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**O VALOR DOS PARCEIROS LOCAIS NO BRASIL: O EFEITO DOS  
PADRÕES DE ESTRUTURA SOCIETÁRIA E DE GRUPOS ECONÔMICOS  
NO VALOR DAS EMPRESAS EM MERCADOS EMERGENTES**

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OWNERSHIP CLUSTERS AND BUSINESS GROUP MEMBERSHIP ON FIRM  
VALUE IN EMERGING MARKETS**

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## ABSTRACT

This study investigates how the qualitative nature of the ownership structure affects the value of publicly listed companies in Brazil within the framework of corporate governance. The work examines the interaction between firm value and five kinds of concentrated owners commonly found in emerging markets: families; public sponsors, foreign institutions, executives, and financial domestic investors. Empirical analysis shows that the mix and concentration of stock ownership do indeed significantly affect a company's value. Using a unique data set, compiling a panel data from 2004 to 2008, the present research also develops hypotheses about the effects of business group affiliation on firm value. The investigation finds evidence that despite their importance for the development of Brazilian firms, family owners, public agents and foreign investors are giving place to more specialized, yet less concentrated monitors, such as executives and domestic financial institutions. These results indicate that corporate governance may be reaching more mature levels of development in Brazil. Further, although no relation between group membership and firm value is found, results suggest that the presence of a specific category of shareholder in one group firm facilitates future investment of the same kind of shareholder in other firms of the same group, implying that the nature of interests and conflicts among shareholders are likely to be perpetuated among the same net of colligated firms. Also, the research shows that while family partners prefer to sponsor firms with active capital mobility, foreign investors and public institutions seek out equity ventures with less capital mobility, which guarantees more transparency with respect to the uses of corporate fund.

## RESUMO

Este estudo analisa como a classe de acionistas afeta o valor das empresas brasileiras listadas na bolsa de valores no ponto de vista da governança corporativa. O trabalho examina a interação entre o valor das empresas e cinco tipos de concentrações acionárias comumente presente em mercados emergentes: famílias, agentes públicos, investidores estrangeiros, executivos e investidores financeiros nacionais. A análise empírica demonstra que o mix e a concentração de participação acionária afeta significativamente o valor das empresas. Utilizando uma compilação única de dados em painel de 2004 a 2008, a presente pesquisa também desenvolve hipóteses sobre o efeito da participação em grupos econômicos para o valor das empresas. A investigação encontra evidências de que, apesar de sua importância para o desenvolvimento de empresas brasileiras, o capital familiar, instituições públicas, e investidores estrangeiros estão cedendo lugar a monitores mais especializados e menos concentrados, como executivos e instituições financeiras nacionais. Estes resultados indicam que a governança corporativa no Brasil pode estar alcançando níveis de maturidade mais elevados. Adicionalmente, apesar de não haver indicação da existência de correlação entre a participação em grupos econômicos e o valor das empresas, os resultados indicam que a presença de um tipo específico de acionista em uma empresa do grupo facilita investimentos futuros desta classe de acionista em outras empresas do mesmo grupo, sinalizando que os interesses acionários são provavelmente perpetuados dentro de uma mesma rede de empresas. Finalmente, a pesquisa demonstra que enquanto o capital familiar prefere investir em empresas com ativa mobilidade do capital, investidores internacionais e instituições públicas procuram investimentos em equity com menor mobilidade de capital, o que lhes garante mais transparência com relação ao uso dos recursos e fundos das empresas.

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## 1. Introduction

After the Enron debacle in 2001 and the 2008 financial crisis, questions regarding the monitoring of companies and of financial markets resurfaced as an international concern, flooding pages of specialized and generalist newspapers and publications, and becoming the main headlines of news programs around the globe.

In the first event, almost a decade apart, the North-American Congress issued a brand new Act named after its creators, Sarbanes-Oxley, which was intended to increase the disclosure of information and enhance the monitoring of North-American companies, corporate groups and their affiliates in every hemisphere.

In the second event, after the banking and the real-estate crisis spilled over into the real economy and plunged the developed world into economic depression, governments not only in North-America, but also in Asia, Eastern and Western Europe, issued emergency credit and economic packages to rescue once solid industrial companies, then in bad financial standings. Aside from the top five American investment banks, and world's largest security company AIG, one of the main symbols of North-American capitalism, General Motors, was amongst the rescued.

The magnitude of these events did only but awaken an issue that reemerges every other decade, when the available monitoring instruments show themselves not capable of providing the controls, guarantees and collaterals previously envisaged and contracted by the stakeholders of business enterprises around the world.

In the midst of such a conflicting context in the developed economies, there rests a question regarding the level of monitoring in emerging markets, which have gained a safe harbor role as they become the world's main resort of growth and, hence, economic recovery. The present paper is interested especially in the monitoring and corporate governance practices excelled by the different categories of shareholders commonly present in emerging economies.

A review of the literature on the subject reveals that common clusters of ownership structure are frequently present in emerging markets: family ownership, public domestic investors, and foreign investors, each with specific corporate interests.

More recently, new players have gained importance in the ownership structure of firms in emerging markets. The two main category of less concentrated, yet more specialized and better prepared monitors, analyzed hereby are domestic financial investors and executives.

Family ownership is constituted by the percentage share of the family founders and by the percentage share of firms belonging to the same family group, as in a holding structure. Public domestic investors<sup>1</sup> are comprised of domestic institutions that have

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<sup>1</sup> The present research chooses to name the explanatory variable Public Investment although some of the shareholdings do not correspond 100% to the participation of the state. However, the grouping intends to

direct or indirect participation of the state, such as development banks, pension funds of state-run and mixed economy firms, and other governmental agencies. Foreign investors represent international financial institutions that make equity investment overseas.

Financial domestic investors are considered as non-strategic<sup>2</sup> individuals or financial institutions (including banks) that do not operate economic activity in any other endeavor in the same segment as the invested firm. They constitute a class of domestic shareholders that contribute with equity and monitoring technology, such as domestic private equity and asset management firms. Executive owners are directors, counselors, and other executives that work for the analyzed firms as part of their management body.

Previous studies on monitoring and corporate governance in Brazil have dedicated efforts in understanding the effects of concentrated and diluted participation in the blocks of control of Brazilian companies. The present work attempts to challenge the understanding of how the qualification of shareholders and the controls exerted by them affect the value of Brazilian companies over time within and without the boundaries of corporate groups.

The approach presented herein is different from the previous techniques applied to the study of ownership monitoring and Corporate Governance in Brazil. The present research applies the methodology used by Khanna and Palepu (1999a) to examine the interaction between the three kinds of concentrated owners in the Indian economy.

The study at hand also investigates the effects of business groups in the value of companies and as a driver for attracting the various categories of investors and their individual interests.

The field of study interested in analyzing how the qualitative nature of shareholders affects firm's value, through the diffusive conflict of interest amongst the different categories of owners, is still young and lacks a systematic approach. The methodology developed by Khanna and Palepu (1999a) was selected because it enables the analysis of the effects of classes of owners over a certain period of time, which is critical for Brazilian companies due to the importance that family ownership, public agents and international investors have played along the Brazilian corporate development.

Additionally, this methodology overcomes other approaches in the sense that it allows for the proper treatment of cross correlation between firms, which is another sensible issue to Brazilian family ownership and corporate groups. Further, this methodology allows the investigation of the effects of corporate group membership in Brazil, which is one of the main objectives of the present work and represents a key contribution to the emerging market research.

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reflect the participation of all shareholders that have close ties and are influenced, even if indirectly, by state agencies or by political interests.

<sup>2</sup> Non-strategic: understood as in the Merger and Acquisition concept. Strategic partners are those firms that operate within the same business segment of the invested company. Non-strategic partners are capital providers that are either financial investors or shareholders that operate other business activities.

Finally, the choice to follow Khanna and Palepu's (1999a) line of research is an attempt to break with the concept that emerging market economies shall be analyzed through the same techniques as developed economies. Due to their specialization in less perfect markets, the authors have been able to curtail new and proper approaches, dedicated exclusively to understanding firms in less stable, riskier, and less mature economies. As such, their work has been gaining weight as an exponent on the still young emerging market research.

The organization of this paper is as follows. Section 2 provides a revision of the literature on monitoring and corporate governance in emerging markets. Section 3 follows with a review of the institutional and legal context that has shaped firm development in Brazil. Section 4 provides a summary of the data sources and sample selection, as well as an explanation of the dependent and independent variables. It also outlines the distinction between independent and group firms. Section 5 describes the results, and section 6 concludes.

## **2. Review of the Literature**

### **2.A. Corporate Governance: ownership concentration**

Monitoring and Corporate Governance in developed and emerging economies has been the subject of various studies in Corporate Finance, each with a somewhat different approach. Most of the work is concentrated in understanding the diverse mechanisms of Corporate Governance, considered as economic and legal instruments that can guarantee the return on investment to the suppliers of finance to firms and corporations.

The two most common approaches to Corporate Governance are legal protection and ownership structure, both of which rely on giving investors some power (Shleifer, 1997). Evidence that the shareholding structure of firms is one of the main mechanisms of monitoring and governance comes from the study of how ownership structure affects performance and value.

The subject was first examined by Berle and Means (1932), who argued that firms reporting high growth rates in North-America should naturally, evolve to a dispersed control ownership structure due to the scarcity of resources by the founding families.

This view was later questioned by Demstez (1983) and Demsetz and Lehn (1985), who ponder that the dispersion of control rights can lead to a more efficient allocation of resources that maximizes firm value. As a consequence, a concentrated or dispersed ownership structure should be the result of shareholder profit maximization. As such, there should be no direct systematic relationship between performance and ownership structure.

Various studies have attempted to relate these variables, arriving in different conclusions. Grossman and Hart (1980) showed that if firm's ownership is widely dispersed, no shareholder has adequate incentives to monitor the management closely

because the gain from a takeover for any individual shareholder is too small to cover the monitoring cost.

Morck, Shleifer, and Vishny (1988) present evidence on the relationship between cashflow ownership of the largest shareholders and profitability of firms, as measured by the Tobin's Qs. The authors find that profitability rises in the range of ownership between 0% and 5%, and falls afterwards.

Stulz (1988) presents a formal model of the roof-shaped relationship between ownership and performance, which has been corroborated by subsequent empirical work (McConnel and Servaes (1990), Wruck (1989)).

Thomsen and Pedersen (1997) applied the model developed by Demsetz and Lehn to 388 firms of 12 European countries. They found evidence of the influence of variables such as firm size, ownership structure and return variability on company value. Their investigation also found no significance for the concentration of ownership on performance.

Cho (1998), on the other hand, finds evidence that performance affects ownership structure (using the percentage of executive shares as a proxy for ownership structure), but not the reverse. Demsetz and Villalonga (2001) analyze ownership structure as an endogenous variable. However, they are not able to find evidence of the effects on performance on the ownership structure or vice-versa.

In Brazil Siqueira (1998) applies the model developed by Demsetz and Lehn (1985), and by Thomsen and Pedersen (1997) to a sample of 278 domestic firms, attempting to understand the determinants of the level of ownership concentration and the consequent effects to their economic performances. The author finds a negative correlation between ownership concentration and performance.

Later, Carvalhal da Silva (2002) finds a positive correlation between the presence of controlling rights over firm's cashflow and firm value. The author also concludes that ownership concentration is negatively correlated with debt leverage and positively correlated with dividend distribution.

Silveira et al. (2004) investigate the effect of the separation of control rights over company's decisions (voting control) and control over cashflow for a panel of Brazilian firms from 1999 to 2000. Despite finding no conclusive evidence, results indicate that the adoption of 'one stock-one vote' rule may contribute to maximize firm's value.

Brito and Lima (2005) also study the determinants of the concentration of ordinary shares by controlling shareholders in Brazil. Their investigation concludes that the endogenous aspects mentioned by Demsetz and Lehn (1985) and Himmelberg et al. (1999) do not influence ownership concentration in Brazil.

Using a fixed effect panel regression Gonçalves (2007) unfolds a statistically significant and positive correlated relationship between ownership structures and performance variables in Brazil.

Okimura, Silveira and Rocha (2007) unveil a quadratic influence of the concentration of voting shares over firm's value, and a negative linear influence of the excess of voting power over firm value. They also disclose that the evidences of the endogeneity of the ownership structure are weak and statistically insignificant for a sample of Brazilian firms from 1998 to 2000.

## **2.B. Monitoring in Emerging Markets**

The study of monitoring, Corporate Governance, firm performance, and ownership structure in emerging markets focus largely on the absence of specialized intermediaries that perform monitoring services. The absence of corporate governance instruments is generally linked to the lack of monitoring skills and with the lack of incentives by shareholders.

Each one of the five categories of owners analyzed in the present study has a different level of monitoring specialization and carries each individual nature of interest over company's cashflow. Hence, the study of monitoring in emerging markets is profoundly linked with the qualification of firm's shareholders.

In Russia, for example, Boycko, Shleifer, and Vishny (1995) show that the weakness of corporate governance mechanisms leads to substantial diversion of assets by managers of many privatized firms, and the virtual nonexistence of external capital supply to firms.

Berglof (1995) finds similar evidences in the Czech Republic, where investment privatization funds hold concentrated blocks of equity that are, however, not translated into active corporate governance.

In his account of the situation in Eastern European countries, Rapaczynski (1996) substantiates that "various supervisory bodies are generally rudderless, incapable of genuine monitoring".

Franks and Mayer (1994) report that even in developed economies, such as Germany, corporate governance mechanisms can be dispersed through ownership structure. They account that in smaller German companies, the norm is family control through majority ownership of pyramids, in which the owner controls 51% of a company, which in turn controls 51% of its subsidiaries and so on.

According to Barca (1995) and Pagano, Panetta, and Zingales (1995), Italian corporate governance mechanisms are so undeveloped as to substantially retard the flow of external capital to firms.

When analyzing the financial reform and corporate governance in China, Neoh (2002) discloses that Chinese investors are for the most part unsophisticated. They operate on a hearsay basis and are usually in the market for short-term gains. Holderness and Sheehan (1991) highlight that firm value will not increase if the block holder lacks the pertinent managerial skills.

Also about China, Wang, Xu, and Zhu (2001) argue that the lack of ownership by management and dispersion of shareholders do not create the necessary incentives for performance.

Studies also show that the lack of monitoring incentives in emerging economies is sometimes caused by conflict of interest among shareholders that discourages the development of such skills (Litwack, 1995). In analyzing monitoring in Israel, Blass, Yafeh, and Yosha (1998) have found evidence of these conflicts of interest. They argue that despite significant capital-market reforms in the mid-1980s, the Israeli government and banks continue to play an unusually dominant role in Israeli financial markets.

They ponder that Israeli banks operate as merchant banks and, through pyramid structures of ownership, control large segments of manufacturing, construction, insurance, and services. In addition, the banks dominate all facets of the capital market, including underwriting, brokerage, investment advice, and the management of mutual and provident funds.

Because of this dominance by the banks, several important mechanisms of corporate governance are missing. There is no effective market for corporate control; institutional investors have little incentive to monitor corporate managers; and those managers in turn have little incentive to improve firm performance and increase shareholder value.

Leung et al. (2002) finds similar results in China. Because bank loans are still the most dominant source of financing for domestic companies, the banking industry plays a key role in shaping economic development in China. However, bank control over firms in China is still underdeveloped.

The lack of monitoring experience by commercial banks is also evidenced in Russia. Frydman et al. (1993) argue that due to the lack of experience with market accounting and governance, Russian commercial banks are therefore in no position to hold management's feet to the fire.

Another frequent problem associated with Corporate Governance in emerging economies is poor availability of information. Hoshi, Kashyap, and Scharfstein (1991) present evidence suggesting that information and incentive problems in the capital market can have important effects on both financial structure and investment.

They argue that a close relationship between firms and banks is likely to mitigate information problems that typically arise when debt and equity are diffusely held and no individual investor has the incentive to monitor the firm.

Kahnna and Palepu (1997) ponder that transactions may be particularly costly in emerging economies because institutions for trade, contract enforcement, communication, and information disclosure are weak, exposing partners to a trade to opportunistic behavior.

In a later study, Kahnna and Rivkin (2001) stress that capital providers may hesitate to fund firms in emerging economies because financial disclosure requirements are minimal in such settings and the rights of minority shareholders and creditors are often protected poorly. As a result, projects may go unfunded even though their rates of return exceed the cost of capital.

Akamatsu (1995) account that in Russia balance sheets typically consist of three lines on the asset side and two lines on the liability side, with no explanatory footnotes. In Chile, Khanna and Wu (1998) stress the importance of skilled intermediaries. They report that even after two decades of financial market reform, domestic analysts are not nearly as skilled as foreign analysts.

Studies by Auerbach (1985) and MacKie-Mason (1990) also contribute to the literature that tries to explain capital-structure choices based on information problems in the capital market.

The lack of legal protection is yet another large field of study. Using a sample of 49 countries, La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997) show that countries with poorer investor protections, measured by both the character of legal rules and the quality of law enforcement, have smaller and narrower capital markets. These findings apply to both equity and debt markets. In particular, French civil law countries have both the weakest investor protections and the least developed capital markets, especially as compared to common law countries.

On their survey of Corporate Governance Shleifer and Vishney (1997) conclude that both legal protection of investors and some form of concentrated ownership are essential elements of a good corporate governance system.

They argue that, aside from the United States, Germany, and Japan, in much of the rest of the world, legal protection of investors is less substantial, either because laws are bad or because courts do not enforce these laws. As a consequence, firms remain family-controlled and, even in some of the richest countries, have difficulty raising outside funds, and finance most of their investment internally (Mayer 1990).

In fact, Xu and Wang (1997) report that in China the high level of family and state shareholding may imply that insufficient shares trade. As shown in the present paper, this phenomenon can also be found for a group of listed companies in Brazil.

Corporate Governance is also hindered by the use of political connections by local owners. A study by the World Bank (Aoki, 1995) on transitional economies argues that when socialists planned economies were first being transformed into market economies it was thought that simple privatization and the development of the equity market would serve as means of corporate control.

However, this view disregarded issues of political economy, as well as the historical development of national institutions. Authors such as Kikeri, Nellis, and Shirley (1992); and Boycko, Shleifer, and Vishny (1995) have surveyed evidence of the inefficiency of state firms, and the consequent drains on their countries' treasuries.

Further, many studies highlight the effects of political interference on Chinese firms. Leung et. al. (2002) disclose that the selection process for listing companies has historically been highly political in nature. When the securities market became a pronounced part of the Chinese capital market, it also had the reputation of being the place to get free money for enterprises.

The central government gave priorities to SOEs, and while there are minimum consideration standards provided as part of screening process, the actual procedures of getting listed fell to the level of favoritism, misinformation and bribery across the spectrum. First, the quota system and provincial recommendation format encouraged bribery on the local government level.

In consonance, Zhang (Zhang, 2002b) suggests that the lack of corporate governance mechanisms in Chinese listed companies is partly due to connected-party transactions and loans to their state-owned parents. The relationships between listed subsidiaries and parent companies are fraught with governance problems and pose a major hurdle to better performance. In addition, ongoing transactions between parents and listed SOEs are a significant problem. *New Fortune* reported in December 2000, that 93.2% of A-Share companies in China have disclosed ongoing significant connected-party transactions with their parents.

Additionally, a group of research indicates that firms in emerging markets also make use of internal capital markets as an instrument that hinders corporate governance. Alchian (1969), Grossman and Hart (1986), Gertner, Scharfstein and Stein (1994), and Stein (1997), for instance, argue that internal capital markets may differ from external capital markets due to differences in information, incentives, asset specificity, control rights, or transactions costs. This is true especially for business groups in emerging economies.



## 2.C. Monitoring Costs of Business Groups

Further, there is a series of studies that analyze the effects of corporate groups on firm performance, especially as part of the literature on monitoring in the emerging markets and transitional economies.

The structure of corporate control, through the five classes of shareholders analyzed herein, is related to business groups because the literature indicates that certain categories of concentrated owners, especially local families and foreign investors, have formed corporate groups overtime as a response to market imperfections and as a means to capitalize sources of investment in less developed, less liquid, and riskier markets.

Previous research on the subject have primarily conceived business groups as responses to market failures and associated transaction costs (Caves, 1989, Leff, 1976, 1978). However, this view has been questioned by more recent studies.

Amsden and Hikino (1994) assert that groups play a major role in assimilating foreign technology in emerging markets. Analyzing samples of firms from Argentina, Spain and South Korea, Guille'n (1997) emphasizes the role of business groups as agents that combine factors of production within each country and from abroad.

By comparatively examining the behavior of firms in Chile and India, Fisman and Khanna (1998) demonstrate that groups serve as capital market intermediaries where the external markets are underdeveloped (India), but not where they are better developed (Chile).

Although Japan is not typically considered an emerging economy, there is a large number of studies on Japanese business groups, especially due to the *keiretsu* structure, which unites cross shareholding from a bank, a maze of firms and executive's interlocks.

Hoshi et al. (1991) shows that internal capital markets operate within *keiretsu*. Gerlach (1992) studies the Japanese networks and develops a blockmodel to understand the elements that define membership in the *keiretsu*. Lincoln, Gerlach and Takahashi (1996) argue that crossholdings among *keiretsu* member firms are functions of intra-company trade and debt.

Belderbos and Sleuwaegen (1996) show that *keiretsu* membership helps group firms make foreign direct investments in Southeast Asia. Lincoln et al. (1996) consider several types of coordination mechanisms among *keiretsu* affiliates besides ownership shareholding and intra-company debt. They ponder that directors, trade and presidents' club membership (*shacho-kai*) also define the net of Japanese groups.

The studies of the Japanese *keiretsu* can be viewed as one preliminary attempt to investigate the role of local partner's control in emerging markets. While business groups and local owners serve some useful functions in the face of market imperfections, they also bring related monitoring costs.

First, they are generally alleged to suffer from lack of transparency, a characteristic that is often related to the ability of controlling shareholders to move funds across group-firms without proper disclosure. Another group feature that affects accountability is the pyramidal structures of ownership that enable corporate control through small percentage ownership of stocks with voting rights. Finally, groups are also associated with rent seeking practices, especially linked to political connections in local markets. (Khanna and Palepu, 1999).

Investigations show that business groups in other emerging markets have also been designed to mimic Japanese *keiretsu*. Keister (1998a, 1998b) notes that Chinese imported many characteristics of the Japanese model. Ungson, Steers, and Park (1997) relate the similarities of Korean *chaebol* to Japanese *zaibatsu*, the predecessors of the *keiretsu*. Lincon et al. (1996) argue that Korean *chaebol* affiliates are known to capitalize on group reputation in their attempt to access capital.

Other authors have addressed issues related to the role and effects of business groups. Leff (1976, 1978), Amsden & Hikino (1991), Granovetter (1994) and Khanna and Palepu (1997) draw a broad discussion of the phenomenon of business groups. Strachan (1976) studies groups in Central America; Camp (1989) in Mexico; Daems (1977) in Belgium; Encaoua & Jacquemin (1982) in France; White (1974) in Pakistan; Chang and Choi (1988), and Amsden (1989) in Korea; and Robinson (1986) and Schwatz (1992) in Indonesia.

The role of groups in India has also gained some scholar attention by authors such as Ghemawat and Khanna (1998), Herdeck & Piramal (1985), and Piramal (1996).

In a recent examination, Khanna and Rivkin (2001) test for the effects of business groups in 14 emerging markets: Argentina, Brazil, Chile, India, Israel, Mexico, Peru, the Philippines, South Africa, South Korea, Taiwan, Thailand, and Turkey. Their results suggest that affiliates perform better than non-affiliates in six countries and worse than non-affiliates in three, with no difference in profitability levels in the remaining five countries. This runs contrary to the wisdom, conventional in advanced economies, that unrelated diversification depresses profitability.

They also find that group affiliation affects profitability at least as much as industry membership, in some cases even more. This is so because a group can overcome market imperfections by transferring capital within the group and by ‘underwriting’ security issues with the entire group’s reputation.

Additionally, they evidence that members of a group are likely to earn rates of return similar to other members of the same group. They interpret this result as indicating that knowledge of a firm’s group affiliation improves one’s ability to anticipate its profitability, even after one knows the industry and the time period in which profitability is observed (Khanna and Rivkin, 2001).

Collectively, these results challenge the traditional view, originated from examinations of firms in developed economies, that unrelated group diversification reduces firm value (Lang and Stulz, 1994; Berger and Ofek, 1995). As a consequence, this raises policy making and practical management issues of whether the emerging economies should blindly import the conclusions on the benefits and cost of diversification from developed markets.

Overall, the investigations on emerging markets suggest that the roots of sustained differences in firm profitability may vary across institutional contexts and that conclusions drawn in one context may well not apply to another (Palepu and Rivkin, 2001).

While there are no definite inferences, the debate on whether business groups are paragons or parasite (Bhagwati, 1982, Fisman, 2000, Krueger, 1974, Kunita 1988), is yet a prominent field of investigation, especially in Brazil where research on the field is scarce.

## **2.D. Ownership Structure: a qualitative approach**

As can be verified, the work dedicated to the analysis of ownership structure is thus far highly focused on the examination of concentrated ownership and expropriation of minority shareholders by large shareholders, matching significant control rights with large cashflow rights.

Recently, a different line of study has been interested in further understanding how the qualitative nature of shareholding concentration may affect the value of firms through a more profound analysis of the different nature of interests represented by each category of owner.

Empirical analysis and previous research on emerging economies show that the mix and concentration of stock ownership do indeed significantly affect a company's performance and value (Xu and Wang, 1999; Kahnna and Palepu, 1999a, Villalonga and Amit, 2004).

The field of study is young. There is no systematic research approach, nor pattern of results. The largest portion of study is focused on the complex ownership structure of Japanese firms (often as a side result of the analysis of the *keiretsu* groups), on the financial and corporate reform in China and other Asian markets, and on transitional Economies of East Europe.

La Porta et al. (1999) show that good corporate governance is used by outside investors to protect themselves from expropriation by insiders. Analyzing Chinese stock companies, Xu and Wang (1999) investigate whether ownership structure significantly affects the value of publicly listed companies in China within the framework of corporate governance.

They observe that a typical listed stock company in China has a mixed ownership structure with three predominant groups of shareholders – the state, legal persons (institutions), and individuals – each holding approximately 30% of the stock. They show that ownership in China is heavily concentrated. The five largest shareholders account for 58% of the outstanding shares in 1995, compared to 57.8% in the Czech Republic, 79% in Germany, and 33% in Japan.

The authors find evidence that the mix and concentration of stock ownership do indeed significantly affect a company's value. First they find a positive and significant correlation between ownership concentration and profitability. Second, they uncover that Chinese firm's profitability is positively correlated with the fraction of the legal person shares, but it is either negatively correlated or uncorrelated with the fraction of state shares and tradable A-shares held mostly by individuals.

When analyzing the corporate governance of state firms, various authors, such as Shapiro and Wiling (1990), Boycko et al. (1996), Shleifer and Vishny (1994) point out that while in theory state firms are controlled by the public, the de facto control rights belong to the bureaucrats, who in spite of having extremely concentrated control rights, have no significant cashflow rights - since the cashflow ownership of state firms is effectively dispersed amongst the taxpayers of the country. Moreover, the bureaucrats typically have goals that are very different from social welfare, and are dictated by their political interests.

Lopez-de-Silanes, Shleifer, and Vishny (1997) observe that bureaucrats often cater to special interest groups that help them win elections. Collectively, these studies indicate that bureaucrats controlling state firms have at best only an indirect concern about profit maximization, because profits flow into the government budget.

Meggison et al. (1994), and Lopez-de-Silanes (1994), on the other hand, analyze privatization processes as a response to the inefficiency of state control. Privatization replaces political control with private control by outside investors. They argue that the result of the switch to concentrated private cashflow ownership typically means a significant improvement in performance of privatized firms.

Another group of studies find evidence that foreign direct investment (FDI) flows to emerging markets suggest that foreign ownership is associated with improvements in plant productivity, and thus, to corporate performance (Aitken and Harrison, 1999), (Perez-Gonzales, 2006), (Arnold and Javorcik, 2005), (Petkova, 2007). The sources of productivity gains are generally attributed to the ability of foreign multinationals to transfer superior technology, bring organizational capital and provide access to international capital markets (Caves, 1996).

Finally, there is a field of research dedicated to the role of banks and other financial intermediaries in channeling funds into productive investment. Diamond (1984), among others, argues that banks serve as corporate monitors who bear the cost of becoming informed about their client firms and who ensure that they make efficient business decisions. However, there is no agreement whether the benefits of bank monitoring outweighs its costs.

The present work contributes to the international literature that examines the qualitative effects of ownership in the value of companies. It reproduces the techniques used by Khanna and Palepu (1999a) to investigate the effect of different categories of investors in the value of firms in India.

The choice to reproduce Khanna and Palepu's (1999a) methodology is due to three main reasons. First, it enables the analysis of the effects of the classes of owners on firm value over a period of time. Second, it uses Tobin's  $q$  as the dependent variable. Third, it allows for the proper treatment of cross correlation between firms.

As shall be further seen in the present study, the time effect of the classes of shareholders is a relevant issue in Brazil due to the important and varying roles families, foreigners, and public agents have played along the country's industrial and economic development. The use of Tobin's  $q$  is critical because it is a measure of value that can be used to predict investment spending or to control for a firm's current and future profitability. Further it is a measure based on accounting and financial figures that can be applied by market agents on the valuation of practical financial transactions.

Further and foremost, the objective in reproducing this methodology is to contribute with the existing literature in bringing a proper and dedicated approach to the understanding of firms in less stable, riskier and less mature markets.

Khanna and Palepu (1999a) find that domestic financial institutions in India are ineffective monitors, whereas foreign institutional investment is associated with significant monitoring benefits. Domestic family ownership is also positively correlated with firm value.

The researchers also analyze the effects of group membership on firm value. Surprisingly, there is no evidence of a difference in this relationship between group affiliates and unaffiliated firms, suggesting that in India monitoring is no less effective for group affiliates than it is for independent firms. (Khanna and Palepu, 1999a).

### **3. Brazilian Institutional Context**

Differently from some of their American counterparts, Brazilian firms have developed based largely on equity investment. A slow shift to a mixed financial structure, with the increase of firms' debt leverage, has begun only by the 1990s, as a result of economic policies that enabled both the opening of the Brazilian Economy to international markets and the beginning of the privatization process.

The privatization process in Brazil represented a radical shift in the preponderant role that had been reserved to the State until the 1990s. Since President Getúlio Vargas' first mandate (1930-1945), government implemented very strict policies that granted state control in every endeavor considered strategic for the development of the country. At the time, public ownership of firms was accompanied by a program of import substitution that led to the second and most important wave of Brazilian industrialization.

These policies resulted on the constitution of state-owned Companhia Siderúrgica Nacional (1940), Companhia Vale do Rio Doce (1942), Companhia Hidro Elétrica do São Francisco (1945), and, during Vargas' second mandate, Petróleo Brasileiro S.A. – Petrobras (1953).

At the same time, the Brazilian banking system was highly anchored in Banco do Brasil and Caixa Econômica Federal, official credit agencies that acted sideways to a few financial institutions. With the exception of small regional financial agents, most of them were owned by foreign capital.

In 1952 Vargas founded a fully State-owned financing bank in the models of North American Eximbank: the National Bank of Economic and Social Development (herein BNDES)<sup>3</sup>. Born with the objective to finance private entrepreneurship, BNDES capitalized national industrialization process, especially in the automobile industry.

Nonetheless, the Bank's main objective was diverted into helping private companies in bad financial standing, which led to the statization of a great number of them. At a certain time in history, BNDES was known as 'the hospital of bankrupt firms'.

But it was during the military regime (1964-1985) that statization reached its peak, with well over 500 companies fully registered under state ownership. Such companies acted both in strategic segments, as well as in consumer industries, such as retail and hospitality. In the period, the Brazilian economy registered its highest GDP growth levels, of over 13% per year.

State-owned companies were subject to various Ministry regulations and monitoring. Each Ministry imposed its own management rules. Technical criteria were often jeopardized by political interest. Capital calls, for example, were decided without previous budget allocation, negatively impacting public spending with no previous planning.

To impose some standard monitoring and control rules over firm administration, in 1979 the federal government created the State Firm Control Bureau<sup>4</sup>, an official agency that responded to the Planning Committee of the Presidency and to the Ministry of

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<sup>3</sup> '*Banco Nacional de Desenvolvimento Econômico e Social (BNDES)*';

<sup>4</sup> '*Secretaria de Controle de Empresas Estatais (SEST)*';

Treasury. In 1980, the General Treasury Attorney<sup>5</sup> was granted the power to represent the State in the general assemblies of state-owned firms.

In 1986 president José Sarney instituted the National Treasury Bureau<sup>6</sup>, which had as its attributions the management of State assets before state-owned companies. However, since ministerial supervision was maintained, the enforcement of this regulation was weak.

By the 70's Brazilian administration also launched a development plan based on a tripartite ownership model intended to develop the domestic petrochemical and processing industries. The policy was meant not only to limit the dependence of the national manufacturing industry on foreign semi-manufactured production, but also to promote regional growth on less wealthy states through private ownership of firms.

The model was anchored on the partnership among the state, private national investors - often family groups - and international depositors. The state offered subsidized equity financing through BNDES to private investors, who were responsible for the structuring, operations and management of the first Brazilian petrochemical and processing firms. Foreign capital came to aid as an important source of funding.

The policy was successful in implementing a tripartite ownership model that resulted on the implementation of the Petrochemical Complex of Camaçari, in the Northeast region, and the Petrochemical Complex of Tubarão, in the South of Brazil. It also contributed to the formation and wealth accumulation of important family groups in Brazil, such as the Mariani and the Odebrecht families, currently shareholders of Braskem, to date the third largest Petrochemical company in the Americas, after Exxon and Dow Chemical.

The Brazilian privatization process was effectively launched in the 1990s through the endorsement of Act number 8.031/1990 during the tenure of President Fernando Collor de Mello (1990-1992). The tenet of federal economic policy was based on drastically reducing imports trade barriers, and on fostering the technological renovation of the national industry. The reduction of the financial support by the state also resulted on adjustments on the debt profile of national firms, through the reduction of long term debts and increase in the liquidity of funds.

The first state-owned company to be fully privatized was Usiminas on October 24, 1991, one of the most profitable steel processors in Brazil at the time, a fact that generated great social debate and media attention. However, of all the 68 firms included in the national privatization program, only 18 were effectively privatized due to problems involving the privatization of one of Brazil's largest airline companies: Viação Aérea São Paulo (Vasp).

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<sup>5</sup> *'Procuradoria Geral da Fazenda'*;

<sup>6</sup> *'Secretaria do Tesouro Nacional'*;

After a conflicting period, marked by great domestic political instability, which resulted on the impeachment of President Collor de Mello for involvement in dubious transactions with the use of public funds, the privatization program in Brazil was reinitiated in 1995 after the election of President Fernando Henrique Cardoso (1995-2002), former Minister of Treasury.

Act number 9.491, approved by Cardoso, created the National Council of Destatization<sup>7</sup>, following agreements and a financing plan with the International Monetary Fund (IMF).

As a result, a large privatization program was put in place. The main infra-structure, utility and energy firms were privatized, changing monitoring control from the hands of the state to the hands of private entrepreneurs.

The second and largest wave of privatization in Brazil was marked by the presence of national groups that formed corporate consortiums to participate in official biddings, as well as by the strong attendance of foreign investors.

The privatization program was structured based on the large participation of the pension funds of the very privatized firms, and on public institutions that acted as the main financing agents of the operations. Credit was also granted to foreign depositors, theoretically going against the Brazilian legislation.

The first company to be privatized under president Cardoso's tenure was Companhia Vale do Rio Doce (CVRD), then world's largest exporter of mining ore. The participants of the bidding, held on May 6, 1997, were groups headed by two of the largest private owners in Brazil, in association with pension funds of state-run or mixed economy firms, and collaborating national and foreign groups.

Nonetheless, the bidding process was surrounded by accusations and strong media coverage that indicated the promotion of unfair competition practices through inside information disclosure between a limited number of insider domestic groups and some state agencies, in especial BNDES.

The good financial standing of the development bank was actually put at stake as a result of the privatization of Brazil's largest utility firm, Eletropaulo. American power group AES Corporation, which was under Chapter 11 bankruptcy in its country of origin, was able to approve a loan from BNDES in an amount equivalent to 100% of the acquisition value. When AES failed to pay the first installment, BNDES was required to accrue as bad debt provision 100% of the loan value in its 1Q 2003 Balance Sheet. As a result, the bank reported record losses of BRL 2.4 billion in the period.

The loss was later renegotiated through the transferring of 49% of Eletropaulo's shares to BNDES and by convertible bonds issued by AES payable in nine years, however the

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<sup>7</sup> 'Conselho Nacional de Desestatização';



transaction remained as a stain in the fairness and transparency of the privatization process and set light into the preferential role played by state agencies and family groups who aided in the accomplishment of this and other operations.

Speculations of industrial espionage, bribery and use of inside information by both family groups and foreign investors were also very common during the privatization process of Brazilian Telecommunication Companies.

Nevertheless, in spite of the monitoring and regulatory problems associated with the process, the privatization program brought incontestable improvements to the development of the domestic industry and to the Brazilian economy, especially in the infra-structure and energy segments. From 1995 to 2002 the program raised USD 78,61 billion, of which 95% in current account investments (including loans by BNDES) with high levels of foreign investments, who contributed with 53% of total investments (Garcia and Gastaldi Filho, 2007).

Firms have also reported high rates of performance increase. Companhia Vale do Rio Doce's EBITDA was multiplied twenty times, for example, and its firm value jumped from BRL 8 billion to BRL 136 billion in 2008. Embraer's market value also increased almost ten times, growing from BRL 1,7 billion in 1995, right after privatization, to BRL 14.9 billion in December 2007. (Economática)

Since its first mandate (2003-2006), president Luis Inácio Lula da Silva continued the privatization process, however in a much slower pace, consolidating the decline of the importance of the state in Brazilian firms and enabling the development of national investors as monitoring agents of firms and the collaboration of foreign investors with additional monitoring and financial resources.

As such, Brazilian national industry came into being as a consonant partnership between the state and private equity investment. Along the development of the country's industrial park, family owners have played a very special monitoring role in acting as the main propeller of industrialization, financed in great part by public capital and other times in partnership with foreign investors.

To understand the consequences of the shift in control as a result of the development of Brazilian firms, the present work aims to address questions such as the following: what is yet the value of family ownership to Brazilian firms? Are they capable monitors, proficient in generating value to firms over the years? Should international depositors prefer an association with well influenced families, which hold great bureaucracy knowledge and contacts, or should they prefer collaboration with state agencies, or both? Does the presence of public institutions on firm ownership have a positive effect on industry value? Which other category of investor may substitute the state as effective firm monitors?

### **3.A. Brazilian Regulatory Framework**

The main legal piece that has regulated the operation of firms in Brazil is Act number 6.404, issued in December 15, 1976. Known as the ‘The joint-stock companies Act’<sup>8</sup>, it rules over the nature, characteristics, ownership structure, accounting principles, as well as the operation of firms from the legal perspective.

Due to the need to update a rather ancient regulation, Congress approved Act number 10.303 in October 31<sup>st</sup>, 2001, which amends and adds provisions to the ‘The joint-stock companies Act’ and to Act number 6.385/1976, which rules over the Brazilian security market and creates the Brazilian Security and Exchange Commission<sup>9</sup> (herein CVM).

More recently, after seven years of handling, Brazilian Congress approved Act 11.638, on December 28<sup>th</sup>, 2007, with the intent to equalize Brazilian accounting principles to international accounting, in order to facilitate access of Brazilian companies to the international markets, and to increase the transparency of firms in the domestic market.

The new regulation requires that firms constituted as joint-stock companies publish their financial results and Balance Sheets according to accounting principles issued by the Brazilian Security and Exchange Commission in consonance with international accounting norms and rules. Their Balance Sheets must be audited by independent professionals registered under CVM. The new regulation also extended these obligations to closely held companies with assets higher than BRL 240 million or sales larger than BRL 300 million.

Limited Liability companies in Brazil may choose to observe the financial disclosure norms applied to joint-stock companies, but face no disclosure obligation.

With regards to the ownership structure of Brazilian firms, Brazilian legislation allows for a very peculiar arrangement of capital. Act number 6.404/1976 stipulated the possibility of issuance of preferred stocks up to 2/3 of the total shares issued.

Such arrangement enables that control is exerted by owners that hold a least of 16.67% of total shares. Act number 10.303/2001 limited the issuance of preferred stocks to 50% of total shares. By this new definition, control rights are exercised by owners with over 25% of total shares.

This peculiar ownership structure directly affects the monitoring ability of each category of owner. With as little as 16.67% an investor can have full control over firm decisions. This situation is exacerbated by the construction of pyramidal ownership structures, very common in some segments of Brazilian industries, such as Telecommunications.

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<sup>8</sup> ‘*Lei das Sociedades por Ações*’;

<sup>9</sup> ‘*Comissão de Valores Mobiliários (CVM)*’;

As a result, the ownership structure of Brazilian firms makes it harder to distinguish control rights when compared to other countries. The distinctions between the two categories of firms - one that adopts ownership parity between preferred and ordinary stocks, and the other that enables 2/3 of preferred stocks – reflects into more complicated analysis for the value of the firms and for those transactions that use the different percentage of shares as parameters, such as control of public offerings or the issuance of stock conversable securities.

#### **4. Data**

##### **4. A. Data Sources and Sample Selection**

The data for the present research was obtained primarily from publicly available information disclosed by the São Paulo Stock Exchange (BMF & Bovespa), by the Brazilian Security Exchange Commission, and from Economática, a privately run firm that maintains databases on Brazilian and other American listed companies, originated from annual reports, regulatory filings, as well as from the press and investors relations releases.

The data set used for the analysis consists of group affiliated and non-group firms listed in the São Paulo Stock Exchange. The analysis is concentrated on listed companies only due to the limitations of financial disclosure of closely held firms in Brazil. In spite of the obligation to publish Balance Sheets, non-listed joint-stock companies do not disclose some of the information necessary to conduct the present analysis, such as ownership structure, and share price, among others.

Since the present work is primarily interested in the effects of the different categories of owners in the value of the firms across time, and due to the peculiarities of the ownership structure of Brazilian firms - that allows for the exercise of control rights with different percentage of shares - two sets of samples were used in the research at hand, to separate cashflow rights from voting rights, thus avoiding any kind of bias in the analysis of the monitoring abilities of each group of owners.

The first sample consists of ownership structure based on the total shares of the firms, that is, it contains the total percentage of preferred and ordinary shares added for each category of owner. A second group of samples was used to conduct tests consisting only on the percentage shares of the voting capital.

The data set for the present analysis originally contained a sample of companies publicly listed in the São Paulo stock Exchange from 2004 to 2008 belonging to the industry and service sectors, including the main following segments: Oil, Gas and Biofuel; Steel, Mining and Metallurgy; Chemical, Paper, Cellulose, Wood and other Basic Materials; Industrial Goods; Transportation; Construction and Real Estate; Agriculture and Processed food and beverage; Cyclical and Non-Cyclical Consumption Goods; Media and Services; Telecommunication and Information Technology; and Utilities.

Companies from the Financial and Banking industry were not included in the sample since they require different valuation drivers from industrial companies. For this subset of companies, the independent variable used for the analysis, Tobin's Q, would not represent the market value of a firm to the replacement cost of its assets, as it does for industrial and service enterprises.

Annual data from 2004 to 2008 was collected for each individual company when available. Each group of sample was then used to compose a pooled cross section panel data consisting of 785 observations.

#### **4.B Identifying Business Group Affiliation**

The task of defining 'business group' is potentially difficult. (Khanna and Rivkin, 2001). Although Business Groups are commonly found in many countries, their specific characteristics differ from market to market. In many countries groups are not formal legal constructs.

While corporate groups go for different names in different countries, to avoid confusion and simplify the analysis, the present work defines business groups as a collection of formally independent firms under single administrative and financial control often through holding companies or pyramidal structures, linked by economic ties that enable coordinated action (Chang and Choi, 1988; Khanna and Rivkin, 2001).

Both the Brazilian Generally Accepted Accounting Principles (BR-GAAP) and the Brazilian legal system recognize corporate groups as a legal construct. Although the consolidation of accounting reports by corporate groups is obligatory only in a few situations, the identification of corporate groups is one of the most important innovations introduced by Act 6.404/1976.

The rules for accounting report consolidation by business groups are defined by the Brazilian Security and Exchange Commission through instruction number 247/96 and by the Brazilian Federal Accounting Council<sup>10</sup> through resolution number 937/02.

The 'Joint-stock company Act' (6.404/1976) defines that firms may constitute business groups by convention, through which they oblige themselves to combine resources and efforts to the realization of common economic activity or endeavors. It also stipulates that the company or person that controls the business group must be Brazilian and may exert control either through the ownership of shares of the affiliated firms or through shareholder agreements.

However, the databases disclosed by the Brazilian and Exchange Commission, by the São Paulo Stock Exchange, and by Economática display no classification of firms into groups.

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<sup>10</sup> 'Conselho Federal de Contabilidade';

As a result, a variety of sources were used to enable group identification. The starting point is the legal construct of groups, identified in the consolidated reports available through the Brazilian Security and Exchange Commission and through the São Paulo Stock Exchange databases.

A second source constitutes a compendium of annual reports, advertisements, public offering prospects, and relevant information releases, which are compulsory requirements for publicly listed companies in Brazil.

A third source of information was the identification of blocks of shareholders that are present in every firm of the same group. The analysis of the ownership structure of firms - disclosed in detail for various years through the Annual Reports<sup>11</sup> published by the Brazilian Security and Exchange Commission - allowed the identification of the cross-firm interests that form each business group.

As a check on the quality of group classification, data was verified against the most traditional financial publications that gather annual rankings of the top 1,000 firms in Brazil<sup>12</sup>.

Similarly to the IFRS, the Brazilian legislation allows for partial control of firms. The joint control over affiliated firms is proportional to the number of shares owned by each group. Whenever partial control was identified, the firm was classified as part of the group that holds the majority of shares.

In the case of even participation the criteria for preferred control of one group over another was the proportion of ordinary shares. If there was a tie in the proportion of ordinary shares, the firm was considered as part of the group that originated it.

The source of information for both the ownership structure and the history of the firms, whenever necessary, was the company's Annual Reports, published by the Brazilian Stock and Exchange Commission. When extremely necessary, information was gathered from the company's website and from direct contacts with the firm's Investor's Relations.

To accurately account for the interests of each individual shareholder, whenever an indirect ownership was identified, the classification in the categories of owners was done by multiplying the amount of shares owned by each end shareholder in the holding company.

As an example, most Telecommunication and Mining companies in Brazil are owned by a consortium of companies that form holding companies. The shareholding of each holding company was traced down until the most granulated level, until the final

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<sup>11</sup> '*Informações Anuais (IAN)*';

<sup>12</sup> '*Valor Econômico 1.000 Maiores*', and '*Anuário Gazeta Mercantil*', both analogous to The Fortune 500 Ranking.

investor was identified. The end classification was then proportionally transposed into the ownership structure of the analyzed company.

Additionally, the Brazilian market registered top ranking levels of merger and acquisition activity from 2004 to 2008, the analyzed period. Since the sampled data consist of firms with shares trade in the São Paulo Stock exchange, the identification of the divesting and acquiring partners was made easy though official releases of the transactions. Nonetheless, when a company changed from one corporate group to another, the value of the variable that accounts for group membership, the group dummy, remained unchanged.

Business groups in Brazil are traditionally constituted by family groups. The largest groups usually couple private equity with public financing, especially through funds, resources and equity offered by the National Bank of Economic and Social Development under very attractive conditions. Smaller groups and independent companies face many obstacles in fulfilling the requirements of BNDES to be eligible to the bank's funds and resources, which perpetuates cycles of public investments in a limited number of Brazilian firms and groups.

At the same time, national media is flooded with scandals involving not only BNDES but obscure links between some corporate groups, often headed by insider families, and the political apparatus.

The sometimes promiscuous relationship between private firms and politicians is usually exacerbated during political campaign periods. Although less frequent, frauds involving international investors are also reported from time to time, usually related to elaborate tax planning and complex capital flows arrangements involving foreign and national business groups.

In this sense, corporate groups in Brazil are thus similar to those in India, where firms are tied by a common ownership of a significant block of shares in group firms, often by a family. The large groups also appear to have the best relationship with the bureaucracy. (Khanna and Palepu, 1999a).

Brazilian business groups are comparable to Japanese groups only in the sense that firms are legally separate entities, have their own shareholders and publish individual statements. However, group membership is not clearly defined in Japan; there are no membership dues or cards. In studies that investigate the influence of the *keiretsu*, groups are understood as a network of business and financial relationships of varying degrees and kinds (Hoshi, 1991).

The *Keiretsu* are often headed by the main bank which provides capital and managerial support in exchange for... an ownership stake in the firms and some say on how it is run (Hoshi, 1994). In the very opposite, Brazilian legislation, through the White Collars Act

(7.492/1986), prohibits any kind of capital flow within banks and firms belonging to the same group.

#### **4.C. Definition of Dependent and Independent Variables**

##### **4.C.I. The Motivation for Q**

Tobin's q is the variable used to measure firm performance. It expresses the ratio between the market value of the firm (debt and equity) and the replacement value of its assets. This statistic was chosen as the dependent variable because it can be used to predict investment spending or to control for a firm's current and future profitability in empirical studies of corporate structure and behavior (Smith, 1981).

A standard principle of corporate finance is that the retention of earnings to finance expansion raises a stock's price if the rate of return on these investments,  $\rho$ , is larger than shareholders' required return on their stock,  $r$ . This principle suggests that whether a firm's stock sells for a premium or a discount relative to the cost of its assets depends on  $\rho$  versus  $r$  and, further, that a firm's investment decisions ought to depend on a comparison of  $\rho$  with  $r$ .

However, shareholders' required returns are not evident nor publically disclosed since the cashflow to each specific category of investor is also undisclosed. For that matter, James Tobin (Brainard and Tobin, 1968; Tobin, 1969) proposed an alternative technique to measure the value of companies: by looking at how financial markets value a firm relative to the replacement cost of the firm's assets:

$$q = \frac{\text{market value}}{\text{replacement cost}}$$

As a rule, firms should invest in plant and equipments if the stock market values the project at more than its cost, that is, if the project's q is greater than 1. A higher value for Tobin's q indicates that assets are being used more effectively. If the market value is larger than the cost, shareholders prefer that the firm makes this investment rather than distribute its cost as dividends, gladly giving up a dollar of dividend in exchange for an increase in the value of their stock. Thus Tobin's q provides a barometer of the incentives for business investment.

However, Tobin's q also has its disadvantages. One complication is that observed market values of firms take into account not only existing assets but also future investments anticipated by the market. Thus observed average q reflects both the profitability of the current capital stock and also the perceived profitability of the firm's future opportunities, overstating the former and understating the latter.

A second complication is that the book value reported by firms is a rough proxy for estimating the replacement cost of a firm's assets. Accounting reports suffer delay in

updating asset value, when replacement costs and depreciation rules are applied according to accounting conventions.

A variety of often complex procedures have been employed to estimate the market value of a firm's debts and the replacement cost of its assets (Brainard, Shoven, and Weiss, 1980; Lindenberg and Ross, 1981; Lewellen and Badrinath, 1997; Lee and Tompkins, 1999), while other authors argue that more readily available book values provide sufficiently accurate approximations (Chung and Pruitt, 1994; Perfect and Wiles, 1994).

However, due to the difficulty in obtaining qualified data for computing more accurate measures of the value of the firm, the present paper defines Tobin's  $q$  as  $q = \{\text{market cap} + \text{market value of debt}\} / \{\text{book value of assets}\}$ . Firm market cap is published by Economática.

Khanna and Palepu (1999a) define Tobin's  $q$  as  $\{\text{market value of equity} + \text{book value of preferred stock} + \text{book value of debt}\} / \{\text{book value of asset}\}$ . This paper takes a different approach in order to avoid the misrepresentation of data due to common events that affect the value of shares in the Brazilian capital market, such as split of assets, dividend distribution, among others.

The market cap and the market value of debt reported by Economática already treat these and other events that affect the value of the shares as reported by the São Paulo Stock Exchange.

As a final remark, in the sample used for the present study,  $Q$  varies from 0.02 to 9.5 and averages 0.9. It is regressed against percentage measures representing the shares of every category of investor. As a result, however large the change in the percentage share of a specific category of investor, the equivalent effect in the dependent variable  $Q$  should be necessarily small. Thus, small coefficients of the independent variables are an expected result.

#### **4.C.II. Pooled Cross Section Analysis**

The present paper reproduces two main different models. Model one regresses the dependent variable, a measure of Tobin's  $q$  ratio, on different categories of owners, namely, family ownership, international investors, public investors, executive owners and financial domestic investors.

Family ownership is constituted by the percentage share of the founding owners and by the percentage share of firms belonging to the same family group, as in a holding structure. Public domestic investors<sup>13</sup> are comprised of domestic institutions that have

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<sup>13</sup> The present research chooses to name the explanatory variable Public Investment although some of the shareholdings do not correspond 100% to the participation of the state. However, the grouping intends to reflect the participation of all shareholders that have close ties and are influenced, even if indirectly, by state agencies or by political interests.



direct or indirect participation of the state, such as development banks, pension funds of state-run and mixed economy firms, and other governmental agencies. Foreign investors represent international financial institutions that make equity investment overseas.

Financial domestic investors are non-strategic individuals or financial institutions (including banks, private equity and asset management funds) that do not operate economic activity in any other endeavor in the same segment as the invested firm. They constitute a class of domestic shareholders that contribute with equity and monitoring technology. Executive owners are directors, counselors, and other executives that work for the analyzed firms as part of their management body.

A group dummy is also added as an independent variable to differentiate companies that belong to corporate groups from unaffiliated firms. Control variables include a proxy for firm size, represented by  $\ln$  of net sales, and firm age.

The objective of the first model is to allow for a multivariate regression analysis of the relation between Tobin's  $q$  and the main ownership structures that have shaped Brazilian corporate development over time. The model is applied to a pooled cross section of firms publicly listed in the São Paulo Stock Exchange from 2004 to 2008.

The hypothesis to be tested are if monitoring by family owners, public institutions, international investors, executives and domestic financial institutions positively affect firm value over time.

In one hand, family owners share extensive knowledge of the local market and maintain political *liasons* that would enable competitive advantages, resulting on an expected positive correlation with firm value. At the same time, family members are often not specialized managers, which could contribute to a negative correlation between partnership by family members and firm value.

On the side, the partnership with BNDES, state-managed pension funds, and other public agents could also contribute with the increase in firm value due to subsidized capital conditions and to the close relationship with bureaucracy. However, emerging market studies and empirical observations indicate that public institutions lack the necessary monitoring skills and resources, which could negatively impact firm value. Also, as posed by Shleifer and Vishny (1994), although bureaucrats have extremely concentrated control rights, cashflow ownership of state firms is effectively dispersed amongst the taxpayers of the country.

Foreign investors, on the other hand, contribute with advanced monitoring technologies as well as capital. However, they lack the local business and political connections enjoyed by family owners and public agents. Hence, their share may positively or negatively impact firm value.

Finally, executives are less concentrated owners, who share less access to capital, when compared to the other classes of owners. However, they are specialized managers that can contribute to increase firm value.

Domestic financial institutions carry the advantage of having large access to capital, but as non-strategic partners, have lower stakes in voting shares and would be less able to influence on firm's decisions. Although a positive correlation is expected between the percentage share of domestic financial institutions and firm value, the peculiarities of corporate ownership structure in Brazil, which enables different levels of distribution between ordinary and preferred stocks, may impact their ability to affect firm value.

The Pooled Cross Section model is divided into seven specifications. Specification 1 uses Ordinary Least Square (OLS) techniques on the pooled cross section data. However, OLS estimation does not account for the correlation between the error and the independent variables, which is present in the collected firm data sample, especially for companies belonging to corporate groups (Moulton, 1986). Hence, OLS estimation was chosen to serve as a comparison to the other specifications, as well as to maintain the consistency with the models applied by Khanna and Palepu (1999a).

Specification 2 uses a fixed effect estimation technique in order to allow for correlated errors across all firms, especially within business groups, and to measure the effects of ownership structure over a period of time. Specification 2 aims to analyze the relationship among the variables overtime (Wooldridge, 2002).

In order to measure the effect of firm membership in corporate groups, represented by the group dummy, Specification 3 uses a random effects transformation that allows for explanatory variables that are constant overtime (Wooldridge, 2002). According to Wooldridge, under the random effects assumptions, the estimator is consistent (not unbiased) and asymptotically normally distributed as N gets large (Wooldridge, 2002).

In the attempt to test the effects of family ownership, public institutions and foreigners across group firms and unaffiliated firms, specifications 4 and 5 interact group membership with the tested categories of owners: family ownership, public investors and foreign shareholders. The estimations are executed through the fixed effect and random effect methods, respectively, for the same reasons previously explained.

Specifications 4 and 5 attempt to assess the hypothesis that family owners, public institutions and international investors affect firm value in different ways depending whether they are a member of a corporate group or not. For family owners, group membership could facilitate inter-company transactions, increasing their stake on firm's residual cashflow, which may nevertheless result detrimental to firm value. For public agents, group membership may hinder transparency and corporate governance, which could also be damaging to firm value. For international investors, although group membership may also hinder transparency by other stakeholders, it can potentialize the

use of foreign capital if inter-company projects that make use of capital calls by foreign partners have positive net present values and present synergies within the same group.

Finally, specifications 6 and 7 report the results of a fixed effect and a random effect generalized least squares panel estimation. In this specification, the dependent variable is the change in Tobin's  $q$ , to account for the appreciation of company value over time. Specifications 6 and 7 use the same mathematical model developed for panel estimation for the previous specifications (1 to 5), alternating between fixed effect and random effect transformations. The only difference is the explained variable, which is the change in firm value, represented by the Tobin's  $q$  variation (2008).

The change in Tobin's  $q$  is calculated between each year until 2008 and the year 2004 (namely, Tobin's  $q$  variation between 2005 and 2004, 2006 and 2004, 2007 and 2004, and 2008 and 2004). The regressors are the corresponding ownership structures of each year to which the variation on Tobin's  $q$  is calculated.

In order to test the presence of multicollinearity among the independent variables, Variance Inflation Factors (VIFs) were calculated in all specifications. All tests produced VIF values less than five, indicating that the independent variables do not present cross-correlation, and corroborating the model presented by Khanna and Palepu (1999a) to the collected sample of Brazilian firms.

#### **4.C.III. Tobit Analysis**

The second main model is a Tobit, which provides a corner solution to model the sensitivities of the percentage share of owners to a series of firm characteristics. This model aims to investigate the drivers that define the decision of family owners, public and foreign owners to invest in a company.

The Tobit model is required as a limited variable model because the dependent variable, which accounts for the percentage shares of family owners, public agents and foreign investors in each specification, is roughly continuous over strictly positive values for a subsample of firms, but is set to zero for a nontrivial fraction of the sampled population (Wooldridge, 2002).

Three different equations are analyzed. In each one of them, the dependent variable is either the percentage ownership of family owners, public partners or foreign investors in the company for the 2008 sample of firms.

The year 2008 was selected to enable the calculation of two of the independent variables (past average Tobin's  $q$  and past return variability) for the same period of time selected for the Pooled Cross Section analysis (from 2004 to 2008). Also, 2008 is the most recent year for which firm data is available after a five year period of record growth for the Brazilian capital market, when the Brazilian economy and firms gained importance as a source of international growth and relative stability, in a period of world economic crisis.

The Hypothesis to be tested is how the past performance, past variability, capital mobility, and the presence of a specific kind of owner in firms of the same business group affect the percentage shares of that class of owner in a firm.

The regressors are variables that drive the interest of the various categories of investors in applying their resources in the chosen firms. One of the test variables is a proxy for the past performance of the firm, represented by the average Tobin q of each firm from 2004 to 2008. A second test variable is the average investment of each category of owners in the other firms of the same group. Variability in past performance is the third regressor, defined as the variance of daily stock returns over the last trading year (2008).

Additionally, three other variables are added as independent variables as a proxy for corporate governance. They account for the mobility of resources within group firms, and are intended to test if firms make use of internal capital markets within corporate groups. Those variables are: investment in other group firms, loans from other group firms, and receivables from group firms. These variables are set to zero for unaffiliated firms.

The coefficients of the dependent variables reported hereby must not be interpreted as the *ceteris paribus* effect of each explanatory variable on the dependent variable because the Tobit model is a nonlinear function of the dependent variable, which makes partial effects difficult to obtain. Rather the coefficients indicate whether the selected drivers positively or negatively affect the value of firms.

The Tobit specifications also resulted Variance Inflation Factors (VIF) lower than five, indicating that multicollinearity is not present among the independent variables, and corroborating the application of the model to the sample of Brazilian firms.

## **5. Summary Statistics**

Table 1 reports some summary statistics for the sample of companies for which it was possible to compute firm sales, age, and ownership structure between 2004 and 2008. The 785 companies constitute the panel data for the pooled cross section analysis. The sample is constituted by 155 firms in 2004, 165 firms in 2005, 161 firms in 2006, 159 firms in 2007, and 145 firms in 2008.

Tobin's q varies from a minimum of 0.02 in 2004 to a maximum of 9.47 in 2008. Mean Q is 0.87 over the years and median Q is 0.66 in the period. The standard deviation of Tobin's q also shows slow variation over the years, reaching as high as 0.97 in 2004 and as low as 0.80 in 2007.

Net sales figures show that Brazilian firms have grown on average by a Compounded Annual Growth Rate (CAGR) of 15.8% from 2004 to 2008. Petrobras has kept its position as the largest company with shares traded in the São Paulo Stock Exchange, with net sales growing from BRL 108.2 billion to BRL 215.1 billion in the period. Mean net sales has almost doubled in the period, growing from BRL 2.7 MM to BRL

4.8 MM. Median net sales however varied from BRL 543.7 K to BRL 1.2 MM. All figures register the growth experienced by the Brazilian industry in the period.

The same effects are represented by the ln of net sales figures, however, with less variability. The choice to use ln of net sales was based after careful analysis in the distribution of the variable. Ln of net sales is less heteroscedastic and less asymmetric than pure net sales figures. The use of the natural logarithm reduces the amplitude of the data series in relation to the original variable, and bounds the effects of outliers in the sample (Wooldridge, 2002).

TABLE1 - Summary Statistics

STATISTIC	TOBIN'S Q								NET SALES (BRL MM)				LN (NET SALES)				AGE (YEARS)			
	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Mean	0,98	0,91	0,85	0,79	0,79	2.720.867	3.019.785	3.268.891	3.682.302	4.896.765	13,2	13,2	13,2	13,3	13,7	20	22	22	23	24
Median	0,71	0,69	0,64	0,61	0,65	543.717	619.655	687.144	833.069	1.260.147	13,2	13,3	13,4	13,6	14,0	23	24	25	25	24
Maximum	6,60	4,99	5,95	7,39	9,47	108.201.479	136.605.078	158.238.819	170.577.725	215.118.536	18,5	18,7	18,9	19,0	19,2	72	73	74	75	62
Minimum	0,02	0,03	0,03	0,04	0,03	835	842	687	851	1.707	6,7	6,7	6,5	6,7	7,4	0	0	0	0	0
Standard Deviation	0,97	0,86	0,86	0,80	0,92	9.350.551	11.230.681	13.011.409	14.227.006	18.734.744	1,9	2,0	2,1	2,2	2,0	13	13	13	13	12
Number of Firms	155	165	161	159	145	155	165	161	159	145	155	165	161	159	145	155	165	161	159	145

Brazilian companies publicly listed in the São Paulo Stock Exchange are on average 24 years old. The oldest company, sampled in year 2007, is 75 years old. The minimum age, represented by the zeros, means that every year new born companies launch their initial public offerings in the Brazilian Market. In fact, the period apprehended by the present research has been characterized by the largest growing period in the Brazilian capital market. In especial, 76 companies launched IPOs in the São Paulo Stock Exchange in 2007.

These new born companies are usually a merger between previously existing groups that register the new venture under a different denomination and company ID, thus counting as a newly founded company.

### **5.A. Ownership Structure in Brazil**

Table 2 reports some summary statistics on the ownership structure of sampled Brazilian companies. The first striking observation is that, on average, Family owners holds the largest stakes in domestic firms, in the selected samples, which corroborates the equity-based development theory of Brazilian firms.

Based on the total shares criteria, mean and median family ownership is 32.3% and 29.4% respectively over the years. However, when only the voting shares are accounted for, families have on average 44.1% and median 46.8% of ordinary shares over the year. This is evidence of the largest concentration of shares that enable family control over firm decisions.

When the voting shares are separately analyzed it is evident that families hold a maximum of 100% shares, even though the company makes use of the capital market as a source of funding. That is, in some instances, family owners have full control over decisions and full monitoring abilities, even though the preferred shares are traded on the stock exchange.

The second largest group of owners in the selected sample is formed by international investors. They hold on average 14.0% participation on the total shares of Brazilian companies from 2004 to 2008, although their median share is 0% in every examined year, meaning that foreign capital is not present in the capital structure of the majority of the sampled firms.

However, when the voting shares are separately analyzed, foreign investors still represent on average 15.8% of total shares over the period. This is a sign that while family owners have larger stakes in ordinary shares, international investors have more equitable participations between voting and preferred stocks. As a conclusion, their monitoring abilities are limited when compared to the higher concentration of voting shares in the hands on families.

**Table 2 - Ownership Structure in Brazil**

TOTAL SHARES																									
STATISTIC	FAMILY OWNERSHIP (%)					PUBLIC INVESTMENT (%)					INTERNATIONAL INVESTORS (%)					FINANCIAL DOMESTIC INVESTOR (%)					EXECUTIVE OWNERSHIP (%)				
	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Mean	33,2	32,5	33,6	32,1	30,1	8,7	8,2	8,6	8,9	10,4	12,2	11,9	13,6	15,1	17,1	6,8	7,4	9,6	10,5	9,8	3,9	4,5	3,7	4,3	4,6
Median	32,3	31,0	32,3	28,4	23,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Maximum	98,6	98,8	98,8	98,8	98,8	84,6	84,6	84,6	84,6	84,6	96,3	99,6	99,6	99,6	99,7	97,7	93,7	93,9	93,9	94,0	87,4	74,8	74,8	63,2	67,1
Minimum	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Standard Deviation	30,3	30,0	30,3	30,8	31,0	18,7	18,3	17,7	18,5	19,5	25,0	24,7	25,4	26,6	28,2	15,6	16,3	17,5	18,1	17,2	12,0	12,8	11,8	11,8	12,4
Number of Firms	155	165	161	159	145	155	165	161	159	145	155	165	161	159	145	155	165	161	159	145	155	165	161	159	145
VOTING SHARES																									
STATISTIC	FAMILY OWNERSHIP (%)					PUBLIC INVESTMENT (%)					INTERNATIONAL INVESTORS (%)					FINANCIAL DOMESTIC INVESTOR (%)					EXECUTIVE OWNERSHIP (%)				
	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Mean	45,8	45,2	46,4	42,8	40,2	9,0	8,7	8,2	8,8	10,1	14,9	14,3	15,5	16,4	18,2	8,3	8,4	9,1	10,0	8,3	6,1	7,1	6,4	6,7	7,0
Median	46,9	49,5	53,1	45,6	38,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Maximum	100,0	100,0	100,0	100,0	100,0	97,4	97,6	94,1	97,6	97,6	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	97,4	96,9	97,0	97,0	94,7	94,7
Minimum	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Standard Deviation	37,8	37,7	37,3	37,9	38,6	20,9	20,7	19,8	21,5	22,6	29,7	29,3	30,0	30,9	33,2	19,3	19,9	21,1	21,7	19,5	19,2	21,1	20,1	19,6	20,3
Number of Firms	155	165	161	159	145	155	165	161	159	145	155	165	161	159	145	155	165	161	159	145	155	165	161	159	145



This result is in line with the role international investors have played along the development of Brazilian firms, acting as financial partners or providers of technology, when, at the same time, taking advantage of the political and institutional connections and local market knowledge of family owners and of the domestic public capital.

Public institutions are on average the third largest shareholder of Brazilian companies in the selected samples. Mean ownership is 8.9% from 2004 to 2008. When only the voting shares are accounted for the mean shares of public institutions is 9.0% over the period. This is yet additional evidence that corroborates how Family owners, often represented by family groups, have been able to maneuver the ownership structure of companies in Brazil in their favor. Of all the categories of investors, family owners are able to keep a greater concentration of voting shares, thus influencing the decisions of firms according to their interest.

With similar concentration levels, financial domestic investors hold on average 8.8% of total shares of Brazilian publicly listed companies from 2004 to 2008. When voting shares are separately analyzed this percentage remains unchanged. The median shares for this category of investor is also 0% in both types of samples, meaning that the majority of firms have no financial domestic investor as a partner.

Finally, the samples reveal that executives still hold a very reduced chunk of shares in the selected Brazilian companies. On average they hold 4.2% of total shares over the years. However, they also have a greater stake in voting shares. They hold 6.7% of voting shares, on average, 2.5% higher than their total stake in the company.

This is evidence that executives have been able to team with families in the management of firms, ensuring their voice on the decisions of the companies in which they work. For a developing economy such as Brazil, this result can be interpreted as an evolution in the corporate governance practices of domestic firms.

Another important observation, very common in developing economies, is the high level of maximum ownership of all the categories of investors in every year of the studied period: family owners (on average 98.8% of total share), public investors (on average 84.6% of total shares), international investors (on average 99.0% of total shares), financial domestic investor (on average 94.6% of total shares), and executive owners (on average 73.5% of total shares).

This maximum concentration of shares implicates a very reduced number of floating shares, since all of the sampled companies are publicly listed in the São Paulo Stock Exchange. The limitation of floating shares is one aspect that affects the monitoring abilities of minority shareholders in Brazil, as exhaustively studied and evidenced in the Brazilian Corporate Finance research (Silveira, 2004; Silveira et. al, 2006; Okimura, Silveira e Rocha, 2007; Rabelo e Silveira, 1999; Dutra e Saito, 2002; de Paula, 2003; Andrade e Rosseti, 2004).

## **5.B. Group Monitoring in Brazil**

Table 3 reports some summary statistics for group firms and non-group firms for the 2004 to 2008 sample collected based on total shares. The entire sample consists of 785 firms, of which 583 are group affiliates and 202 are non-group firms, all publicly listed in the São Paulo Stock Exchange.

The table shows that, in the selected sample, group firms are on average larger than non group firms. Average net sales vary from BRL 3.2 billion to BRL 5.9 billion over the years for group firms whereas non group firms' net sales varies from 976 million to BRL 1.6 MM.

Group firms are also younger than non-group firms in the sample. Their age fluctuates from 19 to 23 years on average, while non-group firms have from 24 to 27 years of age on average.

However, in terms of value both group and non-group sampled firms stand in approximate the same level of value. Mean Q fluctuates from 0.72 to 0.98 to group firms and from 0.89 to 1.03 for unaffiliated firms. Median Tobin's q varies from 0.65 to 0.81 for group firms and from 0.50 to 0.55 for non-group firms.

The group firm sub-sample has a higher concentration of family owners and foreign investors when compared to the non-group sub-sample. On the other hand, the concentration of public institutions, and financial domestic investors is higher for the non-group sub-samples.

The mean ownership structure of the group firms in the selected sample registers the following variation: 31.6% to 36.3% for family owners, 6.4% to 8.6% to public investment, 15.1% to 20.1% for foreign investment, 5.8% to 8.1% for financial domestic investors, and 2.9% to 3.8% to executives.

**Table 3 – Group and Non-group Ownership Structure: Total Shares**

STATISTIC	GROUP FIRMS											
	2004		2005		2006		2007		2008			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Q	0,98	0,81	0,90	0,80	0,81	0,69	0,75	0,65	0,72	0,66		
Net Sales (BRL MM)	3.278.734	1.001.960	3.736.030	1.142.684	4.130.938	1.116.681	4.610.153	1.297.494	5.944.601	1.788.797		
Age (years)	19	20	20	21	21	22	22	21	23	23		
Family Ownership (%)	34,4	32,3	34,8	33,6	36,3	33,5	34,1	29,4	31,6	26,1		
Public Investment (%)	6,8	0,0	6,4	0,0	6,7	0,0	7,1	0,0	8,6	0,0		
International Investor (%)	15,3	0,0	15,1	0,0	16,9	2,3	18,3	3,1	20,1	3,4		
Financial Domestic Investor (%)	5,8	0,0	5,9	0,0	7,0	0,0	8,1	0,0	8,0	0,0		
Executive Ownership (%)	2,9	0,0	3,7	0,0	3,2	0,0	3,8	0,0	3,6	0,0		
In (net sales)	13,6	13,8	13,6	13,9	13,7	13,9	13,8	14,1	14,1	14,4		
Number of Firms	117	117	122	122	117	117	117	117	110	110		
NON-GROUP FIRMS												
STATISTIC	2004		2005		2006		2007		2008			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Q	0,99	0,53	0,94	0,50	0,97	0,55	0,89	0,54	1,03	0,53		
Net Sales (BRL MM)	1.003.225	136.611	987.646	153.024	976.630	147.307	1.097.575	144.865	1.603.565	211.241		
Age (years)	24	27	25	28	26	29	27	30	27	31		
Family Ownership (%)	29,7	28,3	26,1	15,1	26,7	16,5	26,3	11,5	25,2	0,0		
Public Investment (%)	14,7	0,0	13,1	0,0	13,6	0,0	14,0	0,0	16,0	0,0		
International Investor (%)	2,5	0,0	2,9	0,0	4,6	0,0	6,1	0,0	7,6	0,0		
Financial Domestic Investor (%)	9,7	0,0	11,7	0,0	16,6	5,9	17,3	8,8	15,7	5,6		
Executive Ownership (%)	7,1	0,0	6,9	0,0	5,2	0,0	5,8	0,0	7,8	0,0		
In (net sales)	12,0	11,8	12,0	11,9	11,9	11,9	11,9	11,9	12,5	12,3		
Number of Firms	38	38	43	43	44	44	42	42	35	35		

On the other hand, the mean ownership structure for sampled non-group firms fluctuates as follows: 25.2% to 29.7% for Family owners, 13.1% to 16.0% for public agents, 2.5% to 7.6% for international players, 9.7% to 17.3% for financial domestic investors, and 5.2% to 7.8% for executives.

Median share for family owners is also larger in sampled group firms. The median share for this category of investor varies from 26.1% to 33.6% of the total shares for group firms, against 0% to 28.3% to unaffiliated firms. Median shares for public investors, financial domestic investors, and executive owners is 0% over the years.

This means that the sample collects a larger number of companies that have no presence of those types of investors than companies which capital is owned by those categories of shareholders. Median share for foreign investors varies from 0% to 3.4% for group firms and is consistently 0% for non-group firms over the years.

Table 4 shows some statistics for sampled group firms and unaffiliated firms based exclusively on ordinary shares. The collection of firms is the same in both samples. The ownership structure based exclusively on ordinary shares also shows that group firms have a higher concentration of family owners and international investors compared to non-group firms; while non-group firms have a greater share of public investment, financial domestic investors and executives, compared to group firms.

The mean ownership structure of the group firms registers the following sample variation: 41.7% to 49.1% for family owners, 6.1% to 7.9% for public investment, 18.0% to 21.7% for foreign investment, 6.2% to 7.9% for financial domestic investors, and 4.3% to 4.7% to executives. The concentration of family owners in the ordinary shares is even more acute.

On the other hand, the mean ownership structure for non-group firms in the sample fluctuates as follows: 35.5% to 40.6% for family owners, 14.0% to 17.0% for public agents, 3.4% to 7.3% for international players, 10.3% to 15.9% for financial domestic investors, and 11.6% to 15.4% for executives.

Median share for family owners is also larger in sampled group firms. The median share for this category of investor varies from 40.9% to 55.7% of the total ordinary shares for group firms, against 0% to 37.7% to unaffiliated firms. The concentration of family owners in ordinary shares is higher than their concentration on the totality of shares.

Median shares for public investors, financial domestic investors, and executive owners is also 0% when ordinary shares are segregated for analysis, meaning that the majority of firms have no presence of these classes of investors.

**Table 4 – Group and Non-group Ownership Structure: Voting Shares**

GROUP FIRMS										
STATISTIC	2004		2005		2006		2007		2008	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Q	0,98	0,81	0,90	0,80	0,81	0,69	0,75	0,65	0,72	0,66
Net Sales (BRL MM)	3.278.734	1.001.960	3.736.030	1.142.684	4.130.938	1.116.681	4.610.153	1.297.494	5.944.601	1.788.797
Age (years)	19	20	20	21	21	22	22	21	23	23
Family Ownership (%)	47,5	49,5	47,6	52,8	49,1	55,7	44,5	49,5	41,7	40,9
Public Investment (%)	6,8	0,0	6,9	0,0	6,1	0,0	6,6	0,0	7,9	0,0
International Investor (%)	18,7	0,0	18,0	0,0	19,1	0,0	20,0	0,0	21,7	0,0
Financial Domestic Investor (%)	7,7	0,0	6,2	0,0	6,5	0,0	7,9	0,0	7,4	0,0
Executive Ownership (%)	4,4	0,0	4,7	0,0	4,7	0,0	4,5	0,0	4,3	0,0
ln (net sales)	13,6	13,8	13,6	13,9	13,7	13,9	13,8	14,1	14,1	14,4
Number of Firms	117	117	122	122	117	117	117	117	110	110
NON-GROUP FIRMS										
	2004		2005		2006		2007		2008	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Q	0,99	0,53	0,94	0,50	0,89	0,54	0,89	0,54	1,03	0,53
Net Sales (BRL MM)	1.003.225	136.611	987.646	153.024	1.097.575	144.865	1.097.575	144.865	1.603.565	211.241
Age (years)	24	27	25	28	27	30	27	30	27	31
Family Ownership (%)	40,6	37,7	38,4	35,6	38,2	22,6	38,2	22,6	35,5	0,0
Public Investment (%)	15,8	0,0	14,0	0,0	14,7	0,0	14,7	0,0	17,0	0,0
International Investor (%)	3,4	0,0	3,7	0,0	6,2	0,0	6,2	0,0	7,3	0,0
Financial Domestic Investor (%)	10,3	0,0	14,8	0,0	15,9	0,0	15,9	0,0	10,8	0,0
Executive Ownership (%)	11,6	0,0	14,1	0,0	12,8	0,0	12,8	0,0	15,4	0,0
ln (net sales)	12,0	11,8	12,0	11,9	11,9	11,9	11,9	11,9	12,5	12,3
Number of Firms	38	38	43	43	44	44	42	42	35	35

### **5.C. Change in Firm Value**

Table 5 reports changes in Tobin's q between 2004 and 2008 for the subsample of firms for which we have available data to compute Q values between each year and 2004. The change in Tobin's q varies from a minimum of negative 3.79 in 2008 to a maximum of positive 5.50 in the same year. The median change in Tobin's q of the whole subsample is negative 0.09 in the same period. This result shows that on average Brazilian firms lost value from 2004 to 2008.

The value of 50 companies increased from 2004 to 2005, while 85 companies registered lower value in 2005 than in the prior year. In 2006 only 39 companies performed better than in 2004. In 2007 the sample collects 35 firms which value increased with respect to 2004. In 2008 there are 34 firms that perform better than in 2004.

Relative to group firms, unaffiliated companies seem to have lost less value in the period. The mean change in Tobin's q from 2004 to 2008 for group firms varies from minus 0.26 to minus 0.07. At the same time, the mean change in Tobin's q for non-group firms fluctuates from minus 0.03 to positive 0.07.

Median Tobin q of group firms vary from minus 0.18 to minus 0.04, while for non-group firms it fluctuates from minus 0.09 to zero. This result means that both group firm and independent firm samples collect more companies that have lost value over the years than firms that have improved value.

The sampled data also show that for the collection of companies whose value increased, independent firms seem to have gained on average more value from 2004 to 2008 than group firms. Maximum change in Tobin's q for unaffiliated firms varies from 1,02 to 5,50, while maximum change in Tobin's q for group firms varies from 0,26 to 1,18 over the years.

At the same time, minimum change in Tobin q for independent firms in the sample varies from negative 1,66 to negative 3,26 in the period, while minimum change in Tobin's q for group firms varies from negative 0,90 to negative 3,79.

Additionally, the standard deviation of the change in Tobin's q for sampled group firms varies from 0,16 to 0,56 from 2004 to 2008. The standard deviation for sampled independent firms is larger varying from 0,36 to 1,25 in the sampled period.

**Table 5 – Change in Firm Value**

STATISTIC	TOTAL FIRMS				GROUP FIRMS				NON-GROUP FIRMS			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Mean	(0,06)	(0,12)	(0,20)	(0,18)	(0,07)	(0,17)	(0,26)	(0,26)	(0,03)	0,03	(0,01)	0,07
Median	(0,03)	(0,08)	(0,11)	(0,12)	(0,04)	(0,10)	(0,15)	(0,18)	(0,00)	(0,03)	(0,05)	(0,09)
Maximum	1,02	1,98	3,43	5,50	0,34	0,26	0,37	1,18	1,02	1,98	3,43	5,50
Minimum	(1,66)	(2,88)	(3,50)	(3,79)	(0,90)	(2,88)	(3,50)	(3,79)	(1,66)	(2,23)	(2,97)	(3,26)
Standard Deaveation	0,22	0,44	0,60	0,79	0,16	0,37	0,49	0,56	0,36	0,60	0,84	1,25
Number of Firms	134	131	128	130	102	99	96	99	32	32	32	31

## 6. Results

### 6.A. The Effect of Ownership Structure on Performance

Tables 6 and 7 report the effects of different categories of owners on the value of firms over time. Table 6 displays the results based on the analysis of total shares, whereas table 7 shows the results based on the examination of voting shares only. The study is specifically interested on the impacts of the concentration of family owners, public investment and foreign investors on the value of the firms. Specifications 1 to 7 are the same for both sampled data.

Specifications 1 to 5 regress Tobin's  $q$  on the levels of different categories of owners for 785 firms, using pooled cross section data from 2004 to 2008. Specifications 6 and 7 regress the change in Tobin's  $q$  between 2004 and 2008 on the percentage share of the classes of shareholders for 523 firms. The model includes in all specifications control variables for firm size - proxied by  $\ln$  of net sales-, and age.

Since the result of the Breusch-Pagan and Cook-Weisberg test (Wooldridge, 2002) for both samples in all specifications show strong evidence against the null hypothesis that the variance is constant, the totality of specifications have been modeled with heteroscedasticity robust errors.

In specification 1 Ordinary Least Square estimation is primarily used. The results of the OLS estimation suggest that only firm size and group dummy are statistically significant variables that impact firm value when the total shares sample is analyzed. When the ordinary shares sample is separately examined OLS estimations suggests that besides firm size, and group dummy, also age and public owners' impact firm value.

However, as posed by Wooldridge, in order for pooled OLS to produce consistent estimators, the assumption that unobserved effects are uncorrelated with the independent variables would have to be assumed. (Wooldridge, 2002). For the selected sample this assumption is too strong and may not hold true, especially for firms that are part of corporate groups (Moulton, 1986).

As a result, OLS pooled estimation proves not to be the Best Linear Unbiased Estimator due to cross-correlation in the error term. For this purpose, the present research evolves in the direction of using fixed effect estimation with collected panel data, with the main objective to allow for the unobserved effects to be correlated with the explanatory variables.

Specification 2 reports the results of a fixed effect regression model. Both firm size and age negatively affect firm value at statistically significant levels when both the total shares and the voting shares samples are analyzed, meaning that larger and older Brazilian listed companies tend to depreciate value. This is in line with valuation techniques that indicate that to remunerate their assets, and generate value over time, firms need to maintain the growth of projects that remunerate the cost of capital. Results indicate that the older and the larger they get, the selected listed firms have been unable to maintain the growth of projects with positive NPV.



Contrary to previous studies that indicate that family owners, public institutional investors, and foreign investors are the main promoters of value as shareholders of emerging market firms (Khanna and Palepu, 1999a), the fixed effect model in specification 2 shows no effect for the participation of these three categories of investors in the value of Brazilian companies from 2004 to 2008, when the data sample based on total shares is analyzed.

On the other hand, the results of specification 2 show, as an unexpected outcome, that financial domestic investors positively affect the value of companies over time. The coefficient of the estimator is significant at the 5% level when the total shares sample is examined (Table 6). Executive Owners are also significant at the 5% level in the same specification. The analysis shows that the percentage share of executives is also positively correlated with the value of the firms in the period.

Nonetheless, as displayed in Table 7, when the data sample of voting shares is analyzed the investigation shows that the participation of family owners positively affects the value of companies from 2004 to 2008 in the fixed effect transformation (specification 2). The coefficient of the estimator is statistically significance at the 10% level. Financial domestic investors and executives are consistently positively correlated with the value of the firms when the analysis is based on the percentage of voting shares (specification 2 of Table 7).

These results evidence the difference in analyzing the effects of the category of owners based on shares that grant shareholders a stake in the decisions of the firms. When the ability to influence management is isolated in the sample of voting shares, family owners have a positive impact on firm value. However, for both samples statistical significance remains stronger for the impacts of financial domestic partners and executives on value.

The importance of these two categories of investors may signal that listed Brazilian firms have reached a maturity level of their corporate governance practices that enables monitoring by less concentrated, however more professional, groups of shareholders. Mean percentage shares from 2004 to 2008 is 8.8% for financial domestic investors in both samples, while executives show a mean percentage share of 4.2% in the total shares sample, and 6.7% in voting shares sample.

The level of specialization and proficiency of financial investors, and executives is categorically higher than those observed by family groups and by the state in Brazil. Hence, the present findings set out the Brazilian economy when compared to other emerging markets with respect to the monitoring abilities of banks as domestic financial intermediaries. Contrary to other economies, such as the Russian and the Israeli markets, Brazilian banks present good monitoring abilities and contribute to generate value.

Table 6 – Effects of Ownership Structure on Tobin's q: Total Shares

Dependent Variable	Specification 1 OLS Tobin's q	Specification 2 Fixed Effect Tobin's q	Specification 3 Random Effect Tobin's q	Specification 4 Fixed Effect Tobin's q	Specification 5 Random Effect Tobin's q	Specification 6 Fixed Effect Change in Tobin's q	Specification 7 Random Effect Change in Tobin's q
Constant	0,5522366*	4,765869*** P<0,001	2,281185*** P<0,001	4,767859*** P<0,001	2,279846*** P<0,001	0,3681697*** 0,003	0,1068946*** 0,004
Ln Net Sales	0,0323391*	-0,3039618*** P<0,001	-0,1196848*** P<0,001	-0,3036929*** P<0,001	-0,1199032*** P<0,001	-0,2977272*** 0,002	-0,0927154*** P<0,001
Age (years)	-0,0001164	-0,0000643*** 0,005	-0,0000681 0,179	-0,0000627** 0,021	-0,0000711 0,163	-0,0000839 *** 0,005	0,0000111 0,833
Family Ownership	0,0006532	0,0026275 0,143	0,0010097 0,395	0,0029623 0,149	0,0009595 0,723	0,0032572 0,142	0,0003374 0,811
Public Investment	-0,0033105	0,0005191 0,526	0,0006965 0,545	0,0006871 0,293	0,0010958 0,534	0,0007898 0,630	0,0020614 0,259
International Investor	0,160	-0,0009583 0,418	-0,0009753 0,199	0,0021164 0,208	-0,0007634 0,684	-0,0008672 0,639	0,0005303 0,587
Financial Domestic Investor	0,000917	0,0062892** 0,027	0,0042619*** 0,007	0,0062723** 0,030	0,0042429*** 0,007	0,0074284* 0,079	0,0036232** 0,016
Executive Ownership	0,0056048	0,003572** 0,050	0,0027571 0,339	0,0035241* 0,071	0,0027316 0,324	0,0055717* 0,065	-0,000121 0,957
Group Dummy	-0,1876383*	dropped	0,1309813 0,480	dropped	0,1419335 0,492	dropped	-0,0142886 0,911
Insider Ownership*Gdummy	Not included	Not included	Not included	-0,0005676 0,810	0,00000634 0,998	Not included	Not included
Public Investment*Gdummy	Not included	Not included	Not included	-0,0002904 0,878	-0,0008905 0,700	Not included	Not included
International Investor*Gdummy	Not included	Not included	Not included	-0,0034902* 0,073	-0,0002837 0,896	Not included	Not included
Number of Firms	785	785	785	785	785	523	523
R-squared	0,0164	0,124	0,1122	0,1247	0,1122	0,0649	0,0000
F & chi2 (P-value)	0,157 (F)	P < 0,001 (F)	P < 0,001 (chi2)	P < 0,001 (F)	P < 0,001 (chi2)	P < 0,001 (F)	P < 0,001 (chi2)

\*\*\* Significant at the 1% level

\*\* Significant at the 5% level

\* Significant at the 10% level

Overall, these results indicate that it is safer to invest in Brazil having banks, local domestic institutions, executives, and financial individual investors as partners, as they are skilled agents in the monitoring of local firms and play a part on enhancing firm value.

Also contrary to previous studies and expectations (Xu and Wang, 1999; Kahnna and Palepu, 1998, Villalonga and Amit, 2004), public and international investors show no correlation with the value of the firms from 2004 to 2008 when the ordinary share sample is analyzed based on a fixed effect model specification. This result reinforces that family owners, foreign investors and public agents have been losing their importance in influencing the value of firms in the last five years. Simultaneously, other classes of investors, who are better prepared to exert firm monitoring, prove to be statistically significantly important to the value of the firms in the studied period.

The variable Group dummy, that indicates if a firm is part of a corporate group, is dropped from the fixed effect specification. In both collected samples (total shares and ordinary shares) the value of the group dummy never changes for each observation from 2004 to 2008. The value could change from zero to one as the result of a merger or acquisition of an independent firm by a corporate group. However, leverage buyouts and hostile takeovers of publicly listed companies are practically non-existent in the history of Brazilian exchange market.

Usually, when a firm is a group member in year 2004 it will remain as such until year 2008. Sometimes it can change from the hands of one group to another, but this movement does not affect the value of the regressor. As a result, the group dummy variable is dropped from the fixed effect analysis, since all time constant explanatory variables are removed from this type of specification (Wooldridge, 2002).

In order to measure if the participation in corporate groups affects the value of the companies, specification 3 uses a random effects regression model. The Generalized Least Square Random Effect transformation allows for explanatory variables that are constant overtime, and this is one advantage of random effects over fixed effect in the analysis (Wooldridge, 2002).

According to Wooldridge, under the random effects assumptions, the estimator is consistent (not unbiased) and asymptotically normally distributed as N gets large (Wooldridge, 2002).

Table 7 – Effects of Ownership Structure on Tobin's q: Voting Shares

Dependent Variable	Specification 1 OLS Tobin's q	Specification 2 Fixed Effect Tobin's q	Specification 3 Random Effect Tobin's q	Specification 4 Fixed Effect Tobin's q	Specification 5 Random Effect Tobin's q	Specification 6 Fixed Effect Change in Tobin's q	Specification 7 Random Effect Change in Tobin's q
Constant	0,9220613**	4,842375***	1,995009***	4,822862***	2,015885***	0,3360313***	0,8128053***
P-value	0,015	P<0,001	P<0,001	P<0,001	P<0,001	P<0,001	0,008
Ln Net Sales	0,035022*	-0,2557375***	-0,0610308**	-0,2556433***	-0,0613421**	-0,2421166***	-0,0903708***
P-value	0,082	P<0,001	0,043	P<0,001	0,041	P<0,001	P<0,001
Age	-0,0124823***	-0,0389092**	-0,0194291***	-0,0389239**	-0,0195408***	-0,0250784*	0,0043694
P-value	P<0,001	0,048	0,001	0,048	0,001	0,059	0,193
Family Ownership	0,0000841	0,0038983*	0,0025838	0,003245	0,0028806	0,0035759*	0,0018278
P-value	0,962	0,059	0,133	0,134	0,209	0,096	0,219
Public Investment	-0,0054383**	0,0017529	-0,0001879	0,0006968	-0,0011987	0,0028214	0,0031446
P-value	0,030	0,337	0,912	0,548	0,630	0,321	0,112
International Investor	-0,0016677	0,0020742	0,0007934	0,0029135**	-0,0021103	0,0035065	0,0027341
P-value	0,317	0,256	0,525	0,037	0,314	0,209	0,107
Financial Domestic Investor	-0,0009486	0,0058064**	0,0033106**	0,0059401**	0,0034678**	0,0072839***	0,0030453
P-value	0,693	0,033	0,043	0,035	0,033	0,005	0,117
Executive Ownership	0,0033089	0,0043557***	0,0045127*	0,0042874***	0,0045825*	0,0025189	0,0013888
P-value	0,262	0,006	0,083	0,007	0,069	0,410	0,484
Group Dummy	-0,2381045**	dropped	-0,0904261	dropped	-0,1308251	dropped	-0,0322165
P-value	0,024	Not included	0,544	0,0010778	0,471	Not included	0,759
Insider Ownership*Gdummy	Not included	Not included	Not included	0,629	-0,0001137	Not included	Not included
P-value	Not included	Not included	Not included	-0,0007446	0,964	Not included	Not included
Public Investment*Gdummy	Not included	Not included	Not included	0,731	0,0017289	Not included	Not included
P-value	Not included	Not included	Not included	0,0032952	0,545	Not included	Not included
International Investor*Gdummy	Not included	Not included	Not included	0,366	0,0034791	Not included	Not included
P-value	Not included	Not included	Not included	0,785	0,130	Not included	Not included
Number of Firms	785	785	785	785	785	523	523
R-squared	0,0458	0,0765	0,0613	0,0771	0,06	0,0177	0,000
F & chi2 (P-value)	0,0005 (F)	0,0003 (F)	0,0001 (chi2)	0,0019 (F)	0,0006 (chi2)	P<0,001 (F)	P<0,001 (chi2)

\*\*\* Significant at the 1% level

\*\* Significant at the 5% level

\* Significant at the 10% level

Specification 3 reveals that when the sample based on total shares is analyzed through random effects, financial domestic investor is the only category of owner that is statistically significant in the model. In consistence with specification 2, financial investors positively affect the value of companies. Its coefficient is significant at the 1% level.

When the specification is examined based on the voting share sample not only the participation of financial domestic investor, but of executives is also positively correlated with the value of companies. The coefficient of the share of financial domestic investors is significant at the 5% level, while the coefficient of the latter is significant at the 10% level based on the random effect analysis of voting shares.

As a result, the random effect model corroborates the conclusion of the fixed effect model, by which no evidence is found for the effect of public agents and foreign investors in the value of companies from 2004 to 2008. The concentration of family owners is significant based on the fixed effect analysis of voting shares only, however with lower statistical significance.

The variable of interest in the random effect model, group dummy, also shows no statistic significance when both the total shares and the voting shares samples are analyzed, as displayed in specification 3 in Tables 6 and 7. Surprisingly, the results of the random effect analysis show that there is no evidence of a difference in value between group firms and unaffiliated firms. Contrary to previous studies, the lack of transparency of groups in Brazil does not statistically impact company value from 2004 to 2008, as revealed by specification 3.

In the attempt to test the effects of family owners, public institutions and foreigners across group firms and unaffiliated firms, specifications 4 and 5 interact group membership with the tested categories of owners: family owners, public investors and foreign shareholders.

The only significant interaction is for international investors when ownership structure based on the total shares is analyzed, as reported in specification 4 (Table 6). The coefficient of the interacted variable is negative and significant at the 10% level. This result indicates that for group firms international ownership is negatively correlated with value.

This is consistent with the notion that foreign investors find it more difficult to monitor business groups than unaffiliated firms in their investments overseas. As a drawback, the coefficient of the interacted explanatory variable is not significant for the voting shares sample. However, this could be explained by the fact that international owners concentrate their shares on preferred stocks, which are represented in the total shares sample only.

The results show no support for the hypothesis that family owners and public institutions affect the value of companies in different ways depending on whether they are a member of a corporate group or not.

This outcome is inconsistent with previous results found for other emerging markets that indicate that business groups are more difficult to monitor (Khanna and Palepu, 2000b).

Finally, specifications 6 and 7 respectively report the results of a fixed effect and a random effect generalized least squares panel estimation for 523 firms. In this specification, the dependent variable is the change in Tobin's q between each year until 2008 and the year 2004 (namely, Tobin's q variation between 2005 and 2004, 2006 and 2004, 2007 and 2004, and 2008 and 2004). The explanatory variables are the corresponding ownership structures of each year to which the variation on Tobin's q is calculated.

Hence, the reduction in the number of firms is due to the fact that the 2004 data period is dropped from the analyzed sample, as it is used solely as a calculation base for the delta Tobin's q. Also, some firms have no data available for the entire analyzed period from 2004 to 2008.

Once again, both the fixed effect and the random effect specifications reveal that firm size is a relevant variable that impacts the change in firm value. Ln of net sales negatively affects the change in Tobin's q in specifications 6 and 7.

Age, however, is statistically significant only in the fixed effect model (specification 6), and negatively affects the change in Tobin's q when both samples are examined, meaning that the older the company the less likely it is to remunerate the cost of its assets. This is once again in line with valuation theories that indicate that more mature companies are likely to have more stable market value due to the stabilization of their cashflow streams.

The results of specification 6 show that the change in Tobin's q is positively correlated with the percentage of domestic financial investors and executives when the ownership structure based on total shares is analyzed through the fixed effect model. Both coefficients are significant at the 10% level.

The participation of financial domestic investors remains statistically significant and positive correlated at 5% level to the change in Tobin's q when the effects of ownership structure based on total shares is analyzed through the random effect model (specification 7). However, the percentage share of executives is no longer significant.

When ownership structure is analyzed through the percentage of ordinary shares exclusively, Family owners and financial domestic investors positively affect the change in firm value overtime in the fixed effect specification. Family shareholding is significant at the 10% level, while the ownership of financial domestic investors is

significant at the 1% level. The results of specification 6 on Table 7 show that no other class of shareholder is significant to the change in firm value in the period.

Using the random effect transformation, specification 7 reveals that group dummy is not significant in any of the analyzed samples, meaning that group membership has no effect in the change in firm value from 2004 to 2008.

These results corroborate the conclusions reached for the effects of classes of owners to Tobin's  $q$ . Domestic financial investors and executives are able to impact the change in firm value with high levels of significance. While family owners also cause an effect on the change in firm value, their effects are less significant and present only when ordinary shares are exclusively analyzed. Public agencies and foreign investors, on the other hand, have no impact in the change in firm value in the period.

These findings are yet additional evidence that less concentrated and more specialized shareholders are able to monitor firms in Brazil, as a sign of the development of Corporate Governance practices.

### **6.B. Drivers of Ownership**

In the search for further explanations about the drivers of investment for the three main categories of owners, the study advances further in the development of a Tobit model that aims to analyze the extent of family ownership, public investment and foreign investment as a function of a series of firm characteristics.

This investigation follows the sequence applied for the Indian economy by Kahnna and Palepu (1999a), who have also found no effects of family ownership, public institutions and foreign investors across group firms and unaffiliated firms in India.

The model is interested in investigating the drivers that define the extent of investment of families, public agents and foreign owners in Brazilian firms. Hence, the dependent variable of each specification is the percentage share of each one of these three categories of shareholders.

Three different equations are analyzed. In each one of them, the dependent variable is either the percentage ownership of families, public partners or foreign investors in the company for the 2008 sample of firms.

The year 2008 was selected to enable the calculation of two of the independent variables (past average Tobin's  $q$  and past return variability) for the same period of time selected for the Pooled Cross Section analysis (from 2004 to 2008). Also, 2008 is the most recent year for which firm data is available after a five year period of record growth for the Brazilian capital market, when the Brazilian economy and firms gained importance as a source of international growth and relative stability, in a period of world economic crisis.

The independent variables are firm characteristics that include a proxy for firm size (ln of net sales) for the year 2008, its past performance (measured as a simple average of the Tobin's q from 2004 to 2008), and its past variability in performance (defined as the variance of daily stock returns over the last trading year: 2008).

To test the extent to which each category of owner invests in a group, as opposed to in individual firms, the model uses as one of the regressors, in addition to the group dummy, a variable that accounts for the average investment of each category of owners in the other firms of the same group. The variable is set to zero for unaffiliated groups.

Finally, in order to investigate how the use of internal capital markets by corporate groups may affect investment decisions and the extent of investment by families, state agencies and international players, three other variables are added as regressors.

The variables that are used as a proxy for greater internal capital markets and for the lower transparency enjoyed by group firms represent capital mobility within group firms. They are: receivables from other group firms, loans to other affiliates, and investment in other group firms. All three independent variables are set to zero for non-group firms.

The Tobit model was chosen as a limited variable model because the dependent variable, which accounts for the percentage of shares of each category of owner, is roughly continuous over strictly positive values for a subsample of firms, but is set to zero for a nontrivial fraction of the sampled population.

Hence, although nothing prevents the use of a linear model to estimate the expected value of the dependent variable, a linear estimation would possibly obtain negative fitted values for the present case (Wooldridge, 2002). A corner solution is thus required to model the sensitivities of the percentage share of owners to a series of firm characteristics.

It is important to highlight that the objective in using a Tobit model is to know whether there is a relationship between a group of selected value drivers and the extent of investment by some classes of owners, as well as the direction of this correlation. The Tobit model is a nonlinear function of the dependent variable, which makes partial effects difficult to obtain, but, on the other hand, provides a consistent technique for the desired objective: to identify the drivers of equity investment to the selected classes of owners.

As a consequence, the coefficients of the dependent variables reported hereby must not be interpreted as the *ceteris paribus* effect of each explanatory variable on the dependent variable. Rather they indicate the best corner solution conditional to the characteristics of the sampled population. (Wooldridge, 2002)

Specification 1 on table 8 reports the results of the investigation on the drivers of investment to family owners. Prior heteroscedasticity test was run for the specification



considering both data samples, consisting of total shares and voting shares. In both cases there is no evidence to reject the null hypothesis that the error is homoscedastic.

The results show that firm size is a significant driver for family ownership in Brazil. In both analyzed samples, firm size negatively affects the extent of family investment in a firm. That is, results show that family ownership is gradually diluted the larger the size of the company. The coefficient is significant at the 5% level for both samples.

Past performance, however, is not statistically significant for the percentage share of family ownership in Brazil. This means that families invest as much in firms that have a positive track record as in firms that have a negative past performance.

Past return variability has also no discernible effect on the amount of investment of families in a firm. This indicates that the volatility of daily stock return has no impact on families' investment decisions on Brazilian firms. The results are consistent for both samples of total shares and voting shares.

The point estimate on the group dummy is also not significant at conventional statistical levels. Nonetheless, the average participation of families in other firms of the same corporate group is positively correlated with the participation of family ownerships in the sampled firms. The coefficient that measures the average investment of families in other firms of the same group is statistically significant at the 1% level for the sample of total shares and at the 5% level for the voting share sample.

This result means that the average percentage share of families in other firms of the same group positively affects the percentage share of families in yet another firm of the same group.

Investments in affiliated firms also show no relation with the percentage shares of Families in both samples. However, the variable that accounts for the receivables from other group firms is significant at the 5% level when the total share sample is analyzed. The positive sign of its coefficient indicates that the higher the mobility of capital through accounts receivables among firms of the same corporate groups the higher the percentage share of families in these firms. This result is consistent with the notion that Families prefer to invest in groups with intricate social structures and complex fiscal planning as a way to optimize their benefit over the company's residual cashflow in detriment of other classes of shareholder.

As a drawback, the variables that account for capital mobility – namely investment in other group firms, and receivables from other group firms<sup>14</sup> - are not significant when the voting share sample is analyzed.

The variable that accounts for loans to other group firms was dropped from every one of the three specifications due to collinearity. In fact, the value of intra-group loans was

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<sup>14</sup> Loans to other group firms have been dropped from the analysis due to perfect multicollinearity.

zero to all firms included in the samples. This may be so because loans among group firms are highly regulated in Brazil as part of the White Collars Act (7.492/1986) and the domestic money laundering legislation. As a result, listed companies tend to suspend transactions that may raise questions regarding its nature or incur in fines, especially before the Federal Income Agency.

Specification 2 on Table 8 shows that firm size is as well an important driver for the extent of investment of public agents. There is, however, a positive relationship, meaning that while families have higher investments in smaller firms, public agents tend to increase their shares on larger firms. That is, while families get diluted when companies grow, public agents increase their concentration in larger firms. This is in line with the cashflow capabilities of each category of investor, as public institutions have greater amounts of funds available for investment than families.

Contrary to families, the past variability of firm performance also affects the percentage share of state agents in the ownership structure of Brazilian firms. The coefficient of the explanatory variable is significant at the 10% level for the total share sample only, and not significant when voting shares are separately analyzed.

In consonance with the decisions of families, past performance has no significant correlation with the percentage share of public investment, as a result of the regression on both total shares and voting shares samples. This finding means that a positive track record is not a decisive impediment for the investment by public agents.

Results also suggest that, differently from family owners, public agents are less likely to invest in group firms relative to non-group firms. The point estimate on the group dummy is negative and significant at the 10% level for the total shares sample, and at the 5% level for the voting shares sample.

Internal capital market transactions are also negatively correlated with the participation of public investment. The coefficients of the variables investment in other groups firms, and receivables from other group firms are negative and statistically significant in both analyzed samples.

This result is in line with the expectation that public agents lack the necessary resources to conduct monitoring in invested companies. As such, they are less willing to invest in groups with high mobility of capital within group firms, which makes transparency and corporate governance harder and more costly to public owners.

However, in spite of the fact that group membership negatively affects the decisions of state agents to finance companies through equity investment, the participation of public investment in other firms of the same group is a positive driver for public investment. The coefficient of the variable that accounts for average public investment in other firms of the same group is highly significant at the 1% level when both total shares and voting shares are analyzed.

**Table 8 - Tobit Analysis of Investment Drivers**

TOTAL SHARES			
Dependent Variable	Specification 1 Family Ownership (%)	Specification 2 Public Investment (%)	Specification 3 Foreign Investment (%)
Constant	100.3918**	-176.4169***	-90.30049**
P-value	0,012	0,003	0,022
Ln Net Sales	-7.118138**	13.26511***	5.792438**
P-value	0,018	0,001	0,044
Group Dummy	-15,403	-19.46758*	4,621157
P-value	0,319	0,087	0,674
Past Average Tobin's q	2,726108	1,764791	-3,218431
P-value	0,544	0,846	0,534
Past Return Variability	65,92312	-1103.085*	-90,05039
P-value	0,550	0,083	0,695
Average investment of each category of owners in other firms of the same group	0.8058217***	0.6170353***	0.8428437***
P-value	0,001	0,009	0,001
Investment in other group firms	2,83E-06	-0.00000354**	-0.00000763***
P-value	0,175	0,020	0,001
Receivables from other group firms	0.0001731**	-0.0002105***	-0.0001109*
P-value	0,015	0,007	0,064
Loans to other group firms	dropped	dropped	dropped
P-value			
Number of observations	71	71	71
F & chi2 (P-value)	0,0003	P<0.001	0,0007
VOTING SHARES			
Dependent Variable	Specification 1 Family Ownership (%)	Specification 2 Public Investment (%)	Specification 3 Foreign Investment (%)
Constant	128.0669**	-268.7469***	-97,08543
P-value	0,020	0,003	0,170
Ln Net Sales	-9.207008**	19.84054***	5,357923
P-value	0,028	0,003	0,295
Group Dummy	-1,010363	-38.77036**	10,45764
P-value	0,963	0,033	0,587
Past Average Tobin's q	5,163977	2,326513	-16,87275
P-value	0,408	0,850	0,198
Past Return Variability	92,3081	-1421,754	-669,2639
P-value	0,547	0,104	0,552
Average investment of each category of owners in other firms of the same group	0.5801429**	0.7423238***	1.198089***
P-value	0,037	0,002	P<0.001
Investment in other group firms	4,44E-06	-0.00000397*	-0.00000881***
P-value	0,122	0,053	0,008
Receivables from other group firms	0,0001485	-0.0002715**	-0,0000793
P-value	0,119	0,030	0,224
Loans to other group firms	dropped	dropped	dropped
P-value			
Number of observations	71	71	71
F & chi2 (P-value)	0,0171	P<0.001	0,0001

\*\*\* Significant at the 1% level

\*\* Significant at the 5% \* Significant at the 10% level

These results indicate that once a group has historically enjoyed investment by public institutions it becomes easier to obtain further investments for other companies of the same group.

This finding is empirically observed specially in the investment pattern of the National Bank of Economic and Social Development (BNDES), and of the two largest state-owned pension funds in Brazil: Petros and Previ. These institutions have a record of concentrated investment in a limited number of Brazilian corporate groups, which are able to perpetuate their investment over time. This result goes contrary to the main objective of developing institutions, which aim to foster growth based on equity investment coupled with cash out strategies, once the firms have reached the desired level of maturity.

The results of specification 2 are based on heteroscedastic-consistent standard errors, since heteroscedasticity tests for both samples show strong evidence against the null hypothesis that the variance is constant.

Specification 3 on Table 8 measures the effects of firm characteristics on the percentage investment of international investors. Similar to public investors and contrary to family owners, the size of the firm positively affects the percentage share of foreign investors in Brazilian companies, despite being statistically significant only when the sample of total shares is analyzed. The coefficient of  $\ln$  of net sales is significant at the 5% level for the total shares sample and not significant when only voting shares are analyzed. The explanation for the different results may be found in the fact that international players concentrate their participation in preferred stocks of Brazilian firms. It is, nonetheless, worth highlighting that while family owners get diluted in larger companies, the concentration of foreign investors and public agents tend to increase.

Similar to Family owners and public agents, the past performance of firms does not affect foreign owners' percentage share on equity investment in Brazil. Past volatility of daily stock returns is also not statistically significant.

The membership in corporate groups is also not a driver for investment by international players. The variable group dummy is not significant in both analyzed samples. However, the investment of international investors in other companies of the same group is highly significant at the 1% level in both samples. The coefficient of the explanatory variable is positive, which means that, as expected and similar to family owners and public investors, groups that already have international shareholders in their ownership structure are more likely to receive further foreign investment in other firms of the same group.

However, the negative coefficients of the variables investment in other group firms, and receivables from other group firms, which represent capital mobility, indicate that foreign investors seek out those groups where the lack of transparency is least likely to be a problem. The coefficient of the former is statistically significant at the 1% level in

both samples, whereas the coefficient of the latter is significant at the 10% level in the total shares sample and not significant when voting shares are separately analyzed.

Whenever they invest in Brazilian group companies foreign investors choose those firms that have the lowest levels of capital mobility. These results are in line with the theory that corporate groups in emerging markets are less transparent than unaffiliated firms and that families make use of their greater power over company's decision for the disadvantage of other classes of shareholders (Khanna and Palepu, 1999a).

The results of specification 3 are also reported based on heteroscedastic-consistent standard errors, since heteroscedasticity tests for both samples indicate strong evidence against homoscedasticity of the error.

## **7. Summary**

Family groups in Brazil have played a very important role in the development of the domestic economy. They have acted in concert with the state as the propeller for industrial development, often coupled with foreign investors, who have represented an important source of capital and technology over the different phases of Brazilian industrialization.

The present paper investigates how these and other types of shareholdings have affected Brazilian firms in the last five years. The period of the analysis coincides with the fastest growing cycle of the Brazilian capital market so far. After a long history of military regime and subsequent unstable top ranking inflation era, the last five years have positioned the country as one of the main supplier of international growth, along with the other three members of the BRICs.

Motivations for the present investigation abound. Aside from the frequent scandals reported by the media involving the misappropriation by families and corporate groups, sometimes in consonance with public financing agencies and politicians, a review of the literature suggests that the ownership structure of Brazilian firms is highly concentrated. However, the literature finds conflicting results for whether this concentration positively or negatively affects the value of Brazilian firms.

Siqueira (2000), for example, finds a negative correlation between ownership concentration and performance, while Carvalhal da Silva (2002) evidences that firm value increases with higher levels of concentration over cashflow rights by controlling shareholders. However, the present research attempts to qualitative break-down these concentrated blocks of owners to analyze the impacts of the different classes of shareholders to firm value within the context of corporate groups. Further, the present work challenges the understanding of the drivers that contribute to ownership concentration.

Against existing research on emerging market corporate governance, and contrary to previous expectations (Xu and Wang, 1999; Kahnna and Palepu, 1998, Villalonga and

Amit, 2004), the investigation at hand finds no evidence of the effects of public investment and international investors in the value of Brazilian companies from 2004 to 2008.

The effect of family ownership over firm value is found when ownership structure is analyzed based exclusively on the amount of ordinary shares held by each category of shareholder, and when the model controls for fixed effects in order to allow for correlated errors across all firms. However, the effect of family ownership on firm value has a lower significance level.

That is to say, the effect of families on firm value is significant solely when the power over firm's decisions and the ability to influence management, granted by higher stakes on voting shares, is separately analyzed. This result is consistent with the higher concentration of family ownership over ordinary shares of Brazilian firms.

Further, the outcomes of the research are the evidences that indicate that the participation of financial domestic investors and executive owners positively affect the value of firms over time. These results can be interpreted as a sign of a higher level of maturity achieved by Brazilian firms and by the domestic capital market.

The findings suggest that Brazilian publicly listed firms have matured their corporate governance mechanisms to a level that enables monitoring by less concentrated yet better prepared and specialized classes of shareholders. Additionally, for the sampled population of firms, family owners, public institutions and foreign investors have been losing their importance in influencing firm's value in the last five years.

The examination hereby also investigates whether the membership in corporate groups affects the value of companies over time. In contrast with previous studies that indicate that groups are less transparent and pose greater challenges to monitoring, which would negatively impact the value of firms, the present work finds no evidence for the effect of group membership in firm value in Brazil from 2004 to 2008. As a matter of comparison, the same result was found for firms in India (Kahnna and Palepu, 1999a).

The research also finds no differential treatment for affiliated and unaffiliated firms by families and public investors. On the other hand, the presence of foreign owners is negatively correlated with value in group firms. This result is in line with other emerging market studies that point out that international shareholders find it harder to monitor group firms in overseas investments.

In the attempt to further investigate the drivers of investment for the three main classes of shareholders, the present study develops a Tobit model that regresses the percentage of these three classes of owners on a series of firm's characteristics.

The investigation finds that firm size is a significant correlated investment driver for all three kinds of owners. Nonetheless, while it positively affects the percentage share of foreign and public capital, it negatively affects the concentration of families. This result

shows that family ownership is gradually diluted when Brazilian companies grow, while public agents and foreign investors get more concentrated the larger the size of the companies. Past performance, however, is not a decisive factor in equity investment decisions by families, public institutions and foreign players. This is an indication that all types of investors seek the future cashflow of firms.

The volatility of daily stock return is a significant decision-making factor for public investment. There is a negative correlation that indicates that state agencies are less likely to invest in firms with highly volatile performance. Past return variability is irrelevant for equity investment decisions by families and foreign investors.

Group membership is also negatively correlated with the presence of public investment. This result is in consonance with previous research that indicates that institutional investors lack the resources necessary for monitoring firms in emerging markets. Group membership does not affect equity investment decisions of families and foreign investors.

Another outcome is that groups that already have one of the three classes of shareholders in their ownership structure are more likely to receive further investment from each category of owner in other firms of the same group. This outcome is captured by the explanatory variable that accounts for the average percentage share of each category of owner in other firms of the same group, which is positively correlated and highly significant in all specifications that relate them to the concentration of families, public agents and foreign investors.

Finally, in an attempt to address the problems associated with monitoring groups, the work concludes that public shareholders and foreign agents prefer to invest on firms that have low capital mobility within group firms. The incidence of intra-group financial transactions, which is a proxy for the transparency of groups, is negatively correlated and statistically significant with the presence of public capital and international investors.

On the other opposite, capital mobility within group firms is positively correlated with the presence of family owners. This result is in line with the empirical observations that family owners take advantage of their greater concentration on voting shares to construct intricate ownership structures based on complex fiscal planning that enable gains not necessarily captured by the regular monitoring instruments of corporate governance. It is thus expected that groups with greater mobility of capital positively affect equity investment decisions of family owners and family groups.

As a final remark, it is worth mentioning that the results reported hereby reflect the sample period collected from 2004 to 2008. It is possible that the importance of family owners, public owners and foreign investors reveal different results if earlier samples are analyzed.

Additionally, due to limitations on the availability of data, the present research replicates the results obtained for a sample of publicly listed companies. Different results would be found if companies with different levels of maturity could be included in the analysis.

Further, the present study bears some limitations. First, by using as the dependent variable the measure of Tobin Q, the work reflects the effects based on a measure that considers investors' perception of value. The results do not segregate the effects of ownership structure on performance measures such as the Return on Assets (ROA), the Earnings Before Interest Taxes Depreciation and Amortization (EBITDA), or the Return on Investment (ROI), which could have been used for that purpose.

Second, the research also does not make a distinction between family control and family management, which can be exploited in future studies. Third, the choice of variables and equations also do not attempt to reflect the sensibility of shareholder control.

Finally, future studies may choose to expand the subject by using more robust econometric procedures to treat the problem of reverse causality, to further investigate the effects of omitted variables that vary over time and to exploit the issue of endogeneity that may be present in the correlated variables.

Nonetheless, by estimating the effects of ownership clusters and business groups on firm value in Brazil the present work contributes to the international literature on ownership structure and monitoring in emerging markets, and opens the pavement for further investigations on how the different categories of investors and business groups affect the value of the companies over time.



## BIBLIOGRAPHY

Abel, A. B. 1983. Optimal investment under uncertainty. *American Economic Review* 73, 228-233.

Abel, A. B. and O. J. Blanchard. 1986. The present value of profits and cyclical movements in investment. *Econometrica* 54, 249-273

Aitken, Brian and Ann E. Harrison. "Do Domestic Firms Benefit from Direct Foreign Investment? Evidence from Venezuela," *American Economic Review* 89(3), June 1999, pp. 605-618.

Alchian, A., 1969. Corporate management and property rights. *Economic Policy and the Regulation of Corporate Securities*, H. Manne, editor, American Enterprise Institute, Washington, DC.

Alem, Ana Claudia, Cavalcanti, Carlos Eduardo. 2005. O BNDES e o Apoio à Internacionalização das Empresas Brasileiras: Algumas Reflexões. *Revista do BNDES*, Rio de Janeiro, V. 12, No. 24, P. 43-76, Dez 2005.

Amsden, A., & Hikino, T. 1994. Project execution capability, organizational know-how and conglomerate corporate growth in late industrialization. *Industrial and Corporate Change*, 3: 111-148.

Amsden, Alice. 1989. *Asia's Next Giant: South Korea and Late Industrialization*, New York. Oxford University Press.

Amsden, Alice and Hikino, Takashi. 1991 Project Execution Capability, organizational Know-How and Conglomerate Corporate Growth in Late Industrialization. *Industrial and Corporate Change*, 111-148.

Amsden, A., & Hikino, T. 1994. Project execution capability, organizational know-how and conglomerate corporate growth in late industrialization and *Corporate Change*, 3: 111-148.

Andrade, Adriana e Rosseti, José Paschoal. 2004. *Governança Corporativa*. Editora Atlas. pp.412.

Aoki, Masahiko. 1990. Toward an Economic Model of the Japanese Firm. *Journal of Economic Literature*. Vol XXVIII, march 1990, pp. 1-27.

Aoki, Masahiko; Ki Kim, Hyung-. Corporate governance in transitional economies: Insider Control and the Role of Banks. *The World Bank*. 1995, pp. 1 - 467

Arnold, James, and Smarzynska-Javorcik, Beata. 2005. Gifted Kids or Pushy Parents? Foreign Acquisitions and Plant Performance in Indonesia.

Alan J. Auerbach, 1985. "Real Determinants of Corporate Leverage," NBER Chapters, in: Corporate Capital Structures in the United States, pages 301-324 National Bureau of Economic Research, Inc.

Barca, Fabrizio, 1995, On corporate governance in Italy: Issues, facts, and agency, manuscript. Bank of Italy, Rome.

Berger, P. G. and E. Ofek. 1995. Diversification's effect on firm value. *Journal of Financial Economics* 37, 39-65.

Berglof, Erik, and Enrico Perotti, 1994, The governance structure of the Japanese financial keiretsu. *Journal of Financial Economics* 36, 259-284.

Berglof, Erik, and Ernst-Ludwig von Thadden, 1994, Short-term versus long-term interests: Capital structure with multiple investors. *Quarterly Journal of Economics* 109, 1055-1084.

Berglöf, Erik & Roland, Gérard, 1995. "Bank Restructuring and Soft Budget Constraints in Financial Transition," CEPR Discussion Papers 1250, C.E.P.R. Discussion Papers.

Belderbos, Rene & Sleuwaegen, Leo, 1996. "Japanese Firms and the Decision to Invest Abroad: Business Groups and Regional Core Networks," *The Review of Economics and Statistics*, MIT Press, vol. 78(2), pages 214-20, May.

Berle, Adolf A. and Gardiner C. Means, 1932, *The Modern Corporation and Private Property*, Harcourt, Brace, & World Inc., New York.

Bhagwati, J. 1982. Directly-unproductive, profit-seeking DUP activities. *Journal of Political Economy*, 90: 988-1002.

Blanchard, O. J., Rhee, C., and L. H. Summers. 1993. The stock market, profit, and investment. *Quarterly Journal of Economics* 108, 115-136.

Blass, Asher, Yafeh, Yishay, and Yosha, Oved. 1998. Corporate Governance in an Emerging Market: The Case of Israel. *Journal of Applied Corporate Finance*, Volume 10, No 4, Winter, pp. 79-89.

Bond, S. D. and J. G. Cummins. 2000. The stock market and investment in the new economy: Some tangible facts and intangible fictions. *Brookings Papers on Economic Activity* 2000:1, 61-124.

Boycko, Maxim, Andrei Shleifer, and Robert W. Vishny, 1993, *Privatizing Russia*, *Brookings Papers on Economic Activity*, 139-192,

Boycko, Maxim, Andrei Shleifer, and Robert W. Vishny, 1995, *Privatizing Russia* (M.I.T. Press, Cambridge, Mass.),

- Boycko, Maxim, Andrei Shleifer, and Robert W. Vishny, 1996, A theory of privatization, Paish lecture. *Economic Journal* 106, 309-319,
- Brainard, W., Shoven, J., and L. Weiss. 1980. The financial valuation of the return to capital. *Brookings Papers on Economic Activity* 2, 453-502.
- Brainard, W. and J. Tobin. 1968. Pitfalls in financial model-building. *American Economic Review* 58, 99-122.
- Brito, R. D.;Lima, M. R. A. 2005. Escolha da Estrutura de Capital sob Fraca Garantia Legal. *Revista Brasileira de Economia*, Rio de Janeiro, V. 59, N. 2, P. 177-208, 2005
- Camp, Roderic A. 1999. *Entrepreneurs and Politics in Twentieth-Century Mexico*. Oxford University Press. 1464-3650.
- Camp, Roderic A. 1989. *Entrepreneurs and Politics in Twentieth-Century Mexico*, New York. Oxford University Press.
- Carvalho-da-Silva, A. Estrutura de controle e valor das empresas. In: Leal, R. P. C.; Ferreira, V.;
- Carvalho-da-Silva, A. L (org). *Governança corporativa no Brasil e no mundo*. Rio de Janeiro: EPapers Serviços Editoriais Ltda, 2002.
- Carvalho-da-Silva, A. L. Governança corporativa, valor, alavancagem e política de dividendos das empresas brasileiras. *Revista de Administração da USP (RAUSP)*, São Paulo, v.39, n.4, p.348-361, out/nov/dez. 2004.
- Carvalho-da-Silva, A. L.; Leal, R. P. C. Corporate governance index, firm valuation and performance in Brazil. *Revista Brasileira de Finanças*, v.1, n.1, p.1-18, Jun. 2005.
- Carvalho-da-Silva, A. L.; Leal, R. P. C. Corporate governance, market valuation and dividend policy in Brazil. *Relatório COPPEAD* n.358, Rio de Janeiro, 2003.
- Caves, R., & Uekusa, M. 1976. *Industrial organization in Japan*. Washington, DC: Brookings Institution.
- Chandler, A. D. 1982. *The M-Form: Industrial groups*
- Caves, R. 1989. International differences in industrial organization. In R. Schmalensee and R. Willig (Eds.), *Handbook of industrial organization*, vol. 2: 1226- 1249. Amsterdam: North Holland.
- Caves, Richard E. *Multinational Enterprise and Economic Analysis*, Second Edition (New York: Cambridge University Press, 1996). ISBN 0-521-47858-8. Available from the University Bookstore.
- Caves, R. 1989. International differences in industrial organization. In R. Schmalensee and R. Willig (Eds.), *Handbook of industrial organization*, vol. 2: 1226- 1249. Amsterdam: North Holland.

- Caves, R., & Uekusa, M. 1976. Industrial organization in Japan. Washington, DC: Brookings Institution. Chandler, A. D. 1982. The M-Form: Industrial groups.
- Chang, Sea Jin, and Choi, Unghwan. 1988. Strategy, Structure, and Performance of Korean Business Groups: A Transactions Cost Approach. *Journal of Industrial Economics*, December.
- Chari, Anusha and Chen, Wenjie. 2009. Foreign Ownership and Firm Performance: Emerging-Market Acquisitions in the United States. Working Paper 14786. National Bureau of Economic Research. 1050 Massachusetts Avenue Cambridge, MA 02138 March 2009
- Cho. 1998. Ownership Structure Investment, and the Corporate Value: An Empirical Analysis.
- Chung, K. H. and S. W. Pruitt. 1994. A simple approximation of Tobin's q. *Financial Management* 23, 70-74.
- Claessens, S., Djankov, S., Fan, J. P. H., & Lang, L. H. P. (2002, December). Disentangling the incentive and entrenchment effects of large shareholdings. *Journal of Finance*, 57(6), 2741-2771.
- Cummins, J. G., Hassett, K. A., and S. D. Oliner. 1999. Investment behavior, observable expectations, internal funds. *American Economic Review*, forthcoming.
- Dames, Herman. 1977. The Holding and Corporate Control. Nijenrode Studies in Economics. Volume 3. The Netherlands.
- Demsetz, Harold, 1983, The structure of ownership and the theory of the firm. *Journal of Law and Economics* 26, 375-390,
- Demsetz, Harold, and Kenneth Lehn, 1985, The structure of corporate ownership: Causes and consequences. *Journal of Political Economy* 93, 1155-1177,
- Demsetz, H., Lehn, K. The structure of corporate ownership: causes and consequences. *Journal of Political Economy*, v. 93, n. 6, p. 1.155-1.177, 1985.
- Demsetz, Harold & Villalonga, Belen. 2001. Ownership Structure and Corporate Performance. *Journal of Corporate Finance*. Elsevier. Vol 7(3). Pages 209-233. September.
- Denis, D. J., Denis, D. K., and A. Sarin. 1994. The information content of dividend changes: Cash flow signaling, overinvestment, and dividend clienteles. *Journal of Financial and Quantitative Analysis* 29, 567-587.
- DE PAULA, G. M. Governança Corporativa no Brasil e México: Estrutura Patrimonial, Práticas e Políticas Públicas. Santiago do Chile: CEPAL, 2003.

Diamond, Douglas, 1984, Financial intermediation and delegated monitoring. *Review of Economic Studies* 51, 393-414.

Diamond, Douglas, 1989, Reputation acquisition in debt markets. *Journal of Political Economy* 97, 828-862,

Diamond, Douglas, 1991, Debt maturity structure and liquidity risk. *Quarterly Journal of Economics* 106, 1027-1054.

Dutra, M. G. L.; Saito, R. Conselhos de Administração: análise de sua composição em um conjunto de companhias abertas brasileiras. *Revista de Administração Contemporânea*, São Paulo, v. 6, n. 2, p. 09-27, maio/ago. 2002.

Encaoua, David and Jacquemin, Alexis. 1982. Organizational Efficiency and Monopoly Power : The Case of French Industrial Groups. *European Economic Review*. 19:25-51.

Erickson, T. and T. M. Whited. 2000. Measurement error and the relationship between investment and q. *Journal of Political Economy* 108, 1027-57.

Famá, Rubens; Barros, Lucas Ayres B. de C.. Q de Tobin e seu Uso em Finanças: Aspectos Metodológicos e Conceituais. *Caderno de Pesquisas em Administração*, São Paulo, Vol. 07, No. 4, (outubro/dezembro 2000), pp. 27-43.

Fisman, Raymond. 1998. The Incentives to Rent-Seeking: Estimating the Value of Political Connections, Manuscript. Harvard University.

Fisman, R. 2000. The incentives to rent seeking: Estimating the value of political connections. *American Economic Review*: In press.

Fisman, Raymond and Khanna Tarun. 1998. Facilitating Development: The Role of Business Groups. Harvard Business School Working Paper No 98-076, February, 1998.

Franks, Julian, and Colin Mayer, 1990, Takeovers: Capital markets and corporate control: A study of France, Germany, and the UK, *Economic Policy: A European Forum* 10, 189-231,

Franks, Julian, and Colin Mayer, 1994, The ownership and control of German corporations, manuscript, London Business School.

Frydman, R. Phelps, E., Rapaczynski, A. 1993. Needed Mechanisms of Corporate Governance and Finance in Eastern Europe. *Economics of Transition*, Volume 1 (2), 171-207.

Furstenberg, G. M. von. 1977. Corporate investment: Does market valuation matter in the aggregate?. *Brookings Papers on Economic Activity*, 1977:2 347-397.

Garcia, Maurício, and Galstaldi Filho, Helio. A participação do Estado Brasileiro na Sociedade: Percepções da População em relação ao processo de Privatização. *Primeiro Congresso Latinoamericano de Opinião Pública*, World Association of Public Opinion Research, 2007, 139 pp.

Gentry, W. M. and C. J. Mayer. 2002. What can we learn about the sensitivity of investment to stock prices with a better measure of Tobin's q? Working Paper.

Gerlach, Michael L. 1992. The Japanese Corporate Network: a blockmodel analysis. *Administrative Science Quarterly*, 37, March 1992, 105-139.

Gertner, Robert, David Scharfstein, and Jeremy Stein, 1994, Internal versus external capital markets. *Quarterly Journal of Economics* 109, 1211-1230.

Chang, Sea Jin and Choi, Unghwan. 1988. Strategy, Structure and Performance of Korean Business Groups: A Transactions Cost Approach. *The Journal of Industrial Economics*. Volume XXXVII, December 1988, No 2.

Ghemawat, Pankaj. 1996. Ballapur Industries. Harvard Business School Case.

Ghemawat, Pankaj and Khanna Tarun. 1998. The Nature of Diversified Business Groups: A Research Design and Two Case Studies. *Journal of Industrial Economics*, March.

Giambiagi, Fabio e Almeida, Paulo Roberto. 2003. Morte do Consenso de Washington? Os rumores a esse respeito parecem muito exagerados. BNDES, outubro 2003.

Gilchrist, S. and C. P. Himmelberg. 1995. Evidence on the role of cash flow in reduced-form investment equations. *Journal of Monetary Economics* 36, 541-572

Gomes, J. F. 2001. Financing investment. *American Economic Review* 91, 1263-1285.

Gonçalves, André Luiz. 2007. Estrutura de propriedade, valor e desempenho das companhias abertas no Brasil. Dissertação de Mestrado. Programa de Pós-Graduação da CAPES.

Granovetter, M. 1994. Business groups. In N. J. Smelser & R. Swedborg (Eds.), *Handbook of economic sociology*: 453-475. Princeton, NJ: Princeton University Press; New York: Russell Sage Foundation.

Grosfeld, Irena. 1997. Financial Systems in Transition: The Role of Banks in Corporate Governance. K.L. Gupta (ed.), *Experiences with Financial Liberalization*, Boston/Dordrecht/London: Kluwer Academic Publishers, 1997.

Grossman, Sanford, and Oliver Hart, 1980, Takeover bids, the free-rider problem, and the theory of the corporation. *Bell Journal of Economics* 11, 42-64.

Grossman, Sanford, and Oliver Hart, 1986, The costs and benefits of ownership: A theory of vertical and lateral integration. *Journal of Political Economy* 94, 691-719.

Grossman, Sanford, and Oliver Hart, 1982, Corporate financial structure and managerial incentives, in J. J. McCall Ed.: *The Economics of Information and Uncertainty* (University of Chicago Press, Chicago), 123-155.

Guillen, M. 1997. Business groups in economic development. Academy of Management Best Paper Proceedings: 170-174. Hamilton, G. (Ed.). 1996.

Hayashi, F. 1982. Tobin's marginal  $q$  and average  $q$ : A neoclassical interpretation. *Econometrica* 50, 213-224.

Herdeck, Margaret and Piramal, Gita. 1985. India's Industrialists. Volume One, Washington, D.C., Three Continents Press.

Himmelberg, C., Hubbard, G., & Palia, D. (1999). Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of Financial Economics*, 53(3), 353-384.

Holderness, Clifford, and Dennis Sheehan, 1988a, What constrains managers who own large blocks of stock? Managerial Economics Research Center Working Paper 88-07, University of Rochester.

Holderness, Clifford, and Dennis Sheehan, 1988b, The role of majority shareholders in publicly held corporations: An exploratory analysis. *Journal of Financial Economics* 20, 317-346.

Holderness, C. G., and D. P. Sheehan, 1991. Monitoring an owner: The case of Turner Broadcasting, *Journal of Financial Economics* 30-2, December, 1991, 325-346.

Hoshi, T., A. Kashyap, and D. Scharfstein (1990a): "Bank Monitoring and Investment: Evidence from the Changing Structure of Japanese Corporate Banking Relationships," in *Asymmetric Information, Corporate Finance, and Investment*, ed. by G. Hubbard, pp. 105-26, University of Chicago Press

Hoshi, T., Kashyap, A., & Scharfstein, D. 1991. Corporate structure, liquidity, and investment: Evidence from Japanese industrial groups. *Quarterly Journal of Economics*, 106: 33-60.

Hubbard, R. G. 1998. Capital market imperfections and investment. *Journal of Economic Literature* 36, 193-225.

Keister, L. A. 1998. Engineering growth: Business group structure and firm performance in China's transition economy. *American Journal of Sociology*, 104: 404-440. Khanna, T. 1997

Keister L. 1998a. Engineering growth: business group structure and firm performance in China's transition economy. *American Journal of Sociology* 10: 404- 440.

Keister L. 1998b. The emergence of interorganizational exchange: the effects of uncertainty, firm reputation and cost on resource exchange in Chinese business groups. University of North Carolina and Ohio State University mimeograph.

Khanna, Tarun, and Palepu, Krishna. 1997. Why Focused Strategies May be Wrong for Emerging Markets, *Harvard Business Review*, July-August.

Khanna, T., & Palepu, K. 1999a. Emerging Market Business Groups, Foreign Investors and Corporate Governance. In R. Morck (Ed.). *Concentrated ownership*: Forthcoming. Chicago: University of Chicago Press.

Khanna, T., & Palepu, K. 1999b. Policy shocks, market intermediaries, and corporate strategy: The evolution of business groups in Chile and India. *Journal of Economics and Management Strategy*, 8: 271-310.

Khanna, T., & Palepu, K. 2000a. Is group membership profitable in emerging markets? An analysis of diversified Indian business groups. *Journal of Finance*: In press.

Khanna, T., & Palepu, K. 2000b. The Future of Business Groups in Emerging Markets : Long-run Evidence from Chile. *The Academy of Management Journal*, Vol 43, No 3, Jun 2000, pp.268-285.

Khanna, T. and Rivkin. 2001. Estimating the Performance Effects of Business Groups in Emerging Markets. *Strategic Management Journal. Strat. Mgmt. J.*, 22: 45-74 (2001).

Khanna, T., & Wu, D. 1998. *Empresas CAP, 1994*. Harvard Business School Case 9-798-053.

Kikeri, Sunita; Nellis, John; Shirley, Mary. Privatization : the lessons of experience. Washington, D.C. : World Bank, c1992. iv, 86 p.

Keynes, J. M. 1936. *The General Theory of Employment, Interest, and Money*. London: Macmillan, 151.

Krueger, A. 1974. The political economy of rent-seeking society. *American Economic Review*, 64: 291-303.

Kunio Y. 1988. *The Rise of Ersatz Capitalism in South- East Asia*. Oxford University Press: Singapore.

Lamont, Owen, 1997. Cash Flow and Investment: Evidence from Internal Capital Markets. *The Journal of Finance*, Vol LII, No1, March 1997.

Lang, L. H. P. and R. H. Litzenberger. 1989. Dividend announcements: Cash flow signaling vs. free cash flow hypothesis? *Journal of Financial Economics* 24, 181-191.

Lang, L. H. P., Stulz, R. M., and R. A. Walkling. 1989. Managerial performance, Tobin's q, and the gains from successful tender offers. *Journal of Financial Economics* 24, 137-154.

Lang, L. H. P., & Stulz, R. M. (1994). Tobin's q, corporate diversification and firm performance. *Journal of Political Economy*, 102(6), 1248-1281.



- Lang, Larry, and Stulz, Rene. 1993. Tobin's q, Corporate Diversification, and Firm Performance, *Journal of Political Economy*, 102, 142-174.
- La Porta, Rafael, Lopez-de-Silanes, Florencio, Shleifer, Andrei, and Vishny, Robert W. 1997. Legal Determinants of External Finance. *The Journal of Finance*, Vol LII, No3, July 3, July 1997.
- La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R. 1998. Law and finance. *Journal of Political Economy* **106**: 1113–1155.
- La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. 1999. Corporate ownership around the world. *Journal of Finance*, 54: 471-517.
- Leal, R., Silva, A. C., & Valadares, S. (2002, January/April). Estrutura de controle das companhias brasileiras de capital aberto. *Revista de Administração Contemporânea*, 6(1), 07-18.
- Lee, D. E. and J. G. Tompkins. 1999. A modified version of the Lewellen and Badrinath measure of Tobin's q. *Financial Management*, 28, 20-31.
- Leff, N. 1976. Capital markets in the less developed countries: The group principal. In R. McKinnon (Ed.), *Money and finance in economic growth and development*: 97-122. New York: Dekker.
- Leff, N. 1978. Industrial organization and entrepreneurship in the developing countries: The economic groups. *Economic Development and Cultural Change*, 26: 661-675.
- Leung, Erika et. al, 2002. Financial Reform and Corporate Governance in China. MIT Sloan School of Management 50<sup>th</sup> Anniversary Proceedings, June 2002, Cambridge, Massachusetts.
- Lincoln, J. R., Gerlach, M. L., & Ahmadjian, C. L. 1996. Keiretsu networks and corporate performance in Japan. *American Sociological Review*, 61: 67-88.
- Lins, K. V. (2003, March). Equity ownership and firm value in emerging markets. *Journal of Financial and Quantitative Analysis*, 38(1), 159-184.
- Litwack, John. 1995. Corporate Governance, Banks, and Fiscal Reform in Russia in Akamatsu, Noritaka. 1995.
- Lomnitz, L. A., & Perez-Lizaur, M. 1987. A Mexican elite family, 1820-1980: Kinship, class, and culture. (C. Lomnitz, trans.).
- Lewellen, W. G. and S. G. Badrinath. 1997. On the measurement of Tobin's q. *Journal of Financial Economics* 44, 77-122.
- Lindenberg, E. B. and S. A. Ross. 1981. Tobin's q ratio and industrial organization. *Journal of Business* 54, 1-32.

Lopez-de-Silanes, Florencio, Andrei Shleifer, and Robert W. Vishny, 1997, Privatization in the United States, *Rand Journal of Economics* 28.

Lucas, R. E., Jr. and E. C. Prescott. 1971. Investment under uncertainty. *Econometrica* 39, 659-681.

Jeffrey K. MacKie-Mason, 1990. "Do Firms Care Who Provides Their Financing?," NBER Chapters, in: *Asymmetric Information, Corporate Finance, and Investment*, pages 63-104 National Bureau of Economic Research, Inc.

Mayer, Colin, 1990, Financial systems, corporate finance, and economic development, in R. G. Huhhard, Ed.: *Asymmetric Information, Corporate Finance, and Investment* (University of Chicago Press, Chicago).

McConnell, J. J. and H. Servaes. 1990. Additional evidence on equity ownership and corporate value. *Journal of Financial Economics* 27, 595-612.

Meggison, William, Robert Nash, and Matthias van Randenborgh, 1994, The financial and operating performance of newly privatized firms. *Journal of Finance* 49, 403-452.

Monckeberg, María Olivia. El Saqueo: de los grupos económicos AL Estado chileno. Ediciones B. Chile, Santiago do Chile, 2001, 269pp.

Morck, Randall, Andrei Shleifer, and Robert Vishny, 1988a, Characteristics of targets of hostile and friendly takeovers, in A. Auerhach, Ed.: *Corporate Takeovers: Causes and Consequences* (University of Chicago Press, Chicago),

Morck, R., Shleifer, A., and R. W. Vishny. 1988. Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics* 20, 293-316.

Morck, R., Shleifer, A., and R. W. Vishny. 1990. The stock market and investment: Is the market a sideshow? *Brookings Papers on Economic Activity* 1990:2, 157- 202.

Mork, R., Percy, M., Tian, G., Yeung, B., The Rise and Fall of the Widely Held Firm: A History of Corporate Ownership in Canada. Working Paper 10635. National Bureau of Economic Research 1050 Massachusetts Avenue, Cambridge, MA 02138, July 2004.

Moulton, B. R. 1990. An Illustration of a Pitfall in Estimating the Effects of Aggregate Variables on Micro Units, *The Review of Economics and Statistics*, pp. 334-338.

Moulton, B. R. 1986. Random Group Effects and the Precision of Regression Estimates. *Journal of Econometrics*, 32, pp. 385-397.

Mussa, M. 1977. External and internal adjustment costs and the theory of aggregate and firm investment. *Economica* 44, 163-178.

N. Akamatsu (1995), "Enterprise Governance and Investment Funds in Russian Privatisation", in Aoki, Masahiko, Hyung-Ki Kim (eds.), *Corporate Governance in*

*Transitional Economies. Insider Control and the Role of Banks*, Washington D.C., pp.121-183.

Neoh, Anthony. 2000. China's domestic capital markets in the new millennium, Chinaonline.com.

Neoh, Anthony, 2002. Corporate Governance in China. Talk at China Harvard Review conference, April 13.

Nunes, Ricardo da Costa – Privatização e Ajuste Fiscal no Brasil. Ministério da Fazenda. 79 pp. Disponível em [http://www.tesouro.fazenda.gov.br/Premio\\_TN/IIpremio/ajuste\\_fiscal/1tefpIIPTN/NUNES\\_Ricardo\\_da\\_Costa.pdf](http://www.tesouro.fazenda.gov.br/Premio_TN/IIpremio/ajuste_fiscal/1tefpIIPTN/NUNES_Ricardo_da_Costa.pdf)

Okimura, R., Silveira A., Rocha, K. 2007. Estrutura de Propriedade e Desempenho Corporativo no Brasil. Anpad, Rac-Eletrônica, v.1, n. 1, art.8, p.119-135, Jan-Abr. 2007.

Okimura, Rodrigo Takashi. 2003. Estrutura de Propriedade, Governança Corporativa, Valor e Desempenho das Empresas no Brasil. Dissertação apresentada ao Departamento de Administração da Faculdade de Economia, Administração, e Contabilidade da Universidade de São Paulo, como requisito parcial para a obtenção do título de Mestre em Administração.

Opler, T. and S. Titman. 1993. The determinants of leveraged buyout activity: Free cash flow vs. financial distress costs. *Journal of Finance* 48, 1985-1999.

Pagano, Marco, F. Panetta, and Luigi Zingales, 1995, Why do companies go public? An empirical analysis, manuscript. Graduate School of Business, University of Chicago.

Pedersen, Torben and Thomsen, Steen. 1997. European Patterns of Corporate Ownership: A Twelve-Country Study. *Journal of International Business Studies*, Vol. 28, No. 4 (4th Qtr., 1997), pp. 759-778.

Perfect, S. B. and K. W. Wiles. 1994. Alternative constructions of Tobin's q: An empirical comparison. *Journal of Empirical Finance* 1, 313-341.

Petkova, N. 2007, Does Foreign Ownership Lead to Higher Firm Productivity? mimeo.

Qiu, Huiyan and Yao, Shaohua. 2008. Share Merger Reform, Corporate Governance and Firm Value in China. School of Economics and Finance, University of Hong Kong. Electronic copy available at: <http://ssrn.com/abstract=1275699>.

Rabelo, Flavio and Silveira, José Maria da. 1999. Estruturas de governança e governança corporativa: avançando na direção da integração entre as dimensões competitivas e financeiras. Texto para Discussão. IE/UNICAMP, Campinas, n. 77, jul. 1999.

- Perez-Gonzales, Francisco, 2004. The Impact of Acquiring Control on Productivity: Evidence from Mexican Manufacturing Plants, mimeo.
- Perez-Gonzales. 2006. "Inherited Control and Firm Performance," *American Economic Review*, December 2006, Vol. 96, No. 5, pp. 1559-1588
- Perez-Gonçalves. 2007. "Inside the Family Firm: The Role of Families in Succession Decisions and Performance" joint with Morten Bennedsen, Kasper Nielsen and Daniel Wolfenzon *Quarterly Journal of Economics*, May 2007, Vol. 122, No. 2: 647-691. NBER W. P. 12356; European Corporate Governance Institute W. P. No. 132/2006
- Pinheiro, Armando Castelar. 2000. A Experiência Brasileira de Privatização: o que vem a seguir?. Disponível em: <http://www.bndes.gov.br/conhecimento/td/Td-87.pdf>
- Piramal, Gita. 1996. Business Maharajahs, Viking Press, Bombay.
- Rabelo, Flávio; Silveira, José Maria da. Estruturas de Governança e Governança Corporativa: Avançando na direção da integração entre as dimensões competitivas e financeiras. IE/UNICAMP n° 77, 1999
- Rajan, R., Servaes, H., and L. Zingales. 2000. The diversification discount and inefficient investment. *Journal of Finance* 55, 35-80.
- Rapaczynski, Andrzej. 1996. The Roles of the State and the Market in Establishing Property Rights. *Journal of Economic Perspectives*, Volume 10, Number 2, Spring 1996, Pages 87-103.
- Richard E. Caves, *Multinational Enterprise and Economic Analysis*, Second Edition (New York: Cambridge University Press, 1996). ISBN 0-521-47858-8. Available from the University Bookstore.
- Robinson, Richard. 1986. Indonesia: The Rise of Capital, Sydney: Allen and Unwin.
- Salinger, M. A. 1984. Tobin's q, unionization, and the concentration-profits relationship. *The Rand Journal of Economics* 15, 159-70.
- Scielo: Os efeitos da privatização sobre o desempenho econômico e financeiro das empresas privatizadas
- Servaes, H. 1991. Tobin's q and the gains from takeovers. *Journal of Finance* 46, 409-419.
- Shapiro, Carl, and Robert D. Willig, 1990, Economic rationales for the scope of privatization, in E. N. Suleiman and J. Waterbury, Eds.: *The Political Economy of Public Sector Reform and Privatization* (Westview Press, London), 55-87.
- Shin, Hyun-Han and Stulz, Rene M. 1998. Are Internal Capital Markets Efficient?. *The Quarterly Journal of Economics*, May 1998, 531-552.

Schwartz, Adam. 1992. *A nation in Waiting: Indonesia in the 1990s*, Allen & Unwin, Australia.

Shleifer, Andrei, and Lawrence Summers, 1988, Breach of trust in hostile takeovers, in A. J. Auerbach, Ed.: *Corporate Takeovers: Causes and Consequence* (University of Chicago Press, Chicago), 65-88.

Shleifer, Andrei, and Robert Vishny, 1986a, Greenmail, white knights, and shareholder's interest. *Rand Journal of Economics* 17, 293-309.

Shleifer, Andrei, and Robert Vishny, 1986b, Large shareholders and corporate control. *Journal of Political Economy* 94, 461-488.

Shleifer, Andrei, and Robert Vishny, 1988, Value maximization and the acquisition process. *Journal of Economic Perspectives* 2, 7-20.

Shleifer, Andrei, and Robert Vishny, 1989, Management entrenchment: The case of managerspecific investments. *Journal of Financial Economics* 25, 123-140.

Shleifer, Andrei, and Robert Vishny, 1990, Equilibrium short horizons of investors and firms, *American Economic Review Papers and Proceedings* 80, 148-153.

Shleifer, Andrei, and Robert Vishny, 1992, Liquidation values and debt capacity: A market equilibrium approach. *Journal of Finance* 47, 1343-1366.

Shleifer, Andrei, and Robert Vishny, 1993, Corruption, *Quarterly Journal of Economics* 108 599-618.

Shleifer, Andrei, and Robert Vishny, 1994, Politicians and firms. *Quarterly Journal of Economics* 109, 995-1025.

Shleifer, Andrei and Robert W. Vishny, 1997. A Survey of Corporate Governance. The journal of Finance. Vol. LU, No2, June 1997. The Journal of Finance. Vol LU, No 2. June 1997.

Stein, Jeremy C, 1997. " Internal Capital Markets and the Competition for Corporate Resources," Journal of Finance, American Finance Association, vol. 52(1), pages 111-33, March.

Silveira, Alexandre M., Lanzana, Ana Paula. Efeito da Diferença entre o Direito de Controle e o Direito Sobre o Fluxo de Caixa dos Acionistas Controladores no Valor das Companhias Abertas no Brasileiras. Monografia premiada no 1º Prêmio IBGC de Monografia em Governança Corporativa, São Paulo, 2003.

Silveira et al. 2004. Efeito dos acionistas controladores no valor das companhias abertas brasileiras. Revista de Administração da Universidade de São Paulo. Volume 39, número 4, outubro, novembro, dezembro 2004.

Silveira, A., Lanzana, A.P., Lucas A., Famá R., 2004b. Effect of Controlling Shareholder on Market Value of Brazilian Listed Companies. Business Association of Latina American Studies, Conference May 2004, Massachussetts, USA.

Silveira, A., Barros, L., Famá, R. 2006. Atributos Corporativos, Qualidade da Governança Corporativa e Valor das Companhias Abertas no Brasil. Revista Brasileira de Finanças, 2005, Vol4, Número 1, PP.1-30.

Silveira, Alexandre Di Miceli. 2004. Governança Corporativa e Estrutura de Propriedade: determinantes e Relação com o Desempenho das Empresas no Brasil. Tese de Doutorado apresentada ao Departamento de Administração da Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo.

Silveira, A. Perobelli, F, Barros L. 2008. Corporate Governance and Determinants of Capital Structure: Empirical Evidence from Brazilian Markets. RAC, Curitiba, v. 12, n. 3, p. 763-788, Jul./Set. 2008.

Singh, Ajit, 1995, Corporate financial patterns in industrializing economies: A comparative international study. Technical Paper.

Siqueira, Tagore Villarim de. 1998. Concentração da Propriedade nas Empresas Brasileiras de Capital Aberto. BNDES. Disponível em [http://www.bndes.gov.br/SiteBNDES/bndes/bndes\\_pt/Institucional/Publicacoes/Consulta\\_Expressa/Setor/Governanca\\_Corporativa/199812\\_7.html](http://www.bndes.gov.br/SiteBNDES/bndes/bndes_pt/Institucional/Publicacoes/Consulta_Expressa/Setor/Governanca_Corporativa/199812_7.html).

Smith, G. 1981. Investment and  $q$  in a stock valuation model. Southern Economic Journal, 47, 1007-1020.

Stiglitz, Joseph E. *Making Globalization Work*. New York, London: W. W. Norton, 2006. p.142.

Strachan, Harry. 1976. Family and Other Business Groups in Economic Development: The Case of Nicaragua, New York. Praeger.

Stulz, René, 1988, Managerial control of voting rights. *Journal of Financial Economics* 20, 25-59.

Stulz, René, 1990, Managerial discretion and optimal financing policies. *Journal of Financial Economics* 26, 3-27.

Summers, L. H. 1981. Taxation and corporate investment: A  $q$ -theory approach. Brookings Papers on Economic Activity 1981:1, 67-127.

Thomsen, S., Pedersen, T. European ownership concentration: causes and consequences. Institute of International Economics and Management/Copenhagen Business School, 1997.

Titman, S. and R. Wessels. 1988. The determinants of capital structure choice. *Journal of Finance* 43, 1-19.

Tobin J. 1969. A general equilibrium approach to monetary theory. *Journal of Money Credit and Banking* 1, 15-29.

Ungson GR, Steers RM, Park S. 1997. *Korean Enterprise: The Quest for Globalization*. Harvard Business School Press: Boston, MA.

Villalonga and Amit, 2004. How do Family Ownership, Control, and Management affect firm value? *Journal of Financial Economics* 80 (2006) 385–417.

Wang, Xiaozu, Xu, Lixin Colin, Zhu, Tian. 2001. *State-owned Enterprises Going Public: The Case of China*. Working Paper, Hong Kong University of Science and Technology, December 2001.

White, Lawrence J. 1974. *Industrial Concentration and Economic Power in Pakistan*. Princeton: Princeton University Press.

Wooldridge, Jeffrey, 2002, *Introductory Econometrics: A modern Approach*, South-Western Educational, 819.

Wruck, Karen, 1989, Equity ownership concentration and firm value. *Journal of Financial Economics* 23, 3-28.

Xu, Xiaonian and Wang, Yan. 1999. Ownership Structure and Corporate Governance in Chinese Stock Companies. *China Economic Review*, 10, 1999, pp.75-98.

Xu, Xiaonian and Wang, Yan. 1997. *Ownership, Corporate Governance and Corporate Performance: The Case of Chinese Stock Firms*. Amherst College and The World Bank mimeograph.

Yermack, D. 1996. Higher market valuation of companies with a small board of directors. *Journal of Financial Economics* 40, 185-212.

Zhang , Chunlin and Stoyan Tenev. 2002a. *Corporate Governance and Enterprise Reform in China: Building the Institutions of Modern Markets*. The World Bank. April.

Zhang, Joe. 2002b. *China's Corporate Governance: A steep learning curve*. UBS Warburg, January 17.