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Evidence of the Economic Context in the Relationship Between Corporate Governance and Stock Market Volatility in the Brazilian Public Companies

ABSTRACT

Objective: to analyze how the economic context affects the relationship between corporate governance and stock market volatility of Brazilian public companies listed on B3 S.A. - Brasil, Bolsa, Balcão (B3), from 2010 to 2018.

Method: based on quantitative, descriptive, and documentary research, the stock market volatility on an annual basis was used as a metric for volatility (dependent variable); internal mechanisms (ownership and control structure, number of members of the administrative and fiscal council) and external mechanisms (B3 governance levels, American Depositary Receipt, and free float) such as corporate governance proxies (independent variable of interest); and control variables (Gross Domestic Product - GDP and others).

Originality/Relevance: there is no consensus regarding the way that corporate governance practices affect stock market volatility, when considering the economic context in which the country finds itself, given that different proxies can cause different effects before the market (Li *et al.*, 2013; Litov *et al.*, 2006).

Results: it was found that, in general, internal mechanisms have a significant influence in relation to stock market volatility only when analyzed together with the variation in GDP. The external mechanisms, on the other hand, did not show significant influence in relation to the stock market volatility.

Theoretical / Methodological Contributions: the discussion about the interaction of corporate governance practices with the volatility in the stock market prices of Brazilian companies is broadened, as well as the different approaches to decision-making when analyzing the internal and external mechanisms of corporate governance in the Brazilian economic context.

Keywords: Corporate Governance. Stock Market Volatility. Economic Context. Gross Domestic Product.

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1 INTRODUCTION

Theoretical assumptions understand that corporate governance practices can directly influence stock prices (Cremers & Nair, 2005; Li, Jahera, & Yost, 2013). In this postulate, it is believed that a company that presents a high use of corporate governance practices will not necessarily have low volatility on the stock market (Li *et al.*, 2013), but may present different analytical contexts. In the first perspective, this relationship is negative, under the focus of transparency, since the greater the transparency, the greater the credibility attributed to the company's information and the lower the volatility to which its shares are subjected (Li *et al.*, 2013). However, the second conception is based on the fact that the association of governance proxies with the decrease in management conservatism can demonstrate a positive relationship with stock market volatility, considering that less conservative decisions can generate greater volatility (Litov, John, & Yeung, 2006).

Cremers and Nair (2005) analyzed the influence of internal governance mechanisms (shareholder activism, represented by the shareholding percentage of public pension funds and the largest shareholder) on external mechanisms, discovering that both approaches are complementary, as they are related to abnormal long-term returns, as well as to accounting measures of profitability. In this context, Matucheski, Clemente and Sandrin (2009) and Oliveira and Santos (2011) address the variation in stock market volatility compared to the level of corporate governance for periods of financial instability. These periods of uncertainty enable an increase in conflicts of interest between shareholders and managers, due to the possible prioritization of profit maximization over ensuring the healthy continuity of the company (Donker, Santen, & Zahir, 2009).

Thus, aspects related to macroeconomic instability can have potential effects that destabilize the development of a particular country or region, as the decision-making related to investment, production, and financing of companies may be affected (Chow, Muhammad, Bany-Arifin, & Cheng, 2018). Sirqueira (2007) believes that conceptions regarding culture, legislation, regulatory environment, internal structure, and market institutions have an impact on the corporate governance of companies in a given country, which, consequently, will reflect on the stock market volatility.

Therefore, the present study seeks to answer the following problem question: how does the economic context affect the relationship between corporate governance and stock market volatility of publicly traded companies in Brazil? In order to obtain an answer to this question, the objective of the research is to analyze how the economic context affects the relationship between corporate governance and the stock market volatility of Brazilian public companies listed on B3 S.A. - Brasil, Bolsa, Balcão (B3), from 2010 to 2018.

The importance of the research is portrayed by the fact that it addresses a common interest of investors: the Stock Price Returns. The debate on corporate governance and stock price behavior is broadened, as there is no consensus regarding the way that corporate governance practices affect stock market volatility, since different proxies can cause different effects (Li *et al.*, 2013; Litov *et al.*, 2006). Another relevant aspect of the research is the segregation of internal and external mechanisms of corporate governance. This provides business stakeholders with a detailed and informative analysis of the companies in which they invest, in view of the different approaches to decision-making when using these mechanisms (Walsh & Seward, 1990). Furthermore, the discussion related to decision-making through accounting information in an economic context of an emerging country is encouraged.

The research enables a detailed analysis of the use of corporate governance practices as a way of minimizing stock price volatility, as it considers the country's economic circumstances. This theme is relevant due to the macroeconomic uncertainties that Brazil has been experiencing in recent years, strongly affecting market growth and, consequently, the

companies listed in it, especially after scandals involving several publicly traded companies and changes in the political scenario, such as the 2016 Impeachment (Peña, 2017).

In this sense, information users are provided with more efficient decision making, given that it explores the country's economic situation and oscillations over time, and not just the static relationship between corporate governance and price volatility. Furthermore, the analysis of the macroeconomic environment is necessary, since several aspects of decision-making by managers can be affected by eventual market instabilities (Chow *et al.*, 2018), causing problems in the performance of companies, as well as in the volatility of their stocks.

The Agency Theory is the basis for this research, as it assumes that the asymmetry of information between the agent (manager) and the principal (investors) is reduced as the levels of corporate governance increase and, on the other hand, show less risk to shareholders, as it increases the confidence level, maximizing their wealth (Jensen & Meckling, 1976; Li *et al.*, 2013).

2 CORPORATE GOVERNANCE, STOCK MARKET VOLATILITY AND ECONOMIC ENVIRONMENT

Corporate governance has in its precepts that organizational structures with better governance practices (internal and external), tend to present better results and lower market risk (Silva, Santos, Torres, & Ferreira, 2009). The different governance mechanisms aim to understand which factors and conditions can lead to an effective decision-making process (Walsh & Seward, 1990). The internal mechanisms are generated within the company, most of which are prone to directly discipline managers (Aguilera, Desender, Bednar, & Lee, 2015), through: monitoring the board of directors and the executive board; incentives to shareholders; and the concentration of the ownership structure (Daily, Dalton, & Cannella, 2003).

In the event that such monitoring fails due to managerial opportunism, external governance mechanisms are activated, which, according to Aguilera *et al.* (2015), can be seen as operations outside the core of the company, related to the legal environment, the corporate control market, external auditors and the behavior of shareholders, creditors, and the media. Moreover, the authors argue that internal mechanisms are insufficient to guarantee effective corporate governance, suggesting the joint adoption of external instruments to achieve effective management. In this way, the external mechanisms aim to ensure that executives respect the rights of the company and stakeholders in the business, in order to also influence the effectiveness of internal governance mechanisms.

In this sense, hypotheses 1 and 2 are raised:

Hypothesis 1 (H1): The internal mechanisms of corporate governance are negatively related to the stock market volatility in the Brazilian capital market.

Hypothesis 2 (H2): The external mechanisms of corporate governance are negatively related to the stock market volatility in the Brazilian capital market.

Several studies (Gagnon & Jeanneret, 2018; Li *et al.*, 2013; Matucheski *et al.*, 2009; Oliveira & Santos, 2011; Souza, Lima, Barbosa, Coutinho & Albuquerque, 2015) address corporate governance from the perspective of the behavior of the company's shares in relation to the market, demonstrating that, in general, corporate governance practices imply a reduction in stock market volatility. Such a market is composed of a set of operations for buying and selling stocks, carried out on the Stock Exchange, with their performance evaluated through indexes (Malacrida & Yamamoto, 2006).

The investor's return is based on the negotiability of stock prices which, in turn, is guided by the capital market reactions (Malacrida & Yamamoto, 2006). This negotiability is affected by the market risk and by the risk of the borrowing company, therefore, its volatility is

affected by internal and external factors (Cremers & Nair, 2005). Thus, investor confidence is based on the relationship between the variance of risk and return (Li *et al.*, 2013). However, internal information is not always evident to the investor and/or has its influence measured and/or recognized in the performance of the shares.

In this context, it is attractive for investors to invest their capital in operations that allow them to create wealth, so that the return on investment is greater than the initial cost of capital employed (Assaf Neto, Lima, & Araújo, 2008). However, this negotiability involves risk and the shareholder needs to have information that allows him to evaluate the company that offers the best proposal between the required rate of return (minimum required) versus the acceptable risk of his financial decision. Thus, the investor's remuneration also depends on the risk involved in the investment made.

Grullon, Lyandres and Zhdanov (2012) understand that companies change their operational and investment choices in order to minimize bad news and maximize the impact of good information. As a result, they cause volatility to mutate, while companies with more real investment options, such as young, small, research and development, and high-growth companies, have a strong sensitivity to change in volatility.

The volatility expressed in stock prices has been used as a measure of the risk assumed in relation to equity applied in the stock market (Li *et al.*, 2013). In the view of Halov and Heider (2011) and Martins, Paulo and Albuquerque (2013) the volatility of stocks indicates information asymmetry, since high volatility implies a risk to the shareholder, part of this being, in the Brazilian equity context, explained by the existence of trading based on private information, caused by the following facts: small share of foreign companies; agglomerated capital with few investors; a low volume of traded assets; and short-term investors. Based on this assumption, Martins *et al.* (2013) evaluated 198 shares listed on B3 in 2011, noting the use of privileged information in the Brazilian capital market, which consequently affects the return of the shares.

With regard to governance practices concerning risk, Ferreira and Laux (2007) understood idiosyncratic risk as an index of information flow, with private information going to the market in a timely and accurate manner, in addition to the relationship between governance and risk being more pronounced for companies subject to intense negotiations by institutional investors and, in particular, those that were recently involved in risk arbitrage around mergers.

Li *et al.* (2013) concluded that the governance index, measured by the Gompers Index, is an important factor in explaining the implicit volatility of companies, and good governance does not necessarily imply low volatility in the stock price. The authors understand that historical volatility, considered as the standard deviation of stock prices, is a measure of the past, and assumes that stock prices in the future will behave the same. Also, proxies such as company size, financial leverage, and percentage of external people on the organization's board are significantly related to the company's risk when other factors are not controlled. For Sirqueira (2007), culture, legislation, regulatory system, internal structure, and market institutions affect the governance of companies in a given country, which in turn reflects on the volatility of the stock market.

Another perspective to be considered in relation to macroeconomic aspects concerns the fiscal policies of each country. According to Magalhães (2000), in favorable economic contexts (expansion in economic activity) government expenditures are prone to reduction and revenues to increase in proportion to expenditures, providing an increase in the Gross Domestic Product (GDP). In the event of a slowdown in the economy (decline in economic activity), the opposite occurs. However, such a precept would happen only in developed countries, which conduct their fiscal policies in an optimal way. In the case of Brazil, an emerging country, government spending tends to decrease in periods of deceleration, in order to avoid possible deficits,

increasing the share of GDP. In times of economic expansion, credit is made available in an accessible manner, leading to greater spending and, consequently, a decrease in GDP.

Chen, Lim, and Lobo (2016) report that the arrangement of the companies' capital structure has considerable repercussions in the face of oscillations in the economy. For the authors, a booming stock market influences the shareholders' decision-making process regarding their investments in a different way than when it is falling, providing different approaches from the managers in the organization's financing composition. In this way, investors prioritize good accounting results, entrusting their capital to managers with the objective of increasing it through day-to-day business decisions (Kothari, 2019). Additionally, bank financing, the most widely used source of funds for corporate activities, takes into account the country's economic guidelines for regulating credit policies, which influences the choices of managers (Chen *et al.*, 2016).

For Bandyopadhyay and Barua (2016), if the economic context is slowing down, generally more accessible credit policies (such as lower interest rates) are made available, leading companies to attract external financing and leverage their performance. However, moments of expansion of the economic cycle foster the potential use of contractionary monetary policies by the government, increasing interest rates to contain inflation, as well as the costs of loans to companies to hinder their contracting.

Additionally, Banker, Fang and Mehta (2020) have found that the decisions of the managers are complex and affected by the company's information and the environmental economic conditions in which it is located. Thus, the economic slowdown tends to play a distinct and important role in the operational decisions of managers, such as raise incentives to preserve cash; increase pessimism about future sales prospects; and facilitate organizational restructuring to improve efficiency. Along these lines, it seems reasonable to assume that macroeconomic conditions influence organizational performance and, consequently, reflect on the behavior of shareholders and managers, as well as on the volatility of their share prices.

In the meantime, there are hypotheses 3 and 4 for this research:

Hypothesis 3 (H3): The economic context (GDP) affects the stock market volatility in the Brazilian capital market.

Hypothesis 4 (H4): The economic context (GDP) affects the relationship between corporate governance and the stock market volatility in the Brazilian capital market.

The analysis of the Brazilian scenario is relevant due to the high government participation in companies and the overly concentrated ownership structure of the country, with few investors in charge of the business (Sirqueira, 2007). This fact, according to Albanez and Valle (2009), can move the company's shares, since higher risk organizations issue shares to finance their investments, while companies with good governance obtain funds from financial institutions, denoting to the investor that it is a reliable company. That said, it should be noted that the concentration of ownership does not protect minority shareholders, so they are unable to have the strength to make decisions, with the majority being the holders of that power, which can cause agency conflicts (Silveira, Lanzana, Barros, & Famá, 2004).

3 METHODOLOGICAL PROCEDURES

The study is classified as quantitative, descriptive, and documentary (Raupp & Beuren, 2008), with data obtained in April 2019 through collecting at Economatica®, as well as in the Reference Form published by Brazilian public companies and IpeaData. The population was formed by the 359 companies listed on B3 SA - Brasil, Bolsa, Balcão (B3) (B3, 2018) and the sample consisted of the analysis of non-financial organizations, resulting in a total of 274 companies and 2,466 observations, in the period between 2010 to 2018. It should be noted that

the period from 2010 to 2018 was considered for analysis due to Normative Instruction n° 480/2009 of the Brazilian Securities Commission (CVM), which formalized the mandatory disclosure of information related to the control of shareholders as of 2009, through the Reference Form on the B3 website.

In order to verify how the economic context affects the relationship between governance and stock market volatility, Table 1 shows the dependent variable, the independent and control variables, as well as their metrics and the theoretical support used to substantiate these proxies.

Table 1
Variables used in the study

Description		Abbreviation	Metric	Expected Sign	Theoretical Support	
DEPENDENT VARIABLE						
Stock Market volatility		VOL	Stock Market volatility on an annual basis**		Li <i>et al.</i> (2013); Malacrida and Yamamoto (2006).	
INDEPENDENT VARIABLES						
Internal Corporate Governance Mechanisms (Dummies)	Board of Directors	CAD	Board of Directors has between 5 and 9 members*	-	Li <i>et al.</i> (2013).	
	Fiscal Council	CFI	Existence of a Fiscal Council*	-	Li <i>et al.</i> (2013).	
	Ownership and Control Structure	Common Shares	AON	Largest common shareholder owns less than 50% of the voting shares**	-	Li <i>et al.</i> (2013).
		Participation	PAR	Largest common shareholder owns less than 50% of total shares**	-	Li <i>et al.</i> (2013).
	Control Leverage	ALA	The ratio of the Common Shares (ON) and the largest common shareholder is less than 1**	-	Cremers and Nair (2005); Li <i>et al.</i> (2013).	
External Corporate Governance Mechanisms (Dummies)	American Depositary Receipt (ADR)	ADR	The company issues ADR**	-	Silva and Martins (2018).	
	Free Float	FRE	Outstanding shares is greater than or equal to 25%**	-	Silva and Martins (2018).	
	Corporate Governance Level	NGC	The company is listed on the differentiated levels of B3 (Level 1, Level 2 and Novo Mercado)**	-	Gagnon and Jeanneret (2018); Matucheski <i>et al.</i> (2009); Oliveira and Santos (2011); Souza <i>et al.</i> (2015).	
Economic Context	Gross Domestic Product	PIB	Annual GDP variation obtained from IpeaData	+	Magalhães (2000) and Sirqueira (2007).	
INDEPENDENT VARIABLES						
Control	Stock Market Liquidity	LIQ	Financial volume traded on the stock exchange**	+	Macret (2018).	
	Company Size	TAM	Market value logarithm**	-	Li <i>et al.</i> (2013); Malacrida and Yamamoto (2006).	

Description	Abbreviation	Metric	Expected Sign	Theoretical Support
Stock Market Presence	PRE	Number of days when there was at least one deal with the stock in the chosen period**	+	Albanez and Valle (2009).
Negotiability	NEG	Number of times the company entered the trading session**	+	Nardy, Famá, Guevara and Mussa (2015).
Sector	SET	Specification of the sector that the company belongs to in B3**	+	Li et al. (2013).
State Company	EST	State owns at least 50% of the Common Shares**	+	Sirqueira (2007).

Note: * variables collected in the Reference Form; ** variables obtained from Economática®

Equation 1 was used to highlight the economic context (GDP) in the relationship between corporate governance (internal and external mechanisms) and stock market volatility.

$$\begin{aligned}
 VOL_{it} = & \beta_0 + \beta_1 CAD_{it} + \beta_2 CFI_{it} + \beta_3 AON_{it} + \beta_4 PAR_{it} + \beta_5 ALA_{it} + \beta_6 ADR_{it} + \beta_7 FRE_{it} + \\
 & \beta_8 NGC_{it} + \beta_9 \Delta PIB_t + \beta_{10} CAD^* \Delta PIB_t + \beta_{11} CFI^* \Delta PIB_t + \beta_{12} AON^* \Delta PIB_t + \beta_{13} PAR^* \Delta PIB_t + \\
 & \beta_{14} ALA^* \Delta PIB_t + \beta_{15} ADR^* \Delta PIB_t + \beta_{16} FRE^* \Delta PIB_t + \beta_{17} NGC^* \Delta PIB_t + \beta_{18} EST_{it}^* \Delta PIB_t + \beta_{19} EST_{it} + \beta_{20} LIQ_{it} + \beta_{21} TAM_{it} + \beta_{22} PRE_{it} \\
 & + \beta_{23} NEG_{it} + \beta_{24} SET_{it} + \varepsilon_{it}
 \end{aligned}
 \tag{1}$$

The data were interpreted in a descriptive-argumentative manner and analyzed using descriptive statistics, correlation of variables (Spearman matrix), multiple and quantile regressions in an unbalanced panel. The Breusch-Pagan specification tests (pooling versus random effect - p-value: 0.0000), the Chow test (pooling versus fixed effect - p-value: 0.0000), and the Hausman test (fixed effect versus random effect - p-value: 0.9999) were used, with random effects estimation being the most consistent parameters for the present study. In addition, White's heteroscedasticity tests (p-value: 0.3794), Wooldridge's autocorrelation (prob> F: 0.0000) and multicollinearity (VIF: 53.12) were also performed. Thus, to correct the autocorrelation and multicollinearity, we proceeded with the analysis using robust standard errors (clustering and fixed effect by sector).

Regarding the quantile regression model, it is justified by the fact that the regression of the data and the explanation of the variables becomes different in each quantile of the dependent variable (stock market volatility), as can be seen in Figure 1.

Based on Figure 1, it is possible to verify that the results of regression in panel data by Ordinary Least Squares (OLS) - demonstrated through the dotted line in each graph - do not faithfully present the relationship between the variables as it is a regression to the mean, since all interactions demonstrate a concentration of results at the highest quantiles of stock market volatility. In this way, the results of this study are more robust when observing the response of each quantile and the conditional median as a measure of central tendency and not only the regression to the mean in response to outliers. Thus, we test the sensitivity of the OLS model (average) by applying quantile regression (median) and to understand whether companies that have greater or lesser stock market volatility also have a greater or lesser amount of external and internal corporate governance mechanisms, due to the economic context moderating this relationship.

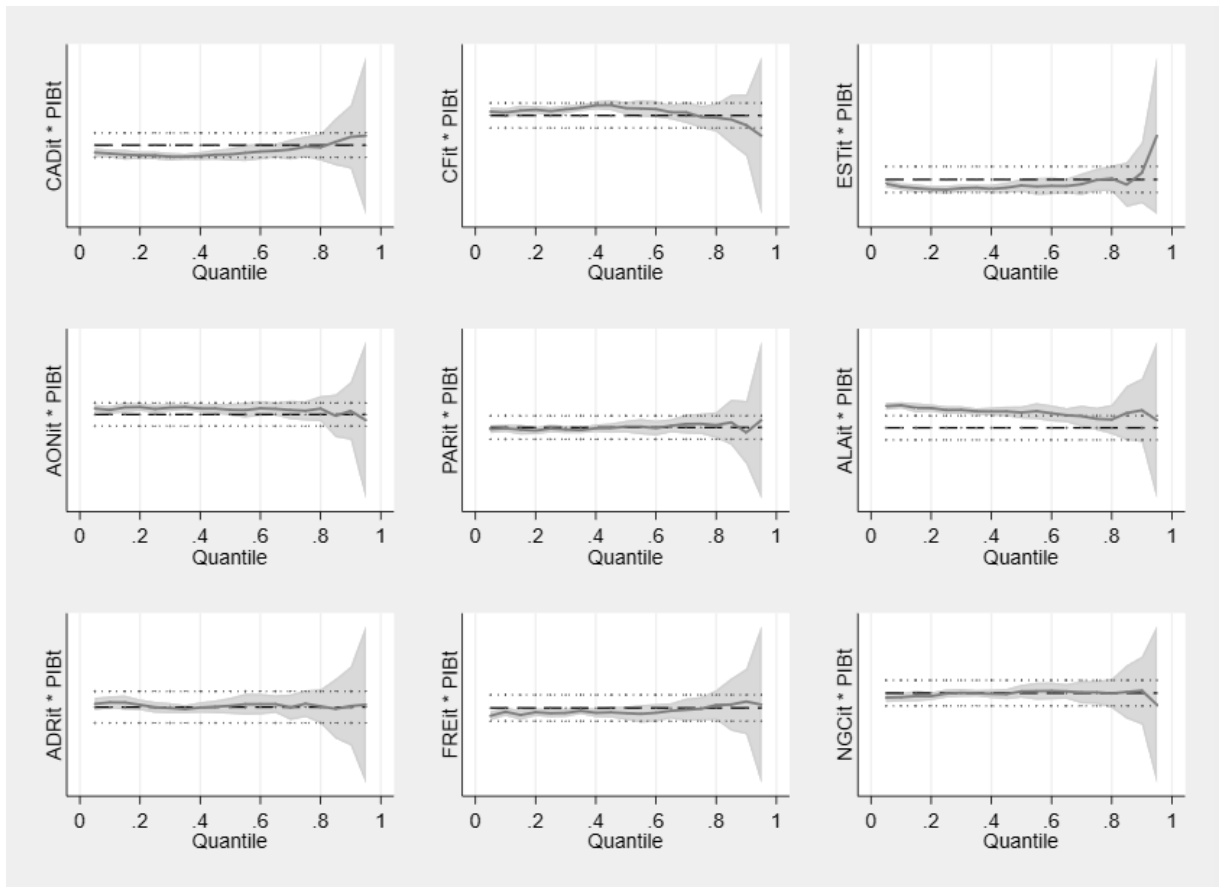


Figure 1. Graphs of quantile regression by interaction of corporate governance and GDP variables.

4 RESULTS

4.1 Descriptive Data Statistics

Table 2 presents the description of the data analyzed using the mean, standard deviation, median, minimum, and maximum.

Based on Table 2, there was average volatility (VOL) of 46.08, a median of 37.73 and a minimum range of 15.28, and a maximum range of 655.16, that is, Brazilian stocks have returns with high degrees of fluctuation. Regarding internal governance mechanisms, 57.5% of the companies analyzed had between 5 and 9 members of the Board of Directors (CAD); 53.5% of the companies have a Fiscal Council (CFI); 54.6% and 66.67%, respectively, of the largest ordinary shareholders own less than 50% of the Common Shares (AON) and less than 50% of the total shares (PAR); and 18.9% of the largest shareholders have a percentage of shares with voting rights over the total shares (ALA) lesser than 1. In relation to external mechanisms, it was identified that 7.3% of the companies issue American Depositary Receipt (ADRs); 34.2% have free float (FRE) in circulation greater than or equal to 25%; and 65.3% are listed in one of B3's differentiated levels of governance (NGC).

The GDP showed negative and positive values, elucidating that the economy had moments of expansion alternating with others of recession, with a low average of 0.016, a high standard deviation of 0.036, and a high amplitude -0.038 and 0.075, signaling a volatile period of economic growth. With regard to state-controlled companies (EST), it is noted that only 4% of the sample has this characteristic of ownership structure, going against Sirqueira (2007) when stating that government participation in Brazilian companies is too concentrated.

Additionally, the average financial volume traded on the stock exchange (LIQ) was 0.178 and its standard deviation was 0.662, showing a high liquidity variability of the sample companies for the analyzed period. As with liquidity, the average number of times that companies entered the trading session (NEG) was highly dispersed, since the sample average was 0.246 and its standard deviation was 0.825. Moreover, the average number of days on which there was at least one deal with shares within the chosen period (PRE) was 71.26, allowing for greater data consistency, as the better the liquidity the more efficient the process of price formation.

Table 2

Descriptive statistics of the sample from 2010 to 2018

Variable	Observations				Mean	Standard Deviation	Median	Minimum	Maximum
	Total	Not Nil	Answered	%					
VOL	2466	1005	-	-	46.083	33.593	37.731	15.283	655.162
CAD	2466	2217	1418	57.5%	0.640	0.480	1	0	1
CFI	2466	2356	1320	53.5%	0.560	0.496	1	0	1
AON	2466	2439	1347	54.6%	0.552	0.497	1	0	1
PAR	2466	2439	1644	66.7%	0.674	0.469	1	0	1
ALA	2466	2439	465	18.9%	0.191	0.393	0	0	1
ADR	2466	2466	180	7.3%	0.073	0.260	0	0	1
FRE	2466	2439	844	34.2%	0.346	0.476	0	0	1
NGC	2466	2466	1611	65.3%	0.653	0.476	1	0	1
PIB	2466	2466	-	-	0.016	0.036	0.019	-0.038	0.075
EST	2466	2466	99	4.0%	0.040	0.196	0	0	1
LIQ	2466	2448	-	-	0.178	0.662	0.001	0.000	13.860
TAM	2466	1765	-	-	13.828	2.069	14.028	5.568	19.879
PRE	2466	828	-	-	71.260	42.515	100.000	0.000	100.000
NEG	2466	1757	-	-	0.246	0.825	0.015	0.000	14.990

Note: sample variables described in Table 1.

4.2 Spearman Correlation Matrix

Table 3 presents Spearman's correlation matrix for the 274 B3 companies analyzed in the period from 2010 to 2018.

Table 3

Spearman Correlation Matrix

	VOL	CAD	CFI	AON	PAR	ALA	ADR	FRE	NGC	PIB	EST	LIQ	TAM	PRE	NEG
VOL	1														
CAD	0.098	1													
CFI	-0.060	-0.132	1												
AON	0.032	0.050	-0.217	1											
PAR	0.037	-0.036	-0.016	0.648	1										
ALA	-0.064	-0.111	0.011	0.058	-0.083	1									
ADR	-0.023	-0.273	0.205	-0.346	-0.056	-0.029	1								
FRE	0.055	-0.075	-0.014	0.155	0.106	-0.025	0.060	1							
NGC	0.137	0.107	0.023	0.102	0.173	-0.223	-0.111	0.094	1						
PIB	0.430	-0.004	0.122	-0.041	0.077	-0.253	0.034	0.033	-0.048	1					
EST	-0.014	-0.013	0.171	-0.331	-0.068	-0.033	0.301	0.017	0.118	0.034	1				
LIQ	0.144	-0.106	0.076	-0.012	0.243	-0.139	0.366	-0.006	0.168	-0.060	0.157	1			
TAM	-0.258	-0.310	0.259	-0.224	0.044	-0.066	0.545	-0.004	-0.061	-0.103	0.184	0.649	1		
PRE	-0.063	-0.036	0.009	-0.060	-0.023	-0.149	0.122	0.027	0.079	-0.062	0.082	0.249	0.196	1	
NEG	0.122	-0.107	0.081	-0.015	0.240	-0.136	0.366	-0.005	0.158	-0.070	0.159	0.998	0.658	0.245	1

Note: sample variables described in Table 1.

Analyzing Table 3, in line with expectations, the existence of the fiscal council (CFI), control leverage (ALA), the issuance of American Depositary Receipt (ADRs), and the size of the company (TAM) showed a negative correlation with stock market volatility. The number of times the company entered the trading session (NEG), the volume traded on the stock exchange (LIQ), and the variation in the Gross Domestic Product (GDP) correlated positively with the change in share prices.

The internal mechanisms - common shares (AON), participation (PAR), and board of directors (CAD) - and the external mechanisms - free float (FRE) and B3 governance level (NGC) - diverged from what was expected, showing a positive correlation. Also, presence on the stock exchange (PRE) and state-owned companies (EST) elucidated a strong association with stock prices, but not the expected sign.

4.3 Multiple Regression Panel

The multiple regression of the panel data of the variables defined in Figure 1, as well as the relevant statistical tests, for the period from 2010 to 2018, are shown in Table 4.

Table 4

Regression of the economic context in the relationship between governance and volatility

Variables	Pooling	Random Effects	Fixed Effects
Constant	131.246***	169.764***	207.174***
Internal Corporate Governance Mechanisms			
CAD _{it}	0.047	1.659	2.170
CFI _{it}	-1.042	0.328	0.304
AON _{it}	-1.209	-3.843*	-6.064**
PAR _{it}	-3.883**	-0.985	1.997
ALA _{it}	3.661	4.213	5.847
External Corporate Governance Mechanisms			
ADR _{it}	1.623	2.839	-
FRE _{it}	1.291	0.609	0.308
NGC _{it}	4.610**	3.468	-
Interactions with GDP variation			
ΔPIB_t	170.962***	131.898***	107.267**
CAD _{it} * ΔPIB_t	-13.560	-10.754	-2.116
CFI _{it} * ΔPIB_t	16.525	-5.057	-17.385
AON _{it} * ΔPIB_t	10.240	-17.616	-33.210
PAR _{it} * ΔPIB_t	-50.614	-8.395	19.770
ALA _{it} * ΔPIB_t	10.242	32.678	38.805
ADR _{it} * ΔPIB_t	-51.631	-34.818	-22.463
FRE _{it} * ΔPIB_t	-0.629	7.578	4.325
NGC _{it} * ΔPIB_t	39.256	43.078	37.989
EST _{it} * ΔPIB_t	-61.734	-77.983*	-79.767*
Control			
EST _{it}	-1.492	-1.952	-
LIQ _{it}	55.366***	38.013***	25.902***
TAM _{it}	-6.361***	-8.967***	-11.237***
PRE _{it}	-0.023	-0.004	0.032
NEG _{it}	-46.713***	-30.498***	-19.429**
Number of Observations	489	489	489
Number of Companies	69	69	69
R-square	0.481	0.529	0.540
Adjusted R-square	0.446	0.388	0.439
Breusch-Pagan (Pooling/RE)		0.0000	
Chow (Pooling/FE)		0.0000	
Hausman (RE/FE)		0.0001	

Note: sample variables described in Table 1. ***, **, * is significant at the level of 1%, 5% and 10%, respectively. The sectors were controlled in the regression.

4.4 Quantile Regression

The results of the quantile regression of the data are elucidated in Table 5.

Table 5
Quantile regression of the economic context in the relationship between governance and volatility

Quantis	0.05	0.10	0.25	0.50	0.75	0.90	0.95
Constant	68.783***	79.103***	93.697***	117.236***	140.917***	164.283***	169.534***
Internal Corporate Governance Mechanisms							
CAD _{it}	-1.747*	-1.056	-0.367	-1.223	-0.325	2.825	3.881
CFI _{it}	0.873	0.482	-0.360	-1.573	-0.223	-0.105	-1.486
AON _{it}	1.394	0.950	0.688	0.430	-0.756	-4.315	-8.927*
PAR _{it}	-0.500	-1.179	-1.896	-2.980	-6.242**	-7.677**	-4.142
ALA _{it}	5.104**	3.345	0.606	0.895	2.651	4.145	8.127
External Corporate Governance Mechanisms							
ADR _{it}	0.685	2.201*	1.578	2.131	-1.014	0.281	-4.158
FRE _{it}	-0.178	-0.260	-0.529	0.360	1.480	1.191	4.758
NGC _{it}	3.383**	1.809	1.537	2.283	3.766	7.343*	8.453
Interactions with GDP variation							
ΔPIB _t	156.633***	148.741***	126.749***	183.403**	175.840*	215.865*	237.340
CAD _{it} *ΔPIB _t	-11.527	-16.841	-28.248	-22.807	-11.467	-2.425	-44.211
CFI _{it} *ΔPIB _t	-47.184*	-30.095	10.778	16.004	60.877	-25.821	-35.028
AON _{it} *ΔPIB _t	59.024	50.754	28.892	15.211	22.842	-90.520	35.698
PAR _{it} *ΔPIB _t	-104.387***	-111.453***	-52.558	-87.424	-103.493	25.258	-87.292
ALA _{it} *ΔPIB _t	33.492	14.346	-22.283	-26.540	1.647	54.921	28.442
ADR _{it} *ΔPIB _t	-10.934	-20.830	-29.885	-42.582	-35.998	-101.556	-112.753
FRE _{it} *ΔPIB _t	-14.444	1.604	17.876	-5.593	20.480	31.443	51.829
NGC _{it} *ΔPIB _t	-4.030	31.018	3.387	33.671	35.236	78.604	107.334
EST _{it} *ΔPIB _t	-122.231***	-106.700***	-90.520**	-134.158**	-84.684	-16.483	49.731
Control							
EST _{it}	4.405**	5.492***	3.916**	2.474	-2.830	-4.564	-9.816
LIQ _{it}	39.731***	43.026***	46.634***	50.933***	69.409***	62.356***	66.548***
TAM _{it}	-3.421***	-3.807***	-4.388***	-5.475***	-6.638***	-7.687***	-7.602***
PRE _{it}	0.006	-0.020	-0.031	-0.032	-0.021	-0.036	-0.058
NEG _{it}	-34.309***	-37.123***	-40.109***	-43.521***	-57.284***	-51.198***	-54.465**
Number of Observations	489	489	489	489	489	489	489
Pseudo R2	0.2824	0.2800	0.2708	0.2832	0.3577	0.4270	0.4685

Note: sample variables described in Table 1. ***, **, * is significant at the level of 1%, 5% and 10%, respectively. The sectors were controlled in the regression.

Based on Table 5, it can be seen that the internal mechanisms continue to show persistence in the company's governance and, subsequently, sensitize the stock market volatility, especially when analyzing the coefficients, which are higher and, consequently, more relevant, in the highest volatility quantiles (0.75 and 0.90) and lowest volatility (0.05 and 0.10). Such evidence can be elucidated through the existence of a fiscal council (CFI), which is in line with what is expected, negatively and significantly influencing 5% in the stock market volatility, as the coefficients grow over the sample quantiles. With respect to the common shares (AON) held by the largest shareholder, a negative and representative relationship is revealed over the quantiles, affecting the change in share prices. Also, the total number of shares held by the majority shareholder (PAR) is significant at 10% and 5% and negatively associated with volatility, respectively, in the 0.75 and 0.90 quantiles, demonstrating the influence of the variable when analyzing companies with a more volatile stock price.

As for the external mechanisms, variables that must be fulfilled at the market level, it is reinforced with the quantile regression that they do not explain stock market volatility in significant terms to mitigate it. In Table 5 this evidence is illustrated by the ADRs, free float (FRE), and negotiability (NGC) mechanisms, with variation in the behavior of the coefficients (high and low), however even with the proxies proving to be significant in certain quantiles, the relationship presented is positive. This result corroborates Aguilera *et al.* (2015) so that external mechanisms have greater potential to ensure that executives comply with the rights of stakeholders in the business, which therefore influences the effectiveness of internal governance mechanisms.

It is noteworthy that liquidity on the stock exchange (LIQ) continues to show the expected sign, as well as being significant in relation to the behavior of volatility. The number of times that the company entered the trading session (NEG) continued to illustrate the influence on the fluctuation of share prices, but with a divergent sign from what was expected. In addition, the size of the companies (TAM) is presented, in the course of the volatility quantiles, with the expected sign and significance, but with a decreasing coefficient.

In the analysis of the interaction between corporate governance mechanisms and GDP, under the focus of stock market volatility, only the participation of the largest ordinary shareholder ($PAR_{it} \Delta PIB_t$) and the existence of a fiscal council ($CFI_{it} \Delta PIB_t$) was shown negatively and significantly, at 1% and 5%, respectively, to be affecting stock market volatility. It stands out that, in both interaction variables, significance was found for low volatility quantiles (0.25 and 0.10), so that the non-concentration of ownership (PAR) held by the majority shareholder, as well as the existence of a fiscal council (CIF) for decision-making, under the joint focus of the GDP variation, are significant factors only when stock market volatility is low. As a result, the quantile regression showed that the presence of internal governance mechanisms helps to mitigate the volatility of shares in the Brazilian economic context, especially when it is not very changeable.

5 DISCUSSION

Regarding the results from the descriptive statistics, it can be seen that the correlation of internal and external mechanisms pointed out that the strategies adopted by Brazilian companies, as well as the purpose of governance, also act to protect minority shareholders. This evidence corroborates what is advocated by the Agency Theory, since one of the roles of corporate governance is to establish means of control and inspection in the business, both for managers and shareholders, so that agency conflicts and information asymmetry are mitigated (Jensen & Meckling, 1976; Li *et al.*, 2013; Malacrida & Yamamoto, 2006).

The Brazilian economic context (represented by GDP) was shown to be related to stock market volatility. In Sirqueira's view (2007), culture, legislation, and market institutions affect the governance of a country's companies, and this, in turn, will reflect in stock market volatility, so Hypothesis 3 cannot be rejected. Furthermore, Magalhães (2000) clarifies that fiscal policies, such as the granting of credit by the government, can also impact the change in stocks.

Analyzing the multiple regression, it was possible to denote that, when the corporate governance mechanisms are combined with the GDP, there is only statistical significance for the interaction with state shareholding control. This result was shown to be negatively related to stock market volatility, which can be justified by movements in the company's governance originating from the market, such as the regulatory environment, fiscal policies, changes in legislation, or even government decisions in the expansion or recession of state-controlled companies, interfering in the sector and causing changes in the volatility of shares in the Brazilian market (Magalhães, 2000; Sirqueira, 2007). Also, government credit incentives can

move the company's governance to raise funds from financial institutions to subsidize its investments (Albanez & Valle, 2009).

It was also observed that negotiability showed a negative result significantly related to the changes in the shares. It should be noted that this may be linked to the fact that trading operations take place especially in the early morning and at the close of the trading day, so that investors seek information for decision-making in the period between the closing of the trading of shares in the day and the opening of the next morning (Macret, 2018). These elements can be voluntary or mandatory reports made by companies, regarding the disclosure of government plans or actions in the Brazilian economy.

Thus, in view of the results obtained, it is evident that Hypotheses 1 (H1) and 3 (H3) cannot be rejected, considering that the internal mechanisms of corporate governance, as well as the economic context (GDP), affect the volatility of Brazilian capital market shares. However, Hypothesis 2 (H2) is rejected, since the external mechanisms of corporate governance do not have the expected influence (mitigation) on stock market volatility when analyzed through a regression to the mean. In this way, the internal mechanisms of corporate governance help to mitigate the volatility of shares in the Brazilian capital market (H1), just as the economic context (GDP) affects the volatility of shares in the Brazilian capital market (H3).

Regarding the quantile regression, it was found that the shares held by the majority shareholder (PAR) are significant and negatively associated with volatility in the highest quantiles, in line with Litov *et al.* (2006). The authors found that the stock price would be influenced by internal corporate governance mechanisms, such as less conservative ownership structures for decision-making. As for external mechanisms, variables that must be met at the market level, the quantitative regression reinforces the view of Souza *et al.* (2015) when reporting that the true attractiveness to the shareholder is sensitized by factors such as return and risk and not, for example, by the company's participation in B3's governance levels. Furthermore, the results obtained indicate that companies tend to protect their investors and mitigate the volatility of shares, using internal mechanisms, in order to provide greater credibility of company information (Li *et al.*, 2013).

Concerning GDP, the quantile regression reinforces the constancy of its influence on the volatility of stocks in the Brazilian context, as in the course of quantiles the volatility of stocks proved to be statistically significant and with the same expected sign. This fact is corroborated by its significance in the interaction with certain variables such as state-owned companies, where the government is the holder of share control. In addition, even if only partially, it appears that the sectors are influenced by volatility, many of which are considered regulated sectors, that is, disciplined by legislation, which is a macroeconomic variable, according to Sirqueira (2007). Chow *et al.* (2018) concluded that corporate governance acts as an effective mechanism to reduce the use of leverage during periods of high volatility in the macroeconomic environment. This result stems from the fact that the independence of the board, the separation between the roles of the CEO and the chairman of the board, and institutional properties are effective governance mechanisms.

In this context, evaluating the findings of this research, it was found that internal corporate governance mechanisms, such as ownership structure, have a significant influence on reducing stock market volatility of the companies that make up the Brazilian market, especially when the economy is less unstable, a fact observed in the lowest quantiles of the median (quantile) regression. Furthermore, it has been demonstrated that the economic context in which the company manages its business is relevant in the analysis of governance mechanisms as observable factors to minimize stock market volatility so that Hypothesis 4 (H4) cannot be rejected.

Along these lines, the economic context (GDP) affects the relationship between corporate governance and the volatility of Brazilian capital market shares (H4). Chen *et al.* (2016) argue that institutional factors at the country level tend to exert a first-order influence on the choice of managers over the capital structure and financial leverage, in order to avoid the understanding that investment in the company is risky. The vision of Kothari (2019) reinforces this perspective, emphasizing that investors aim for good accounting results when entrusting their capital to managers and, with this, corporate governance faces great challenges, to work towards conservatism in financial reports and also to appropriate accounting information to provide good business performance.

6 CONCLUSIONS

The study analyzed how the economic context affects the relationship between corporate governance and the stock market volatility of Brazilian public companies listed on B3 SA - Brasil, Bolsa, Balcão (B3), in the period from 2010 to 2018. Regarding the volatility of stock price and internal mechanisms of corporate governance, it was observed that, in general, there is a negative influence between the variables, but not significant. Furthermore, this same finding was denoted by quantile regression where, as the coefficients of internal mechanisms increase in the quantiles, the stock market volatility also increases, corroborating with Litov *et al.* (2006).

Regarding the external mechanisms of corporate governance, it was found that the variables used in the research do not have a significant influence in relation to mitigating stock market volatility, going against Cremers and Nair (2005) and Li *et al.* (2013). Still, these results reinforce the view of Souza *et al.* (2015), with regard to the behavior of attractiveness to shareholders, considering that, for the authors, the volatility of shares tends to be more influenced by factors such as sensitivity to return and risk.

On the other hand, with respect to the Brazilian economic context and the relationship between governance and stock market volatility in public companies, it was found that the interaction of internal mechanisms with GDP is significant only when in lower volatility quantiles. However, GDP in isolation in the quantile regression offers robustness to its influence on the volatility of stocks in the Brazilian context, by demonstrating statistical significance and convergence to the expected sign, as recommended by Sirqueira (2007). Thereby, instability in the Brazilian economy, with a low average GDP growth rate, high standard deviation, and high amplitude, shows that this factor is an important factor in generating uncertainty in the Brazilian stock market.

In this context, it is understood that Brazilian companies have taken actions to control the fluctuation of share prices, especially in the period from 2010 to 2018, which presented negative and positive GDP. Consequently, market instability and a source of uncertainty for decision-makers in the Brazilian economy, examined by the volatility of the shares traded at B3, portrayed a wide scale in the context and period of analysis.

Thus, considering that Brazil is in a scenario of adopting policies that aim at greater economic growth, and that this has a high capacity to affect stock market volatility, the results of this study indicate that internal and external mechanisms of corporate governance help the country's economic environment to contribute to lower stock market volatility. This research expands the debate on the interaction of corporate governance practices with the behavior of stock prices in Brazilian companies, when considering the economic context of an emerging country, as well as the arguments related to internal and external mechanisms of corporate governance and their different approaches in terms of decision-making characteristics.

The conclusions of this study can be useful for those responsible for governance, regarding the formulation of appropriate policies to mitigate the adverse effects caused by

macroeconomic uncertainty on the volatility of their stocks. This is relevant since the variability of the economic environment can have potentially destabilizing effects on the development of a country or region, putting at risk the capacity of companies to formulate solid investment, production, and financing decisions. In addition, the results suggest that good governance mechanisms provide greater credibility to information disclosed by companies and protect shareholders from managers' conservative decisions, ensuring that companies use less leverage when facing volatility in the macroeconomic environment. These findings can help reinforce the importance of good governance among a country's policymakers and business managers alike.

However, the results of this study are limited to the variables used, to the period of analysis, to the companies selected in the sample, and to the Brazilian context. It is important that works in continuity to this one verify the behavior of managers and members of governance committees in relation to macroeconomic information in the context of stock market volatility.

REFERENCES

- Aguilera, R. V., Desender, K., Bednar, M. K., & Lee, J. H. (2015). Connecting the Dots: Bringing External Corporate Governance into the Corporate Governance Puzzle. *Academy of Management Annals*, 9(1), 483-573. <https://doi.org/10.5465/19416520.2015.1024503>
- Albarez, T., & Valle, M. R. do. (2009). Impactos da assimetria de informação na estrutura de capital de empresas brasileiras abertas. *Revista Contabilidade & Finanças*, 20(51), 6-27. <https://doi.org/10.1590/S1519-70772009000300002>
- Assaf Neto, A., Lima, F. G., & Araújo, A. M. P. (2008). Uma proposta metodológica para o cálculo do custo de capital no Brasil. *Revista de Administração (FEA-USP)*, 43(1), 72-83. Recuperado em 28 outubro, 2018, de <http://200.232.30.99/download.asp?file=v4301072.pdf>.
- Bandyopadhyay, A., & Barua, N. M. (2016). Factors determining capital structure and corporate performance in India: Studying the business cycle effects. *The Quarterly Review Of Economics And Finance*, 61, 160-172. <https://doi.org/10.1016/j.qref.2016.01.004>
- Banker, R. D., Fang S., & Mehta, M. N. (2020). Anomalous Operating Performance During Economic Slowdowns. *Journal of Management Accounting Research*, 32(2), 57-83. <https://doi.org/10.2308/jmar-52547>
- Brasil, Bolsa, Balcão - B3 S.A. (2018). *Empresas Listadas*. Recuperado em 24 setembro, 2018, de http://www.b3.com.br/pt_br/produtos-e-servicos/negociacao/renda-variavel/empresas-listadas.htm.
- Chen, J. Z., Lim, C., & Lobo, G. J. (2016). Does the Relation between Information Quality and Capital Structure Vary with Cross-Country Institutional Differences?. *Journal of International Accounting Research*, 15, 131-156. <https://doi.org/10.2308/jiar-51606>
- Chow, Y., Muhammad, J., Bany-Arifin, A., & Cheng, F. (2018). Macroeconomic uncertainty, corporate governance and corporate capital structure. *International Journal of Managerial Finance*, 14(3), 301-321. <https://doi.org/10.1108/IJMF-08-2017-0156>
- Cremers, K. J. M., & Nair, V. (2005). Governance mechanisms and equity prices. *The Journal of Finance*, 60(6), 2859-2894. <https://doi.org/10.1111/j.1540-6261.2005.00819.x>
- Daily, C. M., Dalton, D. R., & Cannella, A. A. (2003). Corporate governance: Decades of dialogue and data. *Academy of Management Review*, 28(3), 371-382. <https://doi.org/10.5465/amr.2003.10196703>

- Donker, H., Santen, B., & Zahir, S. (2009). Ownership structure and the likelihood of financial distress in the Netherlands. *Applied Financial Economics*, 19(21), 1687-1696. <https://doi.org/10.1080/09603100802599647>
- Ferreira, M. A., & Laux, P. A. (2007). Corporate governance, idiosyncratic risk, and information flow. *The Journal of Finance*, 62(2), 951-989. <https://doi.org/10.1111/j.1540-6261.2007.01228.x>
- Gagnon, L., & Jeanneret, A. (2018). Corporate governance, capital structure, and stock return volatility. [Working Paper]. Recuperado em 29 outubro, 2018, de https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3222818
- Grullon, G., Lyandres, E., & Zhdanov, A. (2012). Real options, volatility, and stock returns. *The Journal of Finance*, 67(4), 1499-1537. <https://doi.org/10.1111/j.1540-6261.2012.01754.x>
- Halov, N., & Heider, F. (2011). Capital structure, risk and asymmetric information. *Quarterly Journal of Finance*, 1(4), 767-809. <https://doi.org/10.1142/S2010139211000171>
- Jensen, M., & Meckling, W. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Kothari, S. P. (2019). Accounting Information in Corporate Governance: Implications for Standard Setting. *The Accounting Review*, 94(2), 357-361. <https://doi.org/10.2308/accr-10651>
- Li, H., Jahera, J. S. Jo., & Yost, K. (2013). Corporate risk and corporate governance: another view. *Managerial Finance*, 39(3), 204-227. <https://doi.org/10.1108/03074351311302773>
- Litov, L. P., John, K., & Yeung, B. Y. (2006). Corporate governance and corporate risk taking: theory and evidence. [Working Paper]. Recuperado em 18 outubro, 2018, de https://papers.ssrn.com/sol3/papers.cfm?abstract_id=890915
- Macret, D. Z. (2018). *Relação entre volume e volatilidade no mercado acionário brasileiro* (Dissertação de Mestrado). Fundação Getúlio Vargas, São Paulo, SP, Brasil.
- Magalhães, M. A. de. (2000). Explicando o ciclo de negócios. *Revista Economia Aplicada*, 4(1), 157-189. Recuperado em 28 outubro, 2018, de <http://cepe.ecn.br/matheus.pdf>
- Malacrida, M. J. C., & Yamamoto, M. M. (2006). Governança Corporativa: nível de evidenciamento das informações e sua relação com a volatilidade das ações do IBOVESPA. *Revista Contabilidade & Finanças*, 3, 65-79. <https://doi.org/10.1590/S1519-70772006000400006>
- Martins, O. S., Paulo, E., & Albuquerque, P. H. M. (2013). Negociação com informação privilegiada e retorno das ações na BM&FBovespa. *Revista de Administração de Empresas*, 53(4), 350-362. <http://dx.doi.org/10.1590/S0034-75902013000400003>
- Matucheski, S., Clemente, A., & Sandrini, J. C. (2009). Governança corporativa e volatilidade das ações negociadas na Bovespa na crise financeira de 2008. *Revista Brasileira de Estratégia*, 2(2), 171-183. <http://dx.doi.org/10.7213/rebrae.v2i2.13454.g12872>
- Nardy, A., Famá, R., Guevara, J. A. de H., & Mussa A. (2015). Verificação da ocorrência do efeito índice no Ibovespa – 2004-2013. *Revista de Administração*, 50(2), 153-168. <http://dx.doi.org/10.5700/rausp1191>.
- Oliveira, L. S. S. de, & Santos, D. F. L. (2011). Desempenho e Volatilidade dos Índices de Governança Corporativa da BM&FBOVESPA. *Revista de Administração, Contabilidade e Sustentabilidade*, 1(2), 52-64. <https://doi.org/10.18696/reunir.v1i2.28>
- Peña, A. M. (2017). Corporate Movements in Democratic Brazil: Informal Business Networks, Civil Activism, and Political Influence. *Bulletin of Latin American Research*, 37(3), 339-353. <https://doi.org/10.1111/blar.12740>

- Raupp, F. M., & Beuren, I. M. (2008). Metodologia da Pesquisa Aplicável as Ciências Sociais. In: I. M. Beuren, I. M. (Org.). *Como Elaborar Trabalhos Monográficos em Contabilidade: teoria e prática* (pp. 76-97). São Paulo: Atlas. (3a ed.). 76-97.
- Silva, C. C. dos S., & Martins, O. S. (2018). Reflexo da qualidade de governança corporativa no processo de avaliação de empresas. *Gestão & Regionalidade*, 34(102), 75-93. <https://doi.org/10.13037/gr.vol34n102.4224>
- Silva, E. S., Santos, E. S., Torres, F. J. V., & Ferreira, L. F. V. M. (2009). Os efeitos da Governança Corporativa sobre os ratings de crédito das Debêntures emitidas por empresas listadas nos níveis diferenciados de governança da Bovespa. *Anais do Encontro da Associação Nacional de Pós-Graduação e Pesquisa em Administração*, São Paulo, SP, Brasil, 33.
- Silveira, A. Di M., Lanzana, A. P., Barros, L. A. B. C., & Famá, R. (2004). Efeito dos acionistas controladores no valor das companhias abertas brasileiras. *RAUSP - Revista de Administração*, 39(4), 362-372. Recuperado em 28 outubro, 2018, de <http://rausp.usp.br/wp-content/uploads/files/V3904362a372.pdf>.
- Sirqueira, A. B. (2007). *Governança Corporativa e otimização de portfólios: a relação entre risco e retorno e boas práticas de governança*. 113f. (Dissertação de mestrado em Engenharia de Produção) - Escola de Engenharia de São Carlos da Universidade de São Paulo, São Carlos, SP, Brasil.
- Souza, G. H. S. de, Lima, N. C., Barbosa, F. B., Coutinho, A. C., & Albuquerque, A. A.de. (2015). Corporate governance and performance of the stocks of companies from the Brazilian electricity sector listed in Bovespa. *Revista de Negócios*, 20(1), 13-28. <http://dx.doi.org/10.7867/1980-4431.2015v20n1p13-28>
- Walsh, J. P., & Seward, J. K. (1990). On the efficiency of internal and external corporate control mechanisms. *Academy of Management Review*, 15(3), 421-458. <http://dx.doi.org/10.2307/258017>

Evidenciação do Contexto Econômico na Relação entre Governança Corporativa e Volatilidade das Ações nas Companhias Abertas Brasileiras**RESUMO**

Objetivo: analisar de que forma o contexto econômico afeta a relação entre a governança corporativa e a volatilidade das ações das companhias abertas brasileiras listadas na B3 S.A. - Brasil, Bolsa, Balcão (B3), no período de 2010 a 2018.


Método: partindo-se de uma pesquisa quantitativa, descritiva e documental, utilizou-se a volatilidade das ações em base anual como métrica para volatilidade (variável dependente); mecanismos internos (estrutura de propriedade e de controle, número de membros do conselho administrativo e fiscal) e mecanismos externos (níveis de governança da B3, American Depositary Receipt e free float) como proxies de governança corporativa (variável independente de interesse); e variáveis de controle (Produto Interno Bruto - PIB e outras).

Originalidade/Relevância: não há consenso em relação à forma que as práticas de governança corporativa afetam a volatilidade das ações, ao se considerar o contexto econômico em que o país se encontra, visto que diferentes proxies podem causar efeitos diversos perante o mercado (Li et al., 2013; Litov et al., 2006).

Resultados: verificou-se que, de modo geral, os mecanismos internos apresentam influência significativa com relação à volatilidade das ações apenas quando analisados em conjunto com a variação do PIB. Já os mecanismos externos não apresentaram influência significativa em relação à volatilidade das ações.

Contribuições Teóricas/Metodológicas: amplia-se a discussão a respeito da interação das práticas de governança corporativa com a volatilidade dos preços das ações das companhias brasileiras, assim como os diferentes enfoques da tomada de decisão ao se analisar os mecanismos internos e externos de governança corporativa no contexto econômico brasileiro.

Palavras-chave: Governança Corporativa. Volatilidade das Ações. Contexto Econômico. Produto Interno Bruto.

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