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**CORPORATE SOCIAL RESPONSIBILITY LEVELS
AND FIRM PERFORMANCE:
EVIDENCE FROM COUNTRIES IN CRISIS**

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Abstract

In times of economic downturn it is of utmost importance for companies to find alternative ways to enhance their value while disregarding all activities that have the potential to destroy value. Corporate Social Responsibility (CSR) disclosures inform analysts and investors about companies' ethical accountability and engagement towards society, possibly contributing to the overall value of a company. This paper examines the rapport between different levels of CSR disclosure and stock market performance, analyzing a sample comprised by companies from Portugal, Spain and Italy, given that these are some of the countries most affected by the 2008 financial crisis. The period covered ranges from 2008 to 2012. CSR disclosure levels are measured through the Global Reporting Initiative (GRI) guidelines. Results unveil that markets value a low CSR disclosure negatively, but do not find other levels of disclosure to add value, which implies that in times of crisis a low CSR disclosure may increase information asymmetry between a company and market participants. Furthermore, an analysis of the changes in GRI reveals the existence of a positive relation between stock market returns and upward changes in CSR disclosure levels.

Introduction

In times of economic downturn, as the one we have been living since the Leman Brothers bankruptcy in 2008, companies intensely increase their awareness to develop and focus on alternative ways to enhance their value. CSR (corporate social responsibility) activities have the potential to restore the markets' loss of confidence, trigger innovation and stimulate learning, helping companies grow their businesses and enhancing their financial value. For these reasons, shareholders and stakeholders have been expecting an increase in accountability related to this area. Several studies show a positive association between CSR and stock market returns (McWilliams and Siegel, 2001; Preston and O'Bannon, 1997) but there is no consensus on whether CSR impacts firm value and, if it does, on what is the real direction of this rapport.

CSR disclosures are considered by investors as their preferred source of information regarding companies' CSR activities (Radley Yeldar, 2012). The Global Reporting Initiative (GRI) emerged in this context as it aims at providing companies a comprehensive sustainability reporting framework, where they can score their level of social responsibility with regard to six different organizational areas: Environment, Human Rights, Labor Practices & Decent Work, Product Responsibility, Society and Economic. The score varies from A to C, in a way that the highest level of disclosure (A) reflects a company that unveils its CSR activities within all the six areas in a highly detailed level. On the other hand, the C level reflects a company that reveals its CSR commitment in few areas with far less detail. A plus sign is added whenever an external party, usually an auditing company, verifies such disclosures.

Under the semi-strong efficient market hypothesis stock prices should reflect all publicly available information and so, the way markets measure the credibility and

informational level of CSR disclosures should impact a company's stock price (Ullman, 1985; Izzo & Donato, 2012). Some studies claim that this relation should be positive, since social responsibility disclosures are allied to a firm's long-term development strategy and performance sustainability (Orlitzky et al. 2003). DeVilliers and Marques (2013) are able to corroborate this theory, as they find a positive relation between European stock market returns and their respective firms' level of CSR, assessed through GRI.

In this paper I analyze the relation between the stock market performance of Portuguese, Spanish, and Italian firms, and their levels of CSR reporting, during the current financial crisis. I focus my study on these countries since these were severely affected by the crisis. Thus, it is crucial for them to find alternative ways to enhance their value and to disregard any activity that is potentially value destructive. I study companies that are listed in the respective countries and I hand-collect each company's disclosure of GRI level from their CSR reports (or annual reports). The same analysis is done for the five years under study, 2008-2012.

Primarily I focus on analyzing whether higher levels of disclosure are related to higher share prices and if, conversely, lower levels of disclosure relate to low share prices. This association is expected, as a higher level of disclosure potentially decreases information asymmetry between investors and firms, upgrading their reputational risk and developing closer relationships with key stakeholders. Low levels, on the other hand, may increase information asymmetry and damage a company's image and reputation which, in times of crisis, is particularly important. Results show that during the crisis, while markets do not find higher levels of disclosure value relevant, they find them value destructive when disclosed at the lowest level (C). Branco and Rodrigues (2008) and Cahan et al. (2012) support that firms engage in CSR disclosures to comply

with stakeholder's expectations, which may be peculiarly high in times of economic downturn due to the lack of confidence and trust in these markets. This theory helps to explain why markets do not value any CSR disclosure level, other than the lowest one.

Secondly, I examine whether returns are higher for companies that increase their CSR disclosure levels on a yearly basis and find evidence to support such hypothesis, as results indicate that a statistically significant relationship between stock returns and changes in GRI Disclosure Level exist. In fact and despite the lack of liquidity and financial contraction of companies, they have consistently increased their levels of disclosure during the financial crisis, indicating that they indeed see these changes as beneficial. These findings are consistent with DeVilliers and Marques (2013), who find the same rapport to hold in a study focused on the biggest 500 companies in Europe.

This paper reveals that, albeit slow, there has been a shift in company's purely financial focus towards a broader one in which the approximation to society, stakeholders and investors is much more fostered. Also it indicates that less developed financial markets start to acknowledge such behavior as they price companies differently bearing in mind their dissimilar behaviors with regards to CSR disclosures. I also find evidence which indicates that, during times of crisis, markets penalize companies located in the most affected economies that disclose insufficient CSR-related information, while rewarding companies that are able to increase their disclosure level.

The remainder of this paper is organized as follows. The next section describes the wideness of Corporate Social Responsibility to the particularity of disclosures, where the hypotheses aptly arise. Section three depicts the sample gathering process. Section four portrays the study's methodology. Section five presents the results. Section six concludes.

Literature Review

In the last century, besides increasing shareholders' value through profit maximization, companies are increasingly dedicating their resources to CSR related activities and endeavor to embrace them into their culture and business operations aiming at higher social value creation (Yang et al., 2010; KPMG, 2011). Although CSR related activities surely translate into societal benefits (Nelling and Webb, 2009), there is still no consensus on whether these have the capability to enhance a company's financial performance, given the multitude of definitions used to describe these concepts (Waddock and Graves, 1997; Ullman, 1985) and the different statistical techniques employed (Nelling and Webb, 2009; Scholtens, 2008).

While some studies find CSR performance to be positively related to Financial performance (McWilliams and Siegel, 2001; Cochran and Wood, 1984; Preston and O'Bannon, 1997), others find this relationship to be negative (Izzo and Donato, 2012) and even neutral (Ullman, 1985; Nelling and Webb, 2009). Orlitzky et al. (2003) perform the first meta-analysis on this topic and conclude that the majority of the studies executed in this arena find a positive relationship between social and financial performance, corroborating with the theory that CSR is value relevant for shareholders and that its long-term benefits outweigh its short-term costs (McWilliams and Siegel, 2001; Pava and Krausz, 1996).

The way markets perceive this CSR accountability may also impact firm's stock prices (Bowman's, 1973). CSR disclosures have thus followed this growing trend as they become more noteworthy (O'Dwyer, 2011; Simnett et al., 2009) since these are considered to be the favorite source of information for analysts and investors regarding CSR information (Radley Yeldar, 2012). While CSR voluntary disclosure is supposed to inform society about enterprises' ethical accountability towards key stakeholders

(Hassan and Harahap, 2010; Yang et al., 2010), it can also be used to shape a company's reputation and image in the market (Hooghiemstra, 2000; McWilliams and Siegel, 2000; Branco and Rodrigues, 2006), regardless of whether these disclosures comply with company's real levels of Corporate Social Performance. Therefore the trustworthiness behind CSR disclosures is still unclear and it is uncertain whether they are opportunistic or informative (Cahan et al., 2013; Waddock and Graves, 1997). Under the semi-strong efficient market hypothesis stock prices should reflect all publicly available information. Thus, the way equity holders assess the credibility and informational level of these disclosures should impact the present value of a firm's future cash flows and be embedded in their valuation (Mackey and Mackey, 2007; Ullman, 1985; Izzo & Donato, 2012).

Taib and Ameer (2012) examine the relationship between CSR disclosures, using a GRI-based measure, and financial performance in the US and UK and found this link to be positive across all GRI levels. However, instead of using stock prices as a proxy for financial performance, this study only uses accounting-based measures, which may be subject to managerial implications and different accounting procedures. DeKlerk et al. (2012) and DeKlerk and DeVilliers (2012) analyze this relationship through stock market performance and discover that CSR disclosures have positive value relevance on market performance. Yet, these studies focus on single countries, which may be limited given that this relationship might be affected by governance institutions, democracy and press of freedom (Cahan et al., 2013). Furthermore, all these studies fail to analyze the association between different levels of CSR disclosure and stock prices since they only account for whether companies disclose CSR information or not.

Cahan et al. (2013) examined this relationship using a sample drawn from 22 countries and Tobin's Q as a proxy for financial performance and they find that higher levels of CSR disclosure are value added for investors. However, contrarily to the other studies employed, this study does not resort to the widely used GRI guidelines to analyze CSR disclosures. Instead, it focuses on the KPMG disclosure measure, which rates the top 100 firms in 22 countries based on their CSR disclosures. DeVilliers and Marques (2013) employ a multi-country approach to analyze the impact of different CSR disclosure levels, using GRI guidelines and stock market performance, and find CSR disclosures to be value relevant for investors as they impact firms' market valuation. Their results indicate that it is not only the commencement of CSR reporting that influences the market value of firms (Dhaliwal et al., 2011), but likewise the level of such disclosures will impact market outcomes differently: high levels of disclosure are associated with higher share prices whereas low levels of disclosure are associated with lower share prices. This may indicate investors believe that high CSR disclosures are reflective of actual CSR performance (Cahan et al., 2013) and might also relate to investors' expectations concerning the degree of CSR disclosure that a firm is likely to unveil; when companies are able to meet these expectations, investors reward them by increasing their market valuation (Finch, 2005). This is consistent with the study performed by Weber et al. (2005), which examines the connection between GRI disclosure levels and the real impact firms have on sustainable development, and finds that there is a positive relationship between high disclosure levels and firms' corporate social responsibility performance.

This positive premium might also be allied to the fact that higher voluntary CSR disclosure levels have the potential to reduce information asymmetry (Cahan et al., 2013) and minimize the uncertainty regarding a firm's reputational risk which may, in

turn, increase the market assessment of the firm's value. Consequently, it helps a firm to develop its relationship with key stakeholders and external actors regarding its credibility, reputation and image (Orlitzky et al., 2003; Branco and Rodrigues, 2006; Hawn and Ioannou, 2012) which creates value for shareholders (Garriga and Melé, 2004) by assisting in the development of intangible resources that are "valuable, rare and cannot be easily imitated" and that bring a competitive advantage for firms, as it enables to distinguish themselves from their competition (McWilliams and Siegel, 2001; Branco and Rodrigues, 2006; Branco and Rodrigues, 2008;).

This potential to reduce information asymmetries may be more advantageous for companies in times of crisis given market's lack of confidence. In fact Giannarakis (2011), who studies the effect of the 2008 financial crisis in CSR disclosure levels through GRI Scores, concludes that during the financial crisis more companies voluntarily disclose CSR information and that the level of these disclosures also increases during this period. This is against the theory that in periods of recession, companies have priorities other than investment in CSR related activities (Ullman, 1985) and implies that companies view high CSR disclosure levels as a valuable resource that allows them to reinforce their relationship with key stakeholders and create intangible valuable resources that will positively impact shareholders value and, consequently, firm's market valuation. However this study fails to address the impact of low levels of disclosure during this period. Actually, and despite the sizable body of literature regarding CSR related activities, there is a lack of research concerning the impact that low levels of disclosure have on financial performance, when compared to no disclosure. The only study that we are aware of that analyzes this relationship is Marques and De Villiers (2013), who find this interplay to be negative, when examining GRI C level disclosures and share price-related information. These results indicate that

investors are more likely to value companies that do not disclose any type of CSR instead of companies that do so at a lower level, as they may become suspected of trying to hide adverse information (Marques and De Villiers, 2013) related to the areas that are not disclosed.

Low levels of disclosure may thus negatively impact corporate reputation, worsening firm's relations with external stakeholders (Branco and Rodrigues, 2006; Cahan et al., 2013). Inferior performance in primary stakeholder fields may, consequently, influence markets assessment of firm's financial performance (Waddock and Graves, 1997) and reputational risk, as it might instigate some doubts in market participants with respect to firm's capability to comply with stakeholders' implicit expectations (McGuire et al, 1988). Given that firms resort to CSR disclosures as one of the informative sources on which stakeholders ground their judgment of a company's reputation (Fombrun and Shanley, 1990; Branco and Rodrigues, 2006), the inability to fulfill these expectations might yield some trepidation in markets and, subsequently, increase enterprise's risk premium (Cornell and Shapiro, 1987; Fiori et al., 2007). This may in turn decrease the market value of firms. Considering that investors are rational, they will embed in their valuations stakeholders' adverse reactions to CSR disclosure (Cornell and Shapiro, 1987; Hamilton, 1995; Klassen and McLaughlin, 1996) as these can be perceived as agency costs (Ioannou and Serafeim, 2013). Therefore, disappointing key stakeholders has the potential to negatively impact firms' financial performance

The above discussion leads to the development of the following hypothesis:

H1: Higher (Lower) levels of CSR disclosure are related to higher (lower) share prices

De-Villiers and Marques (2013) explore the impact that marginal changes in CSR disclosure levels may have on stock prices, using GRI guidelines and a sample comprising the pre-crisis period, and ascertain that an upward (downward) variation in the disclosure level is accompanied by a higher (lower) share price. Notwithstanding the drop in firms' profitability during the current financial crisis and the costs related to CSR disclosures, such as collecting, compiling, and disseminating information (Ullman, 1985; Branco and Rodrigues, 2006), there are more companies disclosing higher levels of CSR information in this period (Giannarakis, 2011; KPMG, 2011; Mia and Mamum, 2011).

This implies that companies see incremental increases in CSR disclosure as value added investments, even in times of an economic downturn, that potentially foster their relationship between society and market participants and helps them to reestablish markets' loss of confidence in businesses and capital markets (Giannarakis, 2011; Branco and Rodrigues, 2006). Besides the reputational benefits, rises in the levels of disclosures during the financial crisis may also be related to the growing need to attain capital markets for additional funding; according to Marques and De Villiers (2013) companies that want to do so, are expected to disclose higher CSR levels, so as to mitigate uncertainties associated to potential CSR related liabilities. Moreover, Dhaliwal et al. (2011), who examines the relationship between firms' cost of equity capital and voluntary CSR disclosures, finds that firms with superior social responsibility disclosure benefit of a subsequent reduction in the cost of equity capital. Similarly, these findings might also explain why firms, overall, increase their CSR levels in times of crisis.

The variety of potential benefits associated with disclosing higher levels of CSR during a crisis should be reflected in stock prices and in investors' assessment of a

firm's risk and future cash flows, leading us to the establishment of the second and final hypothesis:

H2: Increases in CSR disclosure levels are related to increases in share prices

Sample

My original sample comprises 522 companies, which are based and listed in Portugal, Spain, and Italy. This sample was identified via Bloomberg and was chosen so as to fully capture the effect of the financial crisis, given the stock exchanges that companies belong to and their corresponding countries of origin. Subsequently, and following the work of Fiori et al (2007), I disregard enterprises that belong to either the financial or utility industry since these have explicit characteristics, rendering industry wide comparisons meaningless. Furthermore, I cross the firms that encompass my sample with those present on DataStream database (from where we obtain financial information) and lose 15 observations. This leaves me with a sample of 341 firms.

I collect the GRI level that corresponds to each of the parsed years of my sample, relating to the 2008-2012 financial crisis period. For this purpose I analyze the CSR reports of these firms, which are available in their websites. If they do not divulge such report I next examine their annual reports.

Through this research, I must first determine whether there was a GRI disclosure score for the given year. If so, I seek for the extent of such disclosure (A, B or C). Also, I collect information about whether the GRI disclosure level is assured by a third party, and add a plus in those cases. After, I eliminate companies that do not have any available information and, from a prospective sample of 1705 observations (341 firm-

year observations during 5 years), I am left with a sample comprised by 1,259 observations.

Methodology

Based upon the hypotheses developed I estimated two dissimilar equations to analyze my unbalanced panel data. This structure is the most apposite given that the sample has, simultaneously, a cross-sectional and a time-series dimension and because some companies are not observable over the entire five-time period¹. This model allows me to control for unobservable firm-specific variables that do not vary over time, while still attaining robust estimators. So as to control for time-varying components, *year dummies* are included in both regression analysis.

In order to analyze the first hypothesis, which foresees a positive (negative) relationship between high (low) levels of CSR disclosure and share prices, I estimate the following regression:

$$\begin{aligned} Share_Price_{i,t} = & \beta_0 + \beta_2 EPS_{i,t} + \beta_3 BV_pS + \beta_4 GRI_disclosure_level_{i,t} + \beta_5 Leverage_{i,t} + \\ & \beta_6 Sales_Growth_{i,t} + \beta_7 Size_{i,t} + \beta_8 Risk_{i,t} + \beta_9 Cap_Exp_{i,t} + \beta_{10} Profitability_{i,t} + \\ & \beta_{11} Fin_Activ + year\ dummies + \eta_i + \varepsilon_{i,t} \end{aligned} \quad (1)$$

The dependent variable, *Share_Price*, represents the share price three months following the end of the fiscal year, once this is how long it takes for both the annual and the CSR reports to be divulged. Stock prices are the most suitable metric to explore this rapport as they embed the market assessment of the firm's future expected cash flows, which reflects all long-term relevant information for investors. Inversely,

¹ This happens due to missing financial or CSR data for some of the years covered.

accounting-based measures focus on past performance and are more susceptible to differential accounting procedures and managerial manipulation. I apply a modified Ohlson (1995) model, which presumes that the market price per share is positively related with the amount of earnings per share and the book value per share. Hence, the *EPS* and *BV_pS* variables are included in the regression model. *GRI_disclosure_level* is the regression's variable of interest, which is decomposed into six indicator variables, *GRI_A+*, *GRI_A*, *GRI_B+*, *GRI_B*, *GRI_C+* and *GRI_C*, given its ordinal nature. These are coded as one when they correspond to the firm's GRI level of compliance on that year and zero otherwise. So as to avert the onset of perfect multicollinearity, the category comprised by companies that do not disclose any GRI-related information is omitted, and so this is the base group for the corresponding analysis.

Cahan et al. (2013) stress the size and leverage effect on stock prices, when analyzing CSR disclosures, and so these two variables are controlled for. *Size* is measured via the natural logarithm of the company's market capitalization (the market value of the company's shares at the end of the fiscal year), while *Leverage* is given by the ratio between the total debt and total assets, at the same point in time. Profitability is also one of the key features that affects the market valuation of a firm (Fiori et al., 2007). According to Weber et al. (2005) it should be measured through a company's Return on Equity, as it reflects the amount of profit an enterprise is able to engender given the resources delivered by its stockholders. *Profitability* is thus added and computed as the ratio between the fiscal year's after-tax income and the book value of equity. A company's yearly sales growth is also introduced into the regression model, in comparison to the prior fiscal year amount. The significance of *Sales_Growth* relies on the fact that it may be symptomatic of a company's prospective future earning streams (Fiori et al., 2007). Centered in the researches of Ullman (1985) and Xueming Luo and

Bhattacharya (2006), who point out the importance that innovation has on investors' evaluations of firms, the indicative *Cap_Exp* variable is included with the intend to measure a firm's R&D intensity, coded as 1 if the firm invested in R&D during the corresponding year, and zero otherwise². A *Risk* variable is also enclosed owing to the effect it has on market performance. This is measured as the volatility of stock prices through the standard deviation of returns. As it is of paramount importance for investors to understand how firms finance their recurrent activities and if they are able to do so only by reinvesting their earnings, we add the variable *Fin_Activ*. This is computed as the difference between sales and purchases of common and preferred shares plus change in long term debt. *Year dummies* are also appended to the regression as they capture year specific traits that might drive a firm's market value. Conversely, all company-specific but time-invariant effects, such as the country or the industry where a company belongs to, are encapsulated through the inclusion of a random variable, η_i . Lastly, the disturbance term $\varepsilon_{i,t}$ captures random and unexpected shocks.

For the second hypothesis, which envisages that upsurges (reductions) in CSR disclosure levels are positively (negatively) valued by market participants, the regression computed is as follows:

$$\begin{aligned}
 RET_{i,t} = & \beta_0 + \beta_2 \text{Change_EPS}_{i,t} + \beta_3 \text{Change_BV_pS}_{i,t} + \beta_4 \text{Change_GRI}_{i,t} + \beta_5 \\
 & \text{Leverage}_{i,t} + \beta_6 \text{Sales_Growth}_{i,t} + \beta_7 \text{Size}_{i,t} + \beta_8 \text{Risk}_{i,t} + \beta_9 \text{Cap_Exp}_{i,t} + \beta_{10} \\
 & \text{Profitability}_{i,t} + \beta_{11} \text{Fin_Activ} + \text{year dummies} + \eta_i + \varepsilon_{i,t}
 \end{aligned} \tag{2}$$

The dependent variable *RET* epitomizes a company's stock return, calculated by parceling the difference between the stock price three months after the fiscal year ended

² Capital expenditures were coded as zero for companies for which there was no information available on this variable.

and the stock price on the same day of the previous year, excluding any dividends or capital gains. Returns are chosen in this hypothesis since they reflect the stock appreciation relatively to previous year, which should reveal all significant changes in investor's awareness of the firm's intrinsic value. As in the first premise, the Ohlson (1995) model is employed but as we consider returns as the independent variable, we now substitute Book Value per Share and the Earnings per Share variables with their yearly variation, captured by the following variables: *Change_BV_pS* and *Change_EPS*. Herein the variable of concern is *Change_GRI* which represents the alteration in GRI disclosure level in relation to the preceding year, resulting in the loss of all observations in the first year of the sample. This variable may adopt a value from -3 to +3, reflective of the extent of such variation. Contrarily to the first research design, we do not differentiate the external assurance within the GRI Level since these were almost nil. All control and remaining variables are as previously presented.

Data Analysis

Descriptive Statistics

As presented in Figure 1, the sample is majorly comprised by Italian companies as this is the country that has, simultaneously, the oldest stock exchange and the largest number of publicly listed companies³. Contrariwise, Portugal is the country with the lowest number of firms (11%). The industry distribution presented in Figure 2 shows

³ Italian stock Exchange was born in 1808, as opposite to the Portuguese one which was established after 1974;

that the weights of the different sectors in the whole sample range from 3% (healthcare industry) to 31% (consumer discretionary), consistent with different countries' hefts.⁴

Table 1 shows the distribution of GRI scores collected. It indicates that, in my sample, enterprises did not embrace the GRI Guidelines during the financial crisis period, as other less affected countries did (KPMG, 2011). The data indicates that 84% of the entire sample does not disclose any GRI-related information, reflecting a lack of awareness of the importance of CSR related activities, something Izzo & Donato (2012) stress. Among those who follow these principles, companies tend to divulge the highest level (11% for A+) and the frequency of such disclosures prolapses in parallel with the drawdown of the GRI level (close to 0% for C). Although Spain is the nation that most releases GRI, this trend is unswerving across countries (Figure 3), suggesting that companies indeed perceive some and the same dissimilarity between the different levels. Figure 4 shows that the same holds for the various industries that encompass the sample, reinforcing the previous argument.

Notwithstanding the generalized low adoption of GRI, as shown in Figure 5 and consistent with Giannarakis (2011) findings, there is a tendency, albeit slow, for companies to disclose more GRI-related information and for this level of disclosure to increase as the financial crisis wades: the A+ level adoption increases from 8% to more than 12%, which corresponds to roughly the same increase as the overall level of disclosures. Contrarily, the lowest levels of C+ and C remain fairly constant at 1% and 0.4%, respectively. Uniquely in 2009 there is a minimal increase in companies that do not disclose, probably related to the outburst of the crisis and the sudden financial contraction of firms. Interestingly, the major difference is seen in 2010 in which the level of companies that do not disclose decreases towards an increase of the GRI A+

⁴ Sectors laid down by *Bloomberg* were utilized for this classification;

level of over 4%, showing companies' attempt to eliminate any information lopsidedness triggered by the burst of the crisis. Figure 6 shows that this trend is steadier in both Spain and Italy as opposite to Portugal, which is more uneven given that the latest was the country most strongly affected by the economic downturn. Yet, this is the country that mostly increases its level of disclosures from 7% of A+ level in 2008 to circa 17% in 2012. Untabulated results show that, in the latter year, from the companies that adopted the GRI Guidelines, all disclosed the A+ Level.

Descriptive statistics on key and control variables included in both research equations are displayed in Table 2. Results show that, despite the economic crisis, these companies are able to grow in terms of sales, with an average value of 5%. Yet this growth was majorly financed with debt, as the Financing Activities average is of 12.6%. Risk ranges from 0% to a maximum of 1682% and presents a mean of 39.5% indicating that these are assessed as very risky companies. Also their mean and median returns edge below zero, reflective of the financial crisis and investors' uncertainty on these markets.

Pearson correlation matrix, presented in Table 3, supports our first hypothesis as the correlation between GRI A and GRI A+ level are positive related with share prices, while GRI C level is negatively. However, and as presented in the same table, the p-value is only significant for the highest level (GRI A+), not supporting the view that lower levels yield lower share prices. Remarkably, size and sales growth seem to be positively and significantly correlated with the highest levels of GRI disclosure (p-values around 0%) supporting Pava and Krausz (1996) view of a vicious circle existence. On the other hand, results do not support our second hypothesis as the p-value of the correlation between Changes in GRI and returns is of 84.99%.

Estimation Results

To properly deal with unbalanced panel data I first estimate both a fixed effects model and a random effects model. Once analyzing the existence of autocorrelation and heteroskedasticity in both models under both hypotheses, adjusted *Driscoll and Kraay* (1998)⁵ standard errors are employed. This allows controlling for both effects, as their presence would yield inefficient estimates and lead to erroneous conclusions. Afterwards, Hausman tests are performed so as to indicate which model is the most adequate given the characteristics of the sample data. Under this test, the null hypothesis is that company-specific traits are not significantly correlated with the explanatory variables and so there is no need to employ a model that controls for them, like the fixed effects one. If this does not hold and the null hypothesis is rejected, then the random effects model cannot be employed as it yields inconsistent estimates, grounded on improper assumptions. Test results show that the null hypothesis is rejected for both models, when considering a 1% significance level, professing that the fixed effects approach is the most apposite to apply. Thus, this is the model I use in my analyses. Given that it controls for firm-specific time-invariant effects, year dummies are included in both models so as to capture all time-variant effects.

Table 4 unveils the results of estimating equation 1. I find that, although financial markets do not consider high levels of GRI disclosure value relevant during the crisis, they find these to be value destructive at their lowest level. This does not support part of the first hypothesis, which foresees a positive association between high

⁵ Nonparametric technique of estimating standard errors which are robust to several forms of spatial and temporal dependence. These are adjusted for unbalanced panel data, to properly deal with missing firm-year observations.

GRI levels and stock market performance, but it validates the theory that there is a negative relationship between the lowest level and stock market performance, since the coefficient for the GRI C level is negative and statistically significant at a 5% significance level. Thus, firms in these countries that disclose GRI C level information during the financial crisis have lower share prices than firms that do not disclose.

DeVilliers and Marques (2012) claim that the positive association between high levels of disclosure and share prices is more prominent in countries with higher levels of democracy, regulatory quality and government effectiveness, in which investors are better placed to express their concerns resulting in regulation and government increase in effectiveness. Izzo and Donato (2012) argue that less developed stock markets, and specifically the Italian one, are not mature enough and well advanced to properly appraise the positive value embedded in such releases. Both arguments may explain the lack of significance found in high CSR disclosure levels included in my sample. Furthermore, Branco and Rodrigues (2008) and Cahan et al. (2012) support that firms engage in CSR disclosures to obey stakeholder's norms and expectations, which may be abnormally high in times of economic downturn due to the lack of confidence and trust in these markets. Thus, investors do not value GRI A, nor GRI B level, since it complies with their high expectations. Results support such theories and indicate that, during times of crisis, adopting high levels of CSR disclosure is an insufficient condition for companies located in the most affected economies to increase their stock valuations.

Notwithstanding, our findings support the theory that disclosing at the GRI C level results in a lower share price when compared to no disclosure. This is consistent with the findings of DeVilliers and Marques (2012) and with Fiori et al.'s (2007) theory that a meager CSR disclosure increases a firm risk and worsens its reputation and relationship with its several stakeholders, being value destructive for investors. This has

the potential to worsen in times of economic downturn due to the generalized lack of confidence in the markets and companies, supporting our findings. However, results also reveal that when this level is assured by a third party, usually an auditing company, the statistical significance of the variable disappears ($p\text{-value}=0.472$). Thus, market fears are no longer presented when such reports are revised. In fact, results presented in Table 3 show that the p -value of the correlation of GRI A+ and B+ levels with share prices is significant at 5%, and that significance is no longer present when the same levels are disclosed but not assured. This implies that markets only value these reports, regardless of the level disclosed, if they have an outer acknowledgment of the trustworthiness behind them.

In this equation, the Ohlson (1995) model holds as the EPS and BVpS variables are both statistically significant at a 1% and 5% significance level, respectively. Also and validating Ulman (1985) theory, Capital Expenditures seem to have an important role on investor's valuation of firms as this variable has a positive statistically significant impact on share prices. Finally, and upholding on what the research on the topic suggests, Leverage Size and Risk are all statistically significant independent variables.

The second hypothesis examines whether financial markets find changes in GRI Disclosure levels value relevant. The results in Table 5 corroborate with the hypothesis developed, as the coefficient for Changes in GRI level is positive and statistically significant, at a 1% confidence level. Thus, returns in these periods are higher for companies that increased their level of disclosure, as opposite to companies who decreased it, since they enjoyed lower returns. Notice, however, that we do not consider changes within the same GRI level (from assurance to non-assurance) but instead changes between levels and no disclosure, as the former were almost nil. These results

are consistent with DeVilliers and Marques (2012), who found that changes in GRI levels are positively associated with the share prices from the 500 largest European companies and may explain why the considered firms consistently increased their GRI Levels during the analyzed periods.

. So as to make a country-wide comparison, we run both research designs for each country analyzed and find that these markets value disclosures and changes in such disclosures differently. Untabulated results show that Portugal is the only country which positively and significantly values all GRI disclosure levels, as well as changes in such disclosures. Being the country in our sample most affected by the financial crisis, these last results suggests that in times of economic crisis some markets indeed give value relevance to companies that fully embrace CSR-related activities.

Conclusion

During times of crisis, it is of paramount importance for companies to find alternate ways to enhance their value while disregarding activities that may potentially destroy it. This paper attempts to answer this question as it analyzes the association between different levels of CSR disclosure and stock market performance during the 2008 financial crisis of some of the countries that were most affected: Portugal, Italy and Spain. Thus, it focuses on the 2008-2012 period, resorting to a sample comprised by 1259 observations using the GRI Guidelines to measure CSR performance.

It first examines if dissimilar levels of CSR disclosure impact stock prices differently and finds that markets do not see any value in high levels of CSR disclosure but that companies consistently increase their disclosure levels during the crisis

probably because divulging at the lowest level causes a negative reaction on financial markets, a theory that our findings support. Furthermore, it examines the impact that changes in CSR disclosure levels may have on stock market returns and find these to be positively related with higher returns. In fact this study finds that Portuguese companies, located in the country in our sample most affected by the crisis, consistently increased their disclosure levels during the period analyzed reaching a null value for the lowest level in 2012. Nevertheless our study shows that the majority of firms still not disclose any CSR-related information (only 16% of our sample does so) indicating that, despite there has been an increasing concern towards CSR disclosures, there is still a very low awareness for the value of such disclosures and activities.

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Figure 1 *Distribution by Country*

Sample Distribution by Country

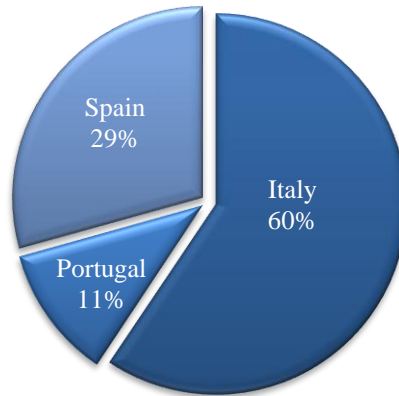


Figure 2 *Distribution by Industry*

Sample distribution by Industry

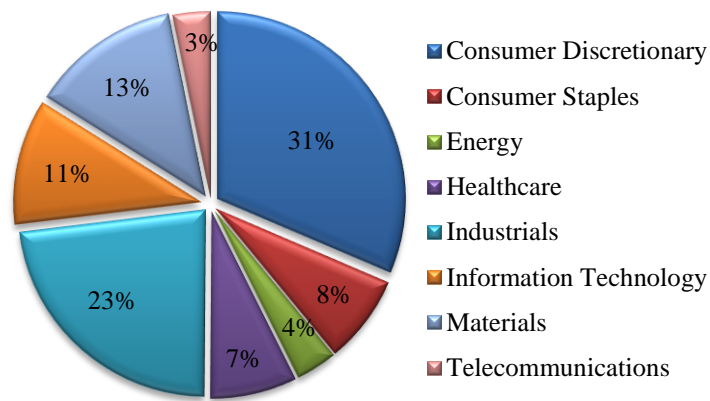


Figure 3 *Breakdown of Disclosure by Country*

GRI Disclosure by country

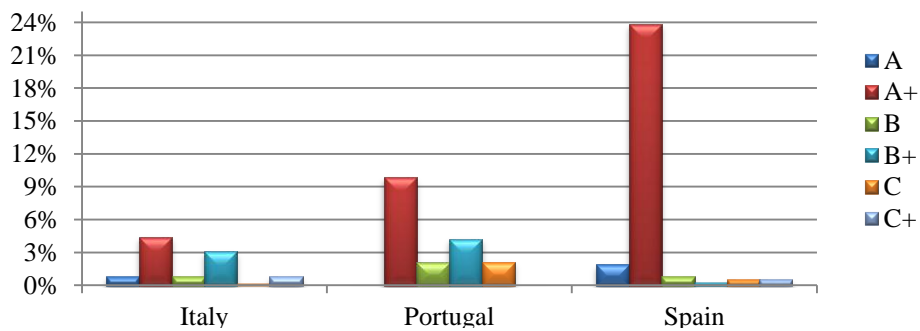


Figure 4 Breakdown of Disclosure by Industry

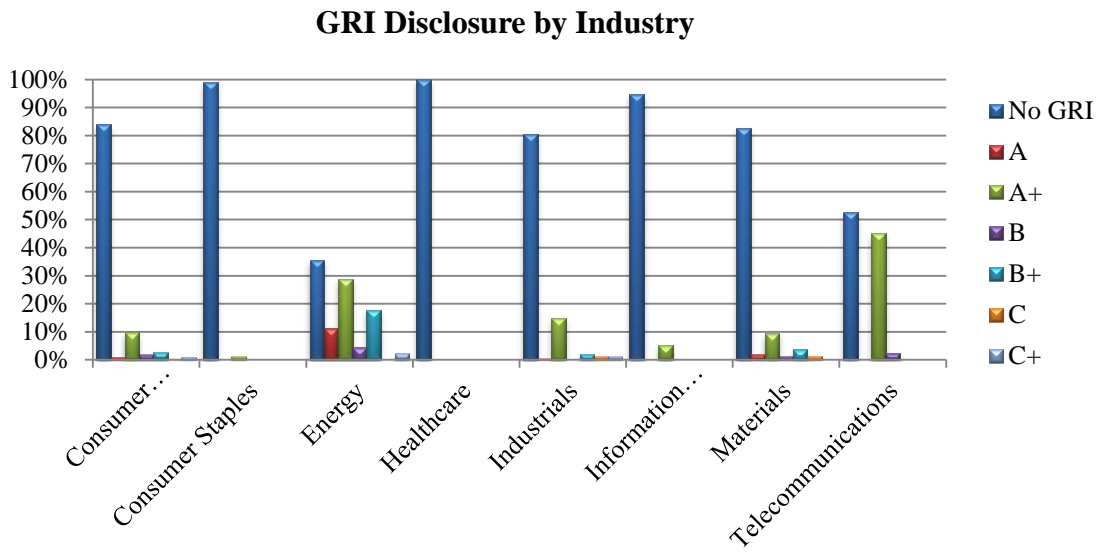


Figure 5 Disclosure Evolution

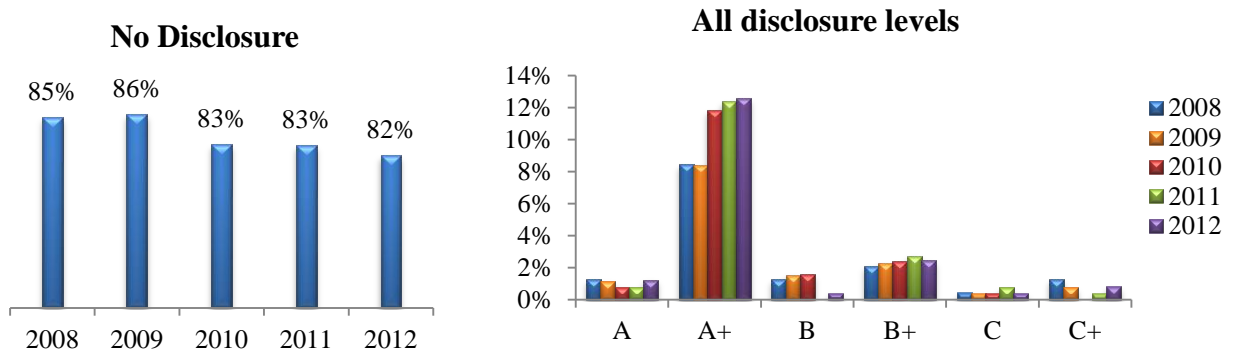


Figure 6 Disclosure evolution by country

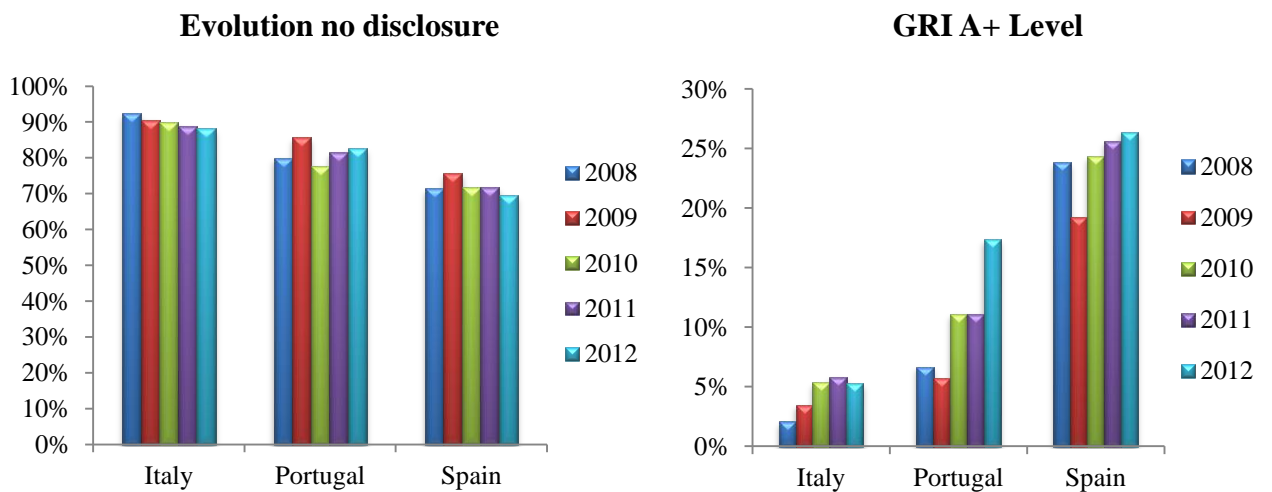


Table 1 Breakdown by GRI Disclosure

GRI Disclosure		
No GRI	1,055	84%
A+	135	11%
A	13	1%
B+	30	2%
B	12	1%
C+	8	1%
C	6	0%
Total	1,259	100%

Table 2 Descriptive statistics of key and control variables

	Average	St.Deviation	Median	Minimum	Maximum
<i>Stock Price</i>	6,184	9,334	2,660	0	100,550
<i>Returns</i>	-0,042	0,476	-0,100	-1	3,852
<i>EPS</i>	0,126	3,200	0,100	-85,788	18,380
<i>BVpS</i>	4,626	6,760	2,262	-2,233	63,723
<i>Change_EPS</i>	0,157	3,132	0,177	-85,788	18,380
<i>Change_BVpS</i>	0,882	6,543	0,155	-71,650	51,545
<i>GRI_A+</i>	0,107	0,310	0	0	1
<i>GRI_A</i>	0,010	0,101	0	0	1
<i>GRI_B+</i>	0,024	0,153	0	0	1
<i>GRI_B</i>	0,010	0,097	0	0	1
<i>GRI_C+</i>	0,006	0,079	0	0	1
<i>GRI_C</i>	0,005	0,069	0	0	1
<i>Change_GRI</i>	0,004	0,381	0	-3	3
<i>Lev</i>	0,313	0,186	0,302	0,000	1,486
<i>Profitability</i>	0,103	1,794	0,045	-8,335	42,821
<i>Size</i>	2,337	0,805	2,234	0,270	4,950
<i>SalesGrowth</i>	0,052	0,558	0,139	-0,990	17,412
<i>FinAct</i>	0,126	4,528	0,009	-34,906	83,081
<i>CapExp</i>	0,180	0,384	0	0	1
<i>Risk</i>	0,395	0,804	0,161	0	16,828

Where:

STOCK PRICE = market price per share three months after fiscal year ended;

RETURNS = return between the stock price three months after the fiscal year ended and the stock price on the same day of the previous year;

EPS = Earnings per Share at the end of fiscal year;

BVpS = Book Value per Share at the end of fiscal year;

CHANGE_EPS = Earnings per share variation when compared to previous fiscal year;

CHANGE_BVPS = Book Value per Share variation when compared to previous fiscal year;

GRI_LEVEL = Incorporates six indicator variables (*GRI_A+*, *GRI_A*, *GRI_B+*, *GRI_B*, *GRI_C+*, *GRI_C*) coded as one when they correspond to the firm's GRI level of compliance on that year and zero otherwise;

CHANGE_GRI = Change in GRI level applied since last year and ranges from -3 to 3, such that *GRI_A*=3, *GRI_B*=2, *GRI_C*=1 and no *GRI*=0;

LEV = ratio of total debt to total assets;

PROFITABILITY = ratio of fiscal year's after-tax income and book value of equity;

SIZE = natural logarithm of the firm's market capitalization at the end of the fiscal year;

SALESGROWTH = Sales variation, when compared to previous fiscal year;

FINACT = Sales less purchases of common and preferred shares plus change in long term debt;

CAPEXP = Indicator variable coded as 1 if the firm invested in R&D and zero otherwise;

RISK = Standard deviation of returns;

Table 3 Pearson Pairwise Correlation Matrix

	Stock Price	Returns	GRI_A+	GRI_A	GRI_B+	GRI_B	GRI_C+	GRI_C	Change GRI	Lev	Profitability	Size	Sales Growth	Fin Act	CapExp	Risk
Stock Price	1															
Returns	0.201	1														
GRI_A+	0.227	0.040	1													
GRI_A	0.014	-0.004	-0.035	1												
GRI_B+	0.049	0.021	-0.054	-0.016	1											
GRI_B	-0.004	0.092	-0.034	-0.010	-0.015	1										
GRI_C+	-0.016	-0.008	-0.027	-0.008	-0.012	-0.007	1									
GRI_C	-0.001	-0.009	0.024	-0.007	-0.011	-0.006	-0.005	1								
Change_GRI	0.019	0.026	0.021	0.052	0.155	-0.027	0.3024	0.226	1							
Lev	-0.235	-0.112	0.056	0.024	-0.040	0.009	-0.034	-0.009	-0.017	1						
Profitability	0.024	0.135	0.0173	-0.002	-0.000	-0.004	0.001	0.001	0.003	0.003	1					
Size	0.450	0.186	0.483	0.103	0.177	0.097	0.038	0.007	0.052	-0.105	0.005	1				
SalesGrowth	0.039	-0.054	-0.010	0.237	-0.003	-0.007	-0.008	0.003	-0.018	-0.007	-0.002	0.062	1			
FinAct	0.093	-0.004	0.050	0.034	0.004	0.005	0.004	-0.021	0.018	0.012	0.015	0.052	0.135	1		
CapExp	0.094	0.053	0.085	-0.047	0.116	-0.003	0.014	-0.002	0.067	-0.069	-0.009	0.260	0.016	0.036	1	
Risk	0.652	0.104	0.167	0.002	0.041	-0.004	0.022	-0.006	0.007	-0.148	0.016	0.280	0.037	0.136	0.062	1

The correlations in bold are statistically significant at a 10% significance level

Table 4 Analysis of first research question – Fixed Effects Approach

	FE Coefficients	White t-stats
Constant	-13.070	-32.54 ***
EPS	0.047	-2.46 **
BVpS	0.492	14.88 ***
GRI_A+	-0.094	-0.30
GRI_A	-0.439	-1.43
GRI_B+	-0.386	-1.19
GRI_B	0.021	0.15
GRI_C+	-0.401	-0.79
GRI_C	-0.406	-3.01 **
Lev	2.459	2.38 **
Profitability	0.021	0.51
Size	6.590	23.69 ***
SalesGrowth	-0.034	-1.65
FinAct	0.033	1.23
CapExp	0.311	2.47 **
Risk	2.098	6.71 ***
Year Dummies	Included	
F-test for model	3.87	(p-value = 0.098)
R²	34.73%	

Statistical significance at the 1% (***), 5% (**) and 10% (*) confidence level, respectively, in a two-tailed t-test, are shown above (see Equation 1)

Table 5 Analysis of second research question – Fixed Effects Approach

	FE Coefficients	White t-stats
Change_EPS	0.005	1.42
Change_BVpS	0.003	4.80 ***
Change_GRI	0.035	2.66 ***
Profitability	0.049	21.04 ***
Lev	-0.010	-0.05
Size	0.264	3.29 ***
SalesGrowth	0.057	2.21 **
FinAct	-0.003	-4.67 ***
CapExp	-0.121	-1.16
Risk	0.091	3.54 ***
F-test for model	4.28	(p-value = 0.128)
R²	41.09%	

Statistical significance at the 1% (***), 5% (**) and 10% (*) confidence level, respectively, in a two-tailed t-test, are shown above (see Equation 2)