

Scientific
Journal of
**Applied
Social and
Clinical
Science**

**PROFITABILITY OF
BRAZILIAN LISTED
CAPITAL COMPANIES:
MEASUREMENT
ALTERNATIVES AND
THE INFLUENCE
OF CORPORATE
GOVERNANCE**

Jose Matias Filho

Ricardo Antonio Fernandes

Ana Beatriz Favero Carinta

Camila Lipsky Gonzalez

Celso Luiz Bracalente Junior

All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).



Abstract: Introduction/Problematization: to analyze in what terms the various measures of profitability of companies: financial indicators, generation of value such as - EVA[®], and value attributed by the market - market value, are related to each other. On the other hand, the globalization of capital markets has increased the pressure on companies to adopt and strengthen corporate governance practices. Would the adoption of governance practices also be an influencing factor in the creation of value for companies? **Objective/proposal:** to investigate the behavior of publicly traded Brazilian companies in relation to the different types of profitability calculation: economic return (RE), value addition (EVA[®]) and market value (MV), in the period from 2015 to 2019, as well as to identify if there was influence of corporate governance practices (GC) implemented by companies, in these results, in addition to a possible influence of the sector of activity. **Methodological procedures:** The study was carried out on a sample of 182 publicly traded Brazilian companies from 2015 to 2019. The EBIT and Net Income indexes were collected, as well as data for calculating the NOPAT and Cost of Debt indicators, in addition to market value. For corporate governance, B3's governance levels were used. Descriptive statistics used: Average, Standard deviation, Coefficient of variation, covariance and correlation; and the inferential, simple regression by the method of ordinary least squares. **Main results:** In the sample, the Coefficient of variation resulted around 5 times, high amplitude. The correlation was strongly positive between MV, LL and EBIT; the EVA[®] was strongly Negative. In the regression, MV was explained by EBIT with R² of 0.61 and LL of 0.23. The EVA was Negative with R² of 0.31. In the evolution of indicators over time, 51% of the sample generates RE and MV Positives. 20% generate only MV Positives and 15% generate RE, MV

and EVA Positives. Differentiated level of GC is present in 70% of the sample; of these, 91% generate MV Positive, 71% generate RE Positive, and only 13% generate EVA[®] Positive. **Conclusion:** In the evolution of profitability, there was a predominance of MV, followed by RE. It is noteworthy that the EVA[®] obtained a negative correlation with RE and VM. In this way, the generation of value did not corroborate with the economic profit or how the market perceives the company. Observed that the MV has a strong relationship with RE. Companies with differentiated GC are also highlighted in the sample, especially in cases where MV resulted Positive. Results were achieved that partially corroborate with other studies cited in this study. The results and analyzes performed are limited to the sample, period and tools used. **Work Contributions:** It is possible to infer that the companies that presented Positive levels of RE were well evaluated by the market, as well as those that had a differentiated level of GC. This result goes against the common sense that the market is not concerned with the past results of companies, but only with their future return expectations. This effect was best observed in the consumer goods, cyclical consumption and public utility sectors. In relation to EVA[®], a smaller number of companies present this Positive indicator, which is not a factor that proved to be relevant for market pricing. **Keywords:** Profitability; Value; Corporate governance.

INTRODUCTION

The search for better financial management practices leads companies to invest in the development of effective control tools focused on the preparation and analysis of financial statements, such as the balance sheet (BP), cash flow statement (DFC) and income statement. exercise (DRE). Indicators are calculated to assist in the interpretation of

these statements including: liquidity ratios, asset management, indebtedness, market value and profitability. The joint analysis of financial statements and indexes provides important support to the administrator for decision-making (GROPPELLI; NIKBAKHT, 2010). Among the main indices, those that measure profitability stand out, the most known and used being EBIT, ROA, ROE and Net Profit (ROSS et al., 2010).

The financial statements provide an analysis of the company's financial performance which, however, goes beyond its financial value and may also include the addition of value. For Wernke, Lembeck and Bornia (2000) there are several definitions of value, which has generated discussions regarding the differences in adding value to different stakeholders such as customers, employees and shareholders, for example. In order to determine an adequate measure of value, the company Stern Stewart & Co developed an index called EVA[®] (economic value added) as a measure of business performance (EHRBAR, 1999).

According to Assaf Neto (2014, p. 181) EVA[®] - Economic Value Added "is a measure of value creation identified in the company's operational performance (...) it is an indicator of whether the company is creating or destroying value". According to Ehrbar (1999, p 1): "The EVA[®] is much more than a simple measure of performance, it is the framework for a complete system of financial management and variable compensation, which can guide every decision taken by a company". Therefore, the company's profit may not be enough for the occurrence of the economic value measured by the EVA[®] (WERNKE; LEMBECK; BORNIA, 2000).

Another performance measure frequently used with the objective of measuring value generation is the MVA – Market Value Added, basically obtained from the variation in the

price of the company's shares. Brigham and Ehrhardt (2008) define MVA as the difference between the market value of the share and the amount of equity invested by shareholders. MVA, in addition to benefiting shareholders, allocates resources efficiently, benefiting the economy.

Additionally, the globalization of capital markets has increased pressure on companies to adopt and strengthen universal corporate governance practices. This occurred mainly to make organizations financially attractive to investors, leading management to always be conducted in accordance with the interests of its stakeholders, especially financial ones. In this way, it can be argued that the main motivator for improving governance mechanisms is also the quest to generate value for shareholders (CORREIA; AMARAL, 2006).

In view of these points, the present study aimed to investigate the behavior of publicly traded Brazilian companies in relation to the different types of profitability calculation: economic, value addition and market value, in the period from 2015 to 2019, as well as to identify whether there was influence of corporate governance practices implemented by companies on these results, in addition to an eventual influence of the sector of activity.

Although these aspects form a coherent set of business performance analysis, this theme is little explored in the country, which was verified through an exhaustive bibliographical review, in which no works were found that had the same scope of analysis.

The study is divided, in addition to this introduction, into item 2 that presents the theoretical bases used in conducting the research, followed by item 3 that comments on the applied methodology. Item 4 discusses and analyzes the results of data collection and calculation, followed by item 5 with the study's final considerations.

THEORETICAL FOUNDATION

Financial Administration deals with the management of financial resources that circulate within and through the company, that is, the control and planning of each available financial resource, according to the needs and priorities of the organization. The concept of financial management becomes practical as a tool or technique used precisely to effectively control the entire spectrum of the company's finances. Financial management can boost or harm a business, and its study is extremely important (ASSAF NETO, 2014).

Understanding the tools used in financial management generates a basis for financial decision-making and evaluation. In addition to being important for external use such as obtaining credit, seeking investments or stipulating the monetary value of the company. Based on this thought, Ross et al (2010) define the maximization of value for shareholders as the main objective of financial management.

PROFITABILITY INDICATORS

Within financial administration, the use of various indices to measure the profitability of companies is observed, also known as economic profitability indices (RE). Brigham and Ehrhardt (2008) state that the indices are calculated to help in the evaluation of the financial statements and, therefore, of the company itself. For Ross et al (2010), financial ratios consist of tools for comparing and investigating the relationships between different financial information. Among the most important are the ratios of liquidity, solvency, assets and profitability. According to Assaf Neto (2014), profitability indicators aim to evaluate the results obtained by a given company, using parameters that show its dimensions, helping the analysis based mainly on the absolute value of net income.

The economic indicators used in this study are shown in Table 1, below:

According to De Melo (2017), the purpose of companies is to generate wealth, although there are few indicators that actually measure this magnitude. However, the most relevant in this context is the EVA® (Economic Added Value), which is part of strategic decisions and helps in making fundamental decisions.

In the view of Kruger and Petri (2014), the essentiality of EVA® can also be demonstrated along with the MVA indicator (Market Added Value), which is related to traditional performance indicators: EPS (Earnings per Share) and VM (Market Value of the company, for shareholders), according to the study carried out on companies listed on B3, between 2000 and 2010.

The MVA makes it possible to measure the wealth generated by an enterprise, in the view of the market's perception, and subsidizes, together with the EVA®, various methods of evaluating business performance, which show the capacity to create or destroy wealth, confirming the theoretical basis of EVA® and MVA efficiency as measures to support the management process. While, in turn, this relationship between ROE (Return on Equity) and ROA (Return on Assets) cannot be confirmed (KRUGER; PETRI, 2014).

As the management's objective is to maximize the company's value, Stewart (2005) states that the focus must be on maximizing the EVA®, which basically results from operating profit less the cost of capital. EVA®, an acronym for economic value added, is a measure of business performance that differs from most others by including a charge on profit for the cost of all capital that a company uses (EHRBAR, 1999).

According to Iung and Silva (2005), the EVA® has a great advantage, as it is easy to understand and apply, even for people who do not have much experience. Another relevant aspect is related to the ability to assess the different levels of the organization,

Indicator	Calculation	Rational
EBIT	$EBIT = \text{Net Income} + \text{Interest} + \text{Taxes}$	Segundo Silva (2012) o EBIT corresponde ao lucro operacional antes dos juros e impostos. Também demonstra os rendimentos e gastos da organização, sendo ganhos ou perdas da operação da empresa, podendo analisar a capacidade e eficiência no mercado e suas capacidades de gerar caixa.
Net profit	$\text{Net income} = \text{Total revenues} - \text{Total expenses (expenses)}$	Shareholders make a detailed examination of net income, as it has a strong connection with the distribution of dividends and with the retention of profits (ROSS et al, 2010).
ROA	$ROA = \text{Net Income} / \text{Total Assets}$	Ross, Westerfield and Jordan (2010) define ROA – Return on Assets as a measure of profit per asset.
ROE	$ROE = \text{Net Income} / \text{Shareholders' Equity}$	ROE is the acronym for Return on Equity, it is a measure of performance (remuneration) of the investment made by shareholders (ROSS; WESTERFIELD; JORDAN, 2010).

Table 1 - Economic Performance Indicators

Source: Prepared by the Authors.

thus translating into actions aimed at all organizational levels.

According to Stewart (2005), the calculation of the EVA[®] is obtained through the residual income, the NOPAT (net operating profit after tax) minus the cost of capital (generally in percentage form), multiplied by the total capital of the company. Within the calculation of EVA there are two dimensions of corporate performance: profitability and growth. The indicator is usually represented by the following equation:

$$EVA = NOPAT - C^* \quad (01)$$

Where: NOPAT = operating profit after tax, C^* = Cost of Capital

CORPORATE GOVERNANCE

The study of corporate governance basically concerns the organization's relationship with shareholders (shareholders) and other interested parties (stakeholders). It is noteworthy that an important concept of modern corporate governance in Brazil is the relationship with the agency theory. "In Anglo-Saxon countries, its essence is based on mechanisms for solving the agency conflict, resulting from informational asymmetry and conflict of interests between the parties involved (owners and administrators)" (BORGES; SERRÃO, 2005, p.112).

Among the assumptions of the Anglo-Saxon model are: i) That shareholdings are relatively dispersed and; ii) That stock exchanges are sufficiently developed; which guarantees the liquidity of these holdings and reduces the risk for shareholders. Therefore, there is less need for direct monitoring since, through price variation, the market signals the approval or rejection of management actions. On the other hand, the constant disclosure of information imposed by the system requires strict control to ensure that privileged information is not used (BORGES;

SERRÃO, 2005).

A metric used in the country by B3 (Brasil, Bolsa, Balcão) is the level of governance (Level 1, Level 2, Novo Mercado), with the new market being the level with the highest demands related to governance and, decreasingly, level 1 is less demanding. The purpose of this mechanism is to improve practices in order to reduce informational asymmetry and risk for investors, allowing greater and better access to information (USP, 2013).

In this context, agency theory aims to analyze the conflicts and costs resulting from the separation between ownership and capital control. In this way, informational asymmetries, risks and other problems related to the relationship between the principal (holder / shareholder) and the agent (manager) arise, since both parties wish to maximize their own benefits (JENSEN; MECKLING, 1976).

Therefore, the main function of corporate governance ends up being the resolution of conflicts of interest between agents and owners, in order to optimize the generation of value for the latter. This is due to the growth and change in the structure of companies in the historical scenario, when there was a separation between ownership and control, when concerns about corporate governance arose. And for this, the implementation of corporate governance practices, to ensure the optimal performance of organizations, translates into results of greater profitability on the holders' investments (CORREIA; AMARAL, 2006).

Thus, Corporate Governance is based on the principle of ensuring that resources are used efficiently and effectively in the organization's mission, objectives and goals, which must protect the interests of shareholders along with the maximization of the organization's economic results. It is also

important to emphasize that good corporate governance contributes to sustainable economic development, improving the performance of companies and providing greater access to external sources of capital (ARRUDA; MADRUGA; FREITAS JUNIOR, 2009).

In the next section, studies are reported that proposed investigations similar to the present research.

RESEARCH RELATED TO THE THEMES OF THIS STUDY

Based on the premise that the capital structure interferes in the generation of value for companies, Angonese, Santos and Lavarda (2011) carried out a study with the objective of investigating whether there is a relationship between debt and EVA[®]. For this, the financial statements of a sample of companies that make up the IBRx 100 index of the Commodities and Futures Exchange (currently B3) were analyzed, with the exception of financial institutions. The results showed that there is no relationship between the debt variables and the generation of added value.

A study based on Exame Melhores e Maiores Magazine, 2010 edition, analyzed the view of the EVA[®] calculation on the performance of the main organizations in the country. Of the 316 companies in the sample, 217 created value for investors, while 99 destroyed value. From this analysis with the geographic regions, it was evidenced that a high creation of value is associated with the Midwest region, that is, organizations in that location have higher EVA[®]. When comparing the ranking of the largest companies, established by Exame Magazine, with the ranking elaborated from the EVA[®] perspective, it was found that only 5 of the 316 companies analyzed remained in their positions (DE MENESES, 2012).

Related to this topic, a study was carried out between 2002 and 2010 on 223 publicly

traded non-financial organizations by Caixe and Krauter (2014). The absence of financial companies was mainly due to the issue of endogeneity, absence of variables, among others. The purpose of the research was to investigate whether the adoption of good corporate governance practices influences the market value of Brazilian companies. The results showed that organizations that participate in Level 1, Level 2 or Novo Mercado of B3 are more valued by the market than firms listed in the traditional segment, in other words, the transparency of information has a positive impact on market value of the firms.

In the work by Gonçalves, Marques and Ribeiro (2013), the authors investigated whether there is a positive relationship between debt and the EVA[®]. The samples used were companies in the agricultural and processed food sectors. The result obtained from the analysis of the 2012 financial statements was that there is no statistical significance of EVA[®] as a determinant of the capital structure.

Regarding corporate governance, especially since the 2000s, there has been a growing number of studies on the subject and how it relates to organizational performance. In 2013, a survey was carried out with 182 companies listed on B3, in order to compare the performance of organizations that adopt governance practices with those that do not. In conclusion, companies that adhere to more sophisticated corporate governance systems showed better economic performances. And yet, it was considered that there is a relationship with better results according to the levels of governance, that is, the most satisfactory answers were present in the companies of the new market (OLIVEIRA LIMA et al, 2015).

The study carried out by Leite, Bambino and Hein (2017) proposed to analyze the relationship between the dividend policy and the financial economic performance of

Brazilian and Chilean companies, analyzing the variables related to the dividend policy, control variables and performance variables, such as ROE, ROA and net profit. In the sample, only companies active in the year 2014 and that had all the variables in the period from 2009 to 2013 were considered. The result showed that the dividend policy exerts a negative influence on the financial economic performance of organizations.

Sousa (2018) carried out a survey with the aim of showing the influence of EVA® on the return of stock prices. As a sample, 13 companies inserted in the B3 in the Level 1 segment were evaluated. The results report that the companies that use the EVA® did not present what was expected by this tool, being inversely proportional to the result of the actions, presenting the EVA® as not being the measure the most suitable performance indicator for this B3 segment.

The case study carried out by Costa et al (2019) aimed to verify whether the use of the EVA® methodology in the analysis and pricing of projects adds information and knowledge, which would not be achieved by a small company, which carries out public projects in the area of civil construction, called Fator Construções, with the methodologies currently used by it. With the use of EVA®, the result changes significantly, demonstrating the importance of considering the real cost of capital in the pricing and analysis of projects.

Between 1998 and 2016, a theoretical-empirical research was carried out with 223 publicly traded organizations. The purpose of the study was, through data collection, to perform variable calculations and econometric tests, in order to test the relationship between the dividend policy, represented by the indicators payout, dividend yield and dividends payable, and the creation or destruction of shareholder value (EVA®). In short, the research stated that companies

that retain a larger share of profit, with less aggressive dividend policies, create more value for shareholders, as they minimize the cost of seeking other sources of financing. That is, the creation of shareholder value is influenced by the companies' dividend distribution policy. However, the research showed that most of the companies analyzed were not efficient in creating value in the analyzed period (SILVA et al, 2019).

Table 2 summarizes the research related to the present study described above:

Thus, the presentation of the themes above, related and pertinent to the theme of the present study, was intended to support the research that was developed, whose conceptual and empirical procedures are described in the following item.

RESEARCH METHOD

The research was descriptive and exploratory, as it proposed to investigate the possible relationship between economic indicators, value generation and market value, in addition to seeking to relate the behavior of these indicators with the company's corporate governance practices. The methodological approach was both quantitative, when collecting and analyzing secondary data, and qualitative, in the search for governance program indicators (GIL, 1999).

The empirical study included a sample of publicly traded Brazilian companies from different sectors in the period from 2015 to 2019, which had enough data to calculate the various economic and financial indicators proposed for the study, in addition to having relevant information about their procedures for corporate governance.

Data were collected from financial reports published by companies, gathered in the Economática® database. Data were collected to calculate the Earning Before Interest and Taxes (EBIT) and Net Profit (LL) profitability

Authors	Sample	Research	Result
Santos(2011) Angonese, and Lavarda	72 companies from the IBRx 100 index of the Commodities and Futures Exchange, except financial institutions, data collected in 2009.	Ratio between debt and EVA*.	There is no correspondence between the variables of indebtedness and generation of added value.
(2012) De Menezes	316 biggest and best companies of 2010 by Exame magazine.	Companies listed in Exame magazine's ranking create or destroy value.	217 companies in the ranking created value for investors and 99 destroyed value.
Caixe e Krauter (2014)	223 publicly traded non-financial organizations in the period between 2002 and 2010.	Understand whether the adoption of good corporate governance practices influences the market value of Brazilian companies.	Organizations that participate in one of the three corporate governance segments of BM&FBovespa (N 1, N2 and NM) are more valued by the market, when compared to companies listed in the traditional segment.
Gonçalves, Marques and Ribeiro(2013)	29 publicly traded companies in the agricultural and processed food sectors in 2012.	Positive relationship between debt and EVA*.	There is no statistical significance of return on equity and EVA* as determinants of the capital structure of the selected sample.
Oliveira Lima et al (2015)	Data from 182 companies extracted from the BM&FBOVESPA electronic portal in 2013.	Comparison of the performance of organizations that adopt governance practices with those that do not.	There is an incentive for shareholders and controllers of organizations (greater positive change in market value) to migrate to higher segments of the differentiated market.
Leite, Bambino and Hein(2017)	Only companies that were active in 2014 and that had all the variables in the period from 2009 to 2013 were considered.	Analyze the relationship between dividend policy and economic and financial performance of Brazilian and Chilean companies, analyzing variables related to dividend policy, control variables and performance variables, such as ROE, ROA and net income.	The dividend policy exerts a negative influence on the economic and financial performance of organizations.
Sousa (2018)	13 companies present at B3 at level 1 between 2014 and 2017.	Intervention of the EVA* in the value of the shares of the studied companies.	The result of the EVA* is inversely proportional to the result of the actions.
Costa et al (2019)	Accounting documents and management reports of the organization "Construction Factor" from 2013 to 2014.	Verify if the use of the EVA* methodology in the analysis and pricing of projects in the company would be relevant to obtain information and knowledge that would not be achieved by the company.	When the present value of the monthly EVA* is calculated, it is observed that this project does not add value to the company.
Silva et al (2019)	223 publicly traded companies, with statements between 1998 and 2016.	Relationship between dividend policy and EVA*.	Companies that retain a larger share of profit, with less aggressive dividend policies, create more value for shareholders.

Table 2 - Summary of research related to the themes of this study

Source: Prepared by the Authors.

indices over a period of 5 years. Data were also collected for the calculation of the NOPAT and Cost of Debt indicators, which resulted in the EVA[®], in addition to the evolution indicator of the companies' market value, in the same period.

Qualitative data on good corporate governance practices were researched through reports provided by the organizations CVM (commission of real estate values), IBGC (Brazilian Institute of Corporate Governance) and B3 (Brasil, Bolsa, Balcão), but the most complete list and updates was only found in the latter, which was used as the basis for classifying the companies in the sample.

Organizations classified with levels of corporate governance differentiated from B3, that is, that are among the levels: Novo Mercado, Level 2 and Level 1, were specified as "Yes", while those that have a basic (or traditional) level on the trading floor of the B3 B3 grouped as "No".

The cost of capital was calculated from its cost of debt and cost of equity components, by weighted average. The cost of debt was calculated by taking the amount of financial expenses reported in the companies' DRE, divided by the total debt on the Balance Sheet, each year. The cost of equity capital was obtained by applying the CAPM model, whose indicators used were: CDI as a risk-free asset, Ibovespa as a market return, and the beta of companies, with all data also collected in the Economática[®] database.

In order to arrive at the result of the indicators, whether Positive or Negative, and to identify the evolution of these indicators of the companies over the years, the variation of each

indicator, where the current year was subtracted by the previous one and divided by the value of the previous year (in module), of the 5 years of data collected from the sample. After that, the Average of the values

of the variations was calculated, both for the economic indicators, and for the EVA[®] and the MV, assuming the condition "Positive" or "Negative" according to these results.

Descriptive statistics tools were used in the analysis of the indicators: Average, Standard deviation, Coefficient of variation, covariance and correlation. There was also the use, in empirical research, of inferential statistics tools, consisting of the analysis of the correlation between the study variables, in addition to the calculation of simple regression, by the method of ordinary least squares, considering the market value of companies (MV), as the Dependent Variable and the EBIT, LL and EVA indicators as the Independent variables of the study, which sought to explain the behavior of the Dependent Variable (FÁVERO et al, 2017).

RESULTS ANALYSIS

The initial sample of this research, extracted from the Economática[®] database, initially consisted of 600 (six hundred) companies. Of these, 135 (135) were eliminated because they did not show the EBIT indicator in the studied period. Next, 283 (two hundred and eighty-three) companies were eliminated for not having the BETA index in the period studied, thus leaving a sample of 182 (one hundred and eighty-two) organizations. After these necessary eliminations, the CAPM, Cost of Debt, Cost of Capital, NOPAT and EVA[®] were calculated, in addition to the variation in the Market Value of the companies during the study period. For the analysis of the organizations' corporate governance, the list provided by B3, updated in September 2020, was used. Thus, it was concluded that of the 182 companies, 55 - 30% do not have robust corporate governance, in terms of the classification of different levels of the scholarship. Those that follow this criterion represent 70% Sample.

STATISTICAL ANALYSIS OF SAMPLE DATA

First, the results of the descriptive statistics of the sample are presented in Table 1, below:

The results of descriptive statistics demonstrate both the mean and Standard deviation of the data used in the research, as well as its amplitude. Regarding the Coefficient of variation, relatively similar results are observed between the variables, around 5 times, which is considered high, taking into account the type of data under analysis, as they refer to profitability and value addition modalities, suggesting a high volatility during the study period.

As for the relationship of the variables to each other, table 2 is presented below, containing the matrix of results of the correlation between the variables under study:

The results of the calculation of the correlation between the variables resulted in a strong positive correlation between the market value (MV) and the profitability indicators Net Income, and mainly EBIT, suggesting a strong positive relationship between the market value perceived by investors and the economic results achieved by companies.

With regard to the EVA[®], the result of the correlation with the other variables was strongly Negative, suggesting that this indicator does not have a wealth generation relationship with the other study variables, on the contrary, it suggests that the generation of value by the method of EVA[®] is antagonistic in relation to the other profitability generation indicators.

INFERENCE STATISTICS

Additionally, an inferential calculation was performed with the study indicators, in order to determine whether the profitability indicators EBIT, LL and EVA had a significant influence on the formation of the Market Value of the companies in the sample. The method

used was simple regression by Ordinary Least Squares, whose results are reported in Table 3, below:

It is noted that all the indicators used as independent variables were able to significantly explain the behavior of the dependent variable Market Value, the most prominent being EBIT, with an explanatory power of 0.61. The EVA, in turn, showed a Negative coefficient sign, meaning that it has a profitability behavior contrary to the Market Value, in the sample and periods studied, a fact corroborated with the correlation results between the indicators, and the analysis of the grouping of the indicators.

RESULT OF THE EVOLUTION OF INDICATORS

The sample companies were grouped according to the result of the positive or negative evolution in each of the groups of indicators studied: economic, added value and market value, resulting in eight different groups. The results are reported in Table 4, below:

It is observed that Group A represents 51% of the total sample, meaning that about half of the companies studied generate both economic results and positive market value, that is, the perception of market value is in line with the satisfactory results of the organizations generated by Ebit and Profit Net. However, this large portion does not generate added value, which was measured by the EVA[®] indicator.

Regarding Group B, the 36 companies that compose it do not have a positive economic result or EVA[®], but have a positive result of their market value evolution, suggesting that the market attributes value to companies even if they do not present an economic result -financial or value-added positives. This result corroborates the idea that the vision of market value in relation to companies is

Variable	Average	D.P.	Min.	Max.	C/V
EBIT	1.050.000	4.830.000	-28.300.000	81.700.000	4,6
LL	386.000	3.300.000	-44.200.000	40.100.000	8,5
EVA	-1.680.000	11.100.000	-186.000.000	41.500.000	-6,6
MV	10.600.000	34.300.000	1.370	407.000.000	3,2

Table 1 - Descriptive Statistics of Variables (R\$ Thousand)

Source: Prepared by the Authors

EBIT	LL	EVA	MV	
1	0,7588	-0,5707	0,7854	EBIT
	1	-0,1427	0,4799	LL
		1	-0,5533	EVA
			1	MV

Table 2 - Correlation Matrix between Variables

Source: Prepared by the Authors

Variable Independent	Coefficient	Mistake Standard	rate-t	p-value	R ² Adjusted
EBIT	5,55731	0,146805	37,85	<0,0001	0,611704
LL	4,96823	2,00322	2,48	0,0133	0,228121
EVA	-1,77479	0,341628	-5,20	<0,0001	0,305303

Note: model adequacy tests were carried out: White Test for heteroscedasticity, Residual Normality Test, RESET Test for model specification and Chow Test for structural failure, and all results (p-value) were less than 0.001.

Table 3 – Simple Regression Results for the Dependent Variable Market Value (MV).

Source: Prepared by the Authors

Group	Economic	EVA	Market	Quant.	%
A	Positive	Negative	Positive	93	51%
B	Negative	Negative	Positive	36	20%
C	Positive	Positive	Positive	28	15%
D	Negative	Negative	Negative	12	7%
E	Negative	Positive	Positive	8	4%
F	Positive	Negative	Negative	2	1%
G	Negative	Positive	Negative	2	1%
H	Positive	Positive	Negative	1	1%
Total				182	100%

Table 4 - Grouping of Economic-Financial Indicators

Source: Prepared by the Authors

more linked to the performance that they may achieve in the future, than to the performance already presented in the past, reported in the published financial statements.

The Group that has: economic performance, value addition and market value all positive, is C, which is composed of 28 companies, representing 15% of the total sample. In contrast to Group C, Group D has all the negative indicators, that is, 7% of the evaluated companies did not have a positive evolution either in economic indicators, value creation or perception of value by the market.

Representing 4% of the sample is Group E where economic performance is negative, EVA[®] and market value are positive. The sum of Groups F, G and H represent only 3% of the sample; all these Groups have the negative market value in common, and different results for economic indicators and EVA[®].

RESULTS OF DIFFERENTIATED LEVELS OF GOVERNANCE

Table 5, below, presents a comparison of the indicative of companies with a differentiated level of governance, in relation to the indicators used in the study:

In general, 70% of the sample has a differentiated level of corporate governance. With regard to Group A, 83% of the companies have good corporate governance practices, representing the most relevant Group in this regard. Following is Group B, which has 67% of its companies present in the differentiated listing segments of B3, followed by Group C, with 11 companies and Group E with 3 representatives.

These four Groups total 115 companies, 63% of the total sample, and 91% of the companies listed in the upper levels of B3, indicating a significant relationship between the attribution of value to companies by the market, and the fact that companies have different levels of corporate governance, in

accordance with B3 criteria. On the other hand, Groups D, E, G and H, which show a negative evolution of the market value indicator and total 17 companies, contain 12 companies listed in B3's differentiated segments, with the total number of companies in these 4 Groups representing only 9% of all companies.

SECTORIAL ANALYSIS OF RESULTS

Additionally, companies were grouped according to the sectors in which they operate. In this way, the predominant sector in each Group was identified. Among the main sectors are cyclical consumption, industrial goods and public utilities. Table 6 presents the sectors of activity according to the Groups of companies.

Of the total sample considered in the survey, 59%, or 107 companies, are concentrated in three activity sectors: 51 companies (28%) belong to the cyclical consumption sector, 33 companies (18%) belong to the industrial goods sector, and 23 companies (13%) to the public utility sector. It is noted that the economic sector with the largest number of organizations is that of cyclical consumption, followed by industrial goods and public utilities. And it is precisely these classes that also have, in that same order, the largest number of companies with a differentiated level of governance. In addition, the eight groups analyzed contain the largest number of companies concentrated in these same predominant sectors: cyclical consumption, industrial goods and public utility.

It is also noteworthy that group A presents a positive economic result and market value, this same group is where the largest number of companies is concentrated, 93, and in relation to the sectors of activity, the sector of cyclical consumption is predominant with (23%) of companies, followed by the public utility sector (16%) and industrial goods (15%). Group D, which shows all types of negative

Group	Quant.	% Quant.	Level B3 Differentiated	% Level B3 Group	% Level B3 Total
A	93	51%	77	83%	42%
B	36	20%	24	67%	13%
C	28	15%	11	39%	6%
D	12	7%	9	75%	5%
E	8	4%	3	38%	2%
F	2	1%	1	50%	1%
G	2	1%	1	50%	1%
H	1	1%	1	100%	1%
Total	182	100%	127		70%

Table 5 - Grouping by B3's Corporate Governance Level

Source: Prepared by the Authors

Sectors	Total	Group								Level B3 Differentiated
		A	B	C	D	E	F	G	H	
Industrial goods	33	14	9	4	3	2	1	0	0	21
Communications	4	4	0	0	0	0	0	0	0	2
Cyclical Consumption	51	21	17	5	3	4	0	1	0	33
Non-cyclical consumption	15	6	3	4	1	0	0	0	1	11
Financial	17	10	2	2	2	1	0	0	0	16
Basic mterials	17	10	3	3	1	0	0	0	0	11
Not defined	2	1	0	0	1	0	0	0	0	1
Others	2	1	0	0	0	0	1	0	0	0
Oil, Gas and Biocomb.	8	4	1	1	0	1	0	1	0	7
Health	8	5	0	3	0	0	0	0	0	6
Information Technology	2	2	0	0	0	0	0	0	0	2
Public utility	23	15	1	6	1	0	0	0	0	17
Total	182	93	36	28	12	8	2	2	1	127

Table 6 - Result of the Grouping of companies according to the sectors in which they operate

Source: Prepared by the Authors

profitability, is predominant in the consumer cyclical and industrial goods sectors (25%), followed by the financial sector (17%).

The above discussion sought to present the results obtained in the empirical research addressed in this study, highlighting its main points, according to the proposed objectives and the theoretical framework used. Next, the final considerations about the present study are made.

FINAL CONSIDERATIONS

This study aimed to investigate the evolution of different types of profitability of publicly traded Brazilian companies, through the evolution of their results in the period from 2015 to 2019. Data were collected from the Economática® database, resulting in an initial sample of 600 companies, which after the necessary eliminations, they resulted in a sample of 182, to which the methodological procedures described in item 3 were applied, in order to reach the results discussed in the previous item.

Regarding the evolution of profitability, there was a predominance of positive results in the market value indicator, with 165 companies, 91% of the total sample, they are in this condition. Economic profitability was observed in 124 companies, that is, 68% of the sample. While the 39 companies that registered value addition represented only 21% of the sample.

It is essential to highlight that value addition had a negative correlation with economic and market profitability. That is, the higher the EVA®, the lower the perceived market value and economic performance and vice versa, in the sample, a result also obtained in the linear regression between the indicators. Thus, the creation of value was not related to economic profit or how the market perceives the company.

Regarding the value perceived by the

market, it was observed that this has a strong relationship with economic profitability indicators. That is, a good economic result of organizations also has a positive perception for the market, and in the regression analysis the explanatory power of this relationship was 0.61, with a positive coefficient. With regard to differentiated levels of Corporate Governance, this was present in 70% of the sample, mainly in cases where the market value was positive.

It is possible to conclude that companies that showed positive levels of economic profitability were well evaluated by the market, as this seemed to be attractive to investors, as well as having a differentiated level of corporate governance. This result goes against the common sense that the market is not concerned with the past results of companies, but only with their future return expectations. This effect was better observed in the sectors of consumer goods, cyclical consumption and public utility, being less relevant in other sectors of the sample. In relation to EVA®, a smaller number of companies presented this positive indicator, which is not a factor that proved to be relevant for market pricing.

In the sample, groups A, B and C recorded the best portion analyzed in relation to good corporate governance practices. As well as it was in this set where positive market value results were observed. Consequently, these stock negotiations at different levels of corporate governance, mirrored, in the researched sample, a positive reaction of valuation of these stocks, in the stock exchange market.

Among the related studies presented in the study, one can highlight the work of Caixe and Kraute (2014), who concluded that when companies are transparent with their information, that is, when they have advanced levels of corporate governance, there is greater market value, corroborating the present study. The study by Oliveira Lima

et al (2015) observed that companies with an advanced level of corporate governance generate better economic results. The research carried out by Sousa (2018) understood EVA® as an antagonistic indicator for the value that the market sees in organizations, also corroborating the results reported here.

It is worth mentioning the limitations of the results obtained here, which must

not be extrapolated to situations outside the sample, period and analysis tools used. It is recommended that new studies be implemented on the subject, in order to increase the level of understanding of the subjects dealt with here, enriching both the academic knowledge, as well as that of the business community and the financial market, about the subject.

REFERENCES

- ANGONESE, R.; SANTOS, P. S. A.; LAVARDA, C. E. F. Valor Económico Agregado (VEA) e Estrutura de Capital em Empresas do IBRX 100. **ConTexto**, Porto Alegre, v. 11, n. 20, p 7- 17, 2º semestre, 2011.
- ARRUDA, G. S. de; MADRUGA, S. R.; FREITAS JUNIOR, N. I. de. A governança corporativa e a teoria da agência em consonância com a controladoria. **Revista de Administração da UFMS**, [S.l.], v. 1, n. 1, oct. 2009.
- ASSAF NETO, A. **Finanças corporativas e valor**. 7. ed. São Paulo: Atlas, 2014. B3. Brasil, Bolsa, Balcão. Disponível em: www.b3.com.br. Acesso em 10/10/2020.
- BORGES, L. F. X.; SERRÃO, C. F. de B. Aspectos de governança corporativa moderna no Brasil. **Revista do BNDES**, Rio de Janeiro, v.12, n.24, p. [111]-148, dez. 2005.
- BRIGHAM, E. F.; EHRHARDT, M. C. **Administração financeira: teoria e prática**. São Paulo: Cengage Learning, 2008. xxiii, 1044 p., [A-1], [I-10]
- CAIXE, D. F.; KRAUTER, E. Relação entre governança corporativa e valor de mercado: mitigando problemas de endogeneidade. **Brazilian Business Review**, Vitória, v. 11, n. 1, p. 96- 117, Jan 2014.
- CORREIA, L.; AMARAL, H. Reflexão sobre as funções da governança corporativa. **REGE Revista de Gestão**, v. 13, n. 1, p. 43-55, 1 mar. 2006.
- COSTA, P. N *et al*. Avaliação de desempenho pelo EVA: estudo de caso em uma construtora de pequeno porte. **Navus**: Florianópolis, Santa Catarina, v. 9, n. 1, p. 21-36, jan / mar, 2019.
- DE MELO, F. L. *et al*. Demonstração Do Valor Adicionado (DVA): Um Estudo Sobre A Destinação Da Riqueza Nas Regiões Brasileiras. **Revista Metropolitana de Sustentabilidade**, São Paulo, v. 7, n. 2, p. 68-92, May 2017.
- DE MENESES, A. F. *et al*. Criação ou destruição de valor na perspectiva do EVA® no ranking das maiores empresas da Revista Exame. **Revista de Ciências da Administração**, Florianópolis, v. 14, n. 34, p. 103, 12, 2012.
- EHRBAR, Al. **EVA: valor econômico agregado: a verdadeira chave para a criação de riqueza**. Rio de Janeiro: Qualitymark Ed., 1999.
- FÁVERO, Luiz Paulo; BELFIORE, Patrícia. **Análise de dados: estatística e modelagem multivariada com Excel, SPSS e Stata**. Rio de Janeiro: Elsevier, 2017.
- GIL, A. C. **Métodos e técnicas de pesquisa social**. 5. ed. São Paulo: Atlas, 1999.
- GONÇALVES, F. V.; MARQUES, T. Á.; RIBEIRO, K. C. S. Estrutura de capital e geração de valor no setor do agronegócio: um estudo sobre as empresas listadas na BM&F BOVESPA. **FACEF Pesquisa: Desenvolvimento e Gestão**, 6(3), 360-370, 2013.
- GROPPELLI, A. A.; NIKBAKHT, E. **Administração financeira**. 3. ed. São Paulo: Saraiva, 2010. xv, 496 p.

IBGC. Instituto Brasileiro de Governança Corporativa. Disponível em: www.Ibgc.org.br. Acesso em 25/08/2020.

IUNG, G.; SILVA, T. M. Valor econômico agregado. **Revista eletrônica de contabilidade**. Santa Maria, v. 1, n. 2, 2005.

JENSEN M.; MECKLING, W. Theory of the firm: Managerial behavior, agency cost, and ownership structure. In: **Journal of Financial Economics**, p. 305-360, 1976.

KRUGER, S. D.; PETRI, S. M. Novas evidências da relação entre medidas tradicionais de desempenho e aquelas baseadas na geração de valor a partir do custo de capital. **Revista Universo Contábil**, v. 10, n. 2, p. 125-143, 2014.

LEITE, M.; BAMBINO, A. C.; HEIN, N. Relação entre política de dividendos e desempenho econômico-financeiro em empresas brasileiras e chilenas. **Revista de Gestão, Finanças e Contabilidade**, v. 7, n. 1, p. 205-221, jan./abr. 2017.

OLIVEIRA LIMA, S. H. *et al.* Governança corporativa e desempenho econômico: uma análise dos indicadores de desempenho entre os três níveis do mercado diferenciado da BM&FBOVESPA. **REGE. Revista de Gestão**, São Paulo, v. 22, n. 2, p. 187-204, 04 2015.

ROSS, S. A.; WESTERFIELD, R. W.; JORDAN, B. D.; MINARDI, Andrea Maria Accioly Fonseca (Trad.). **Princípios de administração financeira**. 2. ed. São Paulo: Atlas, 2010.

SILVA, J. E *et al.* Política de dividendos e criação de valor: um estudo no mercado brasileiro. **Revista Ambiente Contábil**, Natal, v. 11, n. 1, p. 77-97, Jan 2019.

SILVA, J. P. **Análise Financeira das Empresas**. 11. ed. São Paulo: Atlas, 2012.

SOUSA, M. B. e. Valor econômico agregado das empresas de capital aberto na Bovespa e o retorno do preço das ações. 2018. 22 f. **Trabalho de Conclusão de Curso** (Graduação em Ciências Contábeis) – Universidade Federal de Uberlândia, Uberlândia, 2018.

STEWART, G. B.; BASSO, L (Rev.). **Em busca do valor: o guia de EVA para estrategistas**. Porto Alegre: Bookman, 2005. 655 p.

USP - CONGRESSO DE CONTROLADORIA E CONFIABILIDADE: DESAFIOS E TENDÊNCIAS DA NORMATIZAÇÃO CONTÁBIL, 13, 2013, São Paulo. **Anais...** Fipecafi, 2013. 3 p.

WERNKE, R.; LEMBECK, M.; BORNIA, A. C. Valor Econômico Adicionado (E.V.A.): uma ferramenta para mensuração da real lucratividade de uma operação ou empreendimento. **Revista de Ciências da Administração**; Florianópolis Vol. 2, Iss. 3, (Apr 2000): 50.