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ANTECEDENTS OF THE CONTROL PREMIUM IN BRAZILIAN COMPANIES: A STUDY OF ACQUISITIONS IN THE 21ST CENTURY

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Abstract In recent decades, studies have demonstrated that corporate governance shareholders of publicly traded companies do not always receive benefits that are proportional to their shareholding. Studies have identified the existence of private benefits of control as a major cause of this distortion. These benefits can be evidenced, for example, in control acquisition operations, in which there is a control premium. Despite the difficulty of measurement, the literature points to some methods for measuring these benefits. The literature also associates variables that influence this control premium, and among which are legislation on capital markets and its effective application and the protection of minority shareholders and corporate governance levels. In turn, the quality and control of these variables affect companies' levels of external financing and have implications for the development of capital markets and the economy. Empirical evidence has demonstrated that in countries with underdeveloped capital markets, these benefits tend to be high. In Brazil, cross-country studies, such as Dyck and Zingales (2002) and Nenova (2003), found control premiums of 65% and 23%, respectively, for acquisition operations conducted during the 1990s. These authors are references in this field of study and later studies are based on their methodology and their findings (Souza et al, 2014; Ferraro and Rubino, 2017). As considerable changes have occurred in the Brazilian corporate scene, such as the new Brazilian Corporate Law (Nova Lei das S/As) and the introduction of special segments to BOVESPA's corporate governance, it is necessary to further examine this issue. This work pretend determine the practiced control premium value in the Brazilian market involving publicly traded companies after these changes from 2004 to 2009, through regression analysis. The results demonstrates that the primary variable that relates to the control premium is the share control block, with an inverse relationship between increasing the control premium and the size of the control block acquired.

1. INTRODUCTION

The literature in finance has shown that there is a significant difference between the values perceived by shareholders holding the controlling block of a company and the values perceived by other shareholders. Several studies conducted in recent decades have discovered that, generally, the controlling shareholders of a company receive an amount that is proportionally greater than the amount that shareholders that do not hold the controlling block receive.

Jensen and Meckling (1976) and Barclay and Holderness (1989) attribute this overvaluation to the benefits of controlling a company without interference from others, which allows the controlling shareholder to expropriate part of the company value for its own benefit. This expropriation forms what are called the private benefits of control and can be understood as a portion of the cash flows that a company generates, which are enjoyed only by the controlling shareholders.

Although these benefits, also known as control premiums are difficult to measure because they are usually hidden by legally accepted operations, there are two reputable methods for measuring them. The first method was initially created and applied by Barclay and Holderness (1989) and is applied when one company acquires control over another company. In the second method, the control premium is measured by the difference in the value at which shares, with or without voting rights, are traded. Nenova (2003) suggests that voting shares are generally traded with a 14% premium on common stock.

In countries with well-developed capital markets, mergers and acquisitions (M&A) for to obtain a controlling interest in the target company commonly occur, whether through hostile or friendly bids. The first acquisitions occurred in the late nineteenth century in the United States (USA), and according to Besanko et al. (2006), these occurred because of intensive capital and excess capacity. Nelson (1968) noted that the frequency of mergers and

acquisitions are related to specific periods of a country's economy and are more intense in times of economic euphoria and capital market expansion. Thus, throughout the twentieth century, several waves of M&A were observed, especially in the USA, where these operations were more intense.

Since the 1980s, these movements have intensified, especially after the creation of new mechanisms for the purchase of companies, such as leveraged transactions (management buyout and leveraged buyout) and the acceptance of hostile acquisition operations in the corporate environment, which were previously frowned upon in the market (REED; LAJOUX 1999).

In Brazil, although they were always present on the corporate scene, merger and acquisition operations began to be widely used after the 1990s. The primary studies related to control premium are those by Dyck and Zingales (2002) and Nenova (2003), which used data from 1990 to 2000. The conclusions of these studies are similar because they all attribute to Brazil a control premium that is above the average of those in other countries.

In addition to measuring the average control premium, several studies have also sought to explain which variables have an impact on the control premium. Grossman and Hart (1988) and Barclay and Holderness (1989) attributed the variation of the control premium to issues related to the protection of minority shareholders, the oversight and enforcement of regulations governing the capital markets and transparency and information flow, as well as the capital structure of companies and a country's legislation type.

The quality and control of these variables affect the level of companies' external financing and have implications for the development of capital markets and the economy.

Using transactions that occurred during the 1990s as samples, Dyck and Zingales (2002) and Nenova (2003) discovered control premiums in Brazil of 65% and 23%, respectively.

According to Camargos e Barbosa (2003), capital markets in Brazil were regulated during the 1960s and, since then, have experienced periods of growth and shrinkage; it was only with the Real Plan, adopted in 1994, and the consequent economic stabilization that capital markets began to develop on a firmer footing, thus gaining importance in the county's economy. The approval of the New Brazilian Corporate Law in 2001 and the market's incorporation of improved corporate governance concepts through the Stock Exchange of São Paulo's (Bolsa de Valores do Estado de São Paulo – BOVESPA) creation of the New Market resulted in the consolidation and expansion of the Brazilian capital market. These changes have exerted a strong influence on the following variables: transparency (the disclosure of results), the protection of minorities (tag along), ownership structure (common and preferred) and control (board composition).

Considering the alterations in the Brazilian capital market, this study aims to calculate the control premium and identify the variables that influenced acquisition operations during the period of 2004 to 2009.

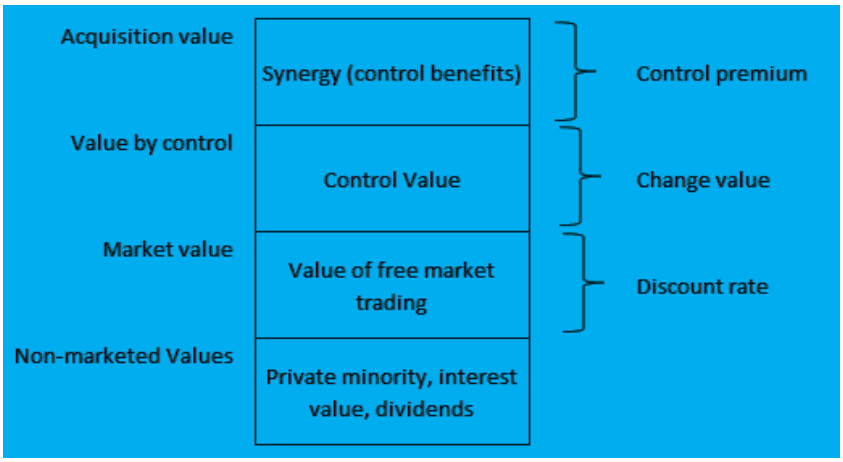
2. THE CONTROL PREMIUM AND A COMPANY'S VALUE

There are different methods for evaluating a company. The most widely used and studied methods are those that consider the potential for wealth creation resulting from future free cash flows. Currently, the measure most widely used and accepted in the market is discounted cash flow, but other measures, such as net asset value per share, the weighted average price of stock quotes, evaluation by market multiples and economic value added (EVA), are often used as well. In Appraisal Reports, the Securities and Exchange Commission (SEC) allows for the use of all of these methods to associate a value to a company.

However, regardless of the method used to calculate a company's market value, the amount usually paid for the acquisition of control exceeds a company's market value; i.e., the company value is increased by this control. Dyck and Zingales (2002) define this value as the sum of two components: (1) a company's Control Value and (2) the value of private benefits that the buyer expects to obtain when retaining control of a company, which is also called the Control Premium in the literature.

The first component, contextualized by Damodaram (2007), refers to the expected increase in firm value resulting from the improvements that the new administration wishes to implement. The second component of company value involves the private benefits that the shareholder wishes to obtain. These components are illustrated in Figure 1.

Figure 1 - Composition of a company's acquisition value



Source: Damodaran, 2007

According to Damodaram (2007), the value of any company is closely linked to the manner in which the decisions that affect cash flow are made. Although the company administrators determine the management of these variables, ultimately, a company's value is a function of the manner in which the company administration is evaluated. Thus, the assessment must consider explicit and implicit information about the managers and the manner in which they conduct business. If these assumptions are true, a change in administration should be reflected in different levels of value. Damodaram (2007) notes that "the control value of a company derives from the belief that someone would operate it differently from the way it is operated today." Thus, for the author, the difference between a company's optimal values and its *status quo* value (company value under the current administration) is considered the value as determined by business control.

The control value can also be understood as a direct consequence of the manner in which the business is conducted, i.e., the change value. The optimal value should be understood as the new company value after the implementation of improvements in the manner of managing the business. The control value can be easily observed during hostile acquisitions because of the rapid and certain change in administration. As the control value is subject to two independent variables, Damodaram (2007) makes note of some implications that directly impact the control value.

- The control value will vary according to the company standard level of management – a company that is poorly managed has a much higher control value than a company that is well managed.
- The premium varies according to the company's results – these results affect cash flows and are possibly the result of mismanagement; in this case, the control value for companies that experience unsatisfactory results tends to be higher than that for companies that experience satisfactory results.
- The control value should reflect the ease of management changes – in companies that experience greater difficulty in implementing these changes, the control value tends to be lower because the changes are time-consuming and the results are slow to materialize.

Damodaram (2007) demonstrated a relationship indicative of the control value in the market value of companies, observed by increasing the unit price of the share when there is evidence of a possible change in administration: when the market suspects that changes in administration will occur, it incorporates the expected value increase arising from this new administration into the stock price in advance. This increase is related to the likelihood that this change will occur. Damodaram (2007) argues that this method should be carefully considered when evaluating a company because if the company's market value is used as a basis for assessing and pricing the company and this value already exists because of the likelihood

of change, the final amount paid by the acquisition may include excess payments.

Another impact study related to control value in terms of stocks is Gompers, Ishi and Metrick's (2003) study on corporate governance. These authors demonstrate that the level of the corporate governance index is directly related to the market value of shares. The authors associate this finding with the fact that this change is more likely to occur in companies characterized by adequate governance than in companies characterized by poor governance, which suggests that companies with adequate governance have a higher control value.

Zanda et al. (2013) state that "control awards are a recognized plus to the value of an investment compared to the corresponding portion of the total economic capital, for the simple fact of allowing the control of a company."

The definition of premiums and discounts is therefore not as clear-cut as one might think and the issue should be dealt with great caution taking into account the possible types that can be identified with respect to different categories of investments subject to valuation (Ferraro, 2015) and situations (first owner, corporate governance model structure) in which premiums and discounts should apply.

2.1. Private benefits of control

Control over a company provides the controlling shareholder with the ability to manage without the interference of others, which often allows for the expropriation of company resources for personal benefit. This expropriation constitutes what are called private benefits of control, which can be understood as a portion of the cash flows that the company generates that are enjoyed exclusively by the controlling shareholders. Therefore, beyond the control value, a premium is added to the value of acquiring a company because of the control benefits that this will provide, known as the control premium, which is the second component of a company's acquisition price.

Empirically, control benefits are observed when there is evidence of controlling shareholder gains that occur to the detriment of the minority shareholders, for example in the form of financial fraud (e.g., embezzlement). However, in most cases, it is not possible to prove the occurrence of control benefits, as they usually occur under the guise of legal transactions (CRUZ, 2003).

Dyck and Zingales (2002) illustrate a typical form of control benefit with the following example: company A buys control of company B, which, in turn, begins to buy the products of company A at a price below that prevailing in the market, thus providing value for B and reducing the value of A. Despite the obvious value transfer, the operation is legal and unquestionable because the price is subjective and can be easily explained by technically capable individuals, making it impossible to prove in court that the price is not the standard market price.

As cited by Sá (2003), other benefits that originate from control are as follows: the controller's *management fee*, which is the sale of assets to businesses related to the controller; the deliberate omission of performance; and *freezout*, which is expulsion by means of the repurchase of shares from non-controlling shareholders at low prices after a control takeover. Cruz (2003) remarks on the diversion of company opportunities, the allocation of ill-prepared executives and excessive pay. Sá (2003) and Jensen and Meckling (1976) also discuss issues related to agency costs, primarily the consumption of "goodies" and bonuses for administrators, which is consistent with personal advantages of all types gained at the cost of shareholder expropriation.

However, control is not always synonymous with benefits because, in some cases, it incurs costs, such as when a company is involved in financial scandals or when the controllers can be held personally liable by creditors with regard to insolvency or administrative negligence. Thus, as stated by Barclay and Holderness (1989), in the case of situations that are delicate for the controller, we should expect the value of the control to be negative because the private costs of control outweigh the benefits.

2.2. Control premium calculation

Unlike the control value, the control premium is not easily measured. Dyck and Zingales (2002) also remark that control benefits are only benefits because they are unverifiable and subjective; if they could be observed with any ease, non-controlling shareholders would be able to discuss the legality of these values, which, for them, have been diluted.

There are two primary methods of measuring control value. The first approach, created and initially applied by Barclay and Holderness (1989), is conducted through the use of a simple observation: while pricing a block, the potential buyer considers

two types of benefits—first, the benefits of cash flow, which are accounted for all shareholders, and, second, private control benefits.

Under the premise that the market adequately incorporates forecasts of future acquirer earnings, the stock market price appears to capture only the control benefits to be distributed among all shareholders. According to this thinking, the control value will be reflected in the difference between the offering price and the stock market price after the announcement of the purchase (MASSARI et al., 2006). Although the price per share that the acquirer pays reflects private control benefits, in addition to cash flow rights under the new administration, the market price reflects only the cash flow benefits that minority shareholders expect to receive under the new administration.

Thus, the control premium value can be found using the following formula:

$$CP = \frac{(P - Pe)}{Pe}$$

where CP = Control premium in percentage form

P = Amount paid for one share for the acquisition of company control

Pe = Market value for one company share one day after delisting announcement

Dyck and Zingales (2002) applied this method to a sample of 412 transactions of control sale in 39 countries between 1990 and 2000. The results pointed to average control premiums ranging between -4% and 65%, with a positive average of 14%. Brazil has the highest average, with a 65% control premium over the market value of shares. The lowest average, -4%, is in Japan, whereas countries such as the USA and Britain have averages of 2%.

Furthermore, the author used control acquisitions as a method of measuring the estimated control benefits, normalizing the value of a control premium by the percentage of the acquired block, with the intention of obtaining a beneficial control value for the company as a whole.

Massari et al. (2006) conducted a study in Italy using a methodology based on Barclay and Holderness (1989); however, he separated the transactions according to business characteristics. For operations in which only the transfer of the purchased controlling block occurred, he found a premium of 8%, whereas transactions followed by *mandatory tender offers* and transactions of voluntary transfer presented a control premium of 9% and 18%, respectively. For the author, when this crude measure of control premium is homogenized by means of multiplying the acquired percentage, a measure of control value expressed as a percentage of the equity value of the company is obtained.

The second method is applied in companies with multiple share classes and allows for the inference that the control value can be measured by the difference in market prices between the classes, which are distinguished by voting right. Among the authors who have used this model are Levy (1983), Lease et al. (1983), Zingales (1994, 1995a,b), Nicodano (2000), Nenova (2003) and Bigelli and Sapienza (2003).

Nenova (2003) concluded that shares with voting rights are usually traded at a higher value than shares without rights because, in the event of a dispute over control, the controlling shareholders (or those wishing to acquire control) would be willing to pay a premium to the stockholder with voting rights.

Doidge (2004) concluded that outside the USA and the UK, the probability of a fight for takeover is low; thus, we can assume that the control premium can be used as an approximation to measure the private benefits of control. Doidge (2004) further states that the differences in the control premiums among countries can be roughly interpreted as the differences in the size of control benefits, which can be explained by the differences in levels of minority investor protection.

Thus, the control premium for companies with two classes of shares would be estimated by adjusting the value assigned to the controlling block votes. The adjustment considers the likelihood of votes being demanded during a change of control, the costs of maintaining the block, differences in the payment of dividends and differences in liquidity.

In 1997, Doidge (2004) applied this methodology to a sample drawn from 18 countries, including 661 companies with two classes of shares. His results suggest average control values ranging from 48% in South Korea to -2.8% in Hong Kong. The value assigned to the control block votes is significant in magnitude and varies significantly among countries, representing over one quarter of the market value of companies in countries such as Brazil, Chile, France, Italy, Mexico and South Korea.

Doidge (2004) found average control premiums ranging from less than 5% in Norway to more than 49% in Italy and Korea. Robinson and White (1990) and Smith and Amoa ko-Adu (1995) estimated control premiums ranging from 7% to 20% in Canada, Zingales (1994) estimated a premium of 82% in Italy, Rydqvist (1996) considered a premium of 12% in the UK.

The difference in the measurement for each country is consistent with the methodology used and the economic environment and legal and cultural development.

With regard to differences in methodology, Dyck and Zingales (2002) comment on differences between their final results and Nenova's (2003) final results. The comparison between the results obtained using the two methods reveals that the control premium is very similar in countries such as the USA, Switzerland and Germany and that the correlation between measurements is 59%.

Conversely, the value of the control premium for Australia and Brazil evidence the divergences between the two methods. Although Dyck and Zingales's (2002) estimates point to a premium of 2% and 65% for Australia and Brazil, respectively, Nenova's (2003) results indicate a value of 23% for both countries.

Dyck and Zingales (2002) argue that 76% of the difference between studies in results are explained by the bias present in Nenova's (2003) study, which adopts the premise that companies tend to issue two classes of shares when private control benefits are substantial, which is not always valid.

Regarding the variables associated with the control premium, Cruz (2003) summarizes:

> *Regarding the mechanisms that explain the private control benefits and that can be used in an attempt to mitigate them, the major focus of the literature has been direct and legal mechanisms that reduce the discretionary power of the controller and align the incentives, such as the presence of strict laws, efficient and applicable in the protection of minority rights and raising the transparency level, making it possible for investors to use the appropriate legal mechanisms to curb the abusive behavior of the controller.*

In addition to measuring control premiums, both Dyck and Zingales (2002) and Nenova (2003) demonstrated in their cross-country studies which variables impacted the control premium value. Both authors concluded that the origin of the legal system is a significant variable, as it has a direct correlation with other variables, such as the protection of minority shareholders and takeover rules.

Control premiums are higher in countries with legal systems of French origin (civil system) than in countries with systems with British, German and Scandinavian origins. Nenova (2003) demonstrates that in countries with common law, the unadjusted average of the control block vote value is 4.5% higher than that of the non-controlling block, whereas in civil law countries, this value is 25.4%.

A weaker law suggests that the costs of value expropriation from minorities are lower, consequently resulting in higher control benefits.

Protection mechanisms generally reduce control benefits because greater protection will result in a lower capacity of value expropriation as conducted by the controlling shareholder.

The results of Dyck and Zingales's (2002) study demonstrate that an increase of one standard deviation to the variable that measures the protection of minority shareholders reduces the control value by 3.8%. However, note that in Nenova's (2003) study, because of the methodology that evaluates different classes of shares, the control premium can vary with better protection mechanisms.

In cases in which there is a shift in value between classes of shares – if there is any difference between the classes in terms of protection – the estimated value of the control premium will increase with better protection mechanisms.

As an example, Doidge (2004) conducted a study exploring the control premium in companies listed with the NY stock exchange and inferred that listed companies have a control premium that is 43% lower than the premium of those not listed. He argued that to be listed in NY, the company must meet more strict criteria regarding corporate governance.

Coffee (1999, 2002) and Stulz (1999) argue that a business listing in foreign/US stock markets (or Nasdaq) increases protection for minority shareholders for companies in countries with little protection of minorities or few control mechanisms because foreign companies that are listed in American stock markets must register with the SEC and are subject to the obligations of transparency and information. SEC registration also implies that the company is subject to US law, which entails an extensive scheme of civil and criminal penalties.

The lack of protection for minority investors may explain why it is difficult for companies outside the US to raise funds, as well as why their assets are

worth less (LA PORTA et al., 2000). Companies listed in the US feature increased protection of minority shareholders and thus reduce private control benefits.

Recent articles, such as Reese and Weisbach (2002) and Doidge et al. (2001), provide evidence consistent with the argument that controlling shareholders use cross-listing as a manner of ensuring minority shareholders that they will not be exploited so that they feel more comfortable investing in the company. Additionally, according to this hypothesis regarding capture gains, Reese and Weisbach (2002) demonstrated that, after cross-listing in the USA, companies from countries with weak protection of minority shareholders can raise more capital in their countries of origin.

In turn, Doidge (2004), found that companies listed in the USA have higher valuation values than non-listed companies and that the valuation differential is negatively related to the level of investor protection in the company's country of origin. He noted that companies listed in the USA have more information within the market because they receive more analyst coverage/attention.

Because of this advantage, the confidence of predictions made regarding companies increases. after a listing, the market's reaction to earnings announcements increases. Research suggests that listing the company with the US stock market signifies a closer monitoring and analysis of its information. Additionally, there is evidence that intermediaries play the role of monitoring cross-listed companies and are sensitive to the American legal system.

Bebchuk et al. (1999) investigated the relationship between ownership structure and control benefits, finding that when the control benefits are high, the company founders will attempt to maintain control of the ownership structure because in the case of a transfer of control, the control premium will be higher and in the case of an initial public offering (IPO), it would be protected from a takeover. Thus, as exemplified by Dyck and Zingales (2002), in terms of the transfer of a block of 20% of the voting stock of a company that has an extremely diluted ownership structure, private control benefits have much more value when the company's largest shareholder owns 51% of this capital.

Although the discussed factors significantly explain the control premium values found, the applicability of laws and corporate regulations constitute a prominent factor. According to Nenova (2003), monetary and image losses caused by exposition and law applicability mitigate a portion of a company's control benefits because the costs become greater than the benefits. Dyck and Zingales's (2002) study demonstrates that an increase of one standard deviation to the law's applicability reduces the control premium by 6.8%.

Many of the mentioned variables are related to corporate governance standards. Barclay and Holderness (1989) and Bergstrom and Rydqvist (1990) infer that countries with high governance concepts, such as the USA and Sweden, respectively, have control premiums lower than those estimated by Zingales (1995b) for Italy. These authors attribute the difference in premiums to the controller's less significant appropriation of private benefits in countries with adequate levels of governance.

Dyck and Zingales's (2002) results have implications regarding the importance of the control premium as a tool for measuring a country's capital market development. The results demonstrate that a change of one standard deviation in the size of private control benefits generates a negative variation of 48% in terms of the relationship of external market capitalization to GDP, 6% for the percentage held by minority shareholders and 35% for the number of companies privatized by private sale.

These authors also conclude that it is reasonable to expect a negative correlation between private control benefits and degree of development, as well as a positive correlation with the degree of concentration in the control structure. Thus, the connection between the structure and quality of the legal system and companies' levels of external financing and savings in the economy has been established, generating implications for the development of markets and the economy. Jensen and Meckling (1976) and Grossman and Hart (1988) are cited. Investors finance companies when the rights of investors and creditors are well protected and guaranteed by the courts or regulators.

Regarding company size, Massari et al. (2006) show that the private control benefits extracted from public corporations tend to decrease according to the corporations' size. Although large companies offer very large pecuniary and non-pecuniary benefits, private costs also tend to increase as larger companies are eventually monitored more closely by market analysts, government officials and institutional investors.

Additionally, Massari et al. (2006) observe in a controlled environment in Italy (during the Draghi Reform), cross-sectional regression analysis reveals that extracting control benefits by foreign buyers and capitalist investors, including private equity fund or asset managers, has become easier.

Regarding foreign buyers, these former difficulties can be described as intense monitoring of origin by the Italian authorities and the buyers' countries. Conversely, financial buyers appear to have fewer opportunities than strategic buyers to extract private control benefits.

Finally, Kang and Kim's (2006) study on Korea, which relates the control premium to the option of capital leverage, is worthy of mention. In Korea, to which Nenova (2003) associated a control premium of 48%, the study suggested that the greater a company's private benefit, the lower the willingness of its management to accept debt and leverage capital, particularly after the 1997 crisis, during which the most indebted companies were those that were most controlled by the government.

2.3. Evolution of the Brazilian Capital Market

According to Camargos e Barbosa (2003), capital markets were initially regulated in Brazil during the 1960s and, since then, have experienced periods of growth and retraction, only experiencing solid growth with the advent of the Real Plan in 1994, when there was greater economic stability, as well as with economic opening and the reduction of state participation, which resulted in Brazil's integration into the global market.

After reaching record expansion peaks in 1997, the market experienced a period of decline and eventual recovery, the latter of which can be attributed to a further dissemination of the importance of corporate governance in 2003. This mechanism provides a system for monitoring and driving the companies seeking to increase value in society and contribute to its continuity, resulting in cheaper capital and an improvement in the relationship among shareholders, management and administrative and fiscal boards. This movement has led to changes in the stock profile, thus increasing the participation of companies from different segments (CAMARGOS; BARBOSA, 2003). Two important changes impact this context.

The first change: the New Brazilian corporate law

The Brazilian corporate law was approved On October 31, 2001, after more than four years in Congress. This law amended several provisions of Law 6.406, enacted on 12/15/1976, which regulates stock companies, as well as provisions of Law 6.385, enacted on 12/7/1976, which regulates the securities market.

Oliveira (2008) argues that the changes to the Law represented a major advance in the Brazilian stock market, as it introduced more guarantees for minority shareholders. The primary changes relate to transparency in information disclosure and an increase in investors' power of company oversight, which increased the liquidity of shares trading on the Brazilian market. Moreover, according to Oliveira (2008), the law salvaged some rights provided in the text of the original law, such as the right to *tag along* and the right to withdraw during split-up transactions.

Camargos e Barbosa (2005) states that the changes have resulted in the establishment of specific procedures for public companies:

a. The effective equity advantages of the preferred shares traded in the market;
b. The appointment of board members by minority shareholders;
c. Tag-along rights during control transfers;
d. A delisting procedure; and
e. Capital structure for opening to market and the formation of new companies for representation by at least 50% of common shares.

The second change: corporate governance

Regarding corporate governance, in 2001, BOVESPA decided to create a market marked by differentiated listing rules, calling them New Market, Level 1 and Level 2 of the Corporate Governance Practices. These levels are three new listing segments to which the company adheres voluntarily if wishing to meet the stricter rules of corporate governance. According to Oliveira (2008), the New Market was created based on the successful German Neuer Markt experience.

According to Rocca (apud OLIVEIRA, 2008) there is empirical evidence suggesting the existence of a strong correlation between levels of shareholder protection and the development of capital markets.

According to Oliveira (2008), the primary feature of these new markets is the matching of clear concern with disclosure (the reporting of information). An additional feature is well-defined rules for the protection of minorities, such as tag-along rights, representation on boards and ownership structure (common x preferred).

3. RESEARCH METHOD

The approach and measuring method used in this work is that developed by Barclay and Holderness (1989) and recently reapplied by Dyck and Zingales (2002) in a cross-country survey, which was previously described.

According to Barclay and Holderness (1989), a stock's market value can be calculated as the quote value of the company's higher liquidity two days after acquisition. For this study, we use the value found in Appraisal Reports published along with OPA (public tender offer) as an approximate value of the stock price.

The information needed for the calculation will be obtained from documents released by publicly traded companies to the SEC, such as Appraisal Reports, Notices of Purchase, takeover bids and announcements to the market, as well as relevant facts. Other sources, such as news and company websites, can also be consulted if necessary.

Sample Definition

We analyzed all of the acquisitions of publicly traded companies listed by BOVESPA from January 2004 until November 2009. The information for the construction of the sample was obtained from the SEC website through an inventory of takeover bids, relevant facts and Appraisal Reports.

According to a survey of the SEC website, 100 takeover bids were disclosed during the aforementioned period. Those whose purpose was to transfer control totaled 46 transactions and were considered to compose the sample, as a control block changed the ownership. The remaining 54 are voluntary takeover bids for the purpose of cancelling registration and increasing share participation.

Exceptions were considered and removed from the sample: transactions in which the buyer had a family and/or business relationship with the target company and transactions in which a buyer acquired two companies of the same group during a single transaction (one directly and another indirectly), producing two takeover bids. In this case, only the transaction whose alienation occurred directly was considered so that duplicates in the results could be avoided.

Considering such criteria, nine transactions characterized by the alienation of control were discarded, resulting in a final sample of 37 transactions.

Definition of variables

Given the objective of relating the variables that impact the control premium, a multiple linear regression analysis was performed, with the control premium of the transaction as the dependent variable. The selection of independent variables was based on studies by other authors (DYCK; ZINGALES, 2002) who associated these variables with the premium. Those studies demonstrated that several variables influence the control premium, and each has different influence, such as the following: legal factors, the internal and external environment and the participants (seller and buyer). Table 1 identifies these variables and provides the values that identify them.

The statistical software SPSS was used.

Table 1 - Independent variables

Variable	Scope
Tag Along (TA)	- 80% for common shares - 100% for common shares - 100% or 80% for common shares extended to preferred shares
Target Industry Company (TI)	- Durable Goods - Non-Durable Goods - Capital Goods - *Utilities*
Size of Control Block Acquired (SCB)	- Up to 30% of total shares - Between 31% and 50% of total shares - Between 51% and 75% of total shares - Over 75% of total shares
Type of Seller (TS)	- Unions and States - Individuals - Institutional
Transaction Year (TY)	- 2003 to 2005 - 2006 and 2007 - 2008 and 2009
Buyer Characteristics (BC)	- Government - Individuals - Brazilian Corporation - Foreign Corporation

Sample characterization

With regard to agent characteristics, we found that the primary seller types are institutions, which performed 52% of operations, individuals, who performed 31%, and states and unions, which performed 14%. The oil, mining, steel, energy and telecommunications sectors are noteworthy, as, altogether, they accounted for more than 40% of transactions.

With regard to the characteristics of the businesses effectively agreed on by the parties, 45% of the transactions were performed in 2006 and 2007, which can be explained by the considerable increase in the Brazilian capital market. This result demonstrates that the concentration of control in Brazil is significant, that the universe of Brazilian companies that have listings on the stock market is still small and that those who have listings do not experience significant *free floating*. Because tag along constitutes the minimum required by law, 80% tag along for common shares is predominant in the sample. A total of 100% tag along, or extended tag along, is not yet a constant in the Brazilian stock market, but it has grown in recent years because of companies' adherence to new segments of the stock market that require higher levels of corporate governance. Of the nine transactions characterized by 100% tag along, only one occurred before 2007.

4. RESULTS

Using the proposed method, it was calculated the control premium for the sample transactions. The values found on for the mean average control premium found is 24.37%, with a 156,42 standard deviation.

When comparing the average control premium found in this study (24.37%) with the averages for studies that used the same technique in Brazilian companies, such as the 65% figure found by Dyck and Zingales (2002) and the figure of 302% found by Araujo Fillho (2003), we observe a significant difference in magnitude. This difference can be explained by the composition of the samples, which, in both cases, were composed of companies

participating in the national privatization program (programa nacional de desestatização — PND).

However, during comparisons with Nenova's (2003) study, 23%, which involves the difference of value between shares with rights and shares without rights for the premium estimate, the values prove to be similar.

Another important result to note is that 25% of the control premiums had negative values (represented by the 1st percentile = -7.5595). According to Barclay and Holderness (1989), during moments or situations that are delicate for the controller, we should expect the control value to be negative because the private costs of control outweigh the benefits; examples include involvement in financial scandals, insolvency or administrative neglect.

Regression analysisn

For the second objective of this research – to identify the variables that influenced the control premium of acquisition transactions that occurred during the period of 2004 to 2009 – we performed a multivariate regression analysis. Through this analysis, we explored the correlation of independent variables and the level of influence on the independent variable, the control premium.

Since the theory not provides the precise functional relation between the dependent and independent variables, this work uses multiple linear regression as an tool with the purpose of identifying the explanatory power of the independent variables that better contributes to the explanation of the private benefits of control and their magnitude. Regression analysis has been widely used in analyzing control premiums in the studies and the methodology used in this study is similar to that of Massari et al (2006); Dick and Zingales (1989); and Nenova (2003) to name but a few. The model is given by:

$$CP(i) = B0 + B1*TI(i) + B2*SCB(i) + B3*TA(i) + B4*TY(i) + B5*TS(i) + B6*BC(i) + ERROR(i)$$

The equations were estimated using ordinary least squares. Given the probable occurrence of heteroscedasticity, the estimators were calculated by the Huber-White method, obtaining robust standard errors.

Table 2 presents the correlation and significance matrix, the control block variable has the highest Pearson correlation coefficient with the control premium value. The coefficient has a value of -0.351, indicating an inverse relationship with the control premium, with a significance level lower than 5%.

Table 2 - Correlation and significance matrix

	CP	TI	SCB	TA	TY	TS	BC
Control premium (CP)	1.000	.036	-.351 (**)	-.047	.189	-.132	.002
Target Industry Company (TI)	.036	1.000	.028	.083	-.148	-.081	-.096
Size of Control Block Acquired (SCB)	-.351 (**)	.028	1.000	.140	-.216	-.098	-.014
Tag Along (TA)	-0.47	.083	.140	1.000	.381	-.060	-.187
Transaction Year announcement (TY)	.189	-.148	-.216	.381	1.000	.103	-.255
Type of Seller (TS)	-.132	-.081	-.098	-.060	.103	1.000	.147
Buyer Characteristics (BC)	.002	-.096	-.014	-.187	-.255	.147	1.00

(**) significance at 5%

The relationship strength of the control block variable is evident when a correlation analysis is performed using the *stepwise* option, which tests the variables one by one and discards those that are not significant. The control block variable is the only input variable for the construction of the linear equation as shown in Table 3.

Table 3 - Selected variables

Model	Variables entered	Variables removed	Method
1	Control Block — % total shares		Stepwise (criteria: probability of F to enter <= 0,050, probability of F to remove> 0,100)

a. Dependent Variable: Value of Control Premium

Additionally, the ANOVA confirms the predictive power of the control premium variable, with an adjusted R squared that is slightly different from the R square, and an F-ratio greater than 1, with significance less than 0.05%.

Table 4 - Anova[1]

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,351[a]	,123	,098	148,55788	,123	4,914	1	35	,033

a. Predictors: (Constant), Bloco de Controle - % ações total

b. Dependent Variable: Valor do Premio de Controle

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	144,823	59,576		2,431	,020	23,877	265,769
	Bloco de Controle - % ações total	-45,477	20,516	-,351	-2,217	,033	-87,127	-3,827

a. Dependent Variable: Valor do Premio de Controle

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	144,823	59,576		2,431	,020	23,877	265,769
	Bloco de Controle - % ações total	-45,477	20,516	-,351	-2,217	,033	-87,127	-3,827

a. Dependent Variable: Valor do Premio de Controle

[1] *On Table 5, Bloco de controle means control block % total shares, and Dependent variable: valor do prêmio de controle means value of control premium.*

Thus, the resulting linear equation, which features the value of the control premium as the dependent variable, presents as a constant the value of 144.823 and the value of – 45.477 as the coefficient for the controlling block variable (percentage), with the 5% significance.

$$CP = 144{,}823 – 45{,}477 * SCB$$

Each time you increase 1% in the control block, you decrease 45% in the control premium.

5. FINAL CONSIDERATIONS

Through this work, it was possible to determine the practiced control premium value in acquisition transactions in the Brazilian market involving publicly traded companies during the period of 2004 to 2009. Note that there is an improvement in the measurement value when compared with that of previous studies. This improvement implies that measures for the protection of minority investors in the Brazilian capital market are yielding positive results.

The main contribution of the article is to verify if there was a change in the importance of the variables that define the control premium after the changes in the structure of the Brazilian capital market.

The regression analysis demonstrates that the primary variable that relates to the control premium is the share control block. There is an inverse relationship between increasing the control premium and the size of the control block acquired. We can conclude that to further evolve in terms of the financial market, it is necessary for the control groups to be less concentrated. Measures relating to the increase of free floating and capital dispersion will be of great importance to the evolution of our stock market.

Finally, given the various constraints that have permeated this work (related to the characteristics of the capital market) and the wide range of variables that relate and explain the control premium, for future work, we suggest studies related to the control premium and capital market developments, as well as studies similar to this one but with a new focus on applicability and methodology.

The primary limitations of this study are consistent with the characteristics of the Brazilian stock market. The absence of some variables, especially those related to corporate governance, does not allow for the observation of some important variables, such as the following:

- Concentration in terms of Ownership Structure: a variable in studies such as Dyck and Zingales's (2004) study cites free floating as an important variable in the explanation of the control premium.

- Concentration in terms of Control Structure: Few companies in Brazil have a board of administration that allows the participation of outsiders and minority investors. The vast majority of companies are still family-centered. External representatives proved an important mechanism in controlling the expropriation of minority shareholders through the use of the control benefit.

- Few publicly traded companies: Despite having a significant market share in absolute numbers, few companies are listed with BOVESPA. In Brazil, the total daily business volume is based primarily on a few companies that are considered blue chips. Such a circumstance restricts the sample to a few observations. Otherwise, the shares of the companies listed are characterized by low trading volume and low liquidity.

- Types of acquisition – Because the stock market is still underdeveloped in terms of the mentioned points, all acquisitions have a friendly character, which results in a pure analysis of the control premium, as proposed by Barclay and Holderness (1989).

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