

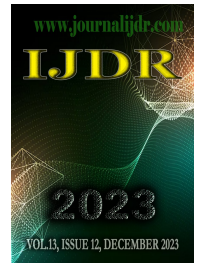


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RESEARCH ARTICLE

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DISCLOSURE OF CONTINGENT ENVIRONMENTAL LIABILITIES AND SOCIO-ENVIRONMENTAL RESPONSIBILITY

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ABSTRACT

Studies highlight the need to increase levels of research on environmental provisions and liabilities. This is because the development of research on this topic can provide more accurate information to the market and regulatory agents, related to the relevance, reliability, quality and comparability of environmental provisions and liabilities. As a general objective, it is intended to identify the level of disclosure of environmental provisions and contingent liabilities as a strategic factor of Socio-Environmental Responsibility of publicly traded companies listed on the Brazilian Stock Exchange, in the period from 2013 to 2022. In addition to touching on the discussion based on Disclosure Theory. This study is classified as descriptive, quantitative, documentary involving descriptive statistics and an econometric model with panel data to achieve the objectives raised. It was thus concluded that contingent liabilities are not presented in balance sheets and only highlighted in explanatory notes, yet it was found that, despite the increasing increase in disclosure levels during the years observed, less than half of the companies analyzed present results referring to the disclosure of provisions and environmental contingent liabilities, highlighting a weakness in the quality of information provided to stakeholders.

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INTRODUCTION

The current situation regarding the quality of information (accounting, economic or financial), risk assessment and results management brings with it challenges at various levels for organizations. Perhaps the most paradoxical are those that entail the need to consider, in their objectives, economic, financing, control, Corporate Social Responsibility (CSR) or Corporate Social Responsibility (CSR) issues, according to studies by Drucker (2017); Chiudini, Cunha and Marques (2018); Ponte *et al* (2019); Garcia *et al* (2021). However, CSR gave way to Social and Environmental Responsibility (RSA), to maximize the concept of ESG (Environmental, Social and Governance). Such factors are essential for innovation, productivity and market growth strategies, as well as for risk management, for the value of companies and mainly for organizational responsibilities, consistent with new trends in economic and financial development. The technologies available or the processes developed do not always allow a balance between these objectives, meaning that organizations sometimes need to sacrifice the achievement of one, depending on the achievement of another. This type of dilemma has been called trade-off. One of the most used theoretical lenses to investigate the phenomenon of CSR (RSA) is the stakeholder theory, according to which companies must extend their range of public interests, opposing the vision based exclusively on

shareholders (Freeman, Harrison, Wicks, Parmar, & Cole, 2010). This association between RSA and stakeholder theory occurs, above all, because it is assumed that organizations have responsibilities that go beyond purely economic interests (Jamali, Safieddine & Rabbath, 2008). The guarantee of a healthy economic system is linked to the transparency and quality of information conveyed by the various producers of economic-financial-accounting information and to ethical conduct on the part of professionals who work in public or private organizations, and who, by holding information and the power to manipulate them, can cause harm to society in general, such as lack of information and/or misinformation when characterized by manipulated information and purposeful deception in accounting or financial statements that can favor and/or increase the incidence of risks, in addition of configuring a "crime" and "corporate fraud". Accounting information becomes relevant when it has the ability to assist users in their decision-making. Camargo and Alberton (2015) clarify that the disclosure of relevant information (disclosure) is one of the central issues in accounting, based on the understanding of the concept of materiality. Barbosa, Scherer, Scarpin and Murcia (2015) highlight that information is material when its omission or distorted disclosure interferes with users' decisions. Thus, material information is information that has fundamental disclosure and whose knowledge is essential for users of accounting information (Hendriksen & Van Breda, 1999). The Disclosure Theory is studied by Verrecchia (2001), who, through mathematical models, tries to explain and predict the

phenomena related to disclosure. According to the author, this theory does not have a central reference, allowing disclosure to be understood as a diverse and highly stylized mix in which each model intends to examine a small part. On the other hand, Dye (2001) states that the theory of voluntary disclosure is a similar and special case to game theory, since it has the premise that any entity will disclose only favorable information, leaving unfavorable information about the company aside. Disclosure theory can be divided into three stages. The first, known as "association-based disclosure," is research that studies the effects of exogenous disclosure on the aggregate or cumulative change in investor actions, in which some claim that the quality of information increases voluntary disclosure. The second concerns "discretionary disclosure", which examines how managers exercise self-control in relation to the disclosure of information known to them. The third is related to "efficiency-based disclosure", research that discusses which agreements are used to disclose information without prior knowledge of the same, that is, what are the unconditional disclosure choices (Verrecchia, 2001).

Studies by Prado and Ribeiro (2016) point to the need to increase levels of research on environmental provisions and liabilities. This is because the development of research on this topic can provide more accurate information to the market and regulatory agents, related to the relevance, reliability, quality and comparability of environmental provisions and liabilities. However, in recent years there has been an increase in research on the subject of disclosure related to accounting or financial issues, whether nationally (MURCIA & Santos, 2009; Kronbauer & Silva, 2012; Cunha & Ribeiro, 2016; Gangemi, Pereira & Slavov 2016; Costa, Correia, Machado & Lucena, 2017; Silva, Araújo & Santos, 2018; Nascimento & Arruda, 2019) or international (Akhtaruddin, Hossain, Hossain, & Yao, 2009; Abdo, Mangena, Needham, & Hunt, 2018; Abdullah, Hamzah, Helmi, Tseng & Brander, 2019). With different themes on economic-financial disclosure, studies on the level of disclosure of companies listed on stock exchanges, the levels of sustainability indicators and those related to environmental responsibility. It is worth remembering that the concept of nature protection, for some companies, has already been established as everyone's duty as stipulated by the Global Compact and the meetings held by the United Nations (UN), but progress in this direction is still necessary. Within the concept of corporate social responsibility, the prevention of damage to nature is embedded; Therefore, some companies are already committed to doing so. Thus, the appropriateness of including environmental information in accounting reports (assets, provisions, liabilities and environmental costs) can be observed, as well as its dissemination, so that the various user groups can assess the company's concern with its social role, its positioning in relation to the environment, formulating and implementing ideas, attitudes and conduct that promote improvements in the short and long term, which will be reflected in the company's image and its equity situation.

In view of the context presented, the following research question arises as a guiding point: What factors influence the disclosure of environmental provisions and contingent liabilities as a strategic factor of Socio-Environmental Responsibility of publicly traded companies listed on [B]³? As a general objective, it is intended to identify the level of disclosure of provisions and environmental contingent liabilities as a strategic factor of Socio-Environmental Responsibility of publicly traded companies listed on [B]³, in the period from 2013 to 2022. Specifically, the following will be carried out: search through bibliometric examinations, a regression analysis, in addition to touching the discussion based on Verrecchia's Disclosure Theory (2001), to analyze the relationship and effects between the constructs as one of the main monitoring tools. Over the years, it has become necessary to obtain objective and clear information about the environmental stance adopted by companies. When companies have environmental contingent liabilities and these are not identified, or the necessary provisions are not made; It can compromise its maintenance and cause great harm to others involved, as they will not have the support to make a correct and real assessment of the company's situation and, therefore, will not be able to judge the feasibility of making investments in it. Accounting, as a

communication tool between companies and society, must be directly (essentially) inserted into the environmental cause. The asset assessment, considering the environmental risks and benefits inherent to the peculiarities of each economic activity, as well as its location, can make the different segments of users of the financial statements aware of their conduct, with regard to the company's commitment to the issue presented in this research.

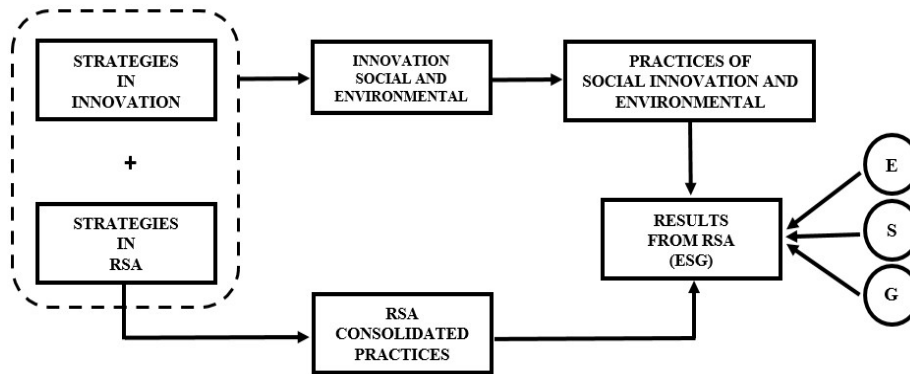
Theoretical foundation: Environmental accounting emerged in 1970, where society and companies began to care more about the environment, as problems could not be a localized responsibility, but rather a global responsibility (Carvalho, 2011; Costa, 2012; Ferreira & Gonzáles, 2015). Research in the area of environmental accounting is categorized into three groups (Clarkson, Richardson & Vasvari, 2007): the first group seeks to assess the relevance of information for corporate environmental performance. This type of research responds to the need to calculate companies' environmental liabilities (Cornier, Magnan & Morard, 1993; Blacconiere & Patten, 1994; Richardso & Welker, 2001). The second group examines the factors that impact the managerial decision to disclose information about environmental liabilities. Research in this area has demonstrated that there are strategic factors that influence the decision to disclose environmental liability information (Patten, 1992; Barth, McNichols & Wilson, 1997; Cormier & Magnan, 2006). The third group explores that there is a relationship between the disclosure of environmental information and environmental performance (Ingram & Frazier, 1980; Wiseman, 1982; Freedman Wasley, 1990; Clarkson, Richardson & Vasvari, 2007). Information of an environmental nature, whether assets, provisions, liabilities or costs, is generally disclosed in Brazil, in a segregated manner in the traditional structure of the Balance Sheet and the Income Statement, through accounts of an environmental nature with mentions in the Board of Directors' Report and /or in Explanatory Notes. On the other hand, Paiva (2003) mentions that some alternatives were created for dissemination, such as Social Balance, Eco-balance, Supplementary Tables, among others. The Social Balance Sheet is a demonstration of information management that aims to fully disclose information of an accounting, economic, environmental and social nature, about the performance of entities, to the most different users.

Environmental liabilities represent the sacrifice of economic benefits that will be realized for the preservation, recovery and protection of the environment, in order to allow compatibility between economic development and the ecological environment or as a result of inappropriate conduct in relation to environmental issues (Akinlo & Dada, 2021; Masron & Subramaniam, 2019; Ribeiro, 2006). It concerns not only sanctions for environmental degradation, but also business measures to prevent environmental damage, which have economic and financial consequences, compromising both the present and the future of the company, exemplified in situations in which the company has to assume the responsibility for the consequences of their operational activities, such as the deposit of waste in the environment (Rodrigues, Cunha, Brito & Pires 2016; Argerino, 2016). It became more widespread due to its negative connotation, that is, for actions that significantly harmed the environment and, therefore, generated liabilities with considerable amounts in the form of fines and compensation to third parties, to recover degraded or polluted areas. On the other hand, there may be attitudes aimed at sustainability, environmentally responsible, and that lead to the execution of preventive measures to reduce impacts on the environment, with the consequent economic and financial effects of these measures generating environmental liabilities. The recognition of environmental liabilities becomes increasingly relevant, as according to Borba and Rover (2006) the measurement of expenses arising from an environmental liability can come from an event or transaction that reflects the organization's interaction with the environment, whose economic sacrifice will occur in the future. In other words, expenses such as acquisition of assets to contain environmental impacts, payment of fines for environmental infractions and expenses to compensate for damage to the environment can be classified in this group. The influence of environmental liabilities on calculations of results and company value

has gained importance and recognition in the market, as stated by Bae (2005), when stating that “the results are consistent with the notion that potential environmental liabilities can create noise in a system of accounting for the company in general and its earnings in particular”. For this same author, “creating noise” means less reliability in the information. The Accounting Pronouncements Committee/Technical Pronouncement CPC 25 – Provisions, Contingent Liabilities and Contingent Assets Correlation to International Accounting Standards – IAS 37, explains contingent liabilities as being: (1) a possible obligation that results from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not entirely under the entity's control; or (2) a present obligation that results from past events but is not recognized because: it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or the value of the obligation cannot be measured with sufficient reliability (CPC, 2009). It should be noted that the provisions reported in this standard deal with the company's possibility of accounting for a present or past event that may or may not happen, generating a future cash disbursement; but to be accounted for, there must first be the possibility of measuring the value, in addition to the probability of this future cash disbursement being greater than not happening. Only by following these conditions can the provision be recorded, which is the first requirement that complicates the relationship between environmental liabilities and the provision of contingent liabilities, thus making their measurement complicated.

METHODOLOGY

This study is classified as descriptive, quantitative, documentary involving descriptive statistics and an econometric model with panel data to achieve the objectives raised. The chosen population are companies listed in [B]³ SA, made up of 294 companies (see Table 1), totaling 653 observations and data available throughout the research period (2013 to 2022), excluding holding companies, considering given their different characteristics in relation to others, particularly those that disclose information about provisions and environmental contingent liabilities. Taking these preliminary aspects into account, the analytical framework and methodological path of this study are structured into two moments, summarized in Figure 1 and briefly explained below. It is noteworthy that these moments did not occur in a linear manner, as occurs in this research, they involved a long process of “interobjectification” as described in the studies by Cefai (2003) and Zask (2004), where they state that the experience is, then, considered at two levels: at the level of observed reality, in which the actors and their environment are perceived from the angle of interaction, and at the level of the empirical procedure itself, which configures (through investigation) an interobjectification of knowledge between researcher(s) and investigated. However, due to the object of study proposed in this research, the path of RSA strategies was prioritized, where the disclosure of the materiality of environmental contingent liabilities is intrinsically related to the



Source: Own preparation, 2023.

Figure 1. Framework of the methodological path

Table 1. Number of companies in the sample by sector

| Economic Sector | Sector Total | Representativeness | Amount Sample | Representativeness |
|--------------------------|--------------|--------------------|---------------|--------------------|
| Industrial Goods | 62 | 21.1% | 28 | 9.5% |
| Basic Materials | 31 | 10.5% | 11 | 3.7% |
| Non-cyclical consumption | 24 | 8.2% | 8 | 2.7% |
| Cyclical Consumption | 76 | 25.9% | 24 | 8.2% |
| Communications | 4 | 1.4% | 0 | 0.0% |
| Information Technology | 7 | 2.4% | 0 | 0.0% |
| Health | 14 | 4.8% | 0 | 0.0% |
| Oil, Gas and Biofuels | 9 | 3.1% | 9 | 3.1% |
| Public utility | 67 | 22.8% | 20 | 6.8% |
| Total companies | 294 | 100% | 100 | 100% |

Source: Data extracted from [B]³ (2023).

Within this perspective, the following research hypotheses were raised:

- H₁: There is a positive association between company size and the disclosure of information on environmental provisions and contingent liabilities.
- H₂: There is a positive association between companies that carry out activities with greater environmental impact in disclosing information about provisions and environmental contingent liabilities.
- H₃: There is a positive relationship in companies with higher operating returns in disclosing information about provisions and environmental contingent liabilities.
- H₄: There is a positive association between companies' Differentiated Levels of Corporate Governance and the level of disclosure about RSA.

Environmental (E) and Governance (G) axes; while the path of innovation strategies in disclosure (due to the quality of the information disclosed) is related to the axes of Governance (G) and Social (S). The sample of this research included 100 companies from different sectors of the economy, listed in [B]³ according to Table 1, and which disclosed environmental contingent provisions and liabilities (RSA) at some point in the year within the period proposed for this study in view of Law No. 10,165 published in 2000, which provides for the National Environmental Policy and which divides companies into three levels (high, medium and low impact) based on activities considered potentially polluting. To compose this sample, companies in the communications, information technology, health and financial sectors were excluded, due to the particularities in terms of structure of these organizations, therefore having different regulatory requirements.

Table 1. Disclosure items in accordance with CPC 25

| Disclosure Items | Points investigated |
|--------------------------------------|--|
| Environmental Provisions | The book value at the beginning and end of the period. |
| | Additional provisions made during the year, including an increase in existing provisions. |
| | Amounts used (i.e., incurred and written off against the provision) during the year. |
| | Amounts not used and reversed during the year. |
| | Brief description of the nature of the obligation. |
| | Expected provisions for outflows of economic benefits. |
| | Indication of uncertainties about the value or timing of economic benefit outflows. |
| | The value of any asset that has been recognized on account of this expected reimbursement. |
| Environmental Contingent Liabilities | A brief description of the nature of contingent liabilities |
| | Estimation of its financial effect when practicable |
| | The increase during the period in the value discounted to present value arising from the passage of time and the effect of any change in the discount rate |
| | Uncertainties relating to the value or timing of any exit when practicable |
| | Possibility of any refund when practicable |

Source: Own preparation (2023).

Table 2. Variables used in the research

| Variable | Type | Operationalization | Data source | Theoretical basis |
|----------|-------------|---|----------------------------|--|
| DRSA | Dependent | Social and Environmental Report Disclosure | Thomas Reuters® | Cucari <i>et al</i> (2017) ; Garcia <i>et al</i> (2017) ; Birindelli <i>et al</i> (2018) ; Coluccia, <i>et al</i> (2018) ; Buallay <i>et al</i> (2020) ; Qureshi <i>et al</i> (2020); Wasiuzzaman and Mohammad (2020). |
| PPPA | Independent | Provisions and Environmental Contingent Liabilities | Thomas Reuters® | Carvalho <i>et al</i> , (2018); Costa <i>et al</i> (2017); Leal <i>et al</i> , (2015); Baldoino and Borba (2015), Ferreira; Borba; Rosa, (2014); CPC, (2009). |
| N.M. | Control | New Market | Economática® | Wachira (2017) ; Ferreira <i>et al</i> (2016) ; Vogt <i>et al</i> (2015); Antunes and Mendonça (2008). |
| TAM | Control | Company size | Reference Form – Item 12.7 | Cunha <i>et al</i> (2014) ; Silva <i>et al</i> (2014); Sun, Lan and Liu (2014); Xie, Davidson III and Dadalt (2003) Yang and Krishnan (2005). |
| GAF | Control | Financial Leverage | Economática® | Sohn (2016) and Francis, Birindelli <i>et al</i> (2018); Bektur and Arzova (2020); Wasiuzzaman and Mohammad (2020); Manta <i>et al</i> (2021). |
| ROA | Control | Return on Asset (ROA) | Economática® | Cornett (2016) ; Birindelli <i>et al</i> (2018) ; Sierra-Garcia <i>et al</i> (2019); Bektur and Arzova (2020); Wasiuzzaman and Mohammad (2020); Manta <i>et al</i> (2021). |
| NDGC | Control | Different Levels of Governance Corporate | Economática® | Birindelli <i>et al</i> (2018); Bravo and Reguera-Alvarado (2018); Buallay <i>et al</i> (2020); Coluccia, <i>et al</i> (2018); Qureshi <i>et al</i> (2020); Wasiuzzaman and Mohammad (2020); Buallay <i>et al</i> (2020); Manta <i>et al</i> (2021). |

Source: Research data (2023).

Analyzing Table 1, it is observed that the industrial goods, cyclical consumption, and public utility sectors are the most representative in the study sample, with participation of 9.5%, 8.2%, and 6.8%, respectively. The other sectors have lower representation in relation to the total sample, ranging from 2% to 3.7%. With the intention of studying the issue of Socio-Environmental Responsibility (RSA) disclosure of companies that disclose provisions and environmental contingent liabilities, the content analysis technique was used, which allows the inference of knowledge relating to production/reception conditions (inferred variables) from these messages (Bardin, 2018), in order to investigate what information of an environmental nature is disclosed in the Financial Statements and other complementary reports. A set of metrics adapted from the work of Sousa, Silva, Ribeiro and Wellfort, *et al* (2014) and the GRI Report (2013) composed of nine categories that are:

- Environmental Policies,
- Environmental management,
- Impacts of Products and Processes on the Environment,
- Mitigation, repair and compensation for damage to the Environment,
- Energy,
- Environmental Financial Information,
- Environmental Education and Research,
- Carbon Credits Market and
- Other Environmental Information

The research data refers to annual information and was extracted from secondary sources of public and digital access. Data relating to RSA were collected from the Thomas Reuters database. The financial data were extracted from the Economática® database (to collect the economic-financial data of the companies) and the composition data

for environmental contingent provisions and liabilities from the Reference Form (FR) at the electronic addresses of [B]³ and the Commission of Securities (CVM), in addition to the JP Morgan's ADR database, Economática® and the CSRHub database. CSRHub has social responsibility and corporate sustainability information from over 18,554 companies in 132 countries (CSRHub, 2023). Considering the sample of this research, it is worth highlighting that, despite some of the companies being potentially or highly polluting, they need to highlight information about provisions and/or contingent liabilities in their statements, verifying adherence to the standard in relation to the disclosure requirement. of the information required by the Accounting Pronouncements Committee 25 (CPC 25), for recognizing environmental provisions and disclosing contingent liabilities, classified into quantitative and qualitative information. Adherence was calculated through the development of a research metric according to Table 1, considering the disclosure requirements set out in items 84 to 92 of this committee.

As companies released an item, it was associated with the value 1 (one); for undisclosed items, 0 (zero) was associated, thus constituting a dummy variable. Subsequently, the ratio was calculated between the total number of items disclosed by the companies and the total number of items that corresponded to the metric. In Table 2, it can be seen that the variable that corresponds to the disclosure of environmental information is the variable of interest in the research; provisions and contingent liabilities is an explanatory variable, the focus of the present study; the other variables are characterized as control variables, which, according to Appuhami and Tashakor (2017), are considered characteristics of organizations, which can influence the disclosure of a company's information (Hackston & Milne, 1996; Halme & Huse, 1997; Gray *et al*, 2001; Brammer & Pavelin, 2006; Murcia & Santos, 2009; Lu & Abeysekera, 2014; Chandok & Singh, 2017; Cormier & Fomezgutierrez, 2018).

The dependent variable of this study is socio-environmental disclosure, and the independent variable is environmental contingent provisions and liabilities, whose proxy used is the ESG score, which represents the market's judgment on the environmental, social and governance disclosure presented by companies (Coluccia&Fontana Solimene, 2018). Disclosure scores measure company transparency and range from 1 to 100, so a higher score indicates more information disclosure and transparency (Wasiuzzaman & Mohammad, 2020).

The methodology used to analyze the research hypothesis of this study was tested using the multiple linear regression model with panel data. The model is presented below:

$$DRSA = \beta_0 + \beta_1PPCA + \beta_2NM + \beta_3TAM + \beta_4GAF + \beta_5ROA + \beta_6NDGC + \epsilon \dots\dots\dots(1)$$

On what:

- DRSA = Social and Environmental Report Disclosure (RSA).
- PPCA = Environmental Contingent Provisions and Liabilities
- TAM = Company Size.
- GAF = Financial Leverage.
- ROA = Profitability of Asset; It is
- NDGC = Differentiated Levels of Corporate Governance.

Considering the existence of a significant volume of missing information on the disclosure of environmental provisions and liabilities, companies may not have disclosed the information because it does not apply to the operational context in which they find themselves, or even because they do not meet the requirements of established disclosure, this research considered two axes of disclosure, **axis 1:** analyzing more rigorously whether companies met the established disclosure requirements, by the number of items met, required items and items not applicable to the company; **axis 2:** analyze compliance with accounting standards regarding environmental liabilities in a more tolerant way, considering that companies that do not mention their items in the disclosure omit information about elements that do not apply to the operational context but that can influence indirectly the company's economic and financial results.

RESULTS ANALYSIS

To analyze the quality of information on the disclosure of socio-environmental information, as well as environmental contingent provisions and liabilities presented by companies listed in [B]³, a descriptive data analysis was carried out, followed by a descriptive econometric analysis of the determining factors, as well as well as control variables, in order to test the research hypotheses and verify the influence of independent variables to identify their profile and behavior in the 100 companies studied. For this analysis, the recognition criteria and measurement and disclosure bases established by CPC 25 were used.

Table 2. Variables calculated in the research

| Variable | Average | Standard deviation | Minimum | Maximum |
|----------|----------|--------------------|----------|----------|
| DRSA | 0.85128 | 0.21179 | 0.16436 | 1.11000 |
| PPPA | 4.35321 | 1.54936 | 0.00000 | 1.00000 |
| TAM | 20.26141 | 1.71628 | 16.45628 | 26.43346 |
| GAF | 0.79179 | 0.24885 | 0.17987 | 2.02436 |
| ROA | 0.03436 | 0.14077 | -1.58923 | 0.46397 |
| NDGC | 1.03333 | 0.50744 | 0.00000 | 1.00000 |

Source: Research data (2023).

In this table, one can observe the standard deviation of the variables PPCA (1.54936) and TAM (1.71628), which presented a greater dispersion of data around the mean, unlike the variable ROA (0.14077), which showed less dispersion. It can also be seen that the PPCA and TAM variables presented the highest means, 4.35321 and 20.26141, respectively. In relation to the dependent variable, DRSA, companies that have disclosure of provisions and environmental contingent liabilities, disclosed a minimum of 0.16436 of the items

listed and investigated; the maximum was 1.11000. For econometric analysis, the Chow (p-value = 0.0000), Hausman (p-value = 0.1356) and Breusch-Pagan (p-value = 0.0000) tests were used. From the values obtained, it was verified that the best panel for the data is the random effects model. Next, the Wooldridge Test (p-value = 0.0000) and Breusch-Pagan-Godfrey Test (p-value = 0.0000) were performed to determine whether the model presented autocorrelation and heteroscedasticity problems, in that order. With the rejection of the hypotheses of absence of such problems, it was observed that the model is both autocorrelated and heteroscedastic, and, as a way to correct them, the regression model was carried out on panel data, with random effects with robustness, the results of which are shown in Table 3.

Table 3. Variables calculated in the research

| Variable | Coefficient |
|----------|-------------|
| β0 | 0.95897 |
| PPPA | 0.26538 |
| TAM | 0.00000 |
| GAF | 0.82051 |
| ROA | 0.02692 |
| NDGC | 0.44487 |

Source: Research data (2023).

Regarding the PPCA variable, it was not significant (p-value = 0.26538); two proxies were considered with the potential to influence socio-environmental responsibility disclosure reports and entities' environmental contingent provisions and liabilities (Carvalho *et al*, 2018; Costa *et al* 2017; Leal *et al*, 2015; Balduino & Borba 2015, Ferreira; Borba; Rosa, 2014; CPC, 2009). Regarding the TAM variable, it can be observed that it is also statistically significant (p-value = 0.000), which clearly shows that the size of companies has a direct relationship with environmental disclosure. It can be observed that this result converges with the studies by Liu and Anbumozhi (2009), Huang and Kung (2010), Monteiro and Aibar-Guzmán (2010), Burgwal and Vieira (2014) and Chandok and Singh (2017) and Manta *et al* (2021), which present a positive relationship between the variables, based on the assumption that, as large companies continually compete in a global economy, relying on a significant number of interested parties in their reports, they thus begin to disclose more information about environmental nature, as a response to the pressures suffered, and to legitimize themselves in the environment in which they are inserted (Chandok & Singh, 2017; Lu & Taylor, 2018; Prates *et al.*, 2019; Qureshi *et al* 2020).

As for the GAF variable, it appears that it presented statistical significance (p-value = 0.82051); This proves that the fact that companies are in debt has no influence on the disclosure of environmental information, which is in line with studies carried out by Huang and Kung (2010), Giannarakis, Konteos and Sariannidis (2014) and Chandok and Singh (2017). A company's creditors, with greater financial leverage, become more influential and begin to demand, from these companies, greater corporate integrity and greater disclosure of information (Roberts, 1992; Huang & Kung, 2010). In the ROA variable, it can be observed that it presented statistical significance (p-value = 0.02692), at a level of 5% it is considered negative, because the relationship between organizational performance and the disclosure of environmental information is negative. This is because companies with higher performance tend to disclose more information and the opposite is also true. A company's financial performance also has a positive effect on voluntary disclosure in response to social demands (Helfaya&Moussa, 2017; Birindelli *et al* 2018; Bektur &Arzova, 2020; Wasiuzzaman & Mohammad, 2020; Manta *et al* 2021). It is natural to think that companies with better performance are more likely to invest economic resources in socio-environmental engagement activities and to engage in the preparation and dissemination of voluntary information (Coluccia, Fontana & Solimene, 2018). The NDGC variable did not obtain a statistically significant result (p-value = 0.44487), thus demonstrating that a company, even if it is inserted in one of the differentiated levels of corporate governance, does not imply that it will disclose a significant amount of environmental

information in relation to those that are not classified in any of the levels of [B]³. It is justified, considering that information disclosure can be used as a tool capable of reducing the political and social pressures faced by organizations, as stated by Patten (1991), being used as a channel through which they respond to the needs of their employees, stakeholders, regardless of whether or not they are part of one of the governance segments (Rivieregiordano, Giordano-Spring & Cho, 2018). Table 4 below shows the values of environmental contingent liabilities by sector in the period established for this research.

Table 4. Variables calculated in the research

| Sector | Environmental contingent liabilities |
|------------------------------|--------------------------------------|
| Energy | R\$ 18,739,740 |
| services | R\$ 7,842,248 |
| Paper And Cellulose | R\$ 6,077,403 |
| Steel and Metallurgy | R\$ 289,936 |
| Chemistry and Petrochemistry | R\$ 42,193 |
| Construction Industry | R\$ 29,890 |
| Mining | R\$ 12,210 |
| Consumer goods | R\$ 6,570 |

Source: Research data (2023).

The energy, services and paper and cellulose sectors show the highest amounts of environmental contingencies. The electric energy sector stands out for presenting the largest financial amount of contingent liabilities, R\$ 18,739,740, even though it does not represent the largest sector in the sample. This fact can be explained by the high rigor in the standards of the National Electric Energy Agency (ANEEL), which approved the Sector Accounting Manual in 2001, whose financial statements are made available annually in the Economic-Financial Information Center of the Electric Sector (CIEFSE) and required to send the Annual Financial Report (PAC). Prado (2014) studied electricity companies and noticed an increase in the disclosure of contingencies following the publication of ANEEL standards. The author named this process as the learning curve on potential risks, where companies absorb information from current legislation and, in the coming years, improve the quality of information for the market, which may have occurred in the sample of this research.

CONCLUSION

This study aimed to analyze the disclosure of contingent liabilities as a factor in the socio-environmental responsibility strategy of 100 publicly traded companies listed on [B]³, with data referring to the years from 2013 to 2022. By analyzing the accounting and financial statements of the sample collected, it was possible to observe that the companies show provisions and contingent liabilities for the different segments; however, in order to verify whether companies are committed to social responsibility and corporate sustainability, the analysis was focused only on information of an environmental nature, seeking to correlate the level of disclosure of environmental provisions and contingent liabilities, such as socio-environmental responsibility, for identify whether this relationship contributes to a higher level of disclosure. Regarding the company size variable, it is observed that the largest companies disclose more information about environmental contingent liabilities, thus accepting the H₁ hypothesis, as the coefficient of the NM variable was significant. The results found in this research are in line with studies by Antunes and Mendonça (2008), who found in their results that the size of companies does not significantly affect the quality of accounting information. A fact that can be explained by the strong regulation of the Securities and Exchange Commission (CVM), the supervisory body for publicly traded companies. Regarding Debt, it was not possible to confirm hypothesis H₂, whether companies with a level of debt disclose information of lower quality, as described in the studies by Rajpal (2012), Lee (2013), Alves (2014) and Habbash *et al* (2014). In the variable, Operating Return, the result found did not present statistical significance, thus rejecting hypothesis H₃. Therefore, in this case, the results are not aligned with those of Rupley, Brown &

Marshall (2012), Iatridis (2013), Bernardi & Stark (2016) and Tan, Habibullah & Tan (2017). In the variable Differentiated Levels of Corporate Governance, the result found did not present statistical significance thus rejecting hypothesis H₄. This result differs from those found in studies by Iatridis (2013), Macêdo *et al* (2013), Bernardi & Stark (2016), Tan, Habibullah & Tan (2017) and Liu & Zhang (2017), who found that governance could be seen as a set of mechanisms that influenced an increase in the level of disclosure and quality of information. For the sample of this research, the results of Fathi (2013), Mansor *et al* (2013), Chi *et al* (2015), Shan (2015), Luthan *et al* (2016) and Xue & Hong (2016), that companies with better corporate governance practices are more likely to disclose higher quality information. The findings of Usman & Yero (2012), Bouvatier *et al* were also not confirmed. (2014), Kouaib and Jarboui (2014), Shan (2015) and Bao & Lewellyn (2017), that companies with greater ownership concentration disclose better quality information.

Based on the results obtained in this study, it appears that the objectives were achieved because they offer relevant contributions to the discussion related to social, environmental and governance (ESG) disclosures by providing new evidence from companies listed on [B]³, which under the From the perspective of Disclosure Theory, they are concerned with reputational, image and meeting the demands of investors concerned with sustainability issues (RSA). Contingent liabilities are not presented in balance sheets and are only shown in explanatory notes. However, it was found that, despite the increasing increase in disclosure levels during the years observed, less than half of the companies analyzed present results regarding the disclosure of provisions and of environmental contingent liabilities, highlighting a weakness in the quality of information provided to stakeholders. As limitations of this study, it can be observed that the number of companies that disclose information on provisions and contingent liabilities is still relatively low, thus limiting a better analysis of the available data or in a joint intersectoral or intersectoral manner. Another point to highlight as limiting is the information disclosed in the reference forms, as there is uninformed and even inconsistent data, which also tends to limit the analysis. For future research, it is suggested to use a more comprehensive sample, with companies listed on other stock exchanges; carry out further investigations of other analysis parameters, highlighting environmental information, not only on provisions and contingent liabilities, but on other data that allow the company's commitment to social responsibility and corporate sustainability to be concretely identified.

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