

OECD



**Organisation for Economic Co-operation and Development
In Co-Operation With The World Bank Group**

**Ownership, Control and Corporate Valuation of Brazilian
Companies**

by

André Carvalhal, Ricardo Leal, Sílvia Valadares, Jairo Procianoy,
Reinaldo Aloy Jr. and Guilherme Lapagess

**The Latin American Corporate Governance Roundtable
26-28 April, 2000, The São Paulo Stock Exchange,
São Paulo, Brazil**

**Co-hosted by:
The São Paulo Stock Exchange**

**With the support of:
The Brazilian Securities and Exchange Commission
The Brazilian Institute of Corporate Governance (IBGC)
and
The World Bank / OECD Global Corporate Governance Forum**

Ownership, Control and Corporate Valuation of Brazilian Companies

André Carvalho, Ricardo Leal, Sílvia Valadares, Jairo Procianoy,

Reinaldo Aloy Jr. and Guilherme Lapagess*

I. Introduction

The objective of this article is to analyze the ownership and control structure of Brazilian companies and the effect of cash flow and voting rights on market valuation. We evaluate the degree of concentration in company ownership along with the mechanisms utilized to separate control from ownership.

The understanding of ownership structure is very important since it influences directly the efficiency of the market for corporate control. First it shows the degree of risk diversification of shareholders. When ownership is concentrated, there is less risk diversification by shareholders. A second important point is that it shows a potential agency problem in the management of the firm. There may be an agency problem between managers and shareholders because managers may not be maximizing shareholder's value. When there is a stockholder that can influence the control of a company, a new agency problem can arise between controlling shareholders and minority shareholders. We will examine these points by looking into direct and indirect ownership concentration of Brazilian companies.

This research continues the study of Valadares and Leal (2000) on ownership and control structures of Brazilian companies. Valadares and Leal evaluate the structure of ownership and control of 325 public Brazilian companies listed at the São Paulo Stock Exchange (Bovespa). They analyze the direct and the indirect ownership structures and find a high degree of ownership concentration. The concentration occurs mainly with the violation of the one share-one vote rule through the use of non-voting shares. They suggest that pyramiding structure is not commonly used as a way of violating the one share-one vote rule.

This paper also follows an extensive literature on the effects of corporate ownership structures on valuation. Jensen and Meckling (1976) and Morck et al (1988) have provided important contributions to the research on ownership structures and corporate valuation. Jensen and Meckling concluded that concentrated ownership is beneficial for corporate valuation, because large investors are better at monitoring managers. Morck et al distinguish between the negative control effects and the positive incentive effects of higher shares of ownership. They suggest that the absence of separation between ownership and control reduces conflicts-of-interest and thus increases shareholder value.

Recent research suggests that higher cash flow rights are associated with higher valuation. In contrast, the concentration of control rights and the separation of voting from cash flow rights have a negative effect on

* Carvalho, Leal, Aloy Jr., and Lapagess are from the Coppead Graduate School of Business (Federal University of Rio de Janeiro), Valadares is from the Ministry of Planning, Budget and Management, and Procianoy is from the PPGA (Federal University of Rio Grande do Sul).

firm value. Shleifer and Vishny (1997), La Porta et al (1998), and Morck et al (1999) study the conflicts of interest between large and small shareholders. When large investors control a corporation, their policies may result in the expropriation of minority shareholders. Such companies are unattractive to small shareholders and their shares have lower valuation.

Claessens et al (1999) separate the effects of control and cash flow ownership on the valuation of firms in several East Asian companies. They find that higher control adversely affects valuation, consistent with Morck et al (1998) and Shleifer and Vishny (1997), while cash flow ownership affects it positively, consistent with the findings of Jensen and Meckling (1976). They conclude that the risk of expropriation is the major principal-agent problem for corporations in East Asia.

The power of the controlling shareholders to expropriate outside investors is moderated by their financial incentives not to do so. An important source of such incentives is equity or cash flow ownership by the controlling shareholder. In general, expropriation is costly and therefore higher cash flow ownership should lead to lower expropriation, other things equal.

La Porta et al (1999) evaluate the effects of legal protection of minority shareholders and of cash flow ownership by a controlling shareholder on the valuation of 371 firms from 27 developed economies. They find evidence of higher valuation of firms in countries with better protection of minority shareholders and weaker evidence of the benefits of higher cash flow ownership by controlling shareholders for corporate valuation.

In this article, we will test six hypotheses in order to analyze the effects of cash flow and voting rights of the controlling shareholder on market valuation of Brazilian companies. Recent research (Shleifer and Vishny (1997), La Porta et al (1998), Morck et al (1999), and Claessens et al (1999)) suggests that the concentration of voting rights by the controlling shareholders is associated with more expropriation of minority shareholders since large owners prefer to generate private benefits of control that are not shared by minority shareholders. So the first hypothesis to be tested is:

- H1: Higher concentration of voting rights by the controlling shareholder is associated with more expropriation of minority shareholders.

As pointed out by Prociyanoy e Comerlato (1994), there is an agency problem when companies or groups of companies do not maximize shareholder's value by transferring profits between corporations belonging to the same group. They suggest there is a negative effect on the company's value as a consequence of expropriation of minority shareholders. La Porta et al (1999) find evidence of higher valuation of firms in countries with better protection of minority shareholders. Claessens et al (1999) interpret the value discount as evidence of expropriation of minority shareholders by controlling shareholders. They find that companies with higher expropriation are unattractive to small shareholders and their shares are valued less relative to their market peers. So the second hypothesis to be tested is:

- H2: Higher expropriation of minority shareholders is associated with lower corporate valuation.

The third hypothesis to be tested is derived directly from hypotheses 1 and 2:

- H3: Higher concentration of voting rights by the controlling shareholder is associated with lower corporate valuation.

Jensen and Meckling (1976) conclude that concentrated ownership is beneficial for corporations because large investors are better at monitoring managers. Morck et al (1988) suggest that the absence of separation between ownership and control reduces conflicts-of-interest. Burkart, Gromb and Panunzi (1998) argue that, in general, expropriation is costly and therefore higher cash flow ownership should lead to lower expropriation, other things equal.

La Porta et al (1999) argue that the power of the controlling shareholders to expropriate outside investors is moderated by their financial incentives not to do so. An important source of such incentives is equity or cash flow ownership by the controlling shareholder. Claessens et al (1999) suggest that higher cash flow ownership by the controlling shareholder affects corporations positively, consistent with the findings of Jensen and Meckling (1976). So, the fourth hypothesis to be tested is:

- H4: Higher cash flow ownership by the controlling shareholder is associated with less expropriation of minority shareholders.

The fifth hypothesis to be tested is derived directly from hypotheses 2 and 4:

- H5: Higher cash flow ownership by the controlling shareholder is associated with higher corporate valuation.

The sixth hypothesis to be tested is derived directly from hypotheses 3 and 5:

- H6: Higher separation of voting from cash flow rights by the controlling shareholder is associated with lower corporate valuation.

The paper is structured as follows. Section II describes the data sample and the methodology utilized in this paper including the construction of the ownership and control variables and the expropriation measure. Section III contains an analysis of the direct shareholding composition of Brazilian companies, along with the utilization of non-voting shares as a way of financing them. Indirect shareholding and the use of pyramidal

structures are discussed in Section IV. Section V investigates the evidence on small shareholder expropriation in Brazil. Section VI concludes.

II. Data and Methodology

The sample comes from companies listed on the São Paulo Stock Exchange (Bovespa) that are not controlled by the Government. We collected information on the shareholding structure from the Infoinvest Database (Browne Global Solutions). Publicly traded companies are required to issue an Annual Report by the end of the first semester of each year regarding the last fiscal year. This report must supply, among other data, information about the equity capital. We selected Annual Reports submitted in the first semester of 1999, with data referring to year end 1998 (in Brazil the fiscal year runs concurrently with the calendar year). One of the objectives of this article is to analyze the ownership and control structure of Brazilian companies at the end of 1998, and compare it with the results of Valadares and Leal (2000), who analyze the shareholding composition of Brazilian companies at the end of 1996.

The sample includes both financial institutions and non-financial institutions and excludes companies with incomplete or unavailable information and with negative book value of assets, negative book value of common equity and firms that had no trade on the São Paulo Stock Exchange (Bovespa) in December 1998 (these restrictions are associated with the computation of the expropriation measure and will be explained later). The final sample consists of 225 firms not controlled by the Government, which represents about 70% of the Bovespa market capitalization including government-controlled companies, and more than 90% of the Bovespa market capitalization excluding government-controlled companies.

Like Valadares and Leal (2000), we analyze two forms of shareholding composition: direct and indirect. Direct shareholders are those who own shares in the company itself. We consider all shareholders with 5% or more of the voting capital. This is because 5% is the threshold for mandatory identification of shareholders in Brazil. Indirect composition represents stockholders who ultimately own the company. For example, if a shareholder has 50% of a company that owns 50% of another company, the former has 25% of the capital of the latter company (50% times 50%). A situation such as this is found in Figure 1, that shows the shareholding composition of Lojas Americanas. Directly, the company has only one large shareholder (who holds 5% of the voting capital), the firm Varbra S.A. with 48.11% of the voting capital and 18.06% of the total capital. This company (Varbra S.A.), in turn, is held by three shareholders, with 50.28%, 11.13% and 11.13% of the voting capital and 35.16%, 12.85% and 12.85% of the total capital each. In other words, Lojas Americanas indirectly has three shareholders, with the major one having 24.19% (50.28% times 48.11%) of the voting capital and 6.35% (35.16% times 18.06%) of the total capital.

This analysis was possible since the Annual Reports also show the shareholding composition of parent companies when they exist. Thus, we analyzed the shareholding composition backwards until we were able to

classify the true owners into one of the following groups: individuals, banks, insurance companies, pension funds, employees, foreigners (either individuals or entities), government, foundations or investment funds.

Like Valadares and Leal (2000), we divide the 225 companies into two groups: firms with a majority shareholder and firms without a majority shareholder. A company with a majority shareholder is one where a single shareholder has directly more than 50% of the voting capital. For the direct and indirect shareholder composition we compute the voting capital and total capital that the largest shareholder, the three largest and the five largest have on each company. Then we compute the median and the average voting capital and total capital that the largest shareholder, the three largest and the five largest have on the group of firms with a majority shareholder and on the group of firms without a majority shareholder.

To verify if pyramidal structures are utilized to maintain control with reduced overall investment in the company, we analyze the companies with one controlling shareholder, comparing the direct and indirect interest. We classify the companies in which there was one controlling shareholder into five categories. The first group refers to companies where control is not maintained directly. For these companies control is not maintained at some level of the pyramid, i.e., there is no shareholder with more than 50% of the voting capital at all levels of ownership. An example of this situation can be seen in Figure 2, showing the indirect shareholder composition of Inepar S.A. Indústria e Comércio. Although, at the first level, one company (Inepar Administração e Participações S.A.) has a controlling 60.68% stake, this latter firm has five shareholders with no single controller. In this case, we say there is no indirect control, since in the sequence no shareholder has more than 50% of the voting capital.

The second group refers to companies where we observe a pyramid with maintenance of control - at all levels there is a shareholder with more than 50% of the voting capital, with control thus exercised by a single shareholder. We divide these companies into three subgroups: those with concentration of capital, i.e, indirectly the largest shareholder has a greater interest than it does directly; those where participation in the capital is maintained; and those where the participation in the capital is reduced.

An example of how the concentration of capital can occur is shown in Figure 3 for Construções Comércio Camargo Corrêa S.A. This occurs because the shareholder Dirce Navarro, besides being a direct owner, also detains nearly all of the capital of the companies that are the remaining shareholders.

An example of maintenance of control and participation can be seen in Figure 4, showing Dana Albarus S.A. Indústria e Comércio. The indirect controller, Dana Corporation, owns 100% of the capital of the directly controlling shareholder, Dana Equipamentos Ltda. Thus it controls the company with the same proportion of the capital.

The next group contains companies where there is maintenance of control by a shareholder that indirectly has a lesser interest than it does directly. An example is show in Figure 1, Lojas Americanas. In this case, control is maintained with 24.19% of the voting capital and only 6.35% of the total capital. The pyramidal structure allows the controlling shareholder to leverage his or her position. The minimum to maintain control of

a company without resorting to a pyramid is 16.7% of the total capital (by holding just over 50% of the voting capital when this represents the lower legal limit of one-third of the total capital). In Brazil companies are permitted to issue shares without voting rights in an amount up to two-thirds of the total capital stock (Law 6404 - Law of Corporations). This allows companies to issue shares without relinquishing control and is therefore a way of separating ownership from control. Control of a company can be guaranteed with only one-sixth of its total capital. Thus, this group may represent companies where a pyramidal structure is used to separate ownership and control, or to maintain distance from the one share-one vote rule.

The last group contains companies where the direct and indirect composition is the same - the same participation and the same shareholder. These are companies that do not use a pyramidal control structure. Our results for the composition of ownership and control of Brazilian companies are presented in the next two sections.

III. Direct Shareholding Composition

Valadares and Leal (2000) reported that 203 out of 325 (62.5%) Brazilian companies had a single shareholder holding more than 50% of the voting capital in 1996. This shareholder had on average 74% of the voting capital. Among the companies where control was not held by only one shareholder (122), the largest one owned on average 32% of the voting capital. Considering the sample as a whole, the largest shareholder had 58% of the voting capital. This shows a large degree of concentration of the voting capital.

Table I shows the structure of ownership and control of Brazilian companies in 1998. Our results in Table I are quite similar to the analysis of Valadares and Leal (2000) for the year 1996. Of the 225 companies, 155 (69%) have a single shareholder holding more than 50% of the voting capital. This shareholder has an average of 74% of the voting capital, very near the median of 75%. Among the companies where control is not held by only one shareholder (70), the largest one owned an average of 31% of the voting capital, with a median of 30%. This shows that even when a single shareholder does not have the majority of the votes, the largest shareholder holds a considerable portion of them. Considering the sample as a whole, the largest shareholder, the three largest, and the five largest have, respectively, 61%, 79% and 84% of the voting capital.

Insert Table I

As reported by Valadares and Leal (2000) for the year 1996, our results shows a large degree of concentration of the voting capital. Even when there is no majority shareholder, the largest one owns a significant portion of the voting capital, and the company is, on average, controlled by its three largest shareholders. Besides this, 84% of the voting capital of companies are in the hands of the five largest shareholders.

We also can note a reasonable difference between the percentage of voting and total capital held by large shareholders. The issuance of non-voting shares appears to be used by large shareholders to maintain control of the firm without having to hold 50% of the total capital. In companies with a single shareholder, this investor has on average 74% of the votes but only 53% of the total capital. Considering the entire sample, the five largest shareholders have 84% of the voting capital but only 58% of the total capital. As pointed out by Valadares and Leal (2000) for the year 1996, if there is some diffusion in ownership of the firm, this occurs through non-voting shares. The issuance of non-voting shares allows maintenance of control with a lower participation in the firm's capital and this can lead to a separation of ownership from control.

IV. Indirect Shareholding Composition

Valadares and Leal (2000) reported the diminished ownership position of major shareholders in the case of companies with a majority shareholder in 1996. For these companies we can say indirect ownership is more diluted. In direct form, the average majority shareholder owns 74% of the voting capital and 51% of the total, while indirectly the figures are, respectively, 51% and 35%. Nevertheless, this reduced participation of the major stockholder did not occur in the case of companies where there was no single majority shareholder. On the contrary, the data actually showed a small increase in the capital invested.

Table II shows the indirect structure of ownership and control of Brazilian companies in 1998. Our results in Table II are quite similar to those of Valadares and Leal (2000) for the year 1996. In the case of companies where the major shareholder holds more than 50% of the voting capital the indirect ownership is more diluted. In direct form, the average majority shareholder owns 74% of the voting capital and 53% of the total, while indirectly the figures are 55% and 37%. Nevertheless, this reduced participation of the major shareholder does not occur in the case of companies where there is no single majority shareholder. On the contrary, the data actually show a small increase in the capital invested. This same result was found by Valadares and Leal (2000) for the year 1996.

Insert Table II

This fact may indicate a certain utilization of pyramidal structures or publicly traded subsidiaries to maintain control with reduced overall investment in the company. If such pyramidal structure occurs at several levels, the separation between ownership and control, and also the disparity from the one share-one vote rule becomes even greater. As done by Valadares and Leal (2000), we analyze the companies with one controlling shareholder, comparing the direct and indirect interest.

Valadares and Leal (2000) classified the 203 companies with a majority shareholder into five groups. The first group refers to companies where control is not maintained directly. 83 of the initial 203 companies fell

into this group (40.9%), indicating that control is less defined than it appears if looking only at direct composition. The second group refers to companies where we observe a pyramid with maintenance of control, which is divided into three groups: those with concentration of capital; those where participation in the capital is maintained; and those where the participation in the capital is reduced. In 83 companies (40.9%) we observe a pyramid with maintenance of control. There are 21 firms (10.3%) with concentration of capital, 18 firms (8.9%) with maintenance of capital, and 44 firms (22.7%) with diversification of capital. The last group contains companies where the direct and indirect composition are the same. There are 37 companies (18.2%) in this group. These results appear to indicate that the utilization of a pyramid as a mechanism to maintain control of companies at a lower cost, that is, with a lower investment in the total capital, was not very common in 1996.

For the year 1998, we classify the 155 companies in which there was one controlling shareholder into the five groups explained above, as can be seen in Table III. The first group refers to companies where control is not maintained directly, i.e, there is no single shareholder with more than 50% of the voting capital. 53 of the initial 155 companies fell into this group (34%). In 68 companies (44%) we observe a pyramid with maintenance of control - at all levels there is a shareholder with more than 50% of the voting capital. We divide these companies into three groups: those with concentration of capital, with 15 companies (10%); those where participation in the capital is maintained, with 17 companies (11%); and those where the participation in the capital is reduced, with 36 companies (23%). The last group contains companies where the direct and indirect composition is the same - the same participation and the same shareholder. These are companies that do not use a pyramidal control structure. There are 34 companies in this group (22%).

Insert Table III

The data in Table III appear to indicate that the utilization of a pyramid as a mechanism to maintain control of companies at a lower cost, that is, with a lower investment in the total capital, is not very common. Of the 121 companies where a pyramid structure exists, where the direct and indirect interest is different, only 36 (30%) have a shareholder that maintains control with a reduction in the percentage of capital invested. On average, while the majority shareholder ensures control with 54% of the company capital, indirectly it does this with 35%. In 53 firms (44%), the majority shareholder does not maintain control indirectly. Our results are similar to those found by Valadares and Leal (2000) for the year 1996. The utilization of a pyramid structure does not appear to be an effort to avoid the one share-one vote rule in Brazilian companies.

We can conclude that between 1996 and 1998 there were no significant changes in the ownership and control structure of Brazilian companies. Most likely, the major changes happened among privatized companies, while private companies have kept the pattern observed by Valadares and Leal (2000).

V. Measuring Expropriation

Researchers have employed Tobin's Q to measure the discount in market values resulting from expropriation (Morck et al (1988), Barclay and Holderness (1989), McConnell and Servaes (1990), Zingales (1994), La Porta et al (1999), among others). It is constructed as the market value of assets divided by the replacement cost of assets. To net out industry-wide effects, previous papers also make adjustments to firms' Tobin's Q.

Claessens et al (1999) measure expropriation by computing an industry-adjusted excess market value variable (EXV) as the ratio of the firm's actual market value to its imputed value. This excess variable provides a relative value by taking the ratio of market value to sale or assets, while adjusting for industry differences. They use this expropriation measure because of the unavailability of information to compute Tobin's Q for all East Asian countries.

Like La Porta et al (1999), our principal measure of valuation is Tobin's Q. We compute it for the year 1998. We also compute Tobin's Q for the year 1996 in order to measure the discount in market values resulting from expropriation in the study of Valadares and Leal (2000). The numerator of Tobin's Q is the book value of assets minus the book value of common equity and deferred taxes plus the market value of common equity. The denominator is the book value of assets. We also compute industry adjusted measures. For each company in a given industry, we make this adjustment relative to the country-wide average for that industry. Our proxy for market value is computed as the difference between the company's Tobin's Q and the average Tobin's Q for the firm's industry.

We need the market value of common equity to compute the numerator of Tobin's Q. That is the reason why we include in our sample only companies that had at least one trade on the São Paulo Stock Exchange in December 1998. In order to compute the market value of common equity we multiply the number of shares outstanding by the average price of the last trade date in December 1998. We do not compute Tobin's Q for companies with incomplete or unavailable information and for companies with negative book value of assets and negative book value of common equity. The information regarding book value of assets, book value of common equity, deferred taxes and market value of common equity comes from the Economatica Database.

We compute the average Tobin's Q and industry-adjusted Tobin's Q for the group of companies without a controlling shareholder and for each of the five groups of companies in which there was one controlling shareholder. The first group refers to companies where control is not maintained directly. The second group refers to companies where we observe a pyramid with maintenance of control, which is divided into three groups: those with concentration of capital; those where participation in the capital is maintained; and those where the participation in the capital is reduced. The last group contains companies where the direct and indirect composition is the same. Then, we conduct an ANOVA (Analysis of Variance) in order to compare Tobin's Q and industry-adjusted Tobin's Q for the six groups of companies. Thus, we will be able to analyze the effects of cash flow and voting rights of the controlling shareholder on market valuation of Brazilian companies.

We also perform the same test used for Tobin's Q to analyze two important variables: price-to-book value and a measure of systematic risk (beta). Braga and Leal (2000) found evidence that the price-to-book value and beta are important risk factors in the Brazilian stock market. We compute price-to-book value and beta (based on 252 days¹) for each company for the years 1996 and 1998. The beta for each firm is computed as the value-weighted betas of common and preferred stocks. The information regarding price-to-book value and beta comes from the Economatica Database. Then, we compute the average price-to-book value and beta for the group of companies without a controlling shareholder and for each of the five groups of companies in which there was one controlling shareholder. We also compute industry adjusted price-to-book value and beta for all companies and for each of the six groups of companies. We conduct an ANOVA (Analysis of Variance) in order to compare the price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta for the six groups of companies. Thus, we will be able to analyze the relationship among ownership/control structure, valuation (measured by the price-to-book value) and risk (measured by the beta) of Brazilian companies.

For the year 1996, we do not have complete information to compute Tobin's Q, industry adjusted Tobin's Q, price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta for each of the 325 companies studied by Valadares and Leal (2000). So we compute these measures only for the 138 companies where there was available and complete information for the year end 1996. The data in Table IV shows that there is no significant difference in the values of Tobin's Q and industry adjusted Tobin's Q among the six groups of companies. The Tobin's Q and industry adjusted Tobin's Q for the group of companies without a majority shareholder ($Q=0.95$ and adjusted $Q = 0.00$) and for the group of companies where the majority shareholder does not maintain control indirectly ($Q=0.86$ and adjusted $Q=-0.01$) are not significantly different from those of the groups where the majority shareholder maintains control indirectly. However, Tobin's Q seem to be lower for groups with greater concentration of control, although the results are not statistically significant.

Insert Table IV

Table IV also shows that there is no significant difference in the measures of price-to-book value and industry adjusted price-to-book value among the six groups of companies. Although it appears that the group of companies without a majority shareholder ($P-B=1.22$ and

¹ For the telecommunications companies originated from the privatization of Telebras S.A in 1998, we compute betas based on 66 days due to unavailable information.

adjusted $P-B=0.06$) and the group of companies where the major shareholder does not maintain control indirectly ($P-B=0.99$ and adjusted $P-B=0.12$) have higher price-to-book value and industry adjusted price-to-book value, there is no significant difference among the values of the six groups of companies. The magnitude of the risk factor is consistent with greater risk when there is greater concentration.

The results for the systematic risk measure (beta) are quite interesting. Table IV reports a significant difference in the values of beta and industry adjusted beta among the six groups of companies. The betas and industry adjusted betas for the group of companies without a majority shareholder ($\beta=-0.39$ and adjusted $\beta=-0.45$) and for the group of companies where the major shareholder does not maintain control indirectly ($\beta=0.27$ and adjusted $\beta=0.04$) are lower than the betas of the groups where the major shareholder maintains control indirectly. The values of the F-test are significant at the 1% level. So it appears that the companies where there is no major shareholder (directly and indirectly) have lower systematic risk when compared to firms where there is a major shareholder. This would be consistent with observing greater risk for companies with higher opportunity for minority shareholder expropriation.

We performed a differences in means test in order to compare Tobin's Q, industry adjusted Tobin's Q, price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta among the six groups of companies. Table V reports the differences in means test for the year 1996. The results indicate that the group of companies without a majority shareholder has lower betas and adjusted betas when compared to the groups with higher concentration of control. The betas of the group of companies where the major shareholder does not maintain control indirectly appear to be lower than those of the groups with higher concentration of control, but only one difference in means test is statistically significant. It appears that the companies with lower concentration of control have lower systematic risk when compared to firms where there is a major shareholder.

Insert Table V

The results of Table V also indicate that the Tobin's Q, industry adjusted Tobin's Q, price-to-book value and industry adjusted price-to-book value of the group of companies without a majority shareholder are not significantly greater than those of the groups with higher concentration of control. However, Tobin's Q and price-to-book value seem to be higher for groups with lower concentration of control.

We performed the same analysis for the year 1998. We compute Tobin's Q, industry adjusted Tobin's Q, price-to-book value, industry adjusted price-to-book value, beta and industry beta for all 225 companies and for the group of companies in which there was not one controlling shareholder and for each of the five groups of companies with a controlling shareholder. Table VI shows that there is no significant difference in the values of Tobin's Q and industry adjusted Tobin's Q among the six groups of companies. The Tobin's Q and industry adjusted Tobin's Q for the group of companies without a majority shareholder ($Q=0.79$ and adjusted $Q = -0.03$)

and for the group of companies where the majority shareholder does not maintain control indirectly ($Q=0.92$ and adjusted $Q=0.01$) are not significantly different from those of the groups where the majority shareholder maintains control indirectly. However, Tobin's Q seem to be lower for groups with greater concentration of control, despite the lack of statistical significance.

Insert Table VI

Table VI also shows that there is no significant difference in the measures of price-to-book value and industry adjusted price-to-book value among the six groups of companies. Although it appears that the group of companies where the major shareholder does not maintain control indirectly ($P-B=1.23$ and adjusted $P-B=0.27$) have higher price-to-book value and industry adjusted price-to-book value, there is no significant difference among the values of the six groups of companies.

The results for the systematic risk measure (beta) are not consistent with those obtained in 1996. Table VI does not report a significant difference in the values of beta and industry adjusted beta among the six groups of companies. The betas and industry adjusted betas for the group of companies without a majority shareholder ($\beta=0.53$ and adjusted $\beta=0.06$) and for the group of companies where the major shareholder does not maintain control indirectly ($\beta=0.64$ and adjusted $\beta=-0.08$) are not lower than the betas of the groups where the major shareholder maintains control indirectly. The values of the F-test are not significant at the 5% level. So it does not appear that the companies where there is no major shareholder (directly and indirectly) have lower systematic risk when compared to firms where there is a major shareholder in the year of 1998.

We also performed a differences in means test in order to compare Tobin's Q , industry adjusted Tobin's Q , price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta among the six groups of companies. Table VII reports the differences in means test for the year 1998. The results of Table VII indicate that the Tobin's Q , industry adjusted Tobin's Q , price-to-book value and industry adjusted price-to-book value of the group of companies with lower concentration of control do not appear to be greater than those of the groups with higher concentration of control. The results for the systematic risk measure (beta) indicates that there is no statistical evidence that firms without a majority shareholder (directly and indirectly) have lower systematic risk relative to the groups of companies with higher concentration of control for the year 1998.

Insert Table VII

Our analysis of the Tobin's Q , industry adjusted Tobin's Q , price-to-book value, and industry adjusted price-to-book value suggests that there is no significant difference in the corporate valuation of Brazilian companies for the years 1996 and 1998. We do not find the kind of evidence found on recent research (Shleifer

and Vishny (1997), La Porta et al (1998), Claessens et al (1999), La Porta et al (1999), among others) about the effects of corporate ownership structures on valuation. For the Brazilian companies studied in this paper, there is no significant relationship between control and ownership structures, expropriation of minority shareholders and corporate valuation. So our hypotheses regarding concentration of voting rights and cash flow ownership by the controlling shareholder, expropriation of minority shareholders and corporate valuation are rejected for the Brazilian companies analyzed here in 1996 and 1998.

VI. Conclusions

The objective of this article was to analyze the ownership and control structure of Brazilian companies and its effect on market valuation. This research continues the study of Valadares and Leal (2000) on the structure of ownership and control of Brazilian companies. This paper also continues an extensive literature on the effects of corporate ownership structures on valuation. Recent research suggests that higher cash flow rights are associated with higher valuation. In contrast, the concentration of control rights and the separation of voting from cash flow rights have a negative effect on firm value. We test empirically some hypotheses regarding concentration of voting rights and cash flow ownership by the controlling shareholder, expropriation of minority shareholders and corporate valuation.

We analyzed 225 Brazilian companies listed on the São Paulo Stock Exchange (Bovespa) that are not controlled by the Government. The sample includes both financial institutions and non-financial institutions and excludes all companies that had incomplete or unavailable information. Our measures of valuation are Tobin's Q and price-to-book value. We also analyze the systematic risk (beta) for each company. To net out industry-wide effects, we also compute industry adjusted measures. The idea is that different industries might be at different stages of maturity and growth that determine their valuations. We divide the companies into six groups according to their control and ownership structure. Then, we conduct an ANOVA (Analysis of Variance) in order to compare Tobin's Q, industry-adjusted Tobin's Q, price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta among the groups of companies.

As reported by Valadares and Leal (2000) for the year 1996, our results show a large degree of concentration of the voting capital in 1998. Even when there is no majority shareholder, the largest one owns a significant portion of the voting capital, and the company is, on average, controlled by its three largest shareholders. We also can note a reasonable difference between the percentage of voting and total capital held by large shareholders. In Brazil companies are permitted to issue shares without voting rights in an amount up to two-thirds of the total capital stock. This allows companies to issue shares without relinquishing control and is therefore a way of separating ownership from control.

We also find that the utilization of a pyramid as a mechanism to maintain control of companies at a lower cost, that is, with a lower investment in the total capital, is not very common. Our results are similar to

those found by Valadares and Leal (2000) for the year 1996. The utilization of a pyramid structure does not appear to be an effort to avoid the one share-one vote rule in Brazilian companies.

Our analysis of the Tobin's Q, industry adjusted Tobin's Q, price-to-book value, and industry adjusted price-to-book value suggests that there is no significant difference in the corporate valuation of Brazilian companies for the years 1996 and 1998. We do not find the kind of evidence found on recent research (Shleifer and Vishny (1997), La Porta et al (1998), Claessens et al (1999), La Porta et al (1999), among others) about the effects of corporate ownership structures on valuation.

The results for the systematic risk measure (beta) are interesting. For the year 1996, it appears that the companies where there is no major shareholder (directly and indirectly) have lower systematic risk when compared to firms where there is a major shareholder. However, the analysis for the year 1998 does not report a significant difference in the values of beta and industry adjusted beta among the groups of companies.

For the Brazilian companies studied in this paper, there is no significant relationship between control and ownership structures, expropriation of minority shareholders and corporate valuation. So our hypotheses regarding concentration of voting rights and cash flow ownership by the controlling shareholder, expropriation of minority shareholders and corporate valuation are rejected for the Brazilian companies analyzed here in 1996 and 1998. However, the usual caveat that our analysis is as good as the proxies we use applies. Future research may search for better proxies for company valuation or better measures of concentration of control than our categories.

VII. References

- BARCLAY, M., HOLDERNESS, C. Private Benefits from Control of Public Corporations, *Journal of Financial Economics*, 25, pp. 371-95, 1989.
- BRAGA, C., LEAL, R. Risco e Retorno das Ações de Valor e de Crescimento Brasileiras nos Anos 90, *Working Paper*, COPPEAD/UFRJ, 2000.
- BURKART, M., GROMB, D., PANUNZI, F. Why High Takeover Premia Protect Minority Shareholders, *Journal of Political Economy*, 106, 1: pp. 172-204, 1998.
- CLAESSENS, S., DJANKOV, S., FAN, J., LANG, L. Expropriation of Minority Shareholders in East Asia, *World Bank*, manuscript, 1999.
- JENSEN, M., MECKLING, W. Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure, *Journal of Financial Economics*, 11, pp. 5-50, 1976.
- LA PORTA, R., LOPEZ, F., SHLEIFER, A., VISHNY, R. Law and Finance, *Journal of Political Economy*, 106, 4: pp. 1113-1155, 1998.
- LA PORTA, R., LOPEZ, F., SHLEIFER, A., VISHNY, R. Investor Protection and Corporate Valuation, *NBER Working Paper*, 1999.
- McCONNEL, J., SERVAES, H. Additional Evidence on Equity Ownership and Corporate Value, *Journal of Financial Economics*, 27, pp. 595-612, 1990.
- MORCK, R., SHLEIFER, A., VISHNY, R. Management Ownership and Market Valuation: an Empirical Analysis, *Journal of Financial Economics*, 20, pp. 293-315, 1988.
- MORCK, R., STANGELAND, D., YEUNG, B. Inherited Wealth, Corporate Control and Economic Growth, *University of Alberta*, mimeo, 1999.
- PROCIANOY, J., COMERLATO, G. Proposta de um Método para Verificação de Evidências de Transferência de Lucro entre Empresas Similares de Capital Aberto de um Mesmo Grupo Econômico, *Proceedings*, ENANPAD, 1994.
- SHLEIFER, A., VISHNY, R. A Survey of Corporate Governance, *Journal of Finance*, 52, pp. 737-783, 1997.
- VALADARES, S., LEAL, R. Ownership and Control Structure of Brazilian Companies, *Abante*, forthcoming, 2000.
- ZINGALES, L. The Value of the Voting Right: a Study of the Milan Stock Exchange Experience, *Review of Financial Studies*, 7, 1: pp. 125-148, 1994.

Table I

Direct Shareholding Composition of Companies - 1998

Direct shareholding composition of 225 Brazilian companies. A company with a majority shareholder is one where a single shareholder has more than 50% of the voting capital. Data collected from Annual Reports, referring to year-end 1998.

	Companies with a majority shareholder (155)		Companies without a majority shareholder (70)		Total sample (225)	
	Voting Capital	Total Capital	Voting Capital	Total Capital	Voting Capital	Total Capital
Average Largest Shareholder (median)	74% (75%)	53% (50%)	31% (30%)	22% (18%)	61% (59%)	43% (37%)
Average 3 Largest Shareholders (median)	86% (89%)	62% (60%)	65% (69%)	44% (43%)	79% (84%)	56% (55%)
Average 5 Largest Shareholders (median)	87% (90%)	62% (62%)	76% (78%)	49% (48%)	84% (88%)	58% (59%)

Table II

Indirect Shareholding Composition of Companies - 1998

Indirect shareholding composition of 225 Brazilian companies listed on the São Paulo Stock Exchange with data on composition complete and available. The indirect composition shows the indirect interest of shareholders. Such participation was analyzed backwards until the effective shareholder was revealed to be from one of the following groups: legal entities (companies, corporations) other than financial, banks or/and insurance companies, pension funds, employees, foreigners (companies or individuals), government (federal or state), foundations, or investments funds. Participation calculation was performed by multiplying the levels of shareholding interest (in other words, if a shareholder has 60% of a company that has 40% of another, that shareholder has 40% x 60% =24%). A company with a majority shareholder is one where a single shareholder has more than 50% of the voting capital directly. Data collected from Annual Reports, referring to year-end 1998.

	Companies with a majority shareholder (155)		Companies without a majority shareholder (70)		Total sample (225)	
	Voting Capital	Total Capital	Voting Capital	Total Capital	Voting Capital	Total Capital
Average Largest Shareholder (median)	55% (54%)	37% (31%)	34% (29%)	23% (18%)	48% (47%)	33% (26%)
Average 3 Largest Shareholders (median)	71% (76%)	48% (45%)	61% (62%)	40% (37%)	68% (71%)	46% (43%)
Average 5 Largest Shareholders (median)	75% (79%)	50% (49%)	70% (74%)	46% (41%)	73% (78%)	49% (47%)

Table III

Indirect Participation of Controlling Shareholders - 1998

We separate the companies that have only one majority shareholder (with more than 50% of the voting capital) and analyze their indirect participation. To do this, we divide the companies into five groups: (i) shareholder does not maintain control indirectly; (ii) shareholder maintains control and increases its interest in the company capital; (iii) shareholder maintains the same interest; (iv) shareholder maintains control while reducing his or her participation in the total capital; and (v) there is no change in the shareholder nor in the level of indirect and direct interest. Indirect interest is calculated as follows: when a shareholder has 40% of a company that has 60% of another, that shareholder has 24% of the latter company. Data collected from Annual Reports, referring to year-end 1998.

		Direct participation of majority shareholder		Indirect participation of majority shareholder	
		Voting Capital	Total Capital	Voting Capital	Total Capital
Do not maintain control (53)		75%	54%	26%	16%
Maintain Control (68)	Concentration (15)	64%	40%	81%	51%
	Maintenance (17)	74%	52%	74%	52%
	Diversification (36)	77%	54%	59%	35%
	Average	73%	50%	68%	43%
Average of four groups		74%	52%	50%	31%
Same composition (34)		74%	56%	74%	56%

Table IV
Measuring Expropriation and Risk in Brazilian Companies - 1996

Since we do not have complete information for each of the 325 companies studied by Valadares and Leal (2000), we compute Tobin's Q and industry adjusted Tobin's Q for 138 Brazilian companies listed on the São Paulo Stock Exchange with available data for the year 1996. The numerator of Tobin's Q is the book value of assets minus the book value of common equity and deferred taxes plus the market value of common equity. The denominator of Tobin's Q is the book value of assets. Industry adjusted Tobin's Q is computed as the difference between the company's Tobin's Q and the country average Tobin's Q for the firm's industry. We also computed price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta for each company. Betas are calculated based on 252 days. Then we compute Tobin's Q, industry adjusted Tobin's Q, price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta for the group of companies without a controlling shareholder and for each of the five groups of companies in which there was one controlling shareholder. Data collected from Annual Reports and Economática Database, referring to year-end 1996.

	Companies without a majority shareholder	Companies with a majority shareholder				
	(55)	Concentration (11)	Maintenance (6)	Diversification (21)	Same composition (14)	Do not Maintain Control (31)
Q	0.95	0.86	0.92	0.96	0.96	0.86
Teste F	F = 0.27		P-value = 0.93	Critical F = 2.28 (5%)		
Q Adj.	0.00	0.01	-0.01	-0.02	0.04	-0.01
Teste F	F = 0.06		P-value = 0.99	Critical F = 2.28 (5%)		
P-B	1.22	0.75	0.90	0.98	1.10	0.99
Teste F	F = 0.36		P-value = 0.88	Critical F = 2.28 (5%)		
P-B Adj.	0.06	-0.12	-0.08	-0.30	0.09	0.12
Teste F	F = 0.58		P-value = 0.71	Critical F = 2.28 (5%)		
β	-0.39	1.01	0.87	0.35	0.70	0.27
Teste F	F = 3.51(*)		P-value = 0.005	Critical F = 2.28 (5%)		
β Adj.	-0.45	0.64	0.72	0.17	0.54	0.04
Teste F	F = 3.05(*)		P-value = 0.01	Critical F = 2.28 (5%)		

Table V
Measuring Expropriation and Risk in Brazilian Companies - 1996

Since we do not have complete information for each of the 325 companies studied by Valadares and Leal (2000), we compute Tobin's Q and industry adjusted Tobin's Q for 138 Brazilian companies listed on the São Paulo Stock Exchange with available data for the year 1996. The numerator of Tobin's Q is the book value of assets minus the book value of common equity and deferred taxes plus the market value of common equity. The denominator of Tobin's Q is the book value of assets. Industry adjusted Tobin's Q is computed as the difference between the company's Tobin's Q and the country average Tobin's Q for the firm's industry. We also computed price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta for each firm. Betas are calculated based on 252 days. We performed a differences in means test in order to compare Tobin's Q, industry adjusted Tobin's Q, price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta among the six groups of companies. Data collected from Annual Reports and Economática Database, referring to year-end 1996.

Differences in means between 2 groups of firms	Q	Q Adj.	P-B	P-B Adj.	β	β Adj.
Without majority shareholder - Concentration	0.09	-0.01	0.47	0.18	-1.40*	-1.09*
Without majority shareholder - Maintenance	0.03	0.01	0.32	0.14	-1.26*	-1.17*
Without majority shareholder - Diversification	-0.01	0.02	0.24	0.36	-0.74*	-0.62*
Without majority shareholder - Same composition	-0.01	-0.04	0.12	-0.03	-1.09*	-0.99*
Without majority shareholder - Not maintain control	0.09	0.01	0.23	-0.06	-0.66*	-0.49
Not maintain control - Concentration	0.00	-0.02	0.24	0.24	-0.74	-0.60
Not maintain control - Maintenance	-0.06	0.00	0.09	0.20	-0.60*	-0.68*
Not maintain control - Diversification	-0.10	0.01	0.01	0.42	-0.08	-0.13
Not maintain control - Same composition	-0.10	-0.05	-0.11	0.03	-0.43	-0.50
Diversification - Concentration	0.10	-0.03	0.23	-0.18	-0.66	-0.47
Diversification - Maintenance	0.04	-0.01	0.08	-0.22	-0.52*	-0.55*
Diversification - Same composition	0.00	-0.06	-0.12	-0.39	-0.35	-0.37
Maintenance - Concentration	0.06	-0.02	0.15	0.04	-0.14	0.08
Same composition - Concentration	0.10	0.03	0.35	0.21	-0.31	-0.10
Same composition - Maintenance	0.04	0.05	0.20	0.17	-0.17	-0.18

* indicates comparisons significant at the 5% level

Table VI
Measuring Expropriation and Risk in Brazilian Companies - 1998

We compute Tobin's Q and industry adjusted Tobin's Q for 225 Brazilian companies listed on the São Paulo Stock Exchange with complete and available data. The numerator of Tobin's Q is the book value of assets minus the book value of common equity and deferred taxes plus the market value of common equity. The denominator of Tobin's Q is the book value of assets. Industry adjusted Tobin's Q is computed as the difference between the company's Tobin's Q and the country average Tobin's Q for the firm's industry. We also computed price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta for each company. Betas are calculated based on 252 days, except for the telecommunications companies originated from the privatization of Telebras S.A in 1998, for which we use 66 days to calculate the betas. Then we compute Tobin's Q, industry adjusted Tobin's Q, price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta for the group of companies without a controlling shareholder and for each of the five groups of companies in which there was one controlling shareholder. Data collected from Annual Reports and Economática Database, referring to year-end 1998.

	Companies without a majority shareholder	Companies with a majority shareholder				
	(70)	Concentration (15)	Maintenance (17)	Diversification (36)	Same composition (34)	Do not Maintain Control (53)
Q	0.79	0.76	0.81	0.98	0.84	0.92
Teste F	F = 1.77		P-value = 0.12	Critical F = 2.26 (5%)		
Q Adj.	-0.03	-0.02	0.02	0.07	-0.02	0.01
Teste F	F = 0.53		P-value = 0.75	Critical F = 2.26 (5%)		
P-B	0.66	0.53	0.65	0.98	0.84	1.23
Teste F	F = 1.37		P-value = 0.24	Critical F = 2.26 (5%)		
P-B Adj.	-0.13	-0.25	-0.14	0.06	-0.11	0.27
Teste F	F = 0.84		P-value = 0.84	Critical F = 2.26 (5%)		
β	0.53	0.43	0.55	0.82	0.35	0.64
Teste F	F = 1.91		P-value = 0.09	Critical F = 2.26 (5%)		
β Adj.	0.06	0.02	0.07	0.15	-0.16	-0.08
Teste F	F = 1.88		P-value = 0.1	Critical F = 2.26 (5%)		

Table VII
Measuring Expropriation and Risk in Brazilian Companies - 1998

We compute Tobin's Q and industry adjusted Tobin's Q for 225 Brazilian companies listed on the São Paulo Stock Exchange with complete and available data. The numerator of Tobin's Q is the book value of assets minus the book value of common equity and deferred taxes plus the market value of common equity. The denominator of Tobin's Q is the book value of assets. Industry adjusted Tobin's Q is computed as the difference between the company's Tobin's Q and the country average Tobin's Q for the firm's industry. We also computed price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta for each company. Betas are calculated based on 252 days, except for the telecommunications companies originated from the privatization of Telebras S.A in 1998, for which we use 66 days to calculate the betas. We performed a differences in means test in order to compare Tobin's Q, industry adjusted Tobin's Q, price-to-book value, industry adjusted price-to-book value, beta and industry adjusted beta among the six groups of companies. Data collected from Annual Reports and Economatica Database, referring to year-end 1998.

Differences in means between 2 groups of firms	Q	Q Adj.	P-B	P-B Adj.	β	β Adj.
Without majority shareholder - Concentration	0.03	-0.01	0.13	0.12	0.10	0.04
Without majority shareholder - Maintenance	-0.02	-0.05	0.01	0.01	-0.02	-0.01
Without majority shareholder - Diversification	-0.19*	-0.10*	-0.32*	-0.19	-0.29	-0.09
Without majority shareholder - Same composition	-0.05	-0.01	-0.18	-0.02	0.18*	0.22*
Without majority shareholder - Not maintain control	-0.13*	-0.04	-0.57	-0.40	-0.11	0.14*
Not maintain control - Concentration	0.16*	0.03	0.70*	0.52	0.21	-0.10
Not maintain control - Maintenance	0.11	-0.01	0.58	0.41	0.09	-0.15
Not maintain control - Diversification	-0.06	-0.06	0.25	0.21	-0.18	-0.23*
Not maintain control - Same composition	0.08	0.03	0.39	0.38	0.29*	0.08
Diversification - Concentration	0.22*	0.09	0.45*	0.31	0.39*	0.13
Diversification - Maintenance	0.18*	0.05	0.33*	0.20	0.27	0.08
Diversification - Same composition	0.14	0.09	0.14	0.17	0.47*	0.31*
Maintenance - Concentration	0.05	0.04	0.12	0.11	0.12	0.05
Same composition - Concentration	0.08	0.00	0.31	0.14	-0.08	-0.18
Same composition - Maintenance	0.03	-0.04	0.19	0.03	-0.20	-0.23

* indicates comparisons significant at the 5% level

Figure 1

Ownership Structure of Lojas Americanas

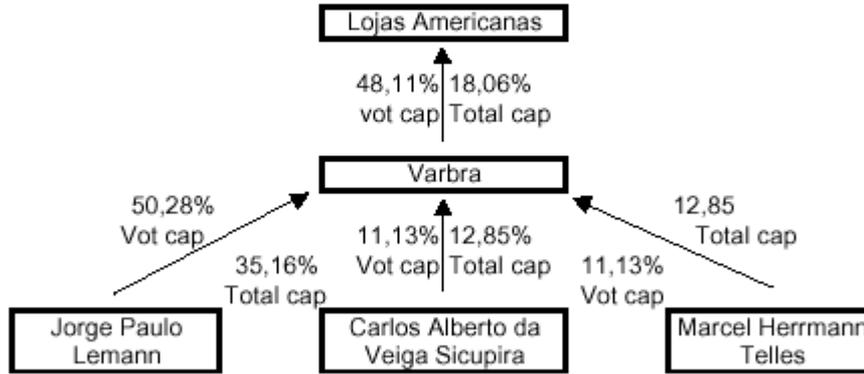


Figure 2

Ownership of Inepar SA Ind e Construções

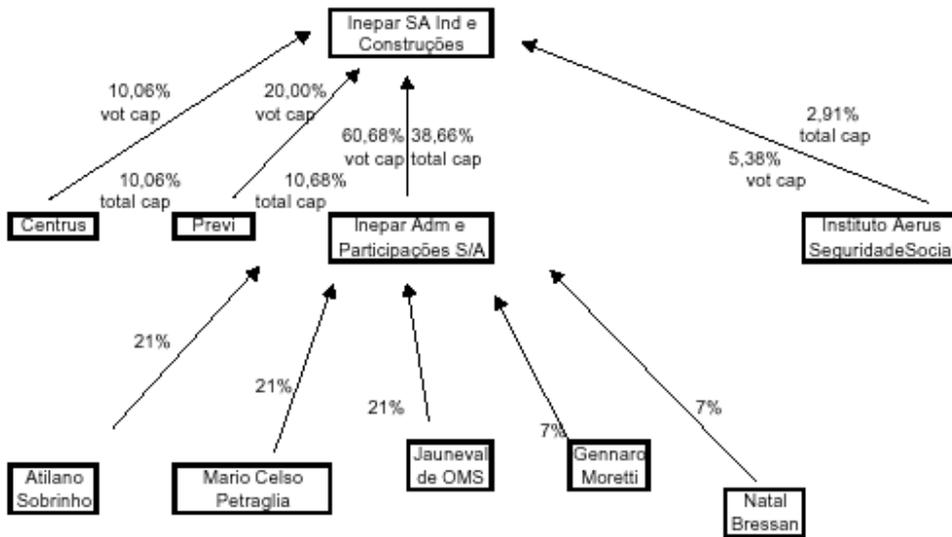


Figure 3

Ownership Structure of Construções Camargo Correa

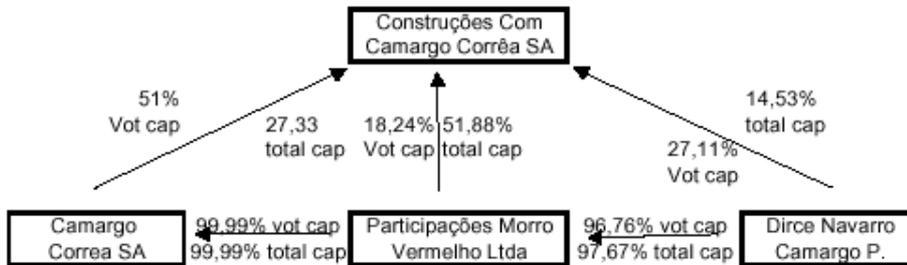


Figure 4

Ownership Structure of Dana Albarus Industria e Comércio

