CLSA. Hence, we have six criteria: discipline (4), accountability (2), responsibility (3), independence (4), transparency (13) and fairness (5), where the number between brackets is questions for each criterion. As a result of the refinements, transparency got a greater number of questions while accountability had very low questions. After the final refinements, we have 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.[9] Table 1-A in the appendix shows the questions left and some statistics of the survey.

3.4.2.1 Sample of Companies

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

At first, a total of five companies refused to answer the questionnaire arguing that the information was "confidential" a response that is at odds with the condition of being "a public company". Thirty-nine of the surveyed companies kindly responded the questionnaire. To get a higher number of companies in the final sample, we proceeded to selectively fill out the questionnaires for 10 of the companies that did not respond it. The criteria for selecting those "extra" companies were the information publicly and non-publicly available we had gathered and the quality of it. That leaves us with 49 companies who responded the questionnaire. However, three companies belonged to regulated industries, and for other three, we could not get financial statements. So at the end, the Colombian corporate governance index we present comes from a sample of 43 non-financial firms (See Table 3).

3.5 SURVEY RESULTS OF COLOMBIAN CORPORATE INDEX

Table 4 reports the first results of a 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 table, 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 the questionnaire. In only one sub-index, accountability, the average (11.1) represents about sixty percent of the maximum attainable (20) but that may be explained by the low number of questions that component has (two). Independence and fairness are practices that seem not be

[9] To obtain each standardized sub-index we multiply the raw sub-index by 20. Although this method introduces a subjective weighting, it is a common procedure (See Black et al 2003).

implemented by firms in this sample since averages are only close to thirty percent of the maximum attainable. Only half of the firms got average above 50 points.[10] Table A-1 in the Appendix presents information about the final questions from which we construct the CGI, and the percentage of yes-answers each one obtained and their averages of the final 43 firms. To illustrate, only 9 firms had scores between 60 and 70 points; 12 where between 50 and 60; and 17 got scores between 40 and 50 points.

4. EMPIRICAL RESULTS

In this section, we first make a statistical and graphical analysis of variables used in the econometric section. Second, we report econometric results on the relation between firm valuation and some measures of ownership and control, 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, we report results on the relation between performance measures and ownership and control variables for the period 1998 to 2002, regardless of whether their stocks were or not traded. Lastly, for a reduced sample of firms we report the relation between performance measures and the governance index, and some other governance and control variables.

4.1 STATISTICAL AND GRAPHICAL ANALYSIS

Table 5 reports descriptive statistics for the variables used in one of the econometric regressions. Panel A reports the statistics for the period 1998-2002 for the Colombian non-financial companies that had their stock traded at least one year during that period. In general, that table shows some very general results. The most important is that ownership concentration has been high since the CR4 is about 60% what must have given them full control of the company. Separation of ownership and control is low. The separation ratio for the ultimate owner is about 0.92, where if the indicator is close to one it means separation is almost null. Tobin's q is under one what can be understood as a high perception of agency problems by market investors for that sample of firms. Two interesting results are Trading and Bursat. The former shows the average percentage of days a stock was traded in a year. It is about 0.17 what means that shares, on average, had very low trading. Bursa is a variable that measures how much in terms of days and number of shares; stocks were traded for a given company. 10 is the maximum level and zero the minimum. The average is under 4 what again verifies the low liquidity of stocks of Colombian listed firms during that period.

More striking results are seen in panel B[11] that are worthy being commented. 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 in 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: a reduction of about 45% of companies in an already tiny market. The second result is the counter-intuitive increase in stock trading (Trading increased from a low .13 to .24.). This could be explained by

[10] Unfortunately, since we signed a confidentiality agreement with surveyed firms, we cannot report the names of them.
[11] To save space, we only report results for some of the variables.

two opposed forces. On the one hand, one could think that stocks with very low likelihood of being traded quit the market; or on the other hand, that firms (stocks) that remained in the market were the more active.

Apparently both forces operated. A standard test of equality of means of the two groups of firms, (no presented) where one group is formed by firms affiliated to business group, and the other by non-affiliated firms, shows that statistically both means are quite different.[12] Then, the variable trading could have increased because non-affiliated firms chose to put their stocks out of the stock exchange. The third result is the declining trend in Tobin's q, too. From a value close to one in 1998, it steadily declined (year by year) to reach 0.72 in 2002, a too large reduction in firms' valuation. The fourth result is evolution of direct ownership concentration by the top largest stockholders. the annual growth rate in sales (operating income) that firms had during 1998 to 2002. During the period there was a slight increase in 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 disappointing flat relation between Tobin's q and the variables chosen. These graphical results can be compared with 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, SR1 and Wedge is weak but positive. Tobin's q is negatively related to the number of years a stock have been listed and with trading, the percentage of days (over the maximum) a stock was traded (within a year). And the relationship of ROA and ROE with the rest of variables is also weak, although less, except with leverage, proxy with debt-ratio.

Figure 5 and 6 plot the association between Tobin's q and two of the measures of direct ownership, CR1, and CR4. Two different insights can be obtained. 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% but decreases with a stake of 15%. It again increases until it reaches 30% and falls again. From a higher stake (35% or more), the relationship is very opaque, increasing and decreasing but seems, at very high levels to be inversely related. One can think that the positive incentive effects of larger cash-flow ownership on firm value prevail for some low ranges but in other ranges the negative effect prevails. The relationship is slightly clearer when we look at 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% are more associated with higher Tobin's q although again the relationship is not quite monotone. None of the figures validate our hypotheses but help in explaining the association between ownership and firm value. In the next section, we will address formally whether, when allowing for other control variables, the relationship is positive or negative.

4.2 ECONOMETRIC RESULTS

4.2.1 FIRMS THAT TRADED THEIR STOCKS DURING 1998-2002

In the next two sub-sections we report 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

[12] The average for trading of the business affiliated firms was 21.8% while for non-affiliated was only 4.5%.

traded theirs stock a single year, others traded two, three or four years, and a small number traded the five years. For this sample of firms, we ran pooled-OLS and corrected for heteroskedasticity. The first subsection presents the findings using firm's valuation measures: Tobin's, market-to-book ratio, and market-to-sales ratio as dependent variables, while the second presents the findings for firm's performance measures: ROE, return on equity, and ROA, return on assets.

4.2.2.1 Relation between Valuation Measures and Firm's Ownership and Voting Rights

Tables 6 reports the results of regression (1) with Tobin's q as dependent variable while Table 7 report the results for market to book ratio and market to sales. In Table 6, we present *nine* different runs using a different set of control variables. In the first basic specification, we include size of the firm, sales growth, debt-to-asset ratio, intangibles, business affiliation to a group, presence of a foreign ownership, number of years the firm had listed their stocks, a recession dummy, and industry dummies to capture some idiosyncratic characteristics of every industry like technology, market competition and the like. The second one adds 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 specification drops ownership variables and replaces them with voting rights of the four largest shareholders. The sixth and seven run regressions following Claessens et al (2002) to control for different wedge measures, and we include Dif1. 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 hypotheses I to III above. There should not be significant colinearities in the regressions since correlations among variables are very low.

The results of specifications (2) to (9) clearly validate hypothesis I. Regardless of the variable of ownership or control taken, stakes of the four largest shareholders is Positively associated with higher firm valuation at significant levels of ten percent or better. In all cases, the coefficients are similar, ranging from a low 0.66 to a high 0.76, what 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, what represents an increase of about 8 percent of the average Tobin's q (0.82). However, the relationship is clearly non-monotone since in all specifications increases in the direct stakes of ownership are negatively associated and significant with Tobin's q. Then, although the positive effect of ownership over firm value is validated, there are thresholds after which firm value start declining. The combining effect of ownership (CR4 and $CR4^2$) on firm's value is negative but economically insignificant (-0.2%) what means a decrease of .0018 points over the mean of the Tobin's q. Unfortunately, hypothesis II is not validated in this specifications since we got positive relations in two of them (6 and 7), and negative but statistically insignificant in other two.

Three other findings in (2) to (9) are worthy explaining. The first one refers to the positive association found between firm affiliation to a business group (in all specifications) and firm value. The coefficients are similar and economically significant what strongly validates our third hypothesis. This finding is in line with the results of Arbeláez and Echavarria (2001) who found that firms affiliated to a business group did not face credit constraints as unaffiliated

firms did during the 90's. The second finding is the coefficients found on the variable the years listed. It is statistically significant in all regressions and negatively associated with firm value. One can think that this result is counterintuitive since one could expect that the more years a firm's stock has been listed, the better would be firm value since firm reputation in the market is consolidated and so is firm value. However, Black et al (2003) as well as other authors took listed years as a proxy for age. In their insight, "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 affect performance and then it would reflect into a lower firm valuation. The reader must recall from Table 5 that Tobin's q had a steadily declining trend[13] 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 to firm value in all regressions; and the capital intensity variable was negatively associated to Tobin's q. With respect to debt-to-asset ratio, some theories have been posed to explain relationships. De Jong (2002) summarized theories explaining the disciplinary role of leverage.[14] There, he explains that leverage may be a device to discipline the incentives that managers have to expand firm size and get private benefits from that conduct. Debt must be paid out of the cash-flow the firm generates. On the other hand, leverage can generate opposite incentives to 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 like the threat of takeover also lead them to increase leverage.[15] In the Colombian case, (founding) owners have been afraid of losing control given the weak legal framework, and has only traded historically a small amount of firm's shares in the stock exchanges. They have expanded firm's size and retained control via leverage. Then, it is plausible to find a positive relationship between leverage and firm value (See similar finding for the Korean case in Black et at., 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% increase relative to the 0.82 sample mean.

With regard to the relation between K/S and Tobin's q two aspects must be analyzed. The first one 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 more the intangibles of the firm that what is represented in book values. Another interpretation may be that an intangible of the firms is their high collateralization of assets that helps leverage. The second point is that magnitude of the coefficients was low. In any case, more research must be done trying to disentangle this association.

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[13] During that period the guerilla intensified its attacks against the infrastructure and civil population and the weakness of the government affected investors' confidence.

[14] This point of view stems from the theories of Jensen (1986) and Grossman and Hart, (1982).

[15] This point of view is based on Zwiegel (1996) and Novaes and Zingales (1995).

Finally, firm's size measured by sales had always the expected negative association with Tobin's q, 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 had also the expected positive sign but in none of the specification it was statistically significant and the economic magnitude of the coefficient was very poor. The presence of foreign ownership was not significant and with the opposite 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 firms recently listed are likely to growth faster since they have better future growth.

All the above results are very robust. From baseline specification (1) one can get the basic values the coefficients of the control variables were when none of the ownership or voting variables were added. The inclusion of these variables did not change any of the signs of the coefficients of control variables and the magnitude of them remained. The R^2 is a little bit larger for specifications (2) to (9) implying that the inclusion of ownership and control account 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 to those found in Tobin's q although the statistical significances decreased for the CR4 variable. The table just confirms that there is a non-linear relationship between market valuation and direct ownership concentration. None of the wedge variables happened to be significant statistically. So hypotheses II and II are weakly verified. Hypothesis III 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 statistically significant but a negative relation with MTBR. Leverage has a wrong sign association with market to sales ratio. However, K/S keeps being negatively associates with these two market valuation but the statistical significance is only valid for MTBR.

In sum, market valuations did seem to be affected positively with the level of ownership concentration (and control rights) of the four largest shareholders suggesting that owners exert a monitoring role over management. Firms affiliated to business groups are also more valued and this is a very important fact. How to explain it? Once can think that investors want to hedge against potential expropriation problems that arise in very weal 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 fear too much any sizable tunneling effect. In next subsection, we will report results for accounting measures of performance.

4.2.1.2 Relation between Performance Measures and Firm's Ownership and Control

In this sub-section, we report the results of the equation (1) but taking performance measures, return on assets, ROA, and return on equity, ROE, instead of firm's valuations. Some findings validate the hypothesis 1. In particular, Table 8 reports four different runs for ROA and for ROE. Specification (3) and (7) show economic importance of both CR4 and its square

although their statistical significance is lower than 10 percent. Hypothesis I is not verified with this variable. However, taking as measure of governance, the percentage of *control* that top four largest shareholders had, hypothesis I is validated (specification 4). In this case, the statistical significance is at 5% level or better for both control and its square; and as in the above Tobin's q findings, control concentration impacts positively the returns on assets of the firm (ROA) but this relation is not monotone because its square is negative. Hypothesis II is also validated since one of our measure of separation between control and ownership, Wedge10, is highly significant and with its expected negative sign both for all ROA and ROE runs. Most of he remaining control variables have the expected signs. Again, the association between ROA and the fact firms belong to business groups is positive and statistically significant. This result verifies Hypothesis III. As expected, the years when overall economy fell impacted negatively firms' profits. The ratio of fixed capital to sales is again negatively associated to both ROA and ROE.

The effect of control concentration on performance is very weak though. The coefficient of voting rights (in run 4) is 0.027, and one standard deviation increase in the percentage of overall control by the top four largest shareholders is associated with an increase in ROA by 0.0005, an increase less than 0.01% with respect to the ROA mean. Robustness of results still keeps being high since signs and magnitude of 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, we presented results on firm's value and performance that verify that large four blockholders exert a positive effect on firm's valuation and performance. However, the findings also suggest that those same blockholders can affect negatively 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 into a business group seem to be more valued by investors.

4.2.1.3 Results for the Firms during 1998-2002.

This subsection reports main findings for the same sample of firms above but expanding the number of years for all firms whenever possible. To illustrate, Colombina is a Colombian firm that was listed from 1998 to 2002. It had issued stocks and other securities but during that period, it only traded their stocks in 1998.[16] Then, in this subsection, it has 5 observations while in the sample of the above section it only had one observation (1998). The objective of this section is twofold. First we want to study how accounting performances of firms evolved during a longer period for all firms regardless of whether their stocks were or not traded. To account for this experiment, we included a dummy variable that takes a value of one if a firm traded its stocks in a year, and zero otherwise. In the example of Colombina, we put a one in 1998 for the dummy variable, **Stock listed**, and zero in the other years. Since some firms did not trade their stock all five years, we did not get market price of common stocks and so had to rely on accounting performance measures like ROA and ROE. The panel is not balanced though. Main reasons are: some firms were born during that period and immediately were listed, most of them were in 1998; for some firms we could not get financial statements for the years other

[16] The fact. that the stocks of a firm did not trade during a year does not mean that the firm's securities are not listed.

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 we reported that hypothesis I, II and III were verified.

In that subsection, we used a complete set of control variables to control for potential endogeneity of (blockholders) ownership with respect to the contracting environment. Himmelberg et al (1999) argue that unobserved heterogeneity among firms can generate a spurious association between ownership and performance and if so, validation of our hypotheses 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.

In Tables 9 and 10, we report the findings for models (1) using ROA, and ROE as dependent variables and running both FGLS and fixed effect panel data[17] to follow Himmelberg et al suggestion. 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 we will focus mainly in those variables related to our hypothesis and goals (in this subsection) and leave to the readers to check the remaining findings. Firstly, in both panels, hypothesis I is once more verified. Ownership by the four largest blockholders is positively associated with better firm's performance and its square is negatively related. The magnitude of the coefficients is good and so is their statistical significance. Hypothesis II is verified in the left panels. There we used three different measures of separation between control and ownership, following Claessens et al. (2002). In specifications (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 firm's wedge between control and ownership stakes increases, firm's returns fall. Hypothesis III is also validated. Firms affiliated to business group tend to get better accounting performances.[18] Lastly, all the regressions control for whether during a year the stocks of a firm were or not traded, Stock Traded. One should expect that since public firms are more scrutinized by regulators and private investors, they be more careful in risk-taking and so their performance (and valuation) be better when their stocks are traded than when they are not because public attention is over them and so must conduct better management and governance. Stock Trade has the expected positive relation with both accounting measures, and in most cases there is a strong statistic significance validating our conjecture. However most research must be done in better identifying the presumption and findings.

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

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[17] We also run regressions using pooled-OLS. These are available upon request. The results validate all three hypothesis.

[18] Coefficients for BGA are not reported in the right panel due to collinearity. They were automatically dropped.

4.3 CORPORATE GOVERNANCE INDEX AND PERFORMANCE 2003-2004

This subsection reports two main econometric specifications for the sample of 43 firms that responded a questionnaire on corporate governance practices in 2004. The first section report OLS regression results on the relation 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 (2004, 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 lowers 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 it is our case, they suggest that to one way to eliminate or reduce such a problem, one must control using variables like size, growth opportunities, and the rate of investment. As mentioned, we do not have any valuation measure but only accounting performance measures that may be less prone to endogeneity but nonetheless can suffer also from some type of 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, next sub-section provides a statistical and graphical overview of the potential relations on main variables.

4.3.1.1 Descriptive Statistics, figures and Econometric Results

Table 11 presents in panel A the statistics of key variables, in panel B the matrix of correlations between corporate governance index, control variables and ownership and separation ratios, and in panel C we report correlations among subcomponents of the corporate governance index. 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 significant. As we expected, growth of sales is highly correlated with corporate index but less correlated with our performance measures, ROA and ROE. However, other correlations are very low with the governance index. The ideal would be that some of our control variables could be highly correlated with our governance measure but weakly correlated with our performance measures in order to be good instruments as tests of endogeneity.

On the other hand, correlations between our two performance measures and the corporate governance index are disappointingly negative (-0.20) and (-0.19). These results can be confirmed with Figure 7 and 8 that present plots of firm-level governance index plotted against returns on assets and returns on equity. The relationship is (strongly) negative what 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 of country studies.

In Table 11, we report estimates of the governance model, equation (2) above. Growth of sales in past three years maintains 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 firm to 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 getting the wrong sign. Lastly, in specification (4) and (5), we included two variables. The first one is *CGC* that takes a value of one, if the firm voluntarily has issued a code of good corporate governance practices, and zero otherwise. The second one is Bursatil, a variable that measures the level and intensity of stock trading. Two insights are worthy to explore. First, coefficients of those two variables are very high and positively associate to the corporate governance index. It means that firms that issued a corporate governance code actually had better scores in governance practices. It also means that firms that traded most their stocks also had better governance practices. The second insight is that the R^2 increased significantly when these two variables were added what might suggest that they do help explain governance scores. However, further research must be done to find better determinants. We ran various regressions using different sets of control variables, and results were very sensitive and unstable for most of them except growth of sales, CGC and Bursatil.

4.3.2 GOVERNANCE AND PERFORMANCE

In this section, we address the relationship between firm performance and firm-level governance while controlling for size, growth opportunities, ownership and separation ratios, and some other variables. We will employ equation (3) below and run OLS taking ROA as the dependent variable. In this section, all financial variables, like ROA, debt-to-asset ratio, natural log of sales, among others, are the 2003-2004 averages. For variables like 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 description of variables are like in equation 1, and the vector X includes variables like members of board of directors, type of security a firm traded in 2004, and Bursatil in year 2003.

We would like to test the following hypothesis:

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 that tested this hypothesis have verified its validity (See, Black et al., 2003 for Korea, Klapper and Love, 2004, for 14 emerging economies, 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. In Panel A, we report the results using OLS. In Panel B, we report the results correcting for endogeneity; and in Panel C, we report result for one of the sub-indices of corporate governance index.[19] In the first two

[19] 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.

panels findings are disappointing, in particular because the governance index is negatively and strongly associated with ROA. Following standard procedures, we included different sets of control variables that can be seen in specifications 1 to 3 in each panel. *Regardless of the control variables included*, the relationship between our index of corporate governance practices and the performance measure kept being 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 what confirms the findings for the period 1998-2002. To control for ownership, we included the percentage of CR4 corresponding to average of years 2001-2002. In neither case CR lagged was significant when entered alone or when entered with its square what is surprising given the strong association found for the period 1998-2002. The remaining control variables like the wedge, Lyears, Members were very unstable, changing the sign and being statistically insignificant most of the times. To go further, we include three dummy variables that captures whether the firm's ultimate owner is a family, UOFF, a financial institution, UOFIF, or a foreign firm, UOFO. In neither case the findings were either economical or statistical 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. Once is to include a robust set of control variables that may be correlated with governance but being 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.

In Table 13, Panel A, we tried the first approach using different sets of control variables to alleviate the potential endogeneity concern but as shown the results are counter intuitive for the association between governance implementation and performance. Most of the control variables did not either result statistically significant. Unfortunately, since our governance data has no time variation we cannot employ panel data techniques. So, we proceeded to use instrumental variables, using a simultaneous equation model. A good instrument is one that is (highly) correlated with the potential endogenous explanatory variable but that is weakly correlated with the dependent one. The use of instrumental variables is constrained for the almost non-existence of them. To address the problem of endogeneity, we recour to two variables that can potentially be accepted as instruments: the first one is a CGC, corporate governance code, and the second one is Bursatil.

In 2001, the Superintendence of Securities issued Resolution 0275 setting some minimum standards of corporate governance practices Colombian listed firms must comply in order that their securities can be 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

making voluntary the issuing of a code of good governance practices, firms in search of funds would issue such a code 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 be more scrutinized by investors and regulators and so had in practice implemented better corporate practices. The correlation of Bursatil with GCI is not so high, 0.29, and statistically significant.

In Table 13, Panel B, we report 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 negative and statistically insignificant. The results using Bursatil, as instrument, are also disappointing. Better corporate governance practices apparently did not lead to better returns on assets although the coefficients are not either statistically significant at accepted level of confidence, and their economic significance is also very tiny implying that implementation of better governance practices have not driven accounting performance. This result is contrary to findings reported in the surveyed literature above where it has been shown that, across countries, firms that adopted better corporate rules had, on average, better valuation and performance. How to explain the result? We would forward some insights. 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 get 70 points; half of the firms had scores greater than the mean 49; and seven got scores between 30 and 40 points. Therefore, the index shows that few firms, among the sample that responded the questionnaire have really worried to implement 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.[20] 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 implement good corporate governance practices. Therefore, our results simply could be reflecting this conduct.

However, it is also disappointing that none of the control variables that helped explaining valuation and performance during 1998 to 2002 were consistently statistically significant although a couple of them had the expected sign, i.e., CR4 and its square, wedge10, Lyears, and business group affiliation, and BGA. Only the three years average of sales growth resulted statistically and economically significant. Despite the unexpected bad results, we think that endogeneity can be affecting our econometric results but more research and fine-tuning must be done to understand what drives those counterintuitive results.

[20] See Confecamaras 2001, and 2002.

5. CONCLUSIONS AND POLICY IMPLICATIONS

To what extent is valuation and performance drive by ownership and control? Do firms affiliated to business group perform better and have better valuation than unaffiliated firms? Do 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 is researched thoroughly in Colombia. The answer to the two first questions is positive. We found evidence that cash-flow rights of the top largest shareholders are positively associated with better firm's valuation and performance but that relationship is not monotone. We also found that wedge, or separation between cash-flow rights and voting rights has a negative effect on firm's valuation and performance. We found strong evidence that affiliated firms also enjoyed better market valuation and had performance. More research has to be done to disentangle what explains it. We hypothesize that since Colombian legal and regulatory framework is weak, 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, investors may have trusted firms affiliated to large and very influential politically business groups.

In our study, we did not find evidence that firms with better standards of corporate governance enjoy better performance despite recent efforts by authorities and regulators in promoting better governance practices. The results of the survey shed some results. The most important is that, on average, firms have been reluctant or very slow in implementing 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 posed looking back at the ways Colombian firms have traditionally financing their needs of capital expansion. In the exposition of motives of the recently presented Bill of Capital Markets (2004) to the Colombian congress, the Ministry of Finance reported that only large Colombian firms have made use of bonds and other types of securities to finance their needs of capital and even for those firms the amount collected by this type of financing have not represented, on average, more than 5% 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 the financing of large firms have been made of reimbursement of company's profits and loans from suppliers. The remaining has been made from financial obligations, mainly banking loans. This picture 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 that at higher prices. It is not either surprising that most of listed firms in the Colombian stock exchange belonged to 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 less financial constraints.

The issuing of new regulations by Superintendence of Securities as well as the Bill on the capital market presented to the Colombian congress can have little impact, if any, over the conduct of companies in adopting better corporate governance practices. It is overwhelming evident

in all studies on the subject, that firms with better governance standards get, on average, better valuation and performance, and so is understandable the attempts of the Colombian government to encourage the adoption of such good practices by Colombian firms. The government efforts look for better protection to investors, more disclosure of relevant and timing information, and better information systems. To that end, they have proposed to put limit on the number of members of boards of directors, to get that minority shareholders have a greater presence and voice in the boards of directors, and to increase the number of "independents" in the boards of directors. These types of proposals follow general recommendations stemmed from the seminal papers of La Porta , Lopez-de-Silanes, Shleifer, and Vishny (1999b, 2000, and 2000b) and have been adopted by many countries around the world.

However, regulation has not addressed the two main stylized facts historically presented in the stock exchanges in the last 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 roots of all of the problems. Our research can just say that investors valued them more. Why the government has not made any reference to this point?

We do not have any clue to answer it but would instead like to quote Bergloff and Von Thadden (1999, 17) who 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 marker base corporate shareholdings from emerging".

More research on the subject is needed to address and understand the many complex relations that are present in today Colombian corporate system. This work is just one starting point to formulate more hypotheses. But we do believe the study of corporate governance in Colombian stock markets must be addressed within the context of business group affiliation.

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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, CR4 are percentages of direct ownership owned by the largest, the two, three, four and ten 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 control rights of the largest shareholder exceed cash flow rights by at least 10% and is zero otherwise. BGA is a dummy variable, with value equal to one if the firm is affiliated to a business group, zero otherwise. FOwners is a dummy, with value one if there is one foreign stockholder among the five largest shareholders, zero otherwise. Trading is a percentage that shows 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	Wedge 10	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	0,00
	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
Metal Products, Machinery and Equipment	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
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

Cont. table 1

Industry	SIC	Firms	CR1	CR2	CR4	CR10	Voting 1	Voting 2	Voting 3	Voting 4	SR1	SR2	SR4	Wedge 10	BGA	FOwners	Trading
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 Adminisdtration, 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 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 to business groups, and for non-affiliated firms. CR1, CR2, CR3, CR4 are percentage of direct ownership owned by the largest, the two, three, four and ten 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 control rights of the largest shareholder exceed cash flow rights by at least 10%, and is zero otherwise. BGA is a dummy variable, with value equal to one if the firm is affiliated to a business group, zero otherwise. FOwners is a dummy, with value one if there is a foreign stockholder among the five largest shareholders, zero otherwise. Trading is a percentage that shows trading intensity of the stocks in a year. Tests of mean differences are also shown. Significant results (at 10% level or better) are shown in boldface.

Variable	**Panel A Affiliated Firms**	**Panel B Non-Affiliated firms**
n	256	91
CR1		
Mean	0.281	0.400
(P_value)	**(0.00)**	
Median	0.2051	0.412
CR2		
Mean	0.426	0.566
(P_value)	**(0.00)**	
Median	0.39	0.551
CR4		
Mean	0.547	0.729
(P-value)	**(0.00)**	
Median	0.57565	0.780
CR10		
Mean	0.654	0.899
(P_value)	**(0.00)**	
Median	0.6858	0.963
Voting 1		
Mean	0.320	0.408
(P_value)	**(0.00)**	
Median	0.2693	0.412
Voting 2		
Mean	0.514	0.572
(P_value)	**(0.086)**	
Median	0.47515	0.561
Voting 3		
Mean	0.626	0.666
(P_value)	(0.283)	
Median	0.6265	0.674
Voting 4		
Mean	0.702	0.735
(P_value)	(0.402)	
Median	0.7132	0.780
SR1		
Mean	0.890	1.000
(P_value)	**(0.00)**	
Median	0.9968	1.000

Cont. table 2

Variable	Panel A Affiliated Firms	Panel B Non-Affiliated firms
SR2		
Mean	0.867	1.000
(P_value)	**(0.00)**	
Median	**0.94629**	1.000
SR4		
Mean	0.828	1.000
(P_value)	**(0.00)**	
Median	**0.8525**	1.000
Wedge		
Mean	0.319	0.000
(P_value)	**(0.00)**	
Median	-	-

TABLE 3

LIST OF SURVEYED FIRMS

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

	Firm
1	**Almacenes Éxito S.A.**
2	**Cartón de Colombia S.A.**
3	**Carulla Vivero S.A.**
4	**Cementos del Caribe S.A.**
5	**Cementos del Valle S.A.**
6	**Cementos Paz del Río S.A.**
7	**Cementos Rioclaro S.A.**
8	**Compañía Colombiana de Inversiones Agrícolas S.A.**
9	**Compañía Colombia de Tabaco S.A.**
10	**Compañía Colombiana de Tejidos S.A.**
11	**Compañía de Cemento Argos S.A.**
12	**Inversiones Nacional de Chocolates S.A.**
13	**Cine Colombia S.A.**
14	**Colombina S.A.**
15	**Compañía de Empaques S.A.**
16	**Comunicación Celular S.A.**
17	**Concreto S.A.**
18	**Confecciones Colombia S.A.**
19	**Electroporcelana Gamma S.A.**
20	**Enka de Colombia S.A.**
21	**Gas Natural S.A. E.S.P.**
22	**Industrias Estra S.A.**
23	**Industrias Metalúrgicas Unidas S.A.**
24	**Inversiones Mundial S.A.**
25	**Inversiones Reacol S.A.**
26	**Mineros de Antioquia S.A.**
27	**Organización de Ingeniería Internacional S.A.**
28	**Papeles Nacionales S.A.**
29	**Petroquímica Colombiana S.A.**
30	**Polipropileno del Caribe S.A.**

Cont. table 3

	Firm
31	**Portafolio de Inversiones Suramericana S.A.**
32	**Productos Familia S.A.**
33	**Promigas S.A. E.S.P.**
34	**Sociedad de Fabricación de Automotores S.A.**
35	**Sociedades boblívar S.A.**
36	**Suministros de Colombia S.A.**
37	**Suramericana de Inversiones S.A. Suramericana**
38	**Textiles Espinal S.A.**
39	**Textiles Fabricato Tejicondor S.A.**
40	***Aerovías de Integración Regional S.A.***
41	***Bavaria S.A.***
42	***Caracol Televisión S.A.***
43	***Carbones del Caribe S.A.***
44	***Compañía Colombiana de Clinker S.A.***
45	***Manuelita S.A.***
46	***Siderúrgica de Boyacá S.A.***
47	***Pavco S.A.***
48	***Mayagüez S.A.***

TABLE 4

CORPORATE GOBERNANCE INDEX: RAW AND TRANSFORMED RESULTS

This table present 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 un 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 subcomponrnt, fairness.

Source: Authors' calculates from the Colombian Corporate Governance Survey.

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

TABLE 5
DESCRIPTIVE STATISTICS 1998-2002
PANEL A. MAIN VARIABLES

Variable	Obs	Mean	Standard Deviation	Min	Max	Median
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
K7S	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
Rdmmy	354	0.50	0.50	0.00	1.00	1
FO	354	0.26	0.44	0	1.00	0

PANEL B. YEAR TO YEAR EVOLUTION OF SOME VARIABLES

Year	Firms	tobin's	grsales	trading	cr4	Dif1
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

Panel C. Correlation Matrix of Selected Variables

	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1	Tobin's q	1																					
2	MTBR	0.86	1																				
3	MTS	0.12	0.15	1																			
4	ROA	0.03	0.11	-0.08	1																		
5	ROE	0.01	0.02	-0.11	0.86	1																	
6	CR4	0.14	0.03	-0.13	0.02	-0.01	1																
7	VRCR4	0.17	0.05	-0.07	0.09	0.02	0.84	1															
8	SR4	-0.10	-0.04	-0.08	-0.15	-0.05	0.01	-0.48	1														
9	Dif1	0.14	0.07	0.01	0.09	0.02	0.19	0.66	-0.75	1													
10	Dif2	0.15	0.08	0.12	0.03	-0.03	-0.12	0.20	-0.62	0.50	1												
11	Dif3	0.12	0.03	0.02	0.15	0.03	0.14	0.53	-0.78	0.77	0.52	1											
12	Wedge	0.13	0.13	0.04	0.03	-0.04	-0.05	0.23	-0.63	0.41	0.43	0.49	1										
13	Lnrsales	0.04	0.00	-0.41	0.25	0.13	0.13	0.21	-0.26	0.17	0.17	0.19	0.11	1									
14	Grsales	0.01	0.01	0.08	-0.02	0.00	-0.05	-0.05	0.04	-0.04	-0.07	-0.04	-0.03	-0.13	1								
15	K/S	-0.16	-0.13	0.21	-0.21	-0.15	-0.11	-0.11	0.05	-0.07	0.01	-0.09	-0.01	-0.37	0.18	1							
16	Debit-Ratio	0.41	0.09	-0.31	-0.29	-0.23	0.19	0.13	0.06	-0.03	-0.06	0.02	-0.08	0.21	-0.08	-0.19	1						
17	Trading	-0.08	-0.06	0.07	0.20	0.07	-0.19	-0.06	-0.34	0.09	0.26	0.26	0.18	0.40	-0.03	-0.12	-0.19	1					
18	bursatil	-0.10	-0.10	0.04	0.22	0.08	-0.11	0.04	-0.36	0.14	0.21	0.28	0.18	0.46	-0.06	-0.14	-0.19	0.86	1				
19	Lyears	-0.25	-0.30	-0.15	0.01	0.05	-0.12	-0.02	-0.20	0.12	0.11	0.19	-0.01	0.26	-0.05	-0.01	0.05	0.37	0.37	1			
20	BGA	0.07	0.03	0.15	0.08	0.00	-0.34	-0.04	-0.49	0.26	0.66	0.29	0.34	0.21	-0.09	0.08	-0.12	0.27	0.26	0.06	1		
21	Rdummy	0.20	0.16	-0.02	-0.23	-0.11	-0.01	-0.03	0.11	0.01	-0.05	-0.03	-0.02	-0.22	0.04	0.02	0.12	-0.08	-0.10	-0.11	-0.12	1	
22	FO	-0.07	-0.11	0.01	-0.07	-0.15	0.17	0.02	0.23	-0.15	-0.10	-0.18	-0.19	0.28	-0.04	-0.01	0.01	0.10	0.14	-0.03	-0.09	-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; Debt-Ratio 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 to 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% level (based on a two-tailed test) are in boldface. 0

Tobin's q Dependent									
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
(CR_4)		0.7283	0.6788			0.7001	0.6579	0.7622	0.7077
		(2.13)	(1.96)			(2.05)	(1.90)	(2.19)	(2.00)
Sq(CR_4)		-0.6290	-0.5847			-0.6514	-0.6094	-0.6563	-0.6081
		(-2.10)	(-1.94)			(-2.17)	(-2.01)	(-2.12)	(-1.94)
Voting rights				0.1469	0.1392				
				(1.97)	(1.86)				
Sq (Voting Rights CR_4)				-0.2593	-0.2478				
				(-2.07)	(-1.96)				
Dif1						0.1861	0.1689		
						(1.86)	(1.65)		
Wedge 10								-0.0182	-0.0152
								(-0.38)	(-0.31)
LnSales	-0.0149	-0.0234	-0.1542	-0.0171	-0.1527	-0.0267	-0.1447	-0.0230	-0.1527
	(-0.90)	(-1.39)	(-2.03)	(-1.00)	(-2.01)	(-1.55)	(-1.90)	(-1.36)	(-2.00)
SqLnSales			0.0062		0.0065		0.0056		0.0062
			(1.76)		(1.79)		(1.57)		(1.73)
GrSales	0.0029	0.0031	0.0027	0.0028	0.0024	0.0030	0.0026	0.0031	0.0027
	(1.50)	(1.55)	(1.34)	(1.48)	(1.25)	(1.51)	(1.32)	(1.55)	(1.34)
DebtRatio	0.7591	0.7939	0.7997	0.7379	0.7450	0.7895	0.7952	0.7957	0.8012
	(7.86)	(8.51)	(8.62)	(7.52)	(7.59)	(8.45)	(8.56)	(8.61)	(8.71)
K/S	-0.0344	-0.0350	-0.0378	-0.0338	-0.0367	-0.0349	-0.0375	-0.0351	-0.0378
	(-2.89)	(-2.85)	(-3.16)	(-2.84)	(-3.22)	(-2.85)	(-3.13)	(-2.86)	(-3.17)
BGA	0.1804	0.2105	0.2178	0.1758	0.1835	0.1809	0.1903	0.2145	0.2211
	(3.13)	(3.65)	(3.75)	(3.08)	(3.21)	(2.95)	(3.07)	(3.73)	(3.81)
Fowner	-0.0869	-0.0841	-0.0895	-0.0870	-0.0937	-0.0703	-0.0765	-0.0880	-0.0928
	(-1.65)	(-1.52)	(-1.62)	(-1.64)	(-1.75)	(-1.26)	(-1.37)	(-1.55)	(-1.63)
Lyears	-0.0038	-0.0036	-0.0038	-0.0033	-0.0036	-0.0035	-0.0037	-0.0036	-0.0038
	(-4.75)	(-3.84)	(-4.04)	(-3.77)	(-3.96)	(-3.74)	(-3.93)	(-3.77)	(-3.96)
Rdummy	0.0500	0.0378	0.0473	-0.0441	0.0542	0.0361	0.0448	0.0385	0.0478
	(155)	(1.21)	(1.53)	(1.38)	(1.70)	(1.16)	(1.44)	(1.23)	(1.54)
Industry Dummy	yes	yes	yes	yes	yes	yes	yes	yes	yes
Constant	0.8179	0.7517	1.4380	0.7438	1.4512	0.8284	1.4419	0.7385	1.4204
	(3.63)	(3.23)	(3.09)	(3.22)	(3.15)	(3.46)	(3.13)	(3.22)	(3.05)
Regression Statistics									
R^2	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 Market to Sales (MTS); 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; ; 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; Debt-Ratio 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 to 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% level (based on a two-tailed test) are in boldface.

Dependent Variable	**MTBR**			**MTS**		
	(1)	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**
(CR_4)	-0.29558	0.86628	0.84133	0.89006	-2.51248	-2.56520
	(-1.53)	(1.38)	(1.35)	(0.92)	(-0.71)	(-0.73)
Sq(CR_4)		-1.01369	-1.03757		2.95144	2.88899
		(-1.88)	**(-1.90)**		(0.93)	(0.89)
Dif1			0.18110			0.43678
			(0.94			(0.41)
LnSales	-0.17594	0.00131	-0.00204	-0.70220	-0.69907	-0.70533
	(-1.09)	(0.04)	(-0.06)	**(-3.67)**	**(-3.69)**	**(-3.73)**
GrSales	0.00316	0.00386	0.00372	-0.35674	-0.40273	-0.39265
	(1.12)	(1.38)	(1.33)	(-0.69)	(-0.76)	(-0.75)
DebtRatio	0.37339	0.36338	0.35954	-1.18584	-1.17246	-1.18369
	(1.46)	(1.44)	(1.43)	**(-1.82)**	**(-1.80)**	**(-1.81)**
K/S	-0.07203	-0.06905	-0.06913	-0.24453	-0.24223	-0.24307
	(-3.14)	**(-2.69)**	**(-2.69)**	(-1.27)	(-1.28)	(-1.29)
BGA	0.10866	0.10191	0.07376	1.42541	1.42252	1.35161
	(1.01)	(0.98)	(0.67)	**(2.72)**	**(2.75)**	**(2.23)**
Fowner	-0.23079	-0.24857	-0.23552	1.31511	1.37779	1.41071
	(-2.27)	**(-2.41)**	**(-2.24)**	**(2.69)**	**(2.67)**	**(2.84)**
Lyears	-0.00882	-0.00847	-0.00839	0.00235	0.00226	0.00241
	(-5.53)	**(-4.89)**	**(-4.89)**	(0.23)	(0.22)	(0.24)
Rdummy	0.12631	0.11191	0.11040	-0.32459	-0.32947	-0.33069
	(1.90)	**(0.67)**	***(1.63)***	(-1.18)	(-1.20)	(-1.19)
Industry Dummy	yes	yes	yes	yes	yes	yes
Constant	1.91259	0.77086	0.84588	9.54246	10.19814	10.35932
	(2.141)	**(1.86)**	**(1.98)**	**(4.812)**	**(4.67)**	**(4.68)**
Regression Statistics						
R^2	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% 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% level (based on a two-tailed test) are in boldface.

Dependent Variable	**ROA**				**ROE**			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
(CR_4)		0.058	0.095			-0.029	0.074	
		0.89	(1.45)			(-0.20)	(0.51)	
Sq(CR_4)		-0.054	-0.084			0.013	-0.072	
		(-0.93)	(-1.45)			(0.10)	(-0.59)	
Voting rights				0.027				0.029
				(1.69)				(0.77)
Voting Rights Squared				-0.076				-0.098
				(2.38)				(-1.53)
Wedge 10			-0.021	-0.031			-0.061	-0.075
			(-2.09)	**(-2.81)**			**(-2.56)**	(-2.60)
LnSales	0.010	0.010	0.010	0.011	0.013	0.014	0.015	0.015
	(3.11)	(2.88)	(3.07)	(3.32)	(1.90)	(1.97)	(2.21)	(2.19)
GrSales	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(1.30)	(1.31)	(1.37)	(1.23)	(0.91)	(0.88)	(0.99)	(0.90)
DebtRatio	-0.125	-0.122	-0.121	-0.129	-0.270	-0.261	-0.258	-0.272
	(-5.87)	**(-5.60)**	**(-5.83)**	**(-6.04)**	**(-4.05)**	**(-3.80)**	**(-3.92)**	**(-4.15)**
K/S	-0.007	-0.007	-0.007	-0.007	-0.013	-0.012	-0.012	-0.013
	(-2.48)	**(-2.38)**	**(-2.5)**	**(-2.60)**	**(-2.01)**	**(-1.88)**	**(-2.0)**	**(-24.13)**
BGA	0.016	0.020	0.025	0.020	0.003	-0.001	0.012	0.014
	(1.63)	**(1.82)**	**(2.22)**	**(1.96)**	(0.14)	(-0.03)	**(0.45)**	(0.56)
Fowner	-0.025	-0.028	-0.032	-0.032	-0.062	-0.067	-0.079	-0.076
	(-2.65)	**(-2.68)**	**(-2.98)**	**(-3.30)**	**(-2.78)**	**(-2.89)**	**(-3.49)**	**(-3.44)**
Lyears	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(-1.00)	(-0.99)	(-1.25)	(-1.01)	(1.07)	(0.88)	(0.52)	(.071)
Rdummy	-0.022	-0.024	-0.023	-0.023	-0.029	-0.030	-0.029	-0.030
	(-3.41)	**(-3.62)**	**(-3.6)**	**(-3.60)**	**(-1.89)**	**(-1.95)**	**(-1.88)**	**(-1.97)**
Industry Dummy	yes	yes	yes	yes	yes	yes		yes
Constant	-0.055	-0.062	-0.075	-0.100	-0.044	-0.042	-0.080	-0.079
	(-1.52)	(-1.510)	**(-1.84)**	(-1.31)	(-0.64)	(-0.49)	(-0.92)	(-1.055)
Regression Statistics								
R^2	0.4443	0.4469	0.4573	0.4657	0.3063	0.2940	0.3106	0.3269
Num of firms Num Obs	326	319	319	325	333	326	326	332
F-test	12.74	11.91	11.12	12.04	6.97	6.84	7.34	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 otehrwise; 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% level (based on a two-tailed test) are in boldface.

ROA	**FGLS**				**Fixed Effects**			
Dependent Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**
(CR_4)	0.1379	0.1515	0.1516	0.1290	0.6161	0.6043	0.6551	0.6300
	(3.18)	**(3.43)**	**(3.26)**	**(2.75)**	**(2.57**	**(2.52)**	**(2.72)**	**(2.61)**
Sq(CR_4)	-0.1320	-0.1441	-0.1360	-0-1175	-0.4717	-0.4565	-0.4945	-0.4812
	(-3.56)	**(-3.82)**	**(-3.48)**	**(-2.89)**	**(-2.36)**	**(-2.27)**	**(-2.47)**	**(-2.40)**
Dif1		-0.0026						
		(-0.28)						
Dif2			-0.0190				-0.0344	
			(-1.98)				(-0.26)	
Dif3				-0.0104				-0.0131
				(-1.61)				(0.54)
LnSales	0.0129	0.0127	0.0119	0.0131	0.0028	-0.0026	-0.0021	-0.0029
	(7.97)	**(7.57)**	**(7.25)**	**(7.74)**	(-0.34)	(-0.33)	(-0.26)	(-0.35)
GrSales	0.0002	0.0003	0.0003	0.0003	0.0012	0.0012	0.0012	0.0011
	(0.44)	(0.52)	(0.46)	(0.54)	**(2.2)**	**(2.21)**	**(2.20)**	**(2.20)**
DebtRatio	-0.1670	-0.1640	-0.1682	-0.1700	-0.0834	-0.0834	-0.0842	-0.0834
	(-14.00)	**(-13.32)**	**(-13.86)**	**(-14.47)**	**(-6.42)**	**(-6.42)**	**(-6.48)**	**(-6.42)**
K/S	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001	-0.0001	-0.0001	-0.0001
	(-3.10)	**(-2.95)**	**(-2.90)**	**(-2.47)**	(-0.29)	(-0.28)	(-0.24)	(-0.29)
Fowner	-0.0555	-0.0579	-0.0551	-0.0544	-0.0664	-0.0651	-0.0662	-0.0671
	(-10.03)	**(-10.78)**	**(-9.53)**	**(-8.48)**	-0.84)	(-0.82)	(-0.84)	(-0.85)
BGA	0.0126	0.0125	0.0300	0.0159				
	(2.37)	**(2.09)**	**(2.94)**	**(2.60)**				
Lyears	-0.0002	-0.0002	-0.0002	-0.0002	-0.0027	-0.0027	-0.0026	-0.0028
	(-1.58)	**(-1.77)**	**(-1.80)**	**(-1.75)**	(1.03)	(1.02)	(0.97)	(1.04)
Rdummy	-0.0335	-0.0347	-0.0329	-0.0329	-0.0265	-0.0259	-0.0264	-0.0271
	(-10.13)	**(-10.26)**	**(-9.62)**	**(-9.40)**	**(-2.27)**	**(-2.21)**	**(-2.27)**	**(-2.31)**
Stocks Traded	0.0066	0.0083	0.0067	0.0070	0.0295	0.0318	0.0307	0.0295
	(1.6)	**(1.85)**	(1.57)	(.154)	**(2.07)**	**(2.18)**	**(2.15)**	**(2.07)**
Industry Dummy	yes	yes	yes	yes	No	No	No	No
Constant	-0.0490	-0.0977	-0.0606	-0.0521	-0.1573	-0.1584	-0.1562	-0.1572
	(-2.45)	(-4.31)	(-2.64)	(-2.33)	(-1.27)	**(-1.28)**	**(-1.26)**	**(-1.27)**
Regression Statistics								
R^2					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	5.15	6.01
Prob>F					0.0000	0.0000	0.0000	0.0000
Wald chi2 ()	1252.8	1085.7	1164.8	1163.1				
Prob>chi2	0.0000	0.0000	0.0000	0.0000				

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 otehrwise; 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% level (based on a two-tailed test) are in boldface.

ROE	**FGLS**				**Fixed Effects**			
Dependent Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**
(CR_4)	0.1379	0.2062	0.1913	0.3745	0.6480	0.6337	0.7226	0.6610
	(3.18)	**(3.76)**	**(3.28)**	**(5,89)**	(1,09)	(1,07)	(1,21)	(1,10)
Sq(CR_4)	-0.1320	-0.2055	-0.1712	-0.2937	-0.5116	-0.4822	-0.5555	-0.5217
	(-3.56)	(-4,41)	(-3.68)	**(-5,75)**	(-1,01)	(-0.95)	(-1,09)	(-1,02)
Dif1		0.0129				-0.1342		
		(0,73)				(-1,23)		
Dif2			-0.0706				-0.0613	
			(-6,93)				(-0.95)	
Dif3				-0.0661				-0.0092
				(-11,34)				(-0,16)
LnSales	0.0116	0.0114	0.0103	0.0142	0.0165	0.0171	0.0180	0.0165
	(4,18)	**(3,98)**	**(3,57)**	**(5,29)**	(0,88)	(0.91)	(0.95)	(0.88)
GrSales	0.0021	0.0021	0.0032	0.0031	-0.0028	-0.0028	-0.0028	-0.0028
	(0,68)	(0.70)	(1,07)	(1,03)	**(-2,20)**	**(-2,19)**	**(-2,21)**	**(-2,20)**
DebtRatio	0.0200	0.0212	0.0183	0.0167	0.0536	0.0515	0.0505	0.0533
	(1,52)	(1,60)	(1,36)	(1,20)	**(4,09)**	**(3,89)**	**(3,74)**	**(4,02)**
K/S	-0.0002	-0.0015	0.0000	-0.0001	0.0003	0.0003	0.0004	0.0003
	(-1,22)	(-1,08)	(-0,04)	(-0,45)	(0.44)	(0.47)	(0.50)	(0.45)
Fowner	-0.0560	-0.0547	-0.0570	-0.0674	-0.2357	-0.2312	-0.2350	-0.2364
	(-7,47)	**(-7,08)**	**(-7,38)**	**(-7,89)**	(-1,26)	(-1,24)	(-1,26)	(-1,26)
BGA	0.0600	0.0562	0.1214	0.0991				
	(5,88)	**(5,07)**	**(8,98)**	**(8,16)**				
Lyears	-0.0001	-0.0001	-0.0003	-0.0002	0.0156	0.0156	0.0152	0.0156
	(-0,76)	(-0,54)	(-1.53)	(-0,74)	**(2,30)**	**(2,31)**	**(2,24)**	**(2,30)**
Rdummy	-0.0403	-0.0392	-0.0428	-0.0452	-0.0151	-0.0122	-0.0149	-0.0155
	(-8,14)	**(-7,71)**	**(-8,56)**	**(-7,97)**	(-0,54)	(-0,43)	(-0,53)	(-0,55)
Stocks Traded	0.0291	0.0255	0.0383	0.0377	0.1207	0.1291	0.1226	0.1205
	(3,28)	**(2,72)**	**(4,08)**	**(3,69)**	**(3,57)**	**(3,74)**	**(3,62)**	**(3,56)**
Industry Dummy	yes	yes	yes	yes	No	No	No	No
Constant	-0.1368	-0.2279	-0.1351	-0.2381	-0.7001	-0.7126	-0.7021	-0.7023
	(-3,87)	**(-5,41)**	**(-3,59)**	**(-6,81)**	**(-2,36)**	**(-2,40)**	**(-2,37)**	**(-2,36)**
Regression Statistics								
R^2					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	741.2				
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

Variable	Firms	Mean	Std. Dev.	Min	Max	Median
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

Variable	Firms	Mean	Std. Dev.	Min	Max	Median
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
$CR4_{T-1}$	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
$Gsales_{t-3}$	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

Cont. table 11

Panel C. Correlation Matrix of Selected Variables

	Variable	(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	**0.88**	1.00													
4	$ROECR4_{T-1}$	0.17	-0.24	-0.24	1.00												
5	Wedge	-0.07	0.20	0.12	-0.18	1.00											
6	LNSales	0.17	**-0.34**	**-0.27**	-0.02	-0.01	1.00										
7	$Gsales_{t-3}$	0.24	**0.26**	**0.28**	-0.06	0.22	-0.06	1.00									
8	Debt-Ratio	-0.02	**-0.48**	-0.08	0.19	**-0.30**	0.31	-0.11	1.00								
9	K/S	0.15	-0.01	-0.11	**0.29**	0.21	-0.03	**-0.28**	-0.16	1.00							
10	Trading	**0.28**	-0.09	-0.19	**-0.28**	0.17	**0.36**	0.11	-0.19	0.13	1.00						
11	Bursatil	**0.29**	0.03	-0.11	-0.23	0.24	**0.34**	0.09	**-0.27**	0.17	**0.94**	1.00					
12	Type	0.18	0.20	-0.02	-0.21	0.20	0.16	0.02	**-0.43**	0.14	**0.61**	**0.79**	1.00				
13	Lyears	0.03	-0.17	-0.22	-0.33	-0.01	0.16	0.03	0.00	-0.16	**0.73**	**0.68**	**0.47**	1.00			
14	BGA	-0.02	0.09	0.07	0.04	**0.26**	0.20	-0.13	-0.12	0.17	**0.27**	**0.30**	**0.26**	0.13	1.00		
15	Members	-0.06	0.04	0.12	**-0.41**	-0.12	**0.30**	0.08	0.18	**-0.29**	0.16	0.15	0.05	0.10	-0.23	1.00	
16	CGC	**0.45**	-0.15	-0.15	0.08	0.07	**0.37**	0.08	-0.02	0.03	**0.47**	**0.42**	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% 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 to 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 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 measure the level of trading of a given stock. Number in parentheses are robust t-student. Coefficients significant at least at the 10% level (based on a two-tailed test) are in boldface.

Dependent Variable: CGI	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
LnSales	1.736	1.623	2.027	0.716	0.965
	(1.27)	(0.94)	(1.21)	(0.45)	(0.51)
GrSales	11.310	13.976	13.972	11.908	10.153
	(2.49)	**(2.33)**	**(2.34)**	**(2.48)**	**(1.69)**
Lyears		-0.020	-0.021	-0.015	-0.158
		(-0.30)	(-0.31)	(-0.23)	(-1.59)
BGA		-1.938	-2.875	-4.070	-4.284
		(-0.50)	(-0.76)	(-1.26)	(-1.22)
Tsecurity		3.211	3.595	3.457	-1.774
		(0.97)	(1.08)	(1.16)	(-0.42)
CGC				8.164	
				(2.64)	
DebtRatio		2.391	2.843	5.352	6.374
		(0.23)	(0.28)	(0.64)	(0.65)
K/S		2.473	2.075	1.778	0.445
		(1.59)	(1.20)	(1.14)	(0.22)
Members			-0.552	-0.747	-0.838
			(-0.99)	(-1.15)	(-1.23)
bursatil					1.778
					(1.86)
Constant	26.926	25.145	26.352	40.381	44.309
	(1.63)	(1.36)	(1.46)	**(2.46)**	**(1.98)**
Regression Statistics					
R^2	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% 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; CR4t-1 is the percentage of direct ownership owned by the four largest shareholders in 2002-03; SqCR4 is the square of CR4 respectively; 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; 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 issuer of stocks and zero otherwise; Members is the number of members of board of directors. Numbers in parentheses are robust t-student. Coefficients significant at least at the 10% level (based on a two-tailed test) are in boldface.

Dependent Variable	**ROA**		**2SLS**			**ROA**
	(1)	**(2)**	**(1)**	**(2)**	**(3)**	**(1)**
CGI	0.000	-0.001	-0.001	-0.001	0.000	
	(-0.54)	(-0.88)	(-0.65)	(-0.44)	(-0.2)	
Independence						0.006
						(3.18)
LnSales	-0.010	-0.016	-0.009	-0.010	-0.016	-0.013
	(-1.72)	**(-2.69)**	(-1.40)	(-1.51)	**(-2.68)**	**(-2.37)**
GrSales	0.082	0.100	0.093	0.099	0.095	0.111
	(3.48)	**(4.12)**	**(2.81)**	**(2.72)**	**(2.73)**	**(5.38)**
$CR4_{t-1}$	0.007	-0.032	0.004	-0.004	-0.029	-0.012
	(0.07)	(-0.29)	(0.03)	(-0.04)	(-0.26)	(-0.12)
$(CR4_{t-1})2$	-0.037	-0.009	-0.031	-0.032	-0.011	-0.011
	(-0.37)	(-0.09)	(-0.33)	(-0.32)	(-0.11)	(-0.13)
Lyears	-0.001	0.000	-0.001	-0.001	0.000	0.000
	(-1.88)	(-1.27)	**(-1.84)**	**(-1.93)**	(-1.22)	(-1.35)
Wedge10		-0.017		-0.020	-0.016	-0.028
		(-8.85)		(-0.97)	(-0.77)	(-1.65)
BGA	0.010	0.026	0.009	0.014	0.026	0.035
	(0.69)	(1.53)	(0.57)	(0.89)	(1.61)	**(2.52)**
Tsecurity	0.014	0.017	0.018	0.016	0.015	0.021
	(0.77)	(0.87)	(0.90)	(0.83)	(0.77)	(1.42)
Debt-ratio	-0.048	-0.050	-0.049	-0.052	-0.048	-0.062
	(-1.42)	(-1.31)	(-1.42)	**(-1.67)**	(-1.21)	**(-1.81)**
K/S	0.003	0.0.008	0.005	0.007	0.007	0.004
	(0.32)	(0.88)	(0.50)	(0.65)	(0.71)	(0.46)
uoff		-0.032			-0.033	-0.048
		(-1.42)			(-1.48)	**(-2.77)**
uofif		-0.013			-0.017	-0.088
		(-0.44)			(-0.61)	**(-2.76)**
uofo		0.004			0.000	-0.024
		(0.15)			(0.01)	(-0.99)
Constant	0.219	0.311	0.243	0.233	0.294	0.203
	(4.78)	**(5.71)**	**(3.40)**	**(3.22)**	**(3.73)**	**(3.07)**
Regression Statistics						
R^2	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.

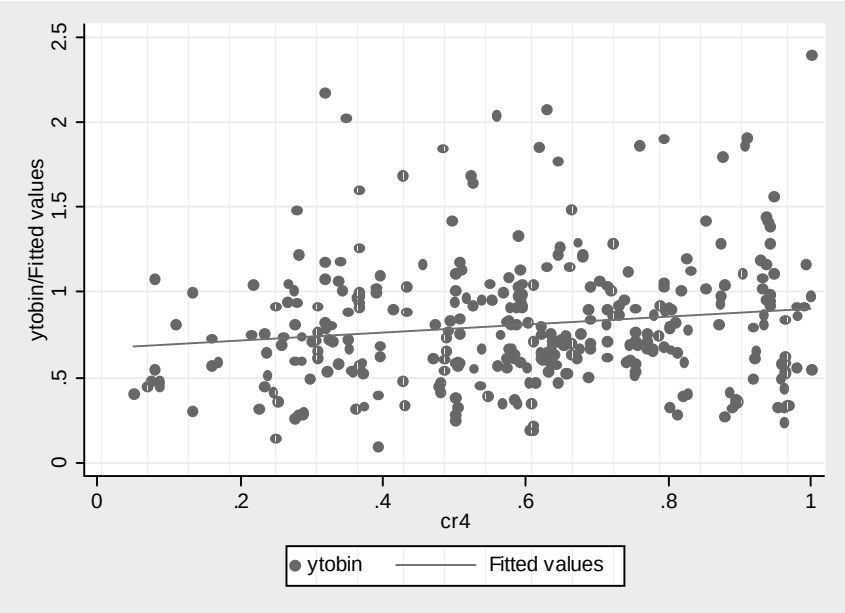


FIGURE 2

TOBIN'S Q AND SEPARATION RATIO OF CASH-FLOW RIGHT 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.

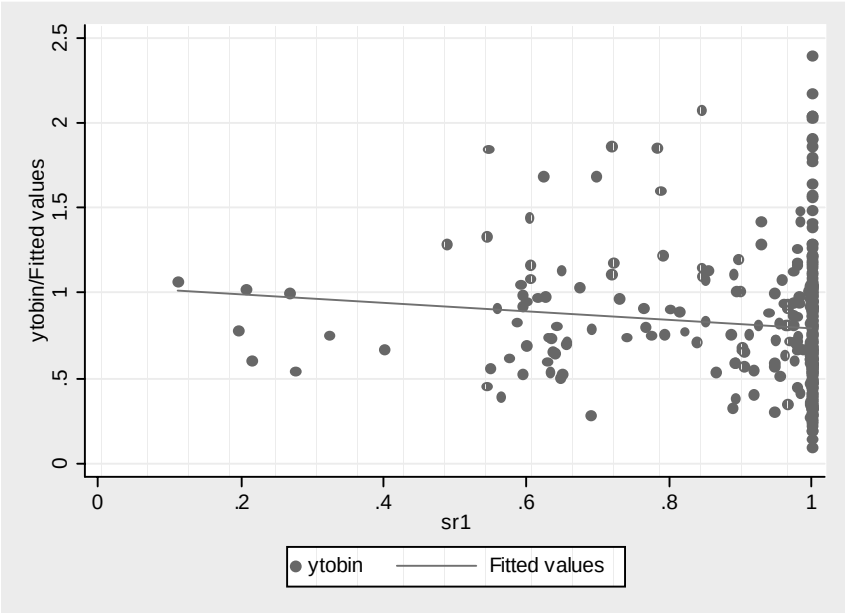


FIGURE 3

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.

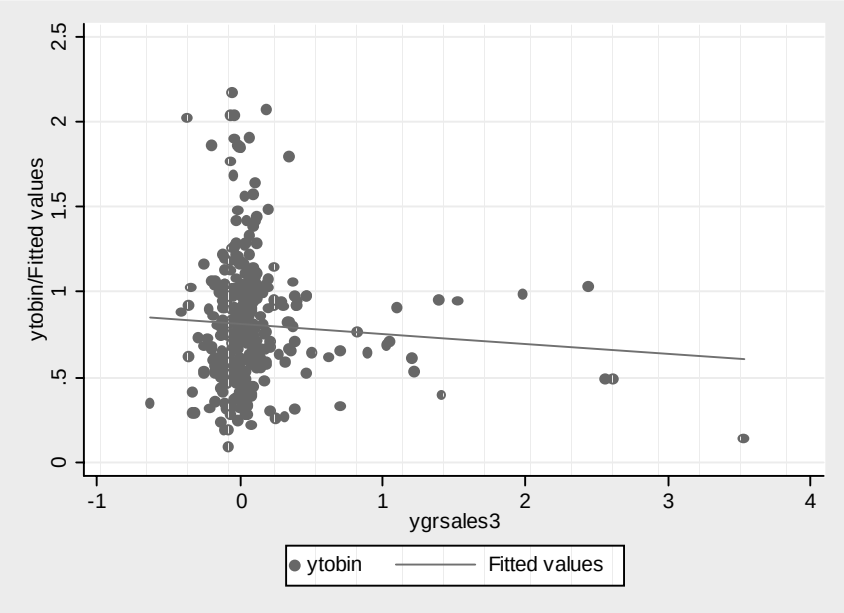


FIGURE 4

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.

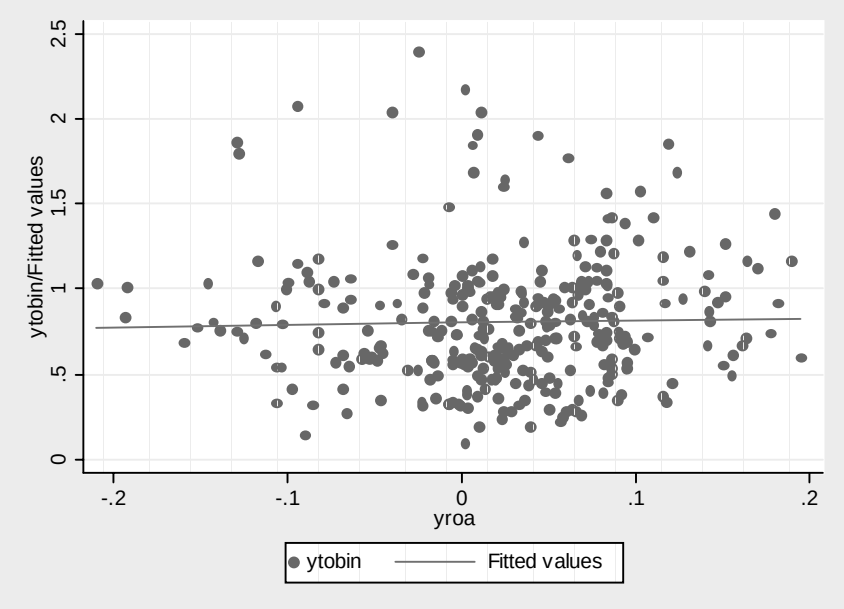


FIGURE 5

COMPANY VALUATION AND OWNERSHIP OF THE LARGEST SHAREHOLDER

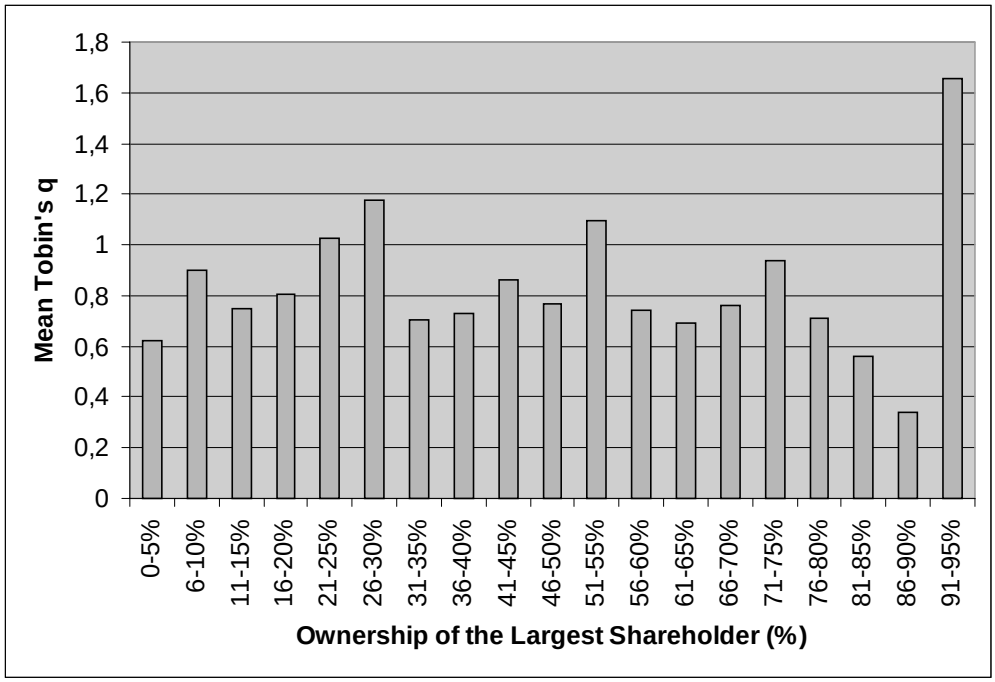


FIGURE 6

COMPANY VALUATION AND OWNERSHIP OF THE FOUR LARGEST SHAREHOLDERS

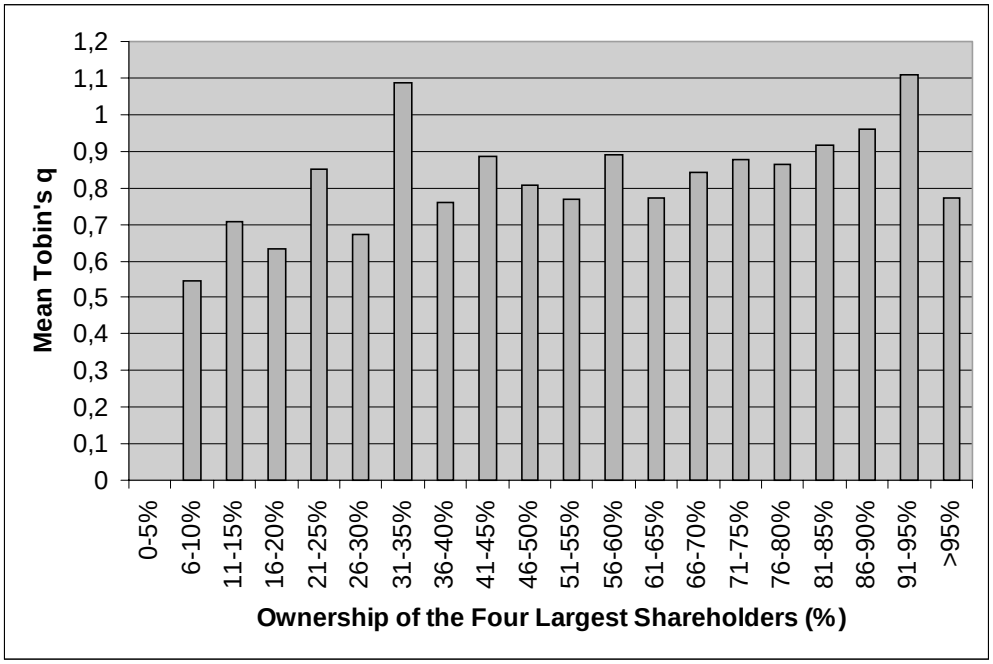


FIGURE 7

CGI AND RETURN ON ASSETS –ROA-

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

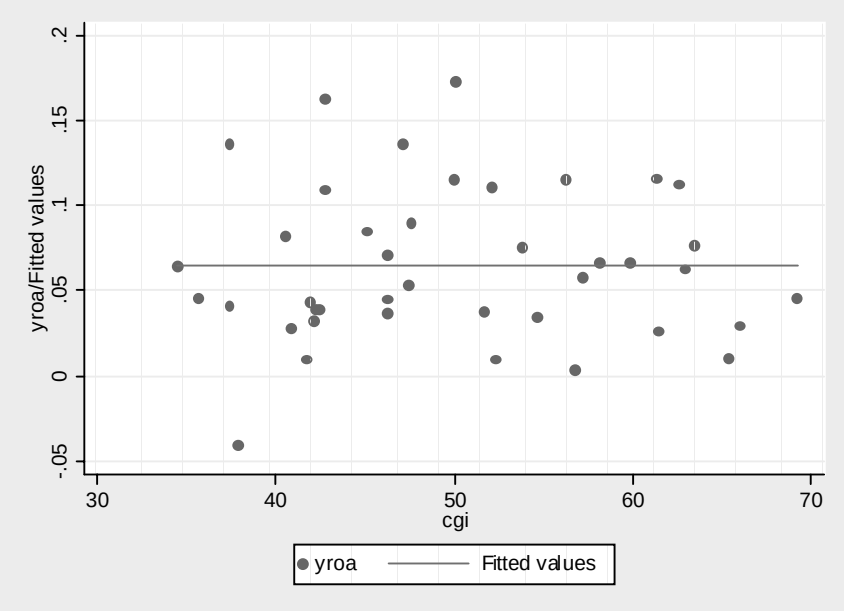


FIGURE 8

CGI AND RETURN ON EQUITY –ROE-

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

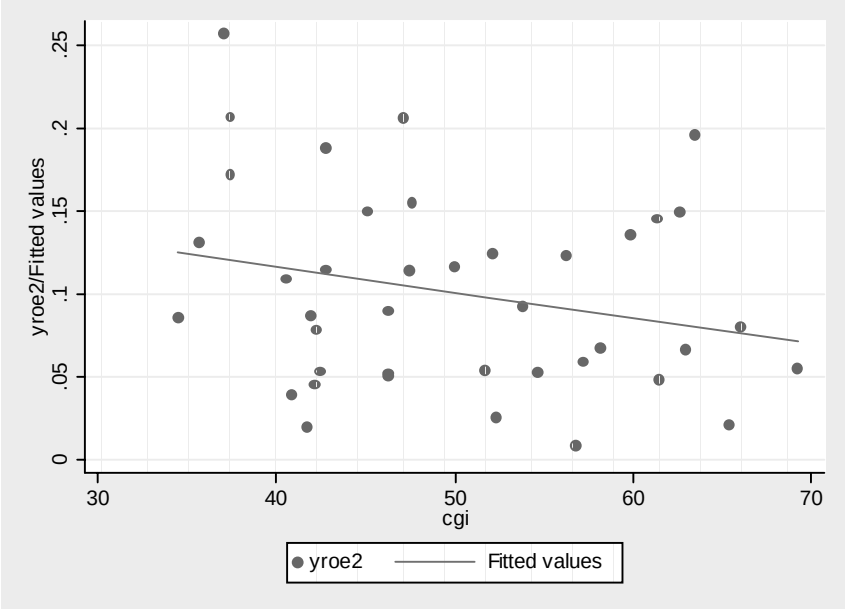


FIGURE 9

CGI AND BURSATIL

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

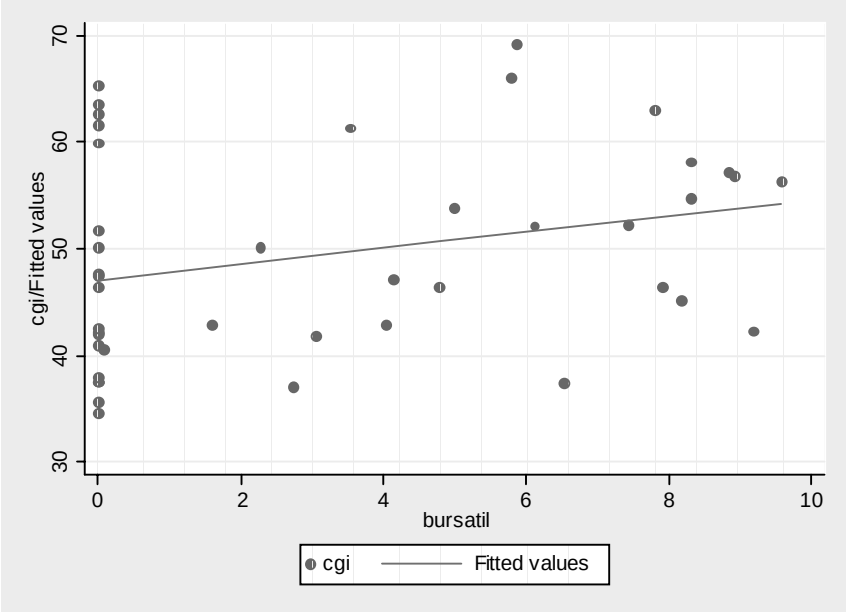
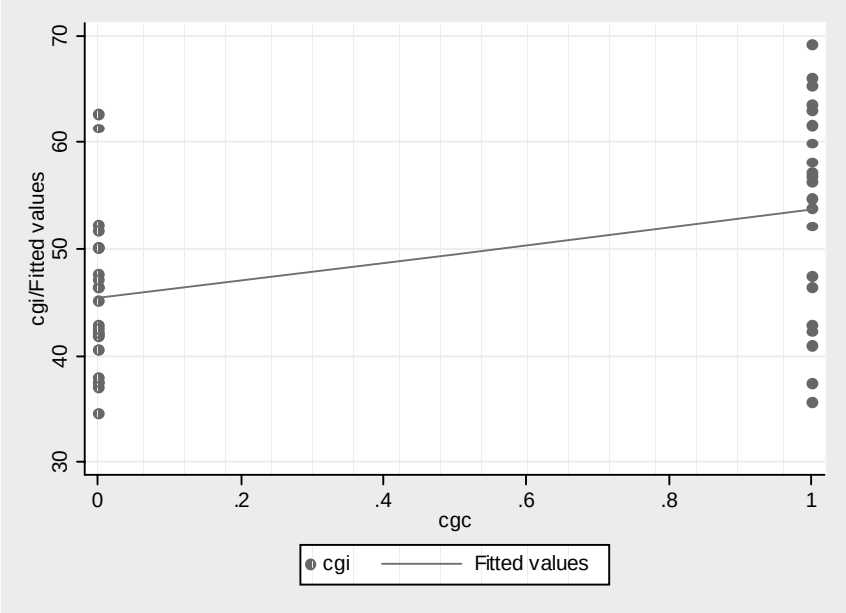


FIGURE 10

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 its summary statistics included in our overall Corporate Governance Index for a total of forty three firms. Six firms that responded 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 govermance principles? Survey question 2.	1	0	43	14	0.33
A.2	Does the company have a code of conduct with corporate govermance 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	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 Enflish survey "Place also indicate frequency" Survey question 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 Spanhish questionnaire the question "Which countries do they come from?" was tumed 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 Chaiman 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 Chaiman 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

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, it 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	23	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 ot 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 transaction 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 percentaje 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 wiht 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 firs 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