RELATIONS BETWEEN OWNERSHIP CONCENTRATION AND CONDITIONAL CONSERVATISM IN BRAZILIAN PUBLIC COMPANIES: AN ANALYSIS USING QUANTILE REGRESSION[1]

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ABSTRACT

Objective: This study analyzes the relationships between the ownership concentration and conditional conservatism in Brazilian public traded companies from 2010 to 2016.

Theoretical Background: Tests the alignment and entrenchment propositions in order to investigate the agency relation between controlling and minority shareholders.

Method: The methodological conduction is performed through the estimation of quantile regressions, used to examine the theoretical relations along multiple points of the probability distribution.

Results: The results showed that: i) ownership concentration is negatively related to conditional conservatism and this relationship becomes more pronounced in lower quantiles; ii) the market-to-book variable confirms the controlling shareholders opportunistic behavior in relation to accounting policies; iii) the size variable works as a mechanism that restricts ownership concentration, limiting the influence of controlling shareholders; iv) debt proved positively related to conservatism in the lower quantile ($\tau = 0.25$) but this relation did not prove to be significant in the upper quantiles ($\tau = 0.50$ and $\tau = 0.75$).

Contributions: Confirms the entrenchment hypothesis and highlights a more pronounced entrenchment effect for lower levels of ownership concentration.

Keywords: Conditional Conservatism; Ownership Concentration; Quantile Regression.

1 INTRODUCTION

The purpose of accounting is to provide useful information to the decision-making process. Under the aegis of agency theory, this objective is due to its capacity to reduce the agency conflicts derived from the informational asymmetry between internal and external agents (Arruda, Vieira, Paulo & Lucena, 2015).

Thus, it is common for discussions on the usefulness of accounting information to assume the efficient market hypothesis (Fama, 1970) as the underlying premise, considering that the useful accounting information is that which is incorporated into the economic return of the shares of a certain period (Paulo, Antunes & Formigoni, 2008, Sarlo Neto, Rodrigues & Costa, 2010) and is therefore considered appropriate and available to all economic agents.

In the same way that accounting information has the potential to reduce informational asymmetry, it can also be influenced by the opportunistic behavior of agents, given the absence of full contracts, which from the point of view of Jensen and Meckling's (1976) agency theory results from the divergence of interests between agent and principal.

In Brazil, the main agency conflict is due to the high degree of concentration of ownership that makes the controller (agent) have privileged access to information, influencing the quality of the information disclosed to the other (minority) stockholders (Sarlo Neto et al ., 2010, Caixe & Krauter, 2013).

The literature indicates that the concentration of ownership is related to the quality of accounting information through the alignment and entricheiramento effects. The alignment effect occurs when the concentration of ownership positively impacts the firm's performance through incentive policies and monitoring of management, reducing agency costs and aligning the interests of contracting parties (Caixe & Krauter, 2013), resulting in lower informational asymmetry and consequently higher quality of accounting information. On the other hand, the entrenchment effect occurs when access to privileged information by the controlling shareholders encourages the expropriation of minority shareholders through the disclosure of accounting numbers with lower information content, increasing informational asymmetry and reducing the ability to assess risks and cash flows (Fan & Wang, 2002, Sarlo et al., 2010).

In the present paper, the propositions of the alignment and entrenchment effects are analyzed from the standpoint of conservatism. Conservatism represents a parameter for measuring the quality of accounting information as a greater degree of verifiability is required for the recognition of revenues and assets compared to the recognition of expenses and liabilities (Basu, 1997), which, consequently, from the perspective of the minority investor, is desirable in view of the need to use information that helps monitor the actions of the controllers, helping to mitigate possible agency conflicts.

This choice is justified based on the conclusions of the Sarlo Neto et. al. (2010), Kung, Cheng and James (2010) and Boná-Sanchez, Peréz-Alemán and Santana-Martín (2011) which point out that firms that are characterized by high shareholder concentration tend to produce information with a lower degree of conservatism, put the wide tendency of the use of private information on the part of the controllers, which indicates the possibility of expropriation of minority investors. However, these studies do not present evidence about the magnitude of these relationships along the analyzed probability distribution, so there is no indication of which level of concentration of property results in more severe consequences of the entrenchment effect.

Faced with the observation of this gap, the present research presents the following problem: **What is the relationship between concentration of ownership and accounting conservatism in Brazilian public companies?**

In order to answer the research question, the main objective of this study is to analyze the relationship between ownership concentration and conservatism in Brazilian public companies through the concentration of votes (Sarlo Neto et al., 2010, Boná-Sanchez et al. 2011), controlling for determinants of conservatism such as size (Yu, 2013), investment opportunities, measured through the market-to-book index (Roychowdhury & Watts, 2007) and indebtedness (Cullinan, Wang, Wang & Zhang, 2012) .

Thus, this research provides a quantum analysis of the relations between conservatism and concentration of property, investigating the alignment and entrenchment effects for the variables studied along the quantile distribution of probability, thus contributing to a better understanding of the existing agency relationship between controllers and minority.

After this introduction, the present work is structured as follows: the second section corresponds to the theoretical foundation and in the sequence is presented the research methodology. In the fourth section the results are highlighted and discussed. Finally, in the conclusion are exposed the contributions of the research.

2 THEORETICAL FOUNDATION

2.1 Accounting Information and Conservatism

The accounting information is directed to characteristics that represent its usefulness among the deands of the different types of users (Moreira, Colauto & Amaral, 2010). However, the accounting information may suffer interference derived from the incompleteness of contractual relations, giving way to opportunistic behavior, resulting in a greater degree of information asymmetry among economic agents and consequently less usefulness to their users (Lopes & Martins, 2005).

The literature has indicated the search for the advance of the understanding of how the contractual failures can affect the elaboration and disclosure of the useful accounting information, given the users' demand for information that contributes to the reduction of agency costs (Jensen & Meckling, 1976, Watts & Zimmerman, 1979) and the creation of accounting practices capable of reducing the divergence of interests between the contracting parties (Watts, 2003a).

One of the accounting practices that can contribute to the reduction of the conflict of interests between agent and principal is conservatism, which according to Basu (1997) consists in the quicker and more timely recognition of bad news than good news, leading to biased and underestimated recognition of shareholders' equity. For Paulo et. al. (2008) conservatism consists of asymmetric recognition of assets / revenues and liabilities / expenses, and should be considered the least favorable scenario, so that the objective that the equity reflects the negative changes more than the positive ones.

According to Ball (2001) and Ball and Shivakumar (2005), through the timely recognition of losses, conservatism limits managers' discretionary abilities to delay the recognition of losses as well as encourage the abandonment of investments with negative net present value. Watts (2003a) points out that conservatism prevents managers from reporting higher profits and thus establish bonuses and compensation in excess of management, increasing the efficiency of executive compensation contracts and reducing the moral hazard derived from the separation of ownership and management.

Sharing this understanding, it is possible to point out that conservative accounting information can be used as an ex ante monitoring mechanism in order to curb possible opportunistic behavior of agents, aligning the interests between the contracting parties, resulting in a greater degree of quality for the accounting information disclosed.

However, Ball and Shivakumar (2005) recommend that for a better understanding of how the contractual benefits mentioned above derive from the practice of conservatism, it is necessary to distinguish between unconditional and conditional conservatism, which although "nebulous" represents a central theme.

Unconditional conservatism refers to the accounting principle of prudence and represents the presenting bias of the lowest possible net worth (Ball & Shivakumar, 2005) reporting, unconditionally, among the possible alternatives, always the lowest value for assets and the largest for liabilities, while revenues should be deferred in recognition of the anticipated recognition of expenses (Watts & Zimmerman, 1986), seeking to protect the entity from the uncertainty of operations.

The conditional conservatism reflects the contemporaneous reduction of net assets and income for the period in view of the indication of economic events that point to the possibility of future losses (Ball & Shivakumar, 2005), resulting in asymmetric and timely recognition of bad news at the expense of good news (Basu, 1997).

Thus, while unconditional conservatism is independent of predictions or future economic events of loss, conditional conservatism occurs when the discretionary judgment about the early recognition of bad news, making this type of conservatism either punctual or momentary.

Distinguishing the types of conservatism, Ball & Shivakumar (2005, pp. 90-91) argue that the asymmetric loss recognition resulting from the practice of conditional conservatism can increase the efficiency of contractual relationships, while unconditional conservatism seems to be inefficient or neutral because reversal is possible or annulment of conservative accounting choices by rational agents.

In the next section, conditional conservatism is studied in the light of the propositions of the alignment and entrenchment effects, the focus of this study, with the purpose of demonstrating the possible effects arising from the divergence of interests between controlling shareholders and minority shareholders over accounting information.

2.2 Conditional Conservatism and the Effects of Alignment and Entrenchment

As mentioned previously, it is accepted in the literature that accounting information can be influenced by possible divergences of interests between controllers and minority shareholders (Fan & Wong, 2002, Wang, 2006) as is the case of the Brazilian stock market characterized by the high degree of concentration of ownership (Sarlo Neto et al., 2010, Caixe & Krauter, 2013).

It should be noted that the concentration of ownership imposes on controllers a set of costs and benefits, which may affect the contractual relationship with minority shareholders and, consequently, the degree of conditional conservatism present in the set of accounting statements disclosed to the market.

In general, concentration of ownership exposes controlling shareholders to a higher level of risk by limiting or even make it impossible to diversify their investments (Faccio, Marchica & Mura, 2011) and to a lower level of liquidity of the shares traded (Maug, 1998, Attig, Fong, Gadhoum & Lang, 2006), which may encourage controllers to obtain private benefits from control (Shleifer & Vishny, 1997), such as access to insider information (Kung et al., 2010, Boná-Sanchez et. (Sarlo Neto et al., 2010) and the opportunistic behavior in relation to the dividend policy (Sarlo Neto et al., 2010) through the disclosure of lower quality information to the other shareholders, characterizing the entrenchment effect.

Realizing the risk of expropriation by the controlling shareholders, as well as the lower potential for monitoring through accounting information, minority shareholders tend to adjust their level of risk in the valuation of their holdings (Claessens, Djankov, Fan & Lang, 2002, La Porta, Lopez-de-Silanez, Shleifer & Vishny, 2002), imposing a greater cost of capital, due to the informational asymmetry (Myers, 1977), to the organizations and consequently reducing their market value.

On the other hand, as a way to avoid or reduce the risks and costs of entrenchment, controllers may incur practices of aligning interests with minority interests as a way of minimizing informational asymmetry and agency costs. The alignment of interests can result in better corporate governance practices (Lara, Osma & Penalva, 2009), with lower capital cost (Lara, Osma & Penalva, 2011) and greater investment efficiency (Lara, Osma & Penalva, 2015).

In these circumstances, conditional conservatism can be understood, under the aegis of the alignment effect, as an alternative to improve the information content of the set of financial statements, helping to reduce agency costs, therefore demanded by minority investors as a monitoring

mechanism and protection of possible risks of expropriation by the controllers (Lara, Osma & Penalva, 2014).

2.3 Empirical Studies

In this section we present empirical studies that dealt with the agency conflict between controlling and minority shareholders and their relation to conditional conservatism.

Sarlo Neto et. al. (2010) investigated the influence of the concentration of votes and the agreement among shareholders on conditional conservatism in non-financial companies traded on the Bovespa using the model proposed by Basu (1997). The study sample comprised 68 companies during the period 2000-2008. The results showed that the concentration of votes negatively influences the degree of conservatism, indicating a lower recognition of losses in the result, while the variable of agreement among shareholders presented a positive relation with conservatism, signaling the timely recognition of loss in profits.

Kung et. al. (2010) observed that the effect of ownership concentration on conditional conservatism in the Chinese capital market is negative. For the authors, these results are justified by the fact that companies with large state concentration and private concentration rely heavily on private information to minimize agency conflicts, thus creating a low demand for conservatism. Kung et. al. (2010) still conclude that this fact is due to the fact that the Chinese market is characterized by the combination of communist and capitalist institutional aspects, which makes the demand of minority investors for conservatism less important.

In turn, Boná-Sanchez et. al. (2011) analyzed the effect of the concentration of votes and the divergence of rights over conditional conservatism in the Spanish market. The authors observed that the concentration of votes and the divergence of rights negatively influence the level of conservatism, which consequently gives rise to a greater probability of expropriation of minority shareholders.

Cullinan et. al. (2012) observed for the Chinese market that the concentration of property negatively influences on conditional conservatism, given that the controlling shareholders have sufficient benefits to influence the management acts and thus access privileged information and encourage less conservative disclosure. In addition, Cullinan et. al. (2012) analyzed whether the presence of shareholders holding a large portion of property that is not part of the controlling block could result in the demand for a higher level of conservatism, a hypothesis that has not been confirmed by the authors.

Yu (2013) studied the influence of the concentration of ownership by non-controlling investors on conservatism. Using the models proposed by Basu (1997) and Ball and Shivakumar (2005). Yu (2013) confirmed the hypothesis of his study, concluding that the demand for conservative information by the nonparticipating owners of the controlling block results in a higher degree of conservatism, enabling a more effective monitoring of management acts.

3 METHODOLOGY
3.1 Sample and Research Data

This work analyzed the listed companies in Brazil, Bolsa e Balcão (B3) in the period from 2010 to 2016. The choice for this period is justified by the full adoption of international accounting standards by Brazil, since the use of information prior to this period could distort the uniformity of the research proxies and consequently the results of the econometric analyzes of the study.

The data were collected from the Economatica® database, starting from the universe of companies listed in B3, according to the following procedures: i) exclusion of companies of a financial nature, since these must comply with specific accounting regulation of the sector; ii) exclusion of

companies with incomplete and unavailable data; iii) disregard of companies with negative share-holders' equity, since they are entities with characteristics of discontinuity; iv) the stock with more liquidity in the stock market was chosen for the companies that negotiate more of a type; and, v) after verification on the B3 website, companies that declare that they do not have a controlling share-holder were excluded.

After these procedures, the final research sample resulted in 72 companies suitable for analysis, resulting in 504 observations for the period from 2010 to 2016.

3.2 Econometric Models and Research Variables

In view of the research objective, we chose the Basu model (1997) which is widely used and validated by the studies cited in the empirical studies section.

The Basu model (1997), known as the reverse model of profit and return, assumes that the return of the stock is able to predict the profit of the period, given that stock prices reflect information derived from alternative sources, and that signal the possibility of recognition of bad news and good news in the result of the exercise.

Thus, the Basu model (1997) captures the bias of timely recognition of losses, using as proxy for good news the positive return of shares, while the proxy for bad news is the negative return of shares. Below, equation 1 presents the Basu model (1997):

$$LPA_{it} = \beta_0 + \beta_1 D_{i,t} + \beta_2 Ret_{ACi,t} + \beta_3 D_{i,t} Ret_{ACi,t} + \varepsilon_{i,t} \tag{1}$$

whereby:

LPA_{it} represents adjusted earnings per share, result of the ratio of the earnings per share of company i in period t, staggered by the price of the share of company i in period t-1.

D_{it} is a binary variable, which corresponds to 1 if the return of the stock of company i in period t is negative ($Ret_{it}<0$) and 0, if positive or null ($Ret_{it}\geq0$).

$Ret_{ACi,t}$ is the stock return of company i in period t, scaled by the share price of company i at time t-1., according to Demonier, Almeida & Bortolon (2015).

ε_{it} indicates the error term of the regression of company i in period t.

For the Basu model (1997) the coefficient β_3 represents the parameter of interest. If this parameter demonstrates a positive and significant signal, there is an indication of timely and skewed recognition of economic losses. If the parameter β_3 presents negative and significant signal the interpretation will be in the sense of postponing the recognition of economic losses.

With the purpose of capturing the effect of the concentration of property on conservatism, the Basu model (1997) was adapted according to the work of Sarlo Neto et al. (2010) in which the variable concentration of votes is inserted as proxy of the concentration of property as presented in equation 2.

$$LPA_{it} = \beta_0 + \beta_1 D_{i,t} + \beta_2 Ret_{ACi,t} + \beta_3 D_{i,t} Ret_{ACi,t} + \beta_4 Votos_{it} + \beta_5 D_{it} Votos_{it}$$
$$+ \beta_6 Ret_{ACi,t} Votos_{it} + \beta_7 D_{it} Ret_{ACi,t} Votos_{it} + \varepsilon_{it} \tag{2}$$

whereby:

LPA_{it} represents adjusted earnings per share, a result of the ratio of the earnings per share of company i in period t, by the price of the share of company i in period t-1.

D_{it} is a binary variable, which corresponds to 1 if the return of the stock of company i in period t is negative ($Ret_{it}<0$) and 0, if positive or null ($Ret_{it}\geq0$).

$Ret_{ACi,t}$, is the stock return of company i in period t, scaled by the share price of company i at time t -1, according to Demonier et al. (2015).

Votos$_{it}$ corresponds to the voting power of the largest controlling shareholder of company i in time period t.

ε_{it} indicates the error term of the regression of company i in period t.

If the parameter β_7 is significant and positive, there will be an indication that the concentration of votes aligns the interests between controllers and minority shareholders through a greater recognition of losses. On the other hand, if the parameter β_7 is significant and negative, the interpretation will be that the concentration of votes encourages controllers to disclose lower quality information, contributing to the increase of information asymmetry and for the consequent expropriation of minority shareholders.

The concentration of votes, according to Sarlo Neto et. al. (2010) consists of effective control of the company, where the shareholder or controlling block has, also, some degree of influence in the preparation and disclosure of accounting information, which include the profits to be disclosed and the dividends to be distributed.

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Assuming, therefore, that the concentration of voting rights gives controlling shareholders greater access to inside information (Shleifer & Vishny, 1997), under the aegis of the entrenchment effect, it is plausible to expect the opportunistic behavior of controllers to influence the disclosure of less conservative information to the market.

This prediction finds support in the results observed by Sarlo Neto et. al. (2010), Kung et. al. (2010), Boná-Sanchez et. al. (2011) and Cullinan et. al. (2012) who observed the negative influence of the concentration of votes on conservatism.

Hypothesis: The higher the concentration of votes, the less the asymmetric recognition of losses.

Finally, the adapted model of Basu (1997) is estimated including the control variables size, market-to-book and indebtedness, which are supported by the literature as variables that positively influence conditional conservatism. Therefore, such variables were included in the model in order to avoid bias associated with the effects of any characteristics of the firms that are components of the research sample.

Below, equation 3 shows the final model used in this paper.

$$
\begin{aligned}
LPA_{it} = {} & \beta_0 + \beta_1 D_{i,t} + \beta_2 Ret_{ACi,t} + \beta_3 D_{i,t}Ret_{ACi,t} + \beta_4 \text{Votos}_{it} + \beta_5 D_{it}\text{Votos}_{it} \\
& + \beta_6 Ret_{ACi,t}\text{Votos}_{it} + \beta_7 D_{it}Ret_{ACi,t}\text{Votos}_{it} + \beta_8 \text{Controles}_{it} \\
& + \beta_9 D_{it}\text{Controles}_{it} + \beta_{10} Ret_{ACi,t}\text{Controles}_{it} + \beta_{11} D_{it}Ret_{ACi,t}\text{Controles}_{it} \\
& + \varepsilon_{it}
\end{aligned}
\tag{3}
$$

Whereby:

LPA_{it} represents adjusted earnings per share, the result of the ratio of the earnings per share of company i in period t, staggered by the price of the share of company i in period t-1.

D_{it} is a binary variable, which corresponds to 1 if the return of the stock of company i in period t is negative ($Ret_{it}<0$) and 0, if it is positive or null ($Ret_{it}\geq0$).

$Ret_{ACi,t}$ is the stock return of company i in period t, staggered by the share price of company i at time t -1, according to Demonier et al. (2015).

Votos_it corresponds to the voting power of the largest controlling shareholder of company i in time period t.

Controles$_{it}$ corresponds to the control variables size, market-to-book and company's indebtedness at time t.

ε_{it} indicates the error term of the regression of company i in period t.

After presenting the econometric models, Table 1 presents the research variables and their respective proxies, descriptions and references.

Table 1 - Study Variables

Variável de Estrutura de Propriedade			
variables	*Proxy*	*Description*	*references*
Concentração de Votos (Votos)	$CV_{it} = Log\left(\dfrac{\%Aord_{it}}{100-\%Aord_{it}}\right)$	Represents the voting power of the largest controlling shareholder and is measured by the ratio of the percentage of common shares held by the largest controlling shareholder and the difference between the total number of common shares issued and the percentage of common shares held by the largest controlling shareholder.	Demsetz & Lehn (1985)
Variáveis de Controle			
variables	*Proxy*	*Description*	*references*
Size	$Tam_{it} = LogVM_{it}$	Large companies are exposed to increased demand for relevant information from their users, being expected, and thus to disseminate more conservative information. This variable is measured by the logarithm of the market value of the organizations.	Yu (2013)
Market-to-Book	$MTB_{it=}\dfrac{VM_{it}}{PL_{it}}$	Controls investment opportunities and the cumulative effects of conservatism of earlier periods. It is measured by the ratio of market value to shareholders' equity.	Roychowdhury & Watts (2007)
Indebtedness	$End_{it} = \dfrac{(PC_{it}+PNC_{it})}{AT_{it}}$	Firms with a high degree of indebtedness are prone to agency conflicts with their creditors. Lenders tend to require conservative practice form of contractual restraint in order to avoid opportunistic behavior as a form of contractual restraint. This variable is measured by the ratio between the sum of the total liabilities and the total assets.	Cullinan *et. al.* (2012)

To conclude the section, as the main methodological limitation it should be noted that the measurement of the variable of concentration of votes did not contemplate possible indirect participation, implying that this variable may be greater than that presented in this study.

However, this limitation does not invalidate the study, since Carvalhal-da Silva (2004), when analyzing the ownership structure of Brazilian public companies, observed similar results for the

two forms of measurement of this variable, pointing as the only difference that the indirect property presented greater significance than the direct property.

Furthermore, the measurement of the voting concentration variable treated the largest controlling shareholder in a homogeneous manner, without distinction of identity, of existence of an agreement between shareholders, of control blocks or pyramidal control structures.

4 ANALYSIS OF RESULTS

At the beginning, the quantile estimation model was chosen to carry out the research analysis by enabling the diagnosis of the theoretical relations in this paper along several points of the probability distribution.

Originally, the quantile regression method was proposed by Koenker & Basset (1978) and has the purpose of offering an alternative estimation method to the classical method of ordinary least squares. Among the advantages of quantile estimation, besides the aforementioned, is that it is possible to obtain robust parameters the presence of outliers, of heteroscedastic residues and of non-Gaussian probability distributions.

In addition, Duarte, Girão and Paulo (2017) point out that due to the heterogeneity of the Brazilian companies it is possible that the estimates made from ordinary least squares regressions present biased results (biased average) and that for this reason the quantile regression method, for estimating the parameters from the median of the quantiles would be more appropriate.

Faced with such arguments and the evidence gap, the econometric models presented in the methodology were estimated according to the quantile regression method, where the significance levels of 1% (***), 5% (**) and 10% (*) were considered for the variables.

The estimated coefficients are presented in four columns, where the former corresponds to the ordinary least squares estimation method (OLS) and the other columns show the results for quantiles (τ) 0.25, 0.5 and 0.75.

Table 2 presents the results of the estimation of the adapted model of Basu (1997) as presented in equation 2, where the variable concentration of votes was inserted.

The results show that according to the OLS method the variable concentration of votes was shown to be negatively related to conditional conservatism, suggesting evidence of postponement of the recognition of losses. On the other hand, the quantile regression analysis did not present significant results for the variable of interest, not allowing to conclude on the acceptance of the null hypothesis of the study from the estimation of the model presented in equation 2.

It is understood that these results can be due to two reasons: i) the ordinary least squares method, sensitive to heterogeneous samples, presented a large estimation error, and ii) the non-use of variables that control the effects and biases related to the characteristics of the companies, which suggests that the concentration of votes has no relevant effects on conditional conservatism when this variable is used in the analysis in isolation.

Table 2 - Results Equation 2

Variável	OLS	$\tau = 0.25$	$\tau = 0.50$	$\tau = 0.75$

Intercepto	-0.1645	-0.0676	0.3536***	0.3756**
Dummy	-0.8837	-0.1549	-0.3451*	0.0400
Retorno	0.0521	0.0319	0.0090	0.0181
Dummy*Retorno	0.4495**	-0.0734	-0.0004	0.0292
Votos	0.3062	0.1480	-0.3156*	-0.2993
Votos*Dummy	0.9785	0.1685	0.3697	-0.0962
Votos*Retorno	-0.0657	-0.0429	-0.0096	-0.0176
Votos*Dummy*Retorno	-0.5825**	0.1186	-0.0007	-0.0413

Source: Research Data

Already in the estimation of the adapted model of Basu (1997) that includes the variables of control (equation 3), it was possible to verify that the parameter of interest β_7 indicated the negative and statistically significant relation of the concentration of votes for both the OLS coefficient and the estimated coefficients (0.25, 0.5 and 0.75).

The observations of these coefficients corroborate with the entrenchment effect, hypothesis of this study, indicating that the concentration of votes contributes to an increase in informational asymmetry and the consequent expropriation of minority shareholders as it encourages controllers to influence the disclosure of profits with less degree of conditional conservatism.

As discussed previously, the concentration of ownership inceptive the opportunistic behavior with regard to the elaboration process and disclosure of accounting information, enabling the controlling shareholders to obtain private control benefits. It should be noted, however, that the negative relation of greater magnitude is that of the lower quantiles(τ = 0.25, onde β_7 = -8.9863), which in a way is unexpected by the fact that it is commonly accepted in the literature that a greater concentration of ownership implies more severe agency problems.

For the upper quantiles, although the concentration of property presents a negative sign, it is possible to conclude that the effects of entrenchment are less severe (given the observation of coefficients of smaller magnitude). The possible justification for such a result is that controllers may face costs greater than the benefits that would accrue to the expropriation of minority shareholders in circumstances of high concentration of ownership.

This finding broadens the results of Sarlo Neto et. al. (2010), Kung et. al. (2010), Boná-Sanchez et. al. (2011) and Cullinan et. al. (2012) which conclude only about the negative relation between the concentration of votes and conservatism without, however, examining this relation according to degrees of concentration of property.

It should also be emphasized that the observation of negative coefficients reinforces the findings of Fan and Wong (2002), Bae and Jeong (2007), Sarlo Neto, Lopes and Dalmácio (2010), Lew and Wu (2013) and Prazeres, Soeiro, Araújo and Freitas (2017) that the concentration of property results in a negative relation (relevance) of the accounting information to the price and the return of shares, which is probably due, to a certain degree, to the disclosure of profits with less conservative conditionality to the market.

Moreover, it is possible to observe the magnitude discrepancy of the coefficient of the variable of interest presented by the OLS method (-16.1900) and the coefficients of the quantile regression (τ 0.25 = -8.9863; τ 0.50 = -4.6433; τ 0.75 = -3.6335), which reinforces that the OLS method, under the circumstances of sample heterogeneity, tends to present results with larger estimation errors, whereas the quantile regression method is robust to this type of problem.

Table 5 shows the results of the estimation of equation 3.

Table 5 - Results Equation 3

Variable	OLS	τ = 0.25	τ = 0.50	τ =0.75

Intercepto	-0.9042	-0.7241	0.6648	-0.5589
Dummy	-17.1600***	-3.7925	0.4920	1.7546
Retorno	0.1131	0.0067	-0.0006**	0.3088***
Dummy*Retorno	0.1131***	2.7368***	1.4721	1.1468*
Votos	2.6670	1.9659	-1.3980	2.0717
Dummy* Votos	39.4400***	7.7725	-1.9184	-5.0822
Retorno* Votos	-0.2457	0.0271	0.0755	-0.7947***
Dummy*Retorno* Votos	-16.1900***	-8.9863***	-4.6433***	-3.6335*
Tamanho	-0.1671	-0.1182	0.0918	-0.1503
Dummy* Tamanho	-2.2790**	-0.3983	0.1604	0.3662
Retorno* Tamanho	0.0132	-0.0041	-0.0084	0.0529***
Dummy*Retorno* Tamanho	1.2690***	0.6988***	0.3497***	0.2745*
Market-to-Book	-0.0017	-0.0056	-0.0103	-0.0100***
Dummy**Market-to-Book*	-0.0278	-0.0025	0.0050	0.0052
Retorno**Market-to-Book*	0.0012	0.0023	0.0014	-0.0004
Dummy*Retorno* *Market-to-Book*	-0.0413***	-0.0192***	-0.0115***	-0.0056*
Indebtedness	-0.0016	-0.0007	-0.0001	0.0002
Dummy* Indebtedness	0.0002	0.0006	-0.0005	-0.0011
Retorno* Indebtedness	0.0000	-0.0002	-0.0002	-0.0001
Dummy*Retorno* Indebtedness	0.0021***	0.0012***	0.0008	0.0005

Source: Research Data

Regarding the control variables, the size variable presented positive results, according to the expected theoretical prediction, indicating that the larger an organization will be the demand of users for quality information (Yu, 2013).

This result corroborates with the theoretical predictions presented by Demsetz & Lehn (1985) that the size of the firm can be understood as a restrictive factor of the concentration of property because it demands a greater proportion of resources for the control to be acquired, which imposes a greater risk, by making it impossible to diversify, for agents wishing to concentrate ownership of a firm. In this case, it is understandable that firms where the cost of acquisition of control is greater, the lower the influence of controllers on conditional conservatism and consequently the lower the likelihood of minority expropriation.

According to Collins and Khotari (1989, p.166) the market-to-book variable, proxy for investment opportunities signals to investors that current assets and future investments have the ability to remunerate the minimum expectation of return on equity, indicating an efficient allocation of resources. Contrary to this prediction, the variable market-to-book has been shown to be negatively related to the degree of conservatism for all quantiles, which makes it possible to infer that the informational environment of concentrated companies does not contribute to the control of minority investors regarding the return of their investments, making it impossible to allocate resources efficiently.

This finding confirms the hypothesis of the entrenchment effect and is in line with the position of Ball (2001), Watts (2003a) and Ball and Shivakumar (2005) that in the agency relationship, conservatism limits the managers' discretion in delaying the recognition of losses and to encourage the abandonment of projects with negative net present value.

The verification of this result implies that there is a tendency for the recognition of losses to be delayed so that projects with negative net present value and greater profits are informed for the purpose of obtaining excess compensation bonuses by the controlling block.

Finally, the indebtedness variable was only significant for the lower limb ($\tau = 0.25$) where it was possible to identify a positive relationship with conditional conservatism, confirming the expected relationship that indebted firms are more prone to the emergence of agency disputes with

their creditors (Cullinan et al., 2012), which tend to require conservative information to avoid opportunistic behavior and reduce the risk of default.

On the other hand, the proposition that the higher the indebtedness the greater the degree of conservatism, the empirical support was not obtained when the upper quantiles are analyzed. Possibly, the observation of this result is justified by the fact that the debt profile (loans and financing) of Brazilian companies is essentially banking (Silva, 2015) which, because of contractual issues, gives the creditors direct access to the managers, thus resulting in a lower demand for quality accounting information.

5 CONCLUSION

This paper analyzes the relationship between concentration of ownership and conditional conservatism practiced by Brazilian listed companies in B3 in order to advance the understanding of the existing agency conflict between controlling shareholders and minority shareholders.

By adopting the quantile regression model it was possible to estimate robust results the presence of outliers, of heteroscedastic residues and of non-Gaussian probability distributions, problems which are common to the classical ordinary least squares estimation method.

From the theoretical point of view, the main finding of this study points to the observation of the negative effect of the concentration of property on conditional conservatism and that this relation presents coefficients of greater magnitude in the lower quantile of the analyzed probability distribution, confirming not only the hypothesis of the entrenchment effect, but that this effect is more severe for lower levels of concentration of property.

The observation of this result is conditioned to the variable concentration of property that was measured through the direct concentration of the voting rights of the largest controlling shareholder, suggesting that for a minor the level of direct participation of the largest controlling shareholder ($\tau = 0.25$, as analyzed in the research), tends to be the negative influence of the controllers on the production process and supply of accounting information with lower degree of conservatism.

On the other hand, despite the observation of the entrenchment effect for the upper quantiles, the estimated coefficients presented a smaller magnitude in relation to the lower quantil. It is believed that this result is due to a higher cost of minority expropriation by controllers through the dissemination of less conservative information (e.g. higher cost of capital) and that for this reason the appropriation of private control benefits is carried out through alternative sources of information.

The variable investment opportunities, measured by the market-to-book index, has also demonstrated a negative relationship with conditional conservatism, which confirms the existence of opportunistic behavior on the part of controllers in relation to accounting policies.

In a similar way to the concentration of property, it was possible to observe that the market-to-book index presented an estimated coefficient of greater magnitude for the lower quantilesand of smaller magnitude for the upper quantiles. This finding converges to a greater negative influence of the controllers (in the lower quantil) on the accounting policies, indicating that investment opportunities can be used to delay losses and anticipate gains, indicating poor allocation of resources organizations, through the implementation of projects with negative net present value.

On the other hand, the size variable was shown to positively influence conservatism in all quantiles analyzed, proving that firm size limits the concentration of ownership and restricts the influence of controllers in the process of preparing and providing accounting information. Thus, it is possible to infer that the size of organizations influences the informational environment by reducing the risk of minority investors being expropriated.

The indebtedness variable was significant only for the lower limb ($\tau = 0.25$) where it was possible to identify a positive relationship with conditional conservatism, indicating that creditors require a greater degree of conservatism as a form of protection against possible agency conflicts.

For the upper quantiles, this variable was not significant suggesting that as a result of the historical-institutional inheritance of bank debt in Brazil (Silva, 2015) creditors have direct access to the managers, which may explain the failure to observe a significant relationship between indebtedness and conservatism.

In view of these results, this paper concludes that firms with a lower level of direct concentration of ownership and investment opportunities are more likely to produce and provide accounting information with a lower degree of conservatism, confirming the entrenchment effect. On the other hand, larger companies with lower levels of indebtedness tend to influence the information environment in a positive way, aligning possible conflicts of interest.

Finally, this study is exempt from presenting the explanatory coefficient of the quantítilic models (Pseudo R^2) because it is not a research objective to analyze the explanatory power of the presented models, but to examine the relations at multiple points (quantiles) of the distribution.

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