CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE: EFFECTS ON COMPANIES ECONOMIC PERFORMANCE AND RISK

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Resumo

We investigated the corporate social responsibility (CSR) disclosure effect on corporate economic performance (CEP) and risk on Brazilian companies, under the (in)consistent CSR disclosure point of view. To distinguish consistent CSR disclosure from inconsistent CSR disclosure, we made use of a premises pool based on CSR disclosure continuity and standardization to indicate consistent CSR disclosure signaling. We used the non-financial disclosure of the Global Reporting Initiative (GRI) repository as a proxy for CSR disclosure and the Corporate Sustainability Index (CSI) as a proxy for CSR. We address the mutual causality between CSR, CSR disclosure and CEP and selection bias problems by controlling a second stage for the CSI and the GRI Inverse Mills Ratio (IMR), whose scores associated with the probability of companies to make part of the CSI or to do GRI disclosure were calculated in two first-stage probits. We found that when companies make CSR disclosures via GRI there are, on average, reductions in the three studied indicators?book and market performances and risk?and that in cases where the CSR disclosure is more consistent, the reductions in the three indicators are even larger.

Palavras-chave: Corporate social responsibility disclosure; Corporate economic performance; risk

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ABSTRACT

We investigated the corporate social responsibility (CSR) disclosure effect on corporate economic performance (CEP) and risk on Brazilian companies, under the (in)consistent CSR disclosure point of view. To distinguish consistent CSR disclosure from inconsistent CSR disclosure, we made use of a premises pool based on CSR disclosure continuity and standardization to indicate consistent CSR disclosure signaling. We used the non-financial disclosure of the Global Reporting Initiative (GRI) repository as a proxy for CSR disclosure and the Corporate Sustainability Index (CSI) as a proxy for CSR. We address the mutual causality between CSR, CSR disclosure and CEP and selection bias problems by controlling a second stage for the CSI and the GRI Inverse Mills Ratio (IMR), whose scores associated with the probability of companies to make part of the CSI or to do GRI disclosure were calculated in two first-stage probits. We found that when companies make CSR disclosures via GRI there are, on average, reductions in the three studied indicators—book and market performances and risk—and that in cases where the CSR disclosure is more consistent, the reductions in the three indicators are even larger.

Key words: Corporate social responsibility disclosure; Corporate economic performance; risk.

1 INTRODUCTION

Recent international works that studied CSR and its effects on organizational aspects—risk and CEP, for example—employed, in general, ratings created by organizations that collect, organize, and classify data obtained from several sources – mainly public sources – internal and external from the companies. These organizations create these ratings from this collected information and make it available, together with detailed data about surveyed companies' CSR, to their clients, including researchers (Semenova & Hassel, 2014).

Dhaliwal, Li, Tsang and Yang (2011) reported researchers' questions about standalone CSR disclosure. According to the authors, researchers identified an alleged redundancy between the CSR disclosure done by companies themselves and the obtention possibility of the same information by investors across third parties, especially across the abovementioned ratings. Researchers questioned what would the rationale be that would lead companies to do standalone CSR disclosure since the market already has access to this information, even if in a dispersed way.

Although those researchers questions, some works that studied the CSR effect on corporate environment stepped beyond and studied the CSR disclosure on its antecedents and consequents. Eccles, Ioannou and Serafeim (2014), by example, made use of detailed data from the Thomson Reuters ASSET4 database to access the CSR effect on corporate aspects and in the same work utilized the non-financial disclosure of the GRI to study related aspects of CSR disclosure.

Hence, in Eccles et al. (2014) work, there was a dissociation between the CSR proxy and the CSR disclosure proxy, although the CSR proxy had been derived from a CSR disclosure compilation (ratings). This gray zone between proxies for CSR and CSR disclosure would last, in theory, if we had employed one of the ratings studied by Semenova and Hassel (2014), which are among the most used proxies for CSR in the financial literature,

This inextricable connection between proxies is not so problematic for researchers since the accountability brought by CSR disclosure is, actually, an important CSR aspect by itself (Dingwerth & Eichinger, 2010; Marquis & Toffel, 2011; Eccles et al., 2014). However, the CSR disclosure isolation from CSR is a relevant distinction because they are separate

phenomena and often are not employed together and are subject to distinct companies' decision-making processes. The database we utilized in this work illustrates this phenomenon because many companies that were socially responsible, according to the CSR proxy, did not make CSR disclosure according to the CSR disclosure proxy.

The literature does not devote the same attention to the CSR disclosure effects on companies' economic performance and risk, if it is compared to the exhaustive literature that has already addressed the CSR effect on CEP and risk. Qiu, Shawkat and Tharyan (2016) faced this task by making use of a United Kingdom (UK) biggest companies sample. In that work, they differentiate environmental disclosure from social disclosure, and they found that for book performance, both kinds of disclosure do not affect it, but that the influence works in the opposite way, from the one-year-before book performance, driving the kinds of disclosures that were studied. The authors found that environmental disclosure does not affect companies' market performance but that social disclosure does increase, on average, a company's market performance. The authors assign this data behavior, in part, to UK market idiosyncrasies. These results require, according to the authors, new approaches.

Regarding risk, Benlemlih, Shaukat, Qiu and Trojanowski (2016) studied the CSR disclosure effect on that metric making use of an UK companies sample. The results showed that CSR disclosure does not affect systematic risk but that it does reduce idiosyncratic risk. Instead of seeing the results as definitive, we could not conclude that the literature has exhaustively elaborated this question, which inspires new scenarios and alternative approaches.

Beyer, Cohen, Lys and Walther (2010) argue that the more information companies have, the more they tend to disclose it, especially if the information was important to value creation. Hence, intuitively, being socially responsible also affects a company's propensity to disclose CSR, —since for western countries, CSR yields higher CEP (Beurden & Gossling, 2008). Hence, when studying the relationship between CSR disclosure and CEP and risk—this study's very task—we must control for companies' CSR level. (Plumlee, Brown, Hayes and Marshall (2015), Benlemlih et al. (2016) and Qiu et al. (2016) looked at similar issue.

The proxy employed for CSR in this work could, in theory, relieve the gray zone problem between CSR and CSR disclosure proxies. The CSI is the index for socially responsible companies utilized by the Brazilian stock market. In the CSI selection process, companies are asked to answer four hundred questions about CSR and to give a certain level of verification. However, until the 2016/2017 CSI cycle, companies were not required to disclose that information to the market. Indeed, not all companies made that disclosure. In 2013, only 41.38% of the CSI chosen companies disclosed those answers. In 2014, that percentage was 55%, in 2015, it was only 5.71%, and in 2016, it was 15.38% (BM&F Bovespa [BM&FB], 2017). Hence, the CSI, in theory, is a CSR proxy less contaminated by the CSR disclosure than ratings utilized by researchers across the world.

In the aforementioned studies that access the relationships between CSR disclosure, CEP and companies' risk, there is an aspect of these relationships, especially related to CSR disclosure (in)consistency, that is but lightly studied. With discretionary disclosure, the kind of CSR disclosure that exists in Brazil, there is a trade off between being opportunistic or having a solid reputation, both of which are related to value creation (Beyer et al., 2010). In other words, it is relevant to distinguish the consistent CSR disclosure effect from the inconsistent CSR disclosure effect. Corroborating this observation, Plumlee, et al., (2015) studied the CSR disclosure effect on the market value of a sample of American public companies and found that disclosure quality differentiation was relevant for their work's results.

Hence, based on the literature, we asked the following research question: What is the (in)consistent CSR disclosure effect on companies' book and market performance (CEP) and risk on Brazilian market? Consequently, this work aims to study what that relationship is

between (in)consistent CSR disclosure and companies' book and market performances (CEP) and risk in the Brazilian market.

In this work, which is of an empirical quantitative nature, we utilized non-financial disclosure from the GRI as a proxy for CSR disclosure, and the CSI as a proxy for CSR, using panel data from 2010 to 2016. We made use of non-balanced panel data regression with fixed effects for year and industry and IMR to properly address selection bias and the mutual causality between CSR and CSR disclosure with CEP (Tucker, 2011).

To differentiate companies/years that made consistent CSR disclosure from companies/years that made inconsistent CSR disclosure, we specified a premises pool, which was based on GRI disclosure continuity and standardization to signal CSR disclosure (in)consistency. Hence, if companies made (in)consistent disclosure in a specific year, we consider that company/year observation as (in)consistent.

The selection bias due to non-observables is related to the effect of characteristics that go beyond the observable characteristics. In this work, it is related to characteristics that are determinants of whether they belong or not to the CSI and that they do or do not GRI disclosure. These non-observable characteristics fit this condition because of misspecifications or because we could not obtain data related to observable characteristics. If we had not addressed the selection bias due to non-observable characteristics, it could lead to inappropriate inferences about the task in focus (Tucker, 2011).

We made the choice of using IMR as a tool to address the selection bias problem caused by non-observables and endogeneity because of the few quantity of listed companies on the Brazilian stock market and because of the great quantity of characteristics intermediating CSR disclosure, CEP and companies' risk. It prevents us from utilizing propensity score matching (PSM) (Tucker, 2011), which was utilized, for example, by Eccles, et al. (2014) to study the relationship between CSR and companies' performance metrics.

Furthermore, PSM consider as known (observable) all characteristics that affect the dependent studied variable (Tucker, 2011), what could be a too strong premise when studying corporate governance features in a non-experimental scenario. Furthermore, IMR also addresses selection bias due to observables in a second stage, showing itself to be the most appropriate tool to solve the selection bias problem as a whole, when compared to PSM.

As a result, we found that in cases where companies made CSR disclosure via GRI, on average, there are reductions in the three studied indicators—risk, book performance and market performance. The results we found also revealed that in cases where companies' CSR disclosure is more consistent, there are larger reductions in the CSR disclosure effect upon the three studied metrics—book and market performances and risk.

Since CSR disclosure effects on CEP and companies' risk were not so deeply studied in the finance literature, which is, in fact, a literature gap, in this work we contribute to the voluntary disclosure literature, shedding some light on the CSR disclosure relationships with CEP and companies' risk. As a practical contribution, this work could improve public CSR policy efficiency. Finally, this work could make a contribution to corporate managers, helping them to make better decisions about CSR and CSR disclosure.

This work is structured as follows: In chapter 2, there is a literature review. In chapter 3, we show the methodology. In chapter 4, we compile the results and analyses. In chapter 5, we present our final considerations.

2 LITERATURE REVIEW

CSR disclosure has grown in importance, going from innovators and first adherents to a condition of great relevance to entrepreneurial strategy (Bradford, Earp, Showalter & Williams, 2017). The non-financial external disclosure began before 2000 but evolved only at the turn of the next decade in 2010 (Eccles et al., 2014). Hence, from 2004 to 2008, there was a great increase in environmental disclosure around the world. In that period, the number of

companies among the 250 biggest companies in the world that provided environmental disclosures increased from 40% to 80% (KPMG, 2008). However, there was no standardization of disclosure criteria (Eccles et al., 2014; Bradford et al., 2017) and little comparable information from company to company (Bradford et al., 2017).

To mitigate this non-comparability problem, the most recommended practices on a global basis are the use of external programs to measure the non-financial performance and to subsequently disclose it, such as the Global Reporting Initiative (GRI) (Marquis & Toffel, 2011). CSR disclosure done in that way is linked to companies that adopt more sustainable corporate policies and that, in turn, show better book and market performances (Eccles et al., 2014).

The non-financial information disclosure in Brazil is discretionary. Hence, the study of CSR disclosure antecedents and consequents in Brazil should be done utilizing discretionary disclosure theory. This kind of disclosure, because it is non-verifiable in some cases, has two features: without cost (the cheap talk model) and with cost (the costly state falsification model). In the cheap talk model, managers tend to disclose everything that could increase share value. This model tends to have less of an effect on share value in cases where disclosure lasts for longer time periods, since managers could increase share value more easily with a solid reputation than with cheap talk. In costly state falsification, managers tend not to disclose (Beyer et al., 2010). Hence, when conducting voluntary disclosure, companies face a trade off between being opportunistic, disclosing only good news or building a consistent disclosure reputation. These choices have, potentially, power to create and to destroy value (Beyer et al., 2010).

It is also important to differentiate how companies understand how to make the better choice when facing the trade off between being opportunistic or having a good reputation, and how the market reacts to both kinds of behavior. Companies' accuracy on solving this trade off, having as a motive value creation, intuitively tends to get close to what the market reacts to. However, these trends are not necessarily coincident (Beyer et al., 2010).

2.1 CSR and CSR disclosure influence on CEP

The empirical literature is hegemonic to assert that, currently, for western countries, having higher CSR yields higher CEP (Beurden & Gossling, 2008; Brocks & Oikonomou, 2017). Along the same lines, Margolis, Elfenbein and Walsh (2009), in their previous 35-year survey about CSR and the CEP relationship, identified two research streams that found a positive relationship between these two variables. In the first research stream, more value is created by the effect of CSR on CEP in a straightforward way. Hence, in more socially responsible companies, there is more of an employee effort and new products and markets are developed out of the very motive of doing good, for example. Still in the first research stream, on the cost side, some problems, such as fines, new regulations, stakeholders contracts frictions and waste production, have their effect on economic performance reduced.

The second research stream states that the CSR influence on CEP is related to companies' socially responsible appearance. In other words, value creation is attached to the companies' social responsibility reputation with stakeholders. Corroborating this line of thinking, Surroca, Tribó and Waddock (2010) argue that the relationship between CSR and CEP is indirect and the indirect connections are the intangible assets of innovation, human resources, reputation and organizational culture.

Transparency, exemplified by CSR disclosure, is not just an instrumental CSR feature, Transparency allows us to shed light on a company's whole production stream, increasing its accountability and also improving its management practices (Dingwerth & Eichinger, 2010). In this way, CSR disclosure leads to stakeholder empowerment (Dingwerth & Eichinger, 2010; Eccles et al., 2014) because it allows stakeholder decisions to be made based on information that by itself generates more sustainability along production and consumption streams.

CSR discretionary disclosure is not only an example of a company self-confidently signaling its social performance but also an opportunity for it to explain itself in case its social performance is not adequate. To make CSR voluntary disclosure consistent going forward could reveal the effort companies make on improving their transparency, while highlighting long-term management and risk concerns (Dhaliwal et al., 2011).

CSR disclosure could create or enhance companies' social responsibility reputations, which already is one of the intangible assets mentioned by Surroca et al. (2010), and that could bring economic advantages to companies in the form of economic performance (Greening & Turbam, 2001; Godfrey, 2005). However, since the trade off between being opportunistic or having a solid reputation could lead both to value creation and/or destruction, whatever option is made by companies—to have consistent or inconsistent CSR disclosure or even not to have any CSR disclosure—, the rising CSR effect, due to CSR disclosure, on economic performance could be reinforced or mitigated by that trade off (Beyer et al., 2010).

Finally, the causality effect link between CSR and CEP could work on both sides. That is, better CSR in the past could drive higher CEP in the present. In turn, higher CEP in the past could drive companies to have more CSR in the present (Flammer, 2015). Hence, since CSR disclosure is closely linked to CSR itself, there could be the same mutual causality problem in the relationship between CSR disclosure and CEP.

2.2 GRI as a proxy for CSR disclosure

The GRI is an international organization that, as a pioneer, has promoted and collected sustainable disclosure data from worldwide institutions since 1997. GRI standards are applicable to aspects of corporate management, in addition to the sustainability triple-bottom line standard (Global Reporting Initiative [GRI], 2017). The choice to have CSR disclosure is valuable, comprehensive and robust when done in a comparable way among companies, which is provided by GRI standards. In addition, GRI disclosure credibility is achieved by the GRI framework. Furthermore, the GRI is often considered the world´s leader on non-financial disclosure standards (Dingwerth & Eichinger, 2010; Kolk & Perego, 2010). Hence, GRI appears as a robust proxy for CSR disclosure.

2.3 CSI as a proxy for CSR

The CSI had its methodological design developed by the Sustainability Studies Center – GVces, Fundação Getúlio Vargas (FGV), School of Administration of Sao Paulo (EAESP), and the Brasil Bolsa Balcão (B3), which manages the Brazilian stock market. They are responsible for the technical management of the index. The applied methodology on company selection considers seven performance dimensions, which include aspects of corporate governance and triple-bottom line sustainability. When evaluating if companies could be chosen for CSI, B3 starts with the definition of electable companies, which consists of the 200 most-liquid listed companies each year. After this first step, the selection process proceeds with B3 applying 400 questions about 7 CSR dimensions to select at most 40 companies to compose the CSI. Companies had the obligation to disclose their answers only after the 2016/2017 CSI cycle (BM&FB, 2017). The CSI is a widely used proxy for CSR in Brazil.

2.4 Hypothesis

Since markets appreciate CSR, especially in western countries, high CSR-rated companies have on average higher CEP (Beurden & Gossling, 2008; Brocks & Oikonomou, 2017). Hence, higher CSR companies have more incentive to disclose their high CSR levels (Beyer et al., 2010). Supposing a hypothetical market in which no company makes CSR disclosure, high CSR level companies are subjected to opportunity loss, in contrast to low CSR companies, which are subjected to opportunity gain. These changes hold because in a no-information market, investors do not distinguish high CSR companies from low CSR companies and tend to value all companies the same way. Hence, for high CSR companies, it is worthwhile to signal their disclosures as high CSR level, since they could distinguish

themselves from low level CSR companies (Morris, 1987). This is true because they would not only efficiently disclose their higher level CSR but also create a reputation for consistent CSR disclosure (Beyer et al., 2010).

Voluntary CSR disclosure does not have the standardization that could deliver comparability between companies (Eccles et al., 2014; Bradford et al., 2017). The comparability attribute was reached, however, at a higher level by the GRI (Marquis & Toffel, 2011). Hence, beyond the mere informational content, to make continuous CSR disclosures via GRI standards, utilizing its more comprehensive standards, could in theory be a signal of consistent CSR disclosure that could yield a better reputation (Beyer et al., 2010) and that could better distinguish high level CSR companies from low level CSR companies.

Others kinds of CSR disclosure do not have the same comparability between companies as the GRI standards do (Eccles et al., 2014; Bradford et al., 2017). In adition, CSR institution has a better reputation among economic agents worldwide tham others kind of disclosure do (Dingwerth & Eichinger, 2010; Kolk & Perego, 2010). Hence, signaling higher CSR via the GRI could be a more efficient way to do so. Other kinds of CSR disclosure, no matter how good the informational content, cannot, in theory, have the same level of consistent CSR disclosure signaling power compared to the GRI standards. Hence, when GRI standards are utilized as a proxy for CSR disclosure, not only the informational content feature is important to related studies, but also its consistent CSR disclosure signaling power is important.

Better CSR yields higher CEP (Beurden & Gossling, 2008; Brocks & Oikonomou, 2017). In turn, CSR disclosure tends to create a socially responsible reputation for companies, which is a kind of intangible asset (Surroca et al., 2010) that could yield higher CEP (Greening & Turbam, 2001; Godfrey, 2005). Hence, intuitively, it seems that CSR disclosure has a positive reinforcement effect on CEP. Corroborating this conjecture, Chen, Ioannou and Serafeim (2017) found that CSR disclosure leads to fewer capital constraints, and Dhaliwal et al. (2011) found that CSR disclosure leads to lower capital costs. Non-convergent results to that conjecture were found by Qiu et al. (2016).

Additionally, CSR disclosure could drive a trade off between opportunistic (inconsistent CSR disclosure), or having a good reputation (consistent CSR disclosure). Both choices could generate or destroy value (Beyer et al., 2010; Plumlee et al., 2015). Since better CSR yields higher CEP, we argue that the trade off between being opportunistic or having a solid reputation yields higher CEP if companies choose reputation. Another possibility is that consistent CSR disclosure leads to lower CEP, but it is not negative enough to compensate the positive effect of CSR on CEP.

Hypothesis H1: CSR disclosure increases, on average, companies' book performance.
Hypothesis H1.1: The CSR disclosure effect on companies' book performance is stronger when there is more consistent CSR disclosure.
Hypothesis H2: CSR disclosure increases, on average, companies' market performance.
Hypothesis H2.1: The CSR disclosure effect on companies' market performance is stronger when there is more consistent CSR disclosure.

Since CSR disclosure leads to higher CSR (Dingwerth & Eichinger, 2010) and since CSR yields lower risk (Teixeira, Nossa & Funchal, 2011), we could attest that CSR disclosure, via GRI, also reduces companies' risk. We suggest this holds even if the trade off between being opportunistic or having a solid reputation acts in opposition to the negative effect of CSR on risk. Corroborating this conjecture, Dhaliwal et al. (2011) state that consistent CSR disclosure signals higher engagement on risk management, and Benlemlih et al. (2016) found empirically that CSR disclosure leads to lower idiosyncratic risk.

Hypothesis H3: CSR disclosure reduces, on average, companies' risk.
Hypothesis H3.1: The CSR disclosure effect on companies' risk is stronger when there is more consistent CSR disclosure.

3 METHODOLOGY

To study what that relationship is between (in)consistent CSR disclosure and companies' book and market performances (CEP) and risk in the Brazilian market, we made use of unbalanced panel data obtained from secondary sources, and we also employed linear regressions with fixed effect for year and industry. To mitigate the selection bias and mutual causality between CSR, CSR disclosure and CEP, we utilized in the two first-stages the IMR methodology with which we obtained representative scores for the probability of appearing in the CSI and making the GRI disclosure. In a second stage sequence, we employed those scores as controls in linear regressions for all dependent variable proxies: book and market performances and companies' risk.

As a proxy for CSR disclosure, we utilized the GRI disclosure, which we obtained from the GRI website. As a proxy for book performance, we utilized return on assets (ROA). For market performance, we employed the natural logarithm of companies' market value as a proxy. Finally, the proxy for risk we employed was the beta obtained by the Capital Asset Pricing Model (CAPM) methodology.

We obtained book and market performances and companies' risk proxies for 2010 to 2016 from an Economática® data panel. Considering "t" as the observation year, we obtained ROA data considering the last 12 months until 201(t)/12/31. We considered market value data from companies' market value at 201(t)/12/31. We calculated beta CAPM considering the last 24 months until 201(t)/12/31 with weekly statistics, and we selected only companies' most traded shares from 2010/01/01 to 2016/12/31. We winsorized all variables by 5%, except IMR scores, which were not winsorized.

We circumscribed the work sample time-set from 2010 to 2016 because only from the turn of 2000 to 2010 did higher CSR disclosure consolidation happen worldwide (Eccles et al., 2014) and because the International Financial Reporting Standard (IFRS) was wholly adopted in Brazil in 2010 (Comitê de Pronunciamentos Contábeis, 2019). Until 2016, because the CSI methodology did not include the obligation to disclose the answers to 400 CSI application questions until that year (BM&FB, 2017).

We picked samples from all Brazilian market listed companies from 2010 to 2016, which amounts to 764 companies. We dropped 75 of these companies that were categorized as financial, insurance and fund companies on the "setor economática" of Economática®. We also dropped 20 negative net equity companies. Finally, we dropped 237 companies with missing values; therefore, 432 companies remained in our sample.

To capture the CSR disclosure effect on CEP and companies' risk, we utilized the following second stage econometric model. In this econometric model, the mutual causality (Flamer, 2015; Dhaliwal et al., 2011) and selection bias between CSR, CSR disclosure and companies' risk was addressed by IMR (Tucker, 2011):

$DEP_{it} = (\beta 1 \ x \ CONSISTENT_{it}) + (\beta 2 \ x \ INCONSISTENT_{it}) + (\beta 3 \ x \ CSI_{it}) + (\beta 4 \ x \ IMRGRI_{it}) + (\beta 5 \ x \ IMRCSI_{it}) + \sum CONTROLS_{it} + \varepsilon_{it}$ (Second stage)

DEP_{it}, which is the dependent variable, assumes the three proxies in the study: book performance (ROA), market performance (natural logarithm of a company's market value), and risk (Beta CAPM) of company "i" in year "t". Variables of interest, $CONSISTENT_{it}$ and $INCONSISTENT_{it}$, were built based on a premises pool, as follows, which were (in)consistent GRI disclosure signals:

1)   We conducted analyses considering GRI disclosure from 2007. It was necessary in deciding whether the first year's time series observations were consistent or inconsistent going back in time.

2)   We always considered suboptimal observations as inconsistent. By definition, disclosures made on G2, G3, G3.1 and G4 GRI standards were considered optimal GRI disclosure, because more comprehensive and, in some cases, verified (GRI, 2017). Hence, if

GRI disclosure was done using different standards then those mentioned above, we considered GRI disclosure as suboptimal; hence, observations were inconsistent.

3) On GRI disclosure series interruptions, we considered observations to be inconsistent while the interruption lasted.

4) If a company had not made a GRI disclosure from 2007 until the first year disclosure, we considered observations neither consistent nor inconsistent.

5) In cases where a company had not made GRI disclosures since 2007, from the first optimal GRI disclosure on, we considered observations as consistent while the optimal GRI disclosure lasted.

6) In cases where a company´s observation was inconsistent, for years-after observations to become consistent, it was necessary to have two optimal GRI disclosures in sequence. From the third year on, we considered observations consistent while optimal GRI disclosure lasted.

Based on the abovementioned premises, the *CONSISTENTit* variable assumes a value one if the observation is consistent and a value of zero otherwise. In turn, the *INCONSISTENTit* variable assumes a value of one if the observations are inconsistent, and it assumes a value of zero otherwise. If the observations are neither consistent nor inconsistent, it assumes a value of zero. The *CSIit* variable assumes a value of one if the company in question belongs to the CSI in that year and a value of zero otherwise. Controls are specified on table A1. εit is the error term of company "i" in year "t". We obtained the *IMRGRIit* and *IMRCSIit* variables from the probit regression models below in the two first-stages, followed by the related IMR score calculations, based on characteristics that influence companies' propensities to belong to the CSI and to do the GRI:

GRIit $= \sum Zit + \delta it$ (First stage – GRI)

CSIit $= \sum Rit + \varphi it$ (First stage – CSI)

GRIit and *CSIit* are binary variables that assume a value of one if company "i" has made a GRI disclosure and has belonged to the CSI, respectively, in year "t" and zero, otherwise. *Zit* and *Rit* refer to instrumental variables (see table A1) of company "i" in year "t", which are related to the propensity of making a GRI disclosure and belonging to the CSI, respectively. δit and φit are error terms for company "i" in year "t", for the GRI and CSI probits, respectively.

TABLE A5: CONTROL AND INSTRUMENTAL VARIABLES

Control and instrumental variables	Proxy	Dependent variable proxy to which it is applicable				Related literature
		GRI	CSI	CEP	RISK	
LEV	Leverage	Yes	Yes	Yes	Yes	Garcia-Castro, Arino and Canela (2010); Bhagat and Bolton (2008); Dhaliwal et al. (2011); Brammer and Pavelin (2006); Lameira et al. (2012); Eccles et al. (2014)
SIZE	Natural logarithm of total assets	Yes	Yes	Yes	Yes	Garcia-Castro et al. (2010); Dhaliwal et al. (2011); Brammer and Pavelin (2006); Lameira et al. (2012); Hasseldine, Salama and Toms (2004); Teixeira et al. (2011); Kolk and Perego (2010); Eccles et al. (2014)
Year fixed effect	Xxxxx	Yes	Yes	Yes	Yes	Garcia-Castro et al. (2010); Dhaliwal et al. (2011); Teixeira et al. (2011); Kolk and Perego (2010)
Industry fixed effect	económica® classification	Yes	Yes	Yes	Yes	Garcia-Castro et al. (2010); Dhaliwal et al. (2011); Marquis and Toffel (2011); Hasseldine et al. (2004); Teixeira et al. (2011); Eccles et al. (2014)
ROA	Return on assets (ROA)	Yes	Yes	Yeas for value, NA for ROA	Yes	Garcia-Castro et al. (2010); Dhaliwal et al. (2011); Brammer and Pavelin (2006); Marquis and Toffel (2011); Hasseldine et al. (2004); Eccles et al. (2014)
LIST	Listed in stock markets other than in Brazil	Yes	NA	Yes	NA	Bhagat and Bolton (2008); Dhaliwal et al. (2011); Marquis and Toffel (2011); Eccles et al. (2014)
ACCRUAL	Accrual	Yes	NA	NA	NA	Dhaliwal et al. (2011); Dechow, Ge e Schrand (2010)
R&D	Research and development investment	Yes	Yes	Yes	NA	Garcia-Castro et al. (2010); Hasseldine et al. (2004)
CSI	Figures on CSI	Yes	NA	Yes	Yes	Garcia-Castro et al. (2010); Dhaliwal et al. (2011); Brammer and Pavelin (2006); Schinetz and Epstein (2005); Teixeira et al. (2011); Kolk and Perego (2010); Eccles et al. (2014)
DIVER	More than one industry by company	Yes	NA	NA	Yes	Hasseldine et al. (2004); Zheng (2017)
B2C	Business to consumer	Yes	Yes	Yes	NA	Eccles et al. (2014)
MTB	Market to book	Yes	Yes	Yes for ROA, NA for value	Yes	Dhaliwal et al. (2011); Teixeira et al. (2011); Eccles et al. (2014)

VISIB	Natural logarithm of insertions	Yes	NA	NA	NA	Brammer and Pavelin (2006); Marquis and Toffel (2011); Kolk and Perego (2010)
NATURE	Non nature friends industries	Yes	Yes	Yes	NA	Brammer and Pavelin (2006); Kolk and Perego (2010); Eccles et al. (2014)
BETA	Beta CAPM	Yes	Yes	Yes	NA	Garcia-Castro et al. (2010); Dhaliwal et al. (2011); Hasseldine et al. (2004); Eccles et al. (2014)
GRI	CSR disclosure	NA	Yes	Yes	NA	Dhaliwal et al. (2011); Eccles et al. (2014)
IMRGRI	IMR score for GRI	NA	NA	Yes	Yes	Tucker (2011)
IMRCSI	IMR score for CSI	NA	NA	Yes	Yes	Tucker (2011)

Yes = Applicable as a control/instrumental variable
NA = Not applicable
Source: Made by the authors.
Industry classification was obtained from Economática®, utilizing its standard classification - "setor Economática" in first level and, complemented by "segmento Bovespa" in second level and "subsetor Bovespa" in third level. Accrual was calculated as the difference between earnings before taxes (EBIT) and cash flow. Research and development investment was proxied by the sum of patents, industrial drawings and computer software deposited in the National Industrial Property Institute (INPI), a Brazilian government bureau, scaled by the natural logarithm of net revenue. More than one industry company was considered diversified. Visibility was expressed as the natural logarithm of total specialized website insertions. Oil and gas, chemicals, metallurgy and mining were considered critical sectors.
Leverage, total assets, industry classification, ROA, companies listed abroad, accrual, net revenue, market to book and critical sectors data were obtained from Economática®. Patents, industrial drawings and computer software data were obtained from the INPI website. Diversification datawere obtained from company websites. Specialized website insertions were obtained from the University of Wisconsin-Madison Libraries website, on article search section, using as argument search "empresa <company´s name>" and "<company´s name> company", by the last 10 years. CSI classification was obtained from the Bolsa Brasil Balcão (B3) website

4 RESULTS AND ANALYSIS

The propensity of companies to make CSR disclosures is influenced by two fundamental theoretical factors: A) companies' CSR level - the higher level CSR companies are, the more incentive companies have to make CSR disclosures (Beyer et al., 2010); and B) companies' perception of what is the best option on the trade off between being opportunistic o having a solid reputation (Beyer et al., 2010).

In turn, the way CSR disclosure affects CEP and companies' risk is driven also by two fundamental theoretical factors: A) the CSR increase driven by CSR disclosures (Dingwerth & Eichinger, 2010; Marquis & Toffel, 2011; Eccles et al., 2014); and B) the way that markets appreciate a company's choice about the trade-off between being opportunistic or having a solid reputation (Beyer et al., 2010).

In the second stage econometric model, we capture the high-level CSR effect on CEP and companies' risk by *CSIit*, a binary variable. Hence, by the *CONSISTENTit* and *INCONSISTENTit* variables, which are the CSR disclosure interest variables, we measure how CEP and companies' risk are affected by the way the market reacts to the trade off between opportunism and reputation as well as the effect of a CSR increase caused by CSR disclosure. It is also important that we highlight that CSI, until 2016, did not have a disclosure feature (BM&FB, 2017), which is an important CSR aspect itself (Dingwerth & Eichinger, 2010; Marquis & Toffel, 2011; Eccles et al., 2014). Hence, to make better inferences about the CSR effect on CEP and companies' risk, we should combine the *CSIit* and *CONSISTENTit* coefficients.

4.1 Descriptive statistics

From descriptive statistics analysis, we concluded that data does not have any relevant problem that needs problem mitigation action. We present it in tables A2 and A3, in which we winsorized data by 5%, except IMRGRI and IMRCSI scores, which we did not winsorize.

TABLE A1: FISRT AND SECOND STAGES, DESCRITIVE STATISTICS – *DEPit* ASSUMING RISK AND BOOK VALUE PROXIES

VARIABLE	OBS.	AVERAGE	STANDART DEVIATION	MIN.	MAX.
CONSISTENT	1308	0.23012	0.42107	0	1
INCONSISTENT	1308	0.08028	0.27182	0	1
DEP (GRI)	1308	0,28364	0.45094	0	1
DEP (CSI)	1308	0.15596	0.36296	0	1
LIST	1308	0.12768	0.33386	0	1
NATURE	1308	0.13073	0.33724	0	1
DIVER	1308	0.08257	0.27533	0	1
B2C	1308	0.40291	0.49067	0	1
ROA	1308	2.56667	7.36294	-15.28608	15.59566
BETA	1308	0.59389	0.34506	0.06799	1.33396
MTB	1308	1.90521	1.86123	0.06603	7.50597
SIZE	1308	2203267	1.45706	19.40405	24.63492
LEV	1308	98.65401	100.5752	0	389.9846
ACCRUAL	1308	5.16e+09	8.14e+09	7.52e+07	3.24e+10
VISIB	1308	7.52211	1.69981	3.97029	10.8517
PATENT	1308	0.06945	0.17167	0	0.68254
MILLSGRI	1308	3.73560	2.81564	2.05e-11	17.81206
MILLSCSI	1308	5.78957	3.61260	0.00039	15.88881

Source: Made by the authors.

TABLE A2: SECOND STAGE, DESCRIPTIVE STATISTICS – *DEPit* ASSUMING MARKET PERFORMANCE PROXY

VARIABLE	OBS.	AVERAGE	STANDART DEVIATION	MIN.	MAX.
DEP (VALUE)	1306	21.22315	1.81459	17.62643	24.07353

CONSISTENT	1306	0.23047	0.42130	0	1
INCONSISTENT	1306	0.08040	0.27201	0	1
CSI	1306	0.15620	0.36319	0	1
LIST	1306	0.12787	0.33407	0	1
NATURE	1306	0.13093	0.33746	0	1
B2C	1306	0.40352	0.49079	0	1
ROA	1306	2.56239	7.36768	-15.28608	15.59566
BETA	1306	0.59362	0.34525	0.06799	1.33396
SIZE	1306	22.03323	1.45810	19.40405	24.63492
LEV	1306	98.72124	100.6374	0	389.9846
R&D	1306	0.06952	0.17179	0	0.68254
IMRGRI	1306	3.75695	2.81014	2.67e-10	17.97374
IMRCSI	1306	5.78529	3.61372	0.00039	15.88881

Source: Made by the authors.

Observations quantity on both stages (company x year) enabled us to make a robust analysis, relieving a likely multicolinearity problem. Also helping to diagnose and avoid likely multicolinearity problems, we calculated the Variance Inflactionary Factor (VIF) for all variables of all econometric models. VIF, however, is a statistic that should be used with care. Hence, if a control variable crosses the threshold value of 10 but is an important variable for the model, we could not drop that variable. VIF turns critical only if an interest variable crosses the threshold value of 10 (Wooldridge, 2011), which is not the case here. Only $SIZE_{it}$, $IMRGRI_{it}$ and $IMRCSI_{it}$ crossed the VIF´s threshold value of 10 for all econometric models, but we did not drop them because they are relevant control variables for the models.

4.2 Main results

To obtain $MILLSGRI_{it}$ and $MILLSCSI_{it}$ scores, we first made two probit regressionsand then proced to scores calculation. We present the probit regressions in table A4.

TABLE A3: PROBIT RESULTS, SUBSIDES TO IMR/GRI AND IMR/CSI SCORES – FIRST STAGES

VARIABLE	PROBIT GRI		PROBIT CSI	
	COEF.	P VALUE	COEF.	P VALUE
LIST	0.0125445	0.989		
NATURE	-0.3716547	0.665	-0.6708904	0.486
DIVER	-0.1062027	0.906		
B2C	0.4390725	0.409	1.354679	0.037**
CSI	2.511403	0.000***		
ROA	0.0226312	0.355	0.0261979	0.480
BETA	-0.2054602	0.636	0.1861093	0.694
MTB	0.0491123	0.634	0.1864879	0.174
SIZE	1,451967	0.000***	1.804196	0.000***
LEV	0,0008565	0.628	0.0012956	0.585
ACCRUAL	-2,90e-11	0.465		
VISIB	0,6251937	0.001***		
R&D	2,18786	0.033**	0.031522	0.979
GRI			2.618677	0.000***
CONS	-40,1818	0.000***	-45.34618	0.000***

Obs. 1: ** = significant at 5%. *** = significant at 1%.
Obs 2: Both probit regressions were controlled by year and industry fixed effects.
Source: Made by the authors.

As we expected, companies' level of CSI is important for the propensity of making GRI disclosure, and vice versa. In addition, of all variables pointed to by the literature that could affect GRI propensity, we found that only companies' size, visibility and R&D investments actually affected it. In turn, we found that of all variables pointed to by the literature that could affect CSI propensity, only a company's size and business to consumer companies type affected it.

In table A5, we present the results for the second stage regression, with CEP assuming book and market performances and risk proxies.

TABLE A4: SECOND STAGE REGRESSIONS

VARIABLE	RISK (DEP = BETA CAPM)		BOOK PERFORMANCE (DEP = ROA)		MARKET PERFORMANCE (DEP = VALUE)	
	COEF.	P VALUE	COEF.	P VALUE	COEF.	P VALUE
CONSISTENT	-0.13799	0.005***	-7.69400	0.000***	-0.69051	0.000***
INCONSISTENT	-0.12255	0.009***	-4.92428	0.000***	-0.36142	0.000***
CSI	0.04737	0.228	0.17100	0.813	0.19116	0.018**
SIZE	0.04164	0.166	-6.93880	0.000***	0.45994	0.000***
LEV	0.00027	0.010***	-0.02053	0.000***	-0.00170	0.000***
MTB	-0.02744	0.000***	0.49354	0.000***		
ROA	-0.00404	0.005***			0.02861	0.000***
DIVER	0.12675	0.043**				
LIST			-0.14537	0.874	-0.03838	0.786
B2C			-3.94379	0.000***	-0.12768	0.183
NATURE			2.21776	0.006***	0.10782	0.382
BETA			-1.88257	0.000***	-0.17028	0.003***
R&D			1.35600	0.334	0.42785	0.012**
IMRGRI	0.05339	0.000***	-1.09933	0.000***	0.01366	0.657
IMRCSI	-0.06884	0.000***	-3.58599	0.000***	-0.32820	0.000***
CONS	-0.11675	0.874	179.4511	0.000***	13.09436	0.000***

Obs. 1: ** = significant at 5%. *** = significant at 1%.
Obs 2: All regressions controlled by year and industry fixed effects.
Source: Made by the authors.

For the three proxies of *DEPit*, we found that the coefficient of both interest variables, *CONSISTENTit* and *INCONSISTENTit,* was negative and significant at 1%, with the *CONSISTENTit* coefficient being larger, in modulus, than the *INCONSISTENTit* coefficient. From these results, we could infer that if companies employ CSR disclosure, whether consistently or inconsistently, their book and market performances and risk undergo a reduction and that this reduction is stronger in cases of more consistent CSR disclosure.

We found that the results for risk fit hypothesis H3, in which we predicted that, in cases where companies employ CSR disclosures, there will be a risk reduction. Hypothesis H3.1, in which we predicted that if companies employ more consistent CSR disclosure, then there will be a stronger effect of CSR disclosure on their risk, was also confirmed, since the *CONSISTENTit* coefficient is more negative than the *INCONSISTENTit* coefficient.

From the abovementioned inferences, we could conclude that whatever the consistency of CSR disclosure is, it always drives the market to reduce a company's risk. Our results corroborate Dhaliwal et al. (2011), who state that companies that disclose CSR are more concerned with business risk. Our results also corroborate Benlemlih et al. (2016), who found that CSR disclosure reduces companies' idiosyncratic risk.

Our results for book performance, in turn, do not fit H1, where we predicted that when companies employ CSR disclosure, it yields a higher book performance. Hypothesis H1.1, in which we predict that when companies' CSR disclosure was more consistent, there would be a stronger CSR disclosure effect on book performance, was confirmed since the *CONSISTENTit* coefficient is more negative than the *INCONSISTENTit* coefficient. In other words, we concluded that the CSR disclosure effect on book performance is strengthened where CSR disclosure was made consistently. Hence, we could infer that whatever the level is of consistency in CSR disclosure, it always yields a reduction in book performance.

One possible explanation for the results, when *DEPit* assumes the proxy for book performance, is that CSR disclosure is linked to costs and earnings. It seems that in Brazil,

earnings driven by CSR disclosure are still smaller than the costs of doing so. Our results do not corroborate Cheng et al. (2014) and Dhaliwal et al. (2011), who found that CSR disclosure is associated with smaller costs of capital and fewer capital constraints. Our results also do not corroborate Qiu et al. (2016), who found that social and environmental disclosure does not affect book performance.

Our results for market performance, in turn, do not fit hypothesis H2, in which we predicted that when companies employ CSR disclosures, there will be better market performance. Hypothesis H2.1, in which we predicted that if companies more consistently disclose CSR, there will be a stronger CSR disclosure effect on market performance, was confirmed, since the *CONSISTENTit* coefficient is more negative than the *INCONSISTENTit* coefficient. In other words, the CSR disclosure effect on market performance is strengthened if CSR disclosure was made more consistently. Hence, we could conclude that whatever the level of CSR disclosure consistency, it always yields a market performance reduction.

Qiu et al. (2016) studied the same market performance issue but from a different perspective than ours. They studied environmental and social disclosure effects on market performance separately and found different results for both. They found that investors care more about social disclosures, which increase market performance. Our results for market performance differ from their results perhaps because we used different methodological procedures. In this work, both kinds of disclosure—social and environmental—are studied together. Another possible source of divergence is possible respective market sample idiosyncrasies.

Our results when *DEPit* assumes the proxy for market performance, in which the GRI disclosure signaling drives companies' values down, contrasts with CSI signaling, which drives companies' market value up, according to the *CSIit* coefficient, which is significant at 5% and positive. This counterintuitive result could be driven by the fact that GRI has, beyond its signaling feature, an informative content, while CSI does not have it. Perhaps, the market reaction went down on eventual bad news from GRI disclosure, which does not hold for CSI signaling.

Analyzing the three proxies for *DEPit* together with the two interest variables, we could infer that companies face a trade off between employing CSR disclosure or not, whatever their level of consistency. Hence, when companies employ the option of making CSR disclosure, decreasing risk should be the main driver of that decision because, as a collateral effect, there will also be a book and market performances decrease.

Taking a look at the *CSIit* coefficient of the three proxies for *DEPit,* for risk and book performance proxies we found that *CSIit* coefficients were not significant, but for market performance proxy, we found that it was significant at 5% and positive. Hence, it seems that being a CSI company is not detrimental in any case but actually is advantageous, at least for market performance. Therefore, companies do not face any trade off between being or not being a CSI company. We differ partially from Lameira, Ness, Quellas and Pereira (2011) in that. These authors found that being a CSI company yields a decrease in risk and a rise in book and market performances. We also differ from Teixeira et al. (2011) who found that the introduction of CSI in the Brazilian market led to a decrease, on average, in compaies' risk. These divergences could have come from different methodological procedures because paradigm studies looked at CSI when it was introduced in the market in a possible non-equilibrium market state, while we studied a period that starts 5 years after the introduction of CSI in the Brazilian market

Focusing on the *IMRGRIit* and *IMRCSIit* coefficients by the three proxies for *DEPit*, we note that companies with more propensity to make GRI disclosure are associated with higher risk and smaller book performance but indifferent on market performance features. When

companies have more of a propensity to belong to the CSI, they are associated with smaller risk and book and market performances.

Lastly, the *CONSISTENTit* and *CSIit* coefficients sum in theory yields a more robust CSR proxy. Based on that, we can infer that high CSR companies tend to have, on average, smaller risk and book performance. For market performance, we found high CSR companies also face a decrease because, although the *CSIit* coefficient was positive and significant at 5%, it was not large enough to supplant the *CONSISTENTit* negative coefficient.

5 FINAL CONSIDERATIONS

We studied the relationship between CSR disclosure, via the GRI, on companies' risk and CEP—namely, the book and market performances—, on the Brazilian market. We made use of unbalanced panel data with fixed effects for year and industry, and we used the IMR to address selection bias and mutual causality between CEP and CSR disclosure. As a result, we found that companies that employ CSR disclosure at any level of consistency face, on average, a decrease in all studied metrics—their risk and book and market performances. These decreases are even larger where CSR disclosure is more consistent.

As for limitations we faced, the very use of the CSI and GRI as proxies for CSR and CSR disclosure is a possible one. CSR is a complex phenomenon with many features and stakeholders, that could have its effects on companies' performance and risk misscaptured if we use CSI as a proxy for CSR. In turn, companies have other ways to disclose CSR than through GRI. Hence, future studies must deepen the theme dissecting CSR in more detail and take into account different disclosure sources.

As a theoretical contribution, our work fills a literature gap in terms of CSR disclosure and the relationship between company risk and book and market performances. We also brought a better understanding of CSI effects on those metrics. For practical contributions, our study could help governments better formulate sustainability public policies, and it could also improve corporate managers' decision-making related to CSR and CSR disclosure.

REFERENCES

Benlemlih, M., Shaukat, A., Qiu, Y., & Trojanowski, G. (2018). Environmental and social disclosures and firm risk. *Journal of Business Ethics*, *152*(3), pp. 613-626.

Beurden, P., Gossling, T. (2008). The Worth of Values: A Literature Review on the Relation Between Corporate Social and Financial Performance. *Journal of Business Ethics, 82*(2), 407-424.

Beyer, A., Cohen, D. A., Lys, T. Z., Walther, B. R. (2010). The Financial Reporting Environment: Review of the Recent Literature. *Journal of Accounting and Economics, 50*(2-3), pp. 296-343.

Bhagat, S., Bolton, B. (2008). Corporate Governance And Firm Performance. *Journal of corporate finance, 14*(3), pp. 257-273.

BM&F Bovespa (2017). *Índice de Sustentabilidade Empresarial (ISE)*. Retrieved from http://www.bmfbovespa.com.br/pt_br/produtos/indices/indices-de-sustentabilidade/indice-de-sustentabilidade-empresarial-ise.htm

Bradford, M., Earp, J. B., Showalter, D. S., Willians, P. F. (2017). Corporate Sustainability Reporting and Stakeholder Concerns: Is There a Disconnect? *Accounting Horizons, 31*(1), pp. 83–102.

Brammer, S., Pavelin, S. (2006). Voluntary Environmental Disclosures by Large UK Companies. *Journal of Business Finance & Accounting*, *33*(7) & (8), pp. 1168–1188.

Brooks, C., & Oikonomou, I. (2018). The effects of environmental, social and governance disclosures and performance on firm value: A review of the literature in accounting and finance. *The British Accounting Review*, *50*(1), pp. 1-15.

Cheng, B., Ioannou, I., Serafeim, G. (2014). Corporate Social Responsibility and Access to Finance. *Strategic Management Journal, 35*(1), pp. 1–23.

Comitê de Pronunciamentos Contábeis. (2019). *Pronunciamentos.* Retrieved from http://www.cpc.org.br/CPC/Documentos-Emitidos/Pronunciamentos

Dechow, P., GeE, W., Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics, 50*, pp. 344–401.

Dhaliwal, D. S., Li, O. Z., Tsang, A., Yang, Y.G. (2011). Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. *The Accounting Review, 86*(1), pp. 59–100.

Dingwerth, K., Eichinger, M. (2010). Tamed Transparency: How Information Disclosure under the Global Reporting Initiative Fails to Empower. *Global Environmental Politics, 10*(3).

Eccles, R. G., Ioannou, I., Serafeim, G. (2014). The Impact of Corporate Sustainability on Organizational Processes and Performance. *Management Science, 60*(11), pp. 2835–2857.

Garcia-Castro, R., Arino, M. A., Canela, M. A. (2010). Does social performance really lead to financial performance? Accounting for endogeneity. *Journal of Business Ethics*.

Global Reporting Initiative. (2018). *GRI´s History.* Retrieved from https://www.globalreporting.org/information/about-gri/gri-history/Pages/GRI's%20history.aspx

Godfrey, P. C. (2005). The relationship between corporate philantropy and shareholder wealth: a risk management perspective. *Academy of Management Review, 30*(4), pp. 777-798.

Greening, D. W., Turban, D. B. (2000). Corporate social performance as a competitive advantage in attracting a quality workforce. *Business and Society, 39*(3).

Flammer, C. (2015). Does Corporate Social Responsibility Lead to Superior Financial Performance? A Regression Discontinuity Approach. *Management Science, 61*(11).

Hasseldine, J., Salama, A. I., Toms, J. S. (2005). Quantity versus quality: the impact of environmental disclosures on the reputations of UK Plcs. *The British Accounting Review, 37*(2), pp. 231-248.

Kolk, J. E. M., Perego, P. (2010). Determinants of the adoption of sustainability assurance statements: an international Investigation. *Business Strategy and the Environment, 19*(3), pp. 182-198.

KPMG. (2008). *KPMG international survey of corporate social responsibility reporting 2008.* Retrieved from http://www.kpmg.com/LU/en/IssuesAndInsights/Articlespublications/Pages/KPMGInternationalSurveyonCorporateResponsibilityReporting2008.aspx

Lameira, V. J., Ness JR, W. L., Quellas, O. L. G., Pereira, R. G. (2013). Sustainability, Value, Performance and Risk in the Brazilian Capital Markets. *Review of Business Managment. 15*(46), pp. 76-90.

Margolis, J. D., Elfebein, H. A., Walsh, J. P. (2009). Does it Pay to Be Good...And Does it Matter? A Meta-Analysis of the Relationship between Corporate Social and Financial Performance. Retrieved from SSRN: https://ssrn.com/abstract=1866371 or http://dx.doi.org/10.2139/ssrn.1866371

Marquis, C., Toffel, M. W. (2011). The globalization of corporate environmental disclosure: accountability or greenwashing? *Harvard Business School*.

Morris, R. D. (1987). Signalling, agency theory and accounting policy choice. *Accounting and business Research*, *18*(69), pp. 47-56.

Plumlee, M., Brown, D., Rayes, R., Marshall, R. (2015). Voluntary environmental disclosure quality and firm value: Further evidence. *Journal Account. Public Policy*.

Qiu, Y., Shaukat, A. and Tharyan, R. (2016). Environmental and social disclosures: Link with corporate financial performance *British Accounting Review, 48*, pp. 102–116.

Schinietz, K. E., Epstein, M. J. (2005). Exploring the financial value of a reputation for corporate social responsibility during a crisis. *Corporate Reputation Review, 7*(4).

Semenova, N., Hassel, L. G. (2015). On the Validity of Environmental Performance Metrics. *Journal of Business Ethics*. Pp. 132-249.

Sousa, F. S., Zucco, A. (2016). Índice de Sustentabilidade Empresarial (ISE) e geração de valor para investidores. *Revista Capital Científico – Eletrônica (RCCe), 14*(1).

Surroca, J., Tribó, J. A., Waddock, S. (2010). Corporate responsibility and financial performance: the role of intangible resources. *Strategic Management Journal, 31*(5), pp. 463-490.

Teixeira, E. A., Nossa, V., Funchal, B. (2011). O índice de sustentabilidade empresarial (ISE) e os impactos no endividamento e na percepção de Risco. *Revista Contabilidade & Finanças - USP, 22*(55), pp. 29-44.

Tucker, J. W. (2011). Selection bias and econometric remedies in accounting and finance research. *Journal of Accounting Literature, Forthcomming,*

Wooldridge, J M. (2011). Introdução à econometria: Uma abordagem moderna. Tradução da quarta edição norte-americana. Cengage Learning.

Zheng, S. (2017). Can corporate diversification induce more tax avoidance? *Journal of Multi. Fin. Manag, 4*, pp. 47–60