LIABILITIES AND COURT-SUPERVISED REORGANIZATION: AN ANALYSIS OF BEHAVIOR IN PUBLIC COMPANIES

PASSIVO E RECUPERAÇÃO JUDICIAL: UMA ANÁLISE DE COMPORTAMENTO EM EMPRESAS DE CAPITAL ABERTO

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ABSTRACT

The objective of the study has been to analyze the behavior of liabilities after compliance with the court-supervised reorganization process in order to verify if the compliance is signaling that companies meet the objective of the process, that is, if they are fulfilling the passive liabilities assumed and are continuing their activities with optimization of their financial capacity, in this way indicating to the market the search for economic and financial reestablishment. The research is quantitative and to achieve its objective balance sheet data and income statements were collected from 38 companies of the Brazilian Stock Exchange from 2011 to 2018, where 19 companies are under court-supervised reorganization process and 19 are not. Thus, the behavior of the liability balances of the companies has been verified for the study period linked to indebtedness and liquidity financial ratios to verify if the companies that are undergoing reorganization have reduced their liabilities with consequent optimization of the ratios. To reach this objective, a panel data regression model has been estimated. As a result of the survey, this study has found that approximately 65% of the companies that comply with the court-supervised reorganization process have a high degree of bank debt at the time of recovery, and this group is the main component of their liabilities. In addition, it has also been found that compliance with the reorganization plan indicates that companies use the reorganization process as an alternative to avoid bankruptcy and that they have difficulty recovering their financial and economic ability.
Keywords: court-supervised reorganization; liabilities; signaling theory.

RESUMO

O objetivo do estudo foi analisar o comportamento dos passivos após a adesão ao processo de recuperação judicial, no intuito de verificar se a adesão está sinalizando que as empresas atendem ao objetivo do processo, ou seja, se estão cumprindo as obrigações passivas assumidas e tendo continuidade de suas atividades com otimização da capacidade financeira, indicando ao mercado a busca pelo reestabelecimento econômico e financeiro. A pesquisa é quantitativa e para alcance do objetivo foram coletados dados dos balanços patrimoniais e demonstrações do resultado de 38 empresas da bolsa de valores brasileira no período de 2011 a 2018, sendo 19 empresas que estão

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em processo de recuperação judicial e 19 que não fazem parte do processo. Dessa forma, foi verificado o comportamento dos saldos de passivos das empresas ao longo do período de estudo atrelado a índices financeiros de endividamento e liquidez, no intuito de verificar se as companhias que estão em recuperação judicial tiveram redução de seus passivos com consequente otimização nos índices. Para alcance do objetivo foi estimado um modelo de regressão com dados em painel. Como resultado na pesquisa constatou-se que aproximadamente 65% das empresas que aderem ao processo de recuperação judicial possuem elevado grau de endividamento bancário na época da recuperação, tendo esse grupo como principal componente de seu passivo. Além disso, verificou-se que a adesão ao plano de recuperação sinaliza que as empresas utilizam o recurso do processo de recuperação como alternativa para evitar falência e possuem dificuldade de retomar sua capacidade financeira e econômica.
Palavras-chave: recuperação judicial; passivo; teoria da sinalização.

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1 INTRODUCTION

Companies are suffering from the financial crisis in Brazil, mainly because of the high level of indebtedness with creditors linked to operations related to main production activities (Campos, 2018; Pereira et al., 2019). Famá and Grava (2000) claim that companies that cannot meet their obligations because of a lack of financial resources are characterized as insolvent. In this context, there is often the need to resort to a court-supervised reorganization process as an alternative to the search for debt compliance and as an attempt to remain in the market.

In Brazil, Law No. 11,101/2005 addresses court-supervised reorganization and highlights the regulations for the development of the process. From article 47 of the Law, it is possible to verify the objective of the process, which is to provide companies characterized as incapable of fulfilling their obligations with the feasibility of special treatment in the face of their economic-financial crisis situation, in this way envisioning the possibility of recovery of their financial capacity and sequence of operational activities (BRASIL, 2005). Pimenta (2006) highlights that a reorganization provides a solution for maintaining the organization's activities, such as employability, interests of third parties such as creditors, consumers, and the tax authority itself.

According to Sztajn (2005), a continuous financial crisis, linked to cash inflows and outflows, has a great possibility of causing a model of insolvency, that is, incurring a crisis related to the structure of assets and liabilities. Liabilities result from present obligations that generate economic benefits that will result in future sacrifices. Over time, the record of liabilities evolved and ceased to have characteristics of complementing assets or expenses, taking on a greater responsibility with regard to the statements of a company's obligations and evidencing its degree of indebtedness (Hendriksen & Van Breda, 1999). In this sense, the study of liabilities, with regard to their organization, exposes an indication of the financial situation of the company and its short and long-term commitments, which can signal a possible insolvency of the organization.

Spence (1973), when developing the Signaling Theory, indicates that this Theory is very useful in the sense of explaining and analyzing how markets react through the issuance of signals sent by organizations. These signs often reveal the financial and economic situation of the company. In signaling, data are revealed through the availability of information and require an appropriate interpretation (Milgron & Roberts, 1992). The Signaling Theory defines market signals as activities or attributes of individuals in a market in which, by structuring or accident, information is transmitted to other interested individuals (Spence, 1973).

Regarding the analysis of companies with requests for court-supervised reorganizations, some studies have already proposed the investigation of some elements that can identify the compliance with the process, analyzing indicators that can give signals of the economic and financial situation of the company, such as an analysis from the Dynamic Working Capital Model (Fleuriet's Model), providing a range of information in a more organized way on the evolution of companies compared to traditional models, which allows an indication of the economic and financial instability of companies before the request for reorganization (Silva et al., 2019), in addition to the study on insolvency prediction models through the analysis of financial indicators, which notes that some indicators allow signaling the state of recovery of companies (Silva et al. 2016). Regarding research on liabilities and the prediction of insolvency of companies, it is appropriate to mention the research of Guimarães and Alves (2019), which sought to predict through financial indicators an insolvency model for companies linked to the health area.

Given the above in relation to previous studies, it is noteworthy that an analysis of the behavior of the liabilities after compliance with the reorganization process has not been the object of research so far, as well as the examination of the fulfillment of the objective of the recovery process after compliance. The signaling theory has also not been used as a tool to inform stakeholders. In view of this, the following research problem arises: What is the behavior of liabilities after joining the court-supervised reorganization process?

According to Bertão (2017), the delay of companies in accepting the financial problem is one of the major obstacles in the reorganization process. The postponement erodes the cash of organizations and causes an expressive accumulation in liabilities to the point that companies often do not have the capacity to fulfill basic obligations, such as salaries, raw materials, etc. They then have to often resort to financial intuitions to obtain working capital. Reinforcing this, Myers (1984) indicates that the way of obtaining funding adopted by a company, when it does not have its own resources from its operating result, is the external financing with third parties by contracting debts. Thus, the general objective of the research is to analyze the behavior of liabilities after compliance with the reorganization process in order to verify if the compliance is justifying the objective of the reorganization process, that is, if the company is fulfilling the passive obligations assumed and is continuing its activities with optimization of its financial ability.

The theoretical assumption that guides this research mentions that the process of disclosing and exposing the accounting information of companies allows signaling the situation in which the organization is, in this way providing users with the ability to analyze their situation (Spence, 1973). In this way, the measurement of the average variation of liabilities allows the signaling that companies are seeking to meet the objective of the reorganization process, that is, complying with obligations and improving their financial capacity.

Based on the above, there is an opportunity to explore and expand the study on the liabilities of public companies in Brazil in view of the imminent process of reorganization that is covering a large amount of companies (Campos, 2018).

The current economic scenario undergoes constant changes and companies are impacted by phenomena in the business world, mainly by recurring crises that plague the Brazilian financial market. Linked to this, there is a need to carry out a permanent and effective control of the financial health of companies, including control of the level of indebtedness and monitoring of the organization's obligations, where the study of the company's financial situation is necessary and significant to give managers actions that help the organization's recovery (Altman et al., 1979).

The financial situation of a company can be detected through the study of financial ratios and its debt structure. In this way, the study of the organization of the liabilities of companies seems to be appropriate, reproducing conclusions that are represented by signs of the company's financial direction (Kanitz, 1978).

Lemmon et al. (2009) emphasize that companies have situations of financial distress, that is, problems in generating results because of the financial inability to pay obligations; however, with favorable operating conditions, they have a higher degree of recovery, but on the other hand, those that carry operational problems tend to be liquidated. In this sense, companies with difficulties to honor their financial commitments must seek recovery and those that are going through a moment of economic distress need to focus their attention on liquidation and distribution of assets to creditors.

Regarding the applicability of the signaling of the company's financial situation, the Signaling Theory helps the capital market by providing significant information about the company to stakeholders and allowing a more adequate assessment in the face of expectations about the future of the organization (Holthausen & Leftwich, 1983).

It is important to highlight that, in practical terms, this work brings contributions to the analysis of stakeholders in the face of the economic and financial situation of companies. That is because information on the liabilities of companies sends signals that assist in decision making (Farias, 2006; Bae, 2018). In addition, this research collaborates with the literature, since it analyzes the liabilities of organizations by measuring the average values of variation of the group in the period before and after the court-supervised reorganization process, using an analysis model, through the Signaling Theory, not previously estimated.

This article is structured in five sections. In addition to the Introduction, there is section two which consists of a literature review; section three presents the methodological procedures adopted, section four brings the analysis of the data obtained, and section five discusses the final considerations.

2 LITERATURE REVIEW

2.1 SIGNALING THEORY

Introduced by Spence (1973), the Signaling Theory is used to demonstrate and explain the behavior of markets based on the signals emitted, and it has a significant use in terms of financial analysis, such as profitability forecast and the possibility of bankruptcy (Altman, 1968; Dambolena & Khoury, 1980).

In order to obtain a certain differentiation in the market, companies seek to promote the complete and faithful disclosure of their economic data in an attempt to send signals and influence the decision-making of stakeholders (Alves & Graça, 2013; Al-Sartawi & Reyad, 2018). Signaling works as a reducer of asymmetry between agents by enabling managers of organizations to signal information to interested parties, such as shareholders, suppliers, customers, etc., thus avoiding possible market failures (Milgron & Roberts, 1992; Dalmácio et al., 2013).

Information plays an essential role in the company, enabling decision making with full access to company information and providing an efficient market (Stroeher & Freitas, 2008; Joseph & Gaba, 2020). Watson et al. (2002) emphasize that organizations have priority information that is inaccessible to agents, which generates information asymmetry and which can be reduced when there is the signaling of the party that obtains the information. In their work, the authors also emphasize that the level of disclosure is related to the size of a company's debt, that is, the greater the debt, the proportional is the amount of information disclosed in order to justify the raising of funds and its degree of indebtedness.

In a context of information asymmetry, agents can use the Signaling Theory to promote actions that demonstrate a positive effect on the organization, in this way helping to minimize the effects of adverse selection (Dalmácio et al., 2020; Jolink & Niesten, 2021).

The signaling provides the ability to better evaluate and define the agents' strategies through the information transmitted, allowing the establishment of a better understanding of the situation of companies and qualifying the decisions taken (Spence, 1973; Vasudeva et al., 2018). Signals sent by companies, through the disclosure of their information, can indicate a positive, negative, or neutral perspective to agents linked to organizations, which promotes the possibility of measuring their financial situation (Spence, 1973).

2.2 LIABILITIES

Liabilities are obligations or commitments by a company to deliver money, goods, or services to an outside company or organization at some future date (Hendriksen & Van Breda, 1999). Liabilities are "probable future sacrifices of economic benefits arising from the present obligations of a given entity to transfer assets or provide services to other entities in the future as a result of past transactions or events" (FASB, 1985, p. 35). The recognition of a liability is linked to the fact that it presents in the financial statements an amount that is likely to generate a future benefit and has an estimated liquidation date (IASB, 2011).

Liabilities represent the occurrence of past or present transactions that give rise to an obligation to deliver assets or services at a future date (Sprouse & Moonitz, 1962). In this same direction, Canning (1929, p. 55) highlights that "A liability is a service with monetary value, which an owner (holder of assets) is legally (or justly) obliged to provide to a second person (or group of people)." Liabilities contain a present liability, likely to be settled in the future at a specified date, with such an obligation allowing little or no freedom for the entity to avoid future sacrifice, as the evidenced transaction has already taken place at an earlier time (FASB, 1985). For Hendriksen and Van Breda (1999), these characteristics exposed by FASB are a combination of a present obligation, between entities, and the existence of an event in which the obligation will be fulfilled.

Regarding the classification of liabilities, Law 6,404/76, amended by Law 11,941/2009, defined that liabilities are segregated into current and non-current liabilities, in which the distinction is due to the term of the maturity of the obligations. Hendriksen and Van Breda (1999) comment that among the objectives of the classification of liabilities is the presentation of insolvency to creditors, which consists of demonstrating the ability and probability of repayment of obligations, and the liquidity of assets and their availability for payment of obligations demonstrate the security of the creditors' loans, including an indication of temporal maturity. According to the authors, this assumption was the origin for the segregation between current and non-current liabilities.

Braga (1995) classifies liabilities into onerous and non-onerous and mentions that non-onerous liabilities are capital resources originated from the company's normal activity, whereas onerous liabilities are linked to working capital needs from financial difficulties, including financing that cause financial charges.

Liabilities have the origin of organizations resources, being related to the sources of capital that the company uses in its assets. There are differences in the formation of capital assessment that originates from partners and those from creditors and financiers. The differences between shareholders' and creditors' rights are related to aspects of the existence of preemptive rights, uncertainty in the determination of values, maturity dates, etc. (Hendriksen & Van Breda, 1999).

According to Durand (1952), companies should seek an optimal capital structure that is capable of reducing the costs of obtaining resources, thus promoting an increase in the company's value. Modigliani and Miller (1958) have developed a model indicating that in an ideal environment without agency costs, bankruptcy costs, taxes, etc., capital structure is less important in maximizing the value of organizations. The authors indicate that a higher level of debt negatively affects the company's cash flows, in this way increasing the probability of bankruptcy.

Loans and financing obtained by companies from financial entities have a strong relationship with obtaining resources, being defined as financing liabilities, as they have a present negotiation with a future sacrifice with financial charges. Lima (1979) comments that “financing debts are obligations with loans and financing for the acquisition of goods or reinforcement of the company's working capital”. Based on the ideas of information asymmetry, Myers (1984) has presented the Pecking Order Theory and presents a preference hierarchy adopted by managers when making financing decisions. According to the author, the company first opts for internal resources (profits), then financing through the use of debts, and finally the issuance of new shares.

2.3 COURT-SUPERVISED REORGANIZATION

According to Teixeira (2014), Law No. 11,101, of February 9, 2005, revoked Decree-Law No. 7,661/1945, which addressed bankruptcy; in this way, *concordatas* were replaced by the figure of the court-supervised reorganization. The author explains that art. 47 of Law No. 11,101/05 has characteristics that value the search for incentives for the continuity of entrepreneurial development, helping organizations in an attempt to remain in activity and overcome existing crises, meeting the interests of their chain of agents.

According to article 51 of the Reorganization Law (BRASIL, 2005), the debtor company has the need to expose, in its reorganization complaint, the concrete causes of the asset situation, as well as the reasons why it is going through the financial crisis. It is also necessary to attach the financial statements related to the last three fiscal years and those gathered especially to present the complaint. The statements must be prepared in compliance with the applicable corporate law and must consist of the Balance Sheet, Accumulated Income Statement, Income Statement since the last fiscal year, and Cash Flow Management Report and its projection.

Since the creation of the legislation, an increasing number of companies have joined the process in order to overcome financial and economic problems through present crises or management failures that have hindered the conditions to fulfill their obligations to their chain of agents.

Figure 1 shows the evolution of requests for reorganization by Brazilian companies since the creation of Law 11,191/2005, according to data from the Serasa Experian digital platform. There has been a significant growth since 2015, the year that started a severe economic crisis in the country because of political scandals linked to the Oil and Gas sector in Brazil, attacking mainly companies in the construction sector (Bicalho, 2016, p. 2).

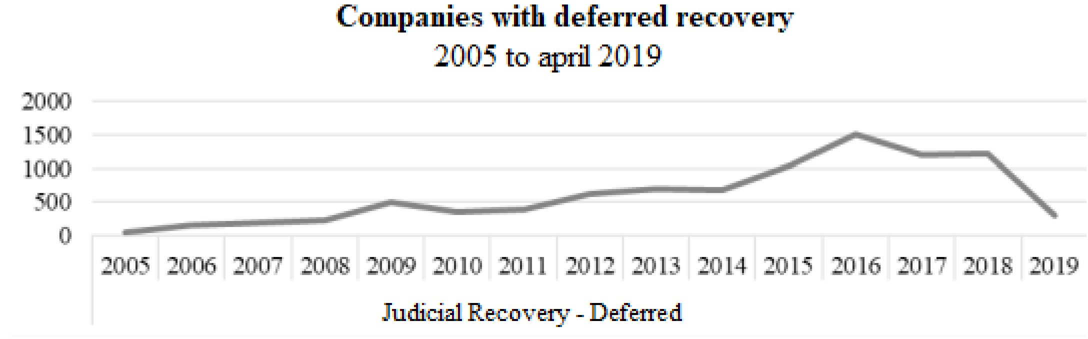

Figure 1 — Evolution of requests for court-supervised reorganization

Figure 1 shows the development of requests for the reorganization of Brazilian companies that were granted in the period from 2005 to April 2019, and it indicates a significant growth from 2014 onwards, with expressiveness in 2015, 2016, and 2017 and a slight drop from 2018.

According to Lopes and Uchoa (2013), it is essential for managers to deeply study the real conditions in which the company is inserted, before opting for judicial recovery, evaluating the positive and negative points of joining the process, in order to promote an estimate of what needs to be followed and to outline strategies for developing the process.

In this context, companies tend to seek the Reorganization process when they are in a situation of insolvency, that is, their debts with creditors, suppliers, employees, and tax obligations are greater than their revenues, which makes it impossible to generate profit and the fulfillment of their obligations. For this end, a formal application is prepared with the intermediation of justice in order to avoid their bankruptcy. After the Reorganization application, the Reorganization Plan is started, in which the debtor company presents a proposal to its creditors to be able to settle its debts. The main objective of the reorganization plan is to plan the disbursement with creditors, enabling a possible financial reestablishment of the companies and the continuity of their activities.

2.4 PREVIOUS STUDIES

A systematic search was carried out in the CAPES (Coordination for the Improvement of Higher Education Personnel) website, in electronic addresses of management accounting congresses, and in journals related to the accounting area. The search was performed using the keywords: court-supervised reorganization, liabilities, and signaling theory. As a result, a variety of articles were identified, mainly on court-supervised reorganization, amounting to 575 papers. After applying the filters 'checked by peers' and 'works carried out from 2016', the search was refined and resulted in the survey of more current studies that served as the basis for this research.

Table 1 highlights the main works that have been used as support for this study.

AUTHORS	YEAR	OBJECTIVE
Correia Júnior and Cavalcanti Filho	2018	To expand, through constitutional support, the scope of Law No. 11,101/05, the so-called Law of Court-supervised Reorganization and Out-of-court Reorganization
Silva, Sampaio, and Gallucci Netto	2018	To examine the relationship between court-supervised reorganization and macroeconomic variables in Brazil.
Silva, Garcia, Lucena, and Paulo	2016	To identify the accounting indicators that signal the state of court-supervised reorganization of organizations
Janiszewski, Carrascoso, Felix Júnior, Lagioia, and Oliveira	2017	To identify the presence of signaling mechanisms in the Brazilian market through the disclosure of information in annual financial statements
Silva, Fonseca, and Littig	2019	To test whether the Fleuriet Dynamic Model could be able to signal a possible insolvency situation.
Leite, Oliveira, Cruz, and Bufoni	2018	To identify, within the scope of public companies registered with the Securities and Exchange Commission of Brazil (CVM), the factors that contribute to the low success rate in court-supervised reorganization processes
Guimarães and Alves	2019	To anticipate the financial ability of health insurance providers that have effectively fulfilled their contractual obligations

Table 1 - Main base works of this research

Table 1 presents a list of some authors who have researched the topic of this study, as well as information on the year and objective of the research found.

The study on Signaling Theory and Court-supervised Reorganization of Silva et al. (2016)

has sought to explore the use of accounting indicators to estimate insolvency. As a result, the authors have found that, out of the 11 indicators studied, only 4 showed power to signal the state of reorganization (Current Liquidity, Asset Productivity, Return on Assets significant at the 1% level, and Retained Earnings Indicator significant at the 5% level). In the study by Silva, Sampaio and Gallucci Neto (2018), the authors have sought to explore the relationship between requests for court-supervised reorganization and macroeconomic variables in Brazil. The result found indicates that the high cost of capital and difficulty in obtaining loans are among the main reasons given by companies for requesting the reorganization.

3 METHODOLOGICAL PROCEDURES

In order to achieve the objectives proposed in this study, with regard to technical procedures, the research is classified as documentary, whose main characteristic is to collect the Financial Statements of the Stock Exchange, *Brasil Balcão* (B3), called secondary sources (Lakatos & Marconi, 2010). The documentary research in the financial statements of companies has a descriptive nature to the point that it analyzes the behavior of liabilities after compliance with the reorganization process, in order to verify if the compliance is justifying the objective of the reorganization process, resulting in the fulfillment of the liabilities of companies and optimization of the financial ability. This investigation follows a quantitative approach through the use of statistical tools to process and measure the data and variables studied (Martins & Theóphilo, 2018),

The population of this research concerns public Brazilian companies listed on the B3 stock exchange. The sample, which according to Martins and Theófilo (2018) is related to companies who have similar characteristics in order to adequately represent the population, is composed of 38 companies, of which 19 had their requests for reorganization approved between 2012 and 2017, that is, five years, and 19 are not part of the reorganization process. To select the companies that are undergoing reorganization, the website of the Securities and Exchange Commission of Brazil (CVM) was consulted. The selection of companies that are not undergoing reorganization took place in order to promote a relationship with the business lines of the companies that joined the reorganization process.

B3 was the secondary data source. Data were collected for the analysis of the Financial Statements, more specifically the assets, liabilities, and results present in the Consolidated Balance Sheet and Income Statements for the required periods. The general indebtedness and current liquidity ratios were calculated; there was also the analysis of the groups of liabilities that had requests for reorganization approved between 2012 and 2017, with an analysis of the date of compliance of each company and another two years, considering thus the interval between 2011 and 2018. In addition to those mentioned, 19 companies that are not part of the reorganization process were analyzed, with analysis of data from the same period of 2011 to 2018. It is worth mentioning that there are different dates for the reorganization process of each company, thus, the date of December 31, 2014 was defined as a reference for the effective approval of the companies in the process as a manner of harmonization for the calculation of averages. Table 2 contains the list of companies that are part of the sample to be analyzed:

COMPANIES UNDER COURT-SUPERVISED REORGANIZATION	COMPANIES NOT UNDER COURT-SUPERVISED REORGANIZATION
Construtora Sultepa	Aliansce
Dommo Energia S.A.	CCX
Eneva	CEG
Fab Tecidos	Construtora A Lind
Fibam	Eletropar

GPC	Enauta
Inepar Ind. e Construções	Comgas
Lupatech	Gafisa
Mangels	Marcopolo
MMX	Metal Leve
OGX	Metalfrio
OSX	Metisa
PDG Realty	Mills
Rede Energia	Renova
Refinaria Manguinhos	Tekno
Tecnosolo	Têxtil Renaux
Teka	Transpaulista
Viver	WEG
Wetzel	WLM

Table 2 - List of sample companies

According to Table 2, data were collected from the balance sheets and financial statements provided by B3 in the periods related to the date of approval of the reorganization processes and other periods object of the study.

The technique for analyzing the research data was panel data regression. This was used in order to verify the behavior of the liabilities of the companies that joined the reorganization process, after the approval phase adopted, relating it to financial ratios of indebtedness and general liquidity, thus allowing to show whether there was a reduction in liabilities linked to the fulfillment of obligations, as well as whether there was an improvement in the financial ability. For the calculation, the same data for the companies that are not part of the reorganization process were included.

The analysis of the behavior of liabilities related to indebtedness and liquidity ratios was performed using data in a dynamic panel, estimating regressions using the Stata Software. According to Fávero (2016), the use of models that contain data from different cross-sections in time is increasingly useful and important. Marques (2000) highlights that the control of individual heterogeneity and the possibility of evaluating the evolution of data over time are the main advantages of using panel data.

To carry out the quantitative analysis of current liabilities, equation 1 was used:

$$Y = a + b1x + b2x + b3x + b4x + u \tag{1}$$

Where:

Y = Current liabilities
a = Intercept
$\beta_1\, x$ = Court-supervised reorganization
$\beta_2\, x$ = Indebtedness ratio
$\beta_3\, x$ = Liquidity ratio
$\beta_4 x$ = Return on Assets
u = Error

To carry out the analysis of non-current liabilities, equation 2 was used:

$$Y = a + b1x + b2x + b3x + b4x + u \tag{2}$$

Where:

Y = Current liabilities
a = Intercept

$\beta_1 x$ = Court-supervised reorganization
$\beta_2 x$ = Indebtedness ratio
$\beta_3 x$ = Liquidity ratio
$\beta_4 x$ = Return on Assets
u = Error

After exposing the methodological procedures, the results of the study are presented.

4 RESULTS

The research was carried out with companies from various sectors of activity, which underwent reorganization in the period between 2012 and 2017. Table 3 presents the business activity and the percentage of the share of each sector in the selected sample.

BUSINESS ACTIVITY	COMPANIES UNDER REORGANIZATION	%	COMPANIES NOT UNDER REORGANIZATION	%	OVERALL TOTAL	%
Consumption and Retail	3	16%	1	5%	4	11%
Energy and Sanitation	2	11%	3	16%	5	13%
Holding	1	5%		0%	1	3%
Real Estate and Construction	3	16%	4	21%	7	18%
Industrial	5	26%	6	32%	11	29%
Mining	1	5%	1	5%	2	5%
Oil and Gas	4	21%	4	21%	8	21%
Overall Total	**19**	**100%**	**19**	**100%**	**38**	**100%**

Table 3 - Companies by business activity

Table 3 presents the business activities performed by the companies selected in the survey, which shows that seven sectors were subject to analysis, and the most significant share was the industrial sector with 26%.

The descriptive statistics of the data are shown in Table 4 with the means, standard deviations, and maximum and minimum values of the research variables.

VARIABLE	NOTES	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
Current liabilities	302	6.19	1.84	0.00	11.94
Non-current liabilities	291	6.29	1.71	2.20	12.04
Indebtedness Ratio	304	1.19	2.54	0.00	39.36
Liquidity Ratio	302	1.77	1.73	0.03	13.82
Return on Assets	302	-0.05	0.49	-3.38	4.04
Court-supervised Reorganization	304	0.21	0.41	0.00	1.00

Table 4 - Descriptive Statistics

The data in Table 4 demonstrate that the indebtedness ratio is the element that presents the highest standard deviation when compared to the other variables. The data also indicate that the variables Reorganization and Return on Assets are the ones with the lowest standard deviation, which indicates greater proximity to the verified mean.

The research sought to identify whether there is any similarity in the composition of the liabilities of companies that join the reorganization process. According to the formulated hypothesis, it was verified if the companies that join the reorganization process have a greater concentration of their liabilities in the bank indebtedness group. Table 5 shows the determined results.

LIABILITIES GROUP	FREQUENCY OF EACH GROUP	FREQUENCY %
	AMOUNT	%
Corporate and Labor Obligations	-	0%
Suppliers	1	5%
Tax Obligations	2	11%
Loans and Financing	12	63%
Other Obligations	2	11%
Provisions	1	5%
Liabilities on Non-Cur Assets for Sale and D.	1	5%
Total	**19**	**100%**

Table 5 - Demonstration of the percentage of the share of each group of liabilities of companies on the date of approval of the request for court-supervised reorganization

From Table 5, it is possible to see that 12 of the 19 companies surveyed that underwent the reorganization process have the highest concentration of their balance of liabilities in the group of loans and financing. The group of loans and financing appears as the most expressive in 63% of the companies surveyed. This percentage variation may consider the difference in the comparison with the corporate and labor obligations group, which represents the smallest share of the analyzed liabilities.

The findings show current bank indebtedness as the main component of obligations of companies that join the reorganization process. The result is reinforced by Myers (1984) who emphasizes that financing is the most attractive resource for companies experiencing financial problems and in obtaining working capital.

The results related to the general objective of the research were obtained by the quantitative analysis of liabilities and financial ratios of the companies surveyed. Tables 6 and 7 show the behavior of current and non-current liabilities of the companies surveyed in relation to compliance with the reorganization process, related to financial indebtedness and liquidity ratios. As indicated in the methodological procedures, data were used from 19 companies that joined the reorganization process and 19 companies that did not.

	(1)	(2)	(3)	(4)	(5)
	CURRENT LIABILITIES	CURRENT LIABILITIES	CURRENT LIABILITIES	CURRENT LIABILITIES	CURRENT LIABILITIES
Court-supervised Reorganization	-0.65^{**} (0.02)	-0.56^{**} (0.02)	-0.47^{**} (0.02)	-0.51^{**} (0.02)	-0.59^{**} (0.02)
Liquidity Ratio		-0.18^{*} (0.08)			-0.20^{*} (0.07)
Indebtedness Ratio			-0.04^{**} (0.01)		-0.06^{**} (0.01)
Return on Assets				-0.22^{*} (0.08)	-0.23^{***} (0.10)
FIXED EFFECTS	**YEAR AND COMPANY**	**YEAR AND COMPANY**	**YEAR AND COMPANY**	**YEAR AND COMPANY**	**YEAR AND COMPANY**
N	302	302	302	302	302
adj. R^2	0.075	0.103	0.069	0.078	0.167

Table 6 - Behavior of current liabilities in relation to court-supervised reorganization

Based on the data in Table 6, it was found that companies that undergo the reorganization process present a reduction in their current liabilities. Therefore, the fact that companies have undergone reorganization reduces non-current liabilities.

	(1)	(2)	(3)	(4)	(5)
	NON-CURRENT LIABILITIES	**NON-CURRENT LIABILITIES**	**NON-CURRENT LIABILITIES**	**NON-CURRENT LIABILITIES**	**NON-CURRENT LIABILITIES**
Court-supervised Reorganization	0.23 (0.17)	0.12 (0.17)	0.25 (0.14)	0.15 (0.17)	0.32^{**} (0.01)
Liquidity Ratio		-0.10* (0.08)			-0.15^{***} (0.06)
Indebtedness Ratio			-0.07^{**} (0.02)		-0.08^{**} (0.02)
Return on Assets				0.08 (0.11)	0.06 (0.13)
N	291	291	291	291	291
adj. R^2	0.005	0.018	0.063	0.002	0.100

Table7 - Behavior of non-current liabilities in relation to court-supervised reorganization

From the analysis of Table 7, it was found that there is an increase in the non-current liabilities of the companies that participate in the reorganization process. An increase can be seen in the non-current liabilities of companies that join the reorganization process, as indicated in item 5 of the table.

In this sense, after a comparative analysis of Tables 6 and 7, it can be seen that, in general, companies that join the reorganization process do not demonstrate a significant reduction in their liabilities with third parties, since a reduction in current liabilities is verified which, to some extent, is offset by an increase in non-current liabilities. The result verified meets the object of the reorganization process evidenced in article 47 of the legislation, which indicates the feasibility of a special treatment in the face of the company's crisis situation so that it can seek the reorganization of its financial and economic ability (BRASIL, 2005).

Figure 2 shows the results of calculating the financial ratios of companies that joined the reorganization process, such as Debt Ratio, Liquidity Ratio, and Return on Assets.

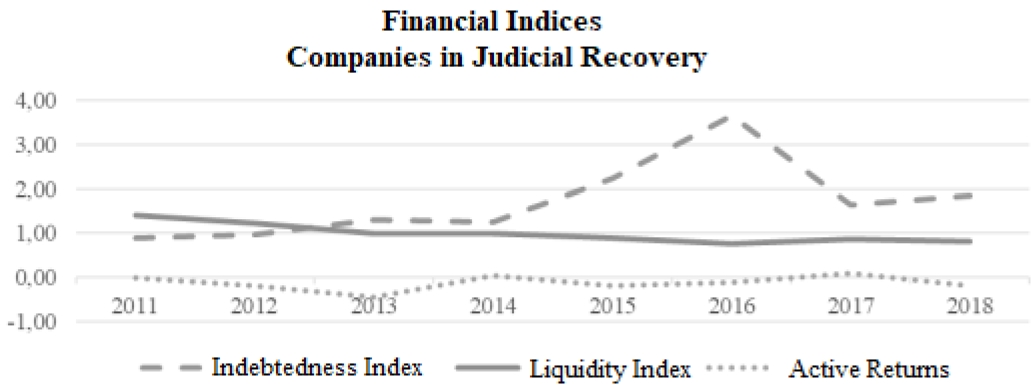

Figure 2 - Statement of financial ratios of companies that are undergoing court-supervised reorganization

Figure 2 presents the means values of the analyzed financial ratios and their behavior over the period studied. According to Assaf Neto (2002), the analysis of financial ratios provides information on the financial situation of organizations in a specific period, with results changing according to the organization's financial management policies. It was found that in the companies that participate in the reorganization process, the ratios indicate that, on average, joining the reorganization process has no positive consequence in the optimization of economic and financial results. There was a negative progression of the indebtedness and liquidity ratios.

Analyzing the raw data and comparing the results of Tables 6 and 7, it can be seen that after the reorganization process, there is an apparent exchange of balance between current and non-current liabilities of companies that underwent the reorganization, which ends up causing the company to maintain high liabilities, even after joining the process. Linked to this, it was found that there is no improvement in the financial ratios studied, which indicates that the optimization of the financial ability is not effective after joining the process.

These findings are in agreement with the findings of Leite et al. (2018), who have analyzed companies that underwent court-supervised reorganization and were unsuccessful in their recovery, which is confirmed by measuring the companies' financial ratios. In this context, joining the reorganization process indicates that companies seek to signal to the market their intention to resume adequate financial standards. According to Spence (1973), organizations can use signaling to promote the organization's positive effects and reduce the adversity faced by it. However, the results indicate that the reorganization is limited as a possible way to avoid undergoing a bankruptcy process because of the difficulties presented to recover the company's financial and economic ability.

5 FINAL REMARKS

The general objective of this research has been to analyze the behavior of liabilities after compliance with the reorganization process in order to verify if the compliance is justifying the objective of the reorganization process, that is, if the company is fulfilling the passive obligations assumed and is continuing its activities with optimization of the financial capacity.

As a way of achieving the objective of the study, 19 companies that joined the court-supervised reorganization process and 19 that did not join it were used according to the criteria described in the section of methodological procedures. A panel data regression model was estimated for the analysis of current and non-current liabilities and verification of the behavior of financial ratios through charts.

The findings indicate that companies are resorting to the reorganization plan with a greater focus only on refinancing their debts, which does not free companies from continuing to accumulate negative economic and financial results in subsequent years. The results show that, in general, all companies went into reorganization with a high degree of bank indebtedness and with their cash and asset ratios lower than the amount of their debts. Thus, it is concluded that the compliance with the judicial reorganization process of companies in Brazil indicates that companies use the appeal of the process as an alternative to avoid bankruptcy, but they have difficulty in regaining their financial and economic ability. This fact is in agreement with the findings of previous studies.

This study contributes to the assessment of individuals about the signals emitted by organizations in the face of their actions in the market. Information on the behavior of the company's liabilities and financial ratios can be used as tools for stakeholder decision-making. A limitation of the research is related to the fact that it was carried out delimiting the period from 2012 to 2017 for the data collection of companies that joined the reorganization process.

As a suggestion for future studies, it is recommended to expand the analysis to other periods, as well as to promote the use of other accounting and financial variables, which can help the analysis of the economic and financial behavior of companies undergoing court-supervised reorganization. In addition, segregated analyses could be performed considering companies that have considerable amounts of environmental liabilities because of environmental degradation or similar reasons (Ogilvy et al., 2018; Negash & Lemma, 2020), or comparing family businesses and non-family businesses, in an attempt to verify possible similarities and/or particularities (Arzubiaga et al., 2022).

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