

Does Capital Market Distrust CSR Reporting? Economic Benefits in Presence of Complementary Monitoring Mechanism

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Submitted: 18 September 2019, accepted: 20 May 2020, published: 10 June 2020

Abstract: From a theoretical point of view, corporate social responsibility (CSR) disclosure actions have associated a large list of benefits as a result of the lower information asymmetry problems that provoke firms to enjoy better financial conditions and higher market value. However, empirically there is no unanimity in the academy about these positive impacts. In this paper, we consider that the possible discretionary decision that managers could have in the elaboration of CSR reporting implies distrust about the credibility and utility of sustainability information. In this regard, the presence of independence in boards and directors that ensure better control of management decision could moderate the relationship between the quality of CSR reports and their benefits. Independent directors, in their decision-making process, associate their personal image, reputation, and career with CSR disclosures. For an international sample of analysis, our empirical evidence supports the premise that the market only positively assesses the utility and comparability of corporate social responsibility information, giving firms a superior value when there is a complementary mechanism that guarantees information credibility.

Keywords: CSR; disclosure; firm performance; cost of capital; information asymmetry; independent directors

How to cite: Isabel-María García-Sánchez, Jennifer Martínez-Ferrero, Tania Azevedo. Does Capital Market Distrust CSR Reporting? Economic Benefits in Presence of Complementary Monitoring Mechanism. *J. Bus. Account. Financ. Perspect.*, 2020, 2(3): 16; doi:[10.35995/jbafp2030016](https://doi.org/10.35995/jbafp2030016).

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Introduction

In recent years, firm transparency has been positioned as a relevant dimension within what is considered to be good corporate governance, having a positive impact on the market evaluation of organizations (Hodges et al.,

1996). In this context, corporate social responsibility (CSR) reports—as voluntary documents aimed to disclose economic, social, and environmental information—have attracted considerable attention from researchers and academia (Wang et al., 2018; Gallego-Álvarez et al., 2018). Among the large number of past studies focused on CSR disclosure, several examined its consequences (e.g., Stevens et al., 2005; Li et al., 2013; Dhaliwal et al., 2011; Martínez-Ferrero and García-Sánchez, 2017; Wang et al., 2018). Focusing on markets, cost of capital, and information asymmetry, evidence usually shows that the voluntary disclosure of CSR information entails some advantages with the confidence of shareholders and the capital market. Nonetheless, the literature does not provide unanimous results, and previous studies have documented that high-quality CSR is necessary in order to achieve better firm performance (Van Beurden and Gössling, 2008; Li et al., 2013).

The latest research has shown that the relevance and credibility of CSR reports are insufficient for market agents for interacting with firms in order to address social and environmental issues; this interaction and dialogue could facilitate an effective engagement with stakeholders and improve CSR practices in business (e.g., Mio, 2010; Asif et al., 2013; Rodrigue, 2014). In each example within a large number of cases, CSR disclosure is designed and implemented according to the firm's own criteria, thus limiting comparison of these cases (Argenti and Forman, 2002). On the other hand, many authors, such as Adams (2002) and Gray (2006), have documented a lack of neutrality and objectivity in the information disclosed.

In this paper, we postulate that the effects of CSR reports on information asymmetry, cost of capital, and market value depend on the existence of a monitoring mechanism under the influence and control of independent directors. The presence of these directors is fundamental in order to monitor the managers' decisions and actions (Barako and Brown, 2008), which is especially relevant in the case of CSR since they desire that the interests of different shareholders and stakeholders are satisfied (Haniffa and Cooke, 2005). In addition, independent directors emphasize a firm's orientation towards CSR issues with the objective that the organization ensures its legitimacy and survival by accounting for social and environmental issues (Prado-Lorenzo and Garcia-Sanchez, 2010).

Independent directors know that (i) CSR reporting is value relevant in capital markets because shareholders and investors benefit from the decrease in information asymmetry and include this voluntary information in their investment decisions (Mackey et al., 2007; El Ghouli et al., 2011) and (ii) their presence reinforces the confidence of corporate investors in the information reported (Bushee and Miller, 2012). We must not forget that the decisions of independent directors are also determined by their personal interests. In this regard, their concerns about their professional career can affect their decision-making process. Independent directors will be encouraged to avoid any policy, practice, or action that may damage their reputation, image, or career (Holmström, 1999).

Thus, the aim of this paper is to determine if the existence of a complementary monitoring mechanism, namely the presence of independent directors, is necessary in order for CSR reports to generate economic benefits for firms. To answer our research question, we extracted data from a sample of international firms during the period 2006–2014, which consisted of 6442 firm-year observations. Specifically, our results support the notion that market agents do not trust information provided in CSR reports, limiting the decrease of the cost of capital and information asymmetry. Nonetheless, interesting results are reported in line with the moderating role played by independent directors; their presence reinforces the strength of the board and increases confidence in CSR reporting. In these scenarios, firms benefit from superior market value, low cost of capital, and information asymmetry. The results contribute to the literature on boards of directors and CSR disclosure and provide useful policy implications by showing that by achieving CSR disclosure, corporate development agendas can be achieved through board composition policy changes.

Research Hypotheses

CSR Disclosures and Its Effects on Information Asymmetry, Cost of Capital, and Market Value

Voluntary CSR reporting offers a host of economic advantages because corporate information helps investors understand management decisions, reduces information asymmetry, increases the confidence of the capital market,

and encourages greater direct foreign investment (Bushman et al., 2004). On the one hand, informational friction between principals and agents will diminish (Jensen and Meckling, 1976). On the other, friction reduces the costs derived from public taxes and fees. In addition, it can reduce financing costs and generate an increase in a firm's value by improving the company's image, increase investor confidence (Babío-Arcay et al., 2003), allow stakeholders to better understand managerial decisions (Bushman et al., 2004), provide greater liquidity to the shares (Healy et al., 1999), increase capital obtention, generate greater institutional and analyst interest (Healy and Palepu, 2001), reduce information asymmetry (Akerlof, 1970), and reduce the cost of capital (Easley and O'Hara, 2004). Among the endless economic and financial benefits associated with CSR reporting, in this paper we will study the consequences associated with firm market value, information asymmetry, and cost of capital.

In the context of market value, the literature is generally in agreement that firms producing higher quality CSR reports perform to a higher standard than those that do not (Li et al., 2013). As Porter and Kramer (2006) propose, CSR is not perceived as a cost but a source of competitive advantage that generates superior corporate performance (Van Beurden and Gössling, 2008). In this regard, authors such as Martínez-Ferrero and Frías-Aceituno (2015) find a positive and bidirectional relationship between CSR performance and firm performance, which may be applicable to the field of disclosure due to the valuation that the market gives to this type of socially responsible behavior. The greatest market value finds its theoretical justification in two theories. First, building upon the social impact theory, the biggest market value is obtained by the satisfaction of the different stakeholder as a result of the social and environmental concessions that they obtain from an organization, which increases the firm reputation and image (Stevens et al., 2005). On the other hand, under the theory of good management, Waddock and Graves (1997) argue that the greater firm performance obtained from higher CSR behavior is due to the improvement in the relationship with the stakeholders. Weber et al. (2010), meanwhile, defend that investment in CSR is closely related to the financial resources of an organization. From this point of view, CSR disclosure can be used as a determinant of subsequent corporate performance. The voluntary disclosure of CSR information allows investors to give added value to the company in question, which they take into account in their investment decisions and which affects the future profitability of their actions (Luo and Bhattacharya, 2006). In this context, we expect a positive impact on firm performance in response to CSR disclosure.

In addition to the effect on market value, considerable research has paid attention to the effect of voluntary disclosure on the informational asymmetries emanating from agency conflict. Investors and shareholders attach special importance to information in the investment decision-making process (Barberis and Thaler, 2003). In general, previous studies agree that the disclosure of corporate information minimizes information asymmetries (e.g., Healy et al., 1999; Leuz and Verrecchia, 2000). The aforementioned authors confirm that the higher quality of the information disclosed, the less asymmetric information that arises from the difference between public and private information. It should be noted that the best informed are usually those in which the management of the company resides and who have access to private information. Voluntary reporting allows the information gap between managers and investors to be reduced, and therefore, a decrease in the agency problem. In this regard, authors such as Frías-Aceituno et al. (2012) confirm that the market positively values CSR reporting by reducing information asymmetries and transaction costs that investors must assume. This reporting that transforms private information into public information improves and reinforces the credibility and confidence in such information (Diamond, 1985; Bushee and Miller, 2012). Thus, it should be noted that authors such as Dhaliwal et al. (2011, 2012) and Verrecchia (2001), among others, consider that the dissemination of information on CSR reduces information asymmetries and improves the accuracy of analysts' forecasts. That is, voluntary CSR disclosure is expected to reduce information asymmetries and the costs associated with them.

Therefore, it can be expected that reducing the problem of information asymmetries will also result in a lower cost of capital, since the best and worst informed investors will have the same information (Diamond and Verrecchia, 1991). With this, investors can have a greater volume of information that allows them to understand the economic risks of their investment, reducing the minimum profitability required in said investment (Botosan, 2006), that is, the cost of capital (Mazumdar and Sengupta, 2005). Botosan and Plumlee (2005) and Dhaliwal et al. (2011) argue

that the voluntary disclosure of information reduces the costs of adverse selection and improves the accuracy in the estimation of risk by financial analysts (Clarkson et al., 2008). The above arguments are supported by previous studies, namely the lower cost of capital in response to a higher quality of disclosure (Bhattacharya et al., 2003). Core et al. (2015) document that a lower cost of capital is achieved by a higher quality of disclosure because the expected cash flow predictions of investors are reinforced.

CSR Disclosures and Their Credibility and Utility to Stakeholders

CSR reporting, therefore—and building upon voluntary disclosure theory—is conceived as one of the mechanisms that allows the problems of information asymmetries to be reduced and the credibility/confidence of investors in said information to be improved (Dhaliwal et al., 2011), which translates into an improvement in the assessment of economic risks and, therefore, at a lower capital cost (El Ghouli et al., 2011).

However, it should be noted that in many cases, the information disclosed by the companies, given their typology and/or structure, is not useful because it does not adjust to the needs of the users who demand it, especially in the case of voluntary reporting. For the same reason, it is not comparable because it is developed according to the company's own criteria, which do not conform to any nationally or internationally recognized standard. Specifically, the increased experience in the preparation of CSR reports has generated a high degree of disbelief regarding the relevance of the information disclosed and its relation to the organization's actual performance; some studies have found a lack of evidence of neutrality and objectivity in the data reported by the companies (Adams, 2002; Gray, 2006).

The idiosyncrasies of such reports greatly hinders their comparison; specifically, Argenti and Forman (2002) and DeTienne and Lewis (2005) have found several methods by which companies can effectively transmit information to different stakeholders without, in practice, eliminating legal uncertainty and the ethics that accompany this type of information, thus avoiding a reduction in the cost of capital or information asymmetry.

More concretely, several papers have observed that stakeholders consider that CSR reports may have little use for analyzing CSR strengths and concerns, especially due to the lack of compliance with the international disclosure standard (Global Reporting Initiative or GRI), which prevents performance comparability (i.e., Asif et al., 2013; Rodrigue, 2014). Firms could reveal less quantitative and non-monetary information and do not report all the CSR indicators that are necessary to know the environmental and social impact of companies (Mio, 2010). In addition, Laine (2010), García-Sánchez et al. (2018), and Martínez-Ferrero et al. (2019) show that companies broadcast polyphonic information; in other words, they use the same discourse for unsustainable behaviors with a fairly similar rhetoric. It is therefore necessary to open a debate about the utility and comparability of the CSR information to which sustainability reports should be considered as a simulation used to camouflage real sustainability problems and project an idealized vision of the performance of companies.

In the context in which stakeholders know that the commitment and reporting on sustainability is also a discretionary decision (Luo et al., 2012), it is necessary to consider the need for other monitoring mechanisms; they may complement the role that CSR information disclosure has in resolving conflict and in asymmetry problems about social and environmental concerns. In the field of voluntary information disclosure, it is necessary to take into account that the responsible body for all business decisions, particularly the quality and relevance of corporate information, is the board of directors.

Complementary Monitoring Mechanisms: The Moderating Role of Independent Directors

On the basis of agency conflict, the board of directors has a fundamental function to monitor and supervise managerial behavior and thus reduce manager discretion (Fama and Jensen, 1983). Moreover, the board continues to be considered one of the main mechanisms of corporate governance that ensures the satisfaction of the demands of the different shareholders and stakeholders (Mason and Simmons, 2014); for instance, the board of directors ensures

a good relationships with employees, customers, governments, regulatory bodies, and so on (García-Sánchez and Martínez-Ferrero, 2018).

The independence of this body is one of the main aspects related to board strength (Kang et al., 2007). Independent directors are the ones that ensure control, monitoring, and alignment of the interests of managers and owners; in addition, they improve the efficiency of the board in management control (Franks et al., 2001). Considering the role of the board in the CSR commitment of a firm (Barako and Brown, 2008), it is relevant and indispensable to analyze the behavior of independent directors in CSR reporting when representing the interests of shareholders and stakeholders (Fama and Jensen, 1983; Hill and Jones, 1992).

Independent directors are mechanisms of corporate governance capable of minimizing the AGENCY problems of Informational asymmetries or adverse selection due to its independence from management and the supervision and the control it exercises over them (Fama and Jensen, 1983). These directors ensure that the organization responds not only to the interests of its shareholders but also to interested parties (Haniffa and Cooke, 2005). In addition, they show greater orientation and pressure for companies to disclose CSR information in order to ensure alignment between the decisions and actions of the company and the corporate legitimacy emanating from the social and environmental impacts of their actions (Frías-Aceituno et al., 2012).

In addition to their capabilities and experience, the need to protect their reputation abroad as a guarantee of their professional future is synonymous with an independent role of supervision, aimed at maximizing the value of corporations. Thus, regarding the protection of the interests of all stakeholders, independent directors will be interested in implementing socially responsible strategies and seek to make voluntary information dissemination consistent with the true performance of the organization. In this respect, a large part of the previous literature agrees that greater board independence improves and reinforces the orientation of the company towards promotion and investment in CSR, satisfying the interests of shareholders and stakeholders (Harjoto and Jo, 2011; Jo and Harjoto, 2011, 2012; Walls et al., 2012); with this, they guarantee the social responsibility of the company (Michelon and Parbonetti, 2012).

However, it should be noted that other authors have evidenced an opposition from independent directors to the CSR disclosure in order to protect the wealth of shareholders (Coffey and Wang, 1998). Thus, Haniffa and Cooke (2005) find a negative impact of an independent board on CSR reporting. Similar, Rupley et al. (2011) document a reduction in the number of environmental topics reported when the presence of independent directors is greater. Prado-Lorenzo and Garcia-Sanchez (2010) also report a reduction in greenhouse gas emissions disclosures when board independence is greater, and the information utility and comparability could have proprietary costs due to the firm's environmental performance. Thus, the basis of this contrary evidence could be that the board has the ability to align management decisions with the objectives of shareholders and stakeholders, which limits the opportunistic behavior of managers (Fama and Jensen, 1983).

In this regard, it should not be forgotten that the preferences and personal interests of independent directors can have implications for decision-making. Their prestige, reputation, and job opportunities are some of the personal incentives of independent directors (Holmström, 1999). Concerns about their career or reputation can affect their behavior and, therefore, their decision about firm strategies. According to Holmström (1999), independent directors will try to avoid any policy that negatively affects their personal reputation and professional career. As such, they assume the risk that misleading information may affect their professional reputation and personal image as well as the future opportunity to belong to other boards (Ravina and Sapienza, 2009). Following the same reasoning of maintaining their reputation abroad, independent directors will develop internal control systems that allow them to sufficiently contrast the quality of information, maintaining an objective view in light of the firm's actual performance.

This is why independent directors closely link their reputational risk to the decision-making process on CSR reporting, monitoring the reliability and credibility of this information. Independent directors, in order to alleviate the concerns of reputational and financial risks associated with CSR issues, can reduce the voluntary reporting of misleading CSR information (Cheng and Courtenay, 2006). However, as long as the readability of CSR disclosure is higher, they can favor the dissemination of CSR information (Cheng and Courtenay, 2006; García-Sánchez and

Martínez-Ferrero, 2017). Therefore, their presence guarantees the existence of a complementary control mechanism for the reliability, relevance, and comparability of the CSR information disclosed by the company.

Moreover, given that their prestige will be strongly linked to their actions, they will be interested in showing CSR behavior and will aim to voluntarily disclose information that is consistent with the true performance of the organization. In this way, they would protect the interests of all stakeholders by providing them, as much as possible, with objective and reliable information, while at the same time avoiding corporate legitimization based on information that does not conform to reality. Assuming that independent directors will ensure the consistency of CSR information reporting as well as its credibility and reliability, it is expected that the quality of CSR disclosure will achieve superior firm performance and a lower cost of capital and information asymmetry when firms have a large percentage of independent directors on their board. That is, independent directors guarantee the quality of the disclosed information, which allows investors, shareholders, and other stakeholders to positively evaluate such reporting (increasing market valuation and minimizing the cost of capital as a result of the lower information asymmetry). Building upon the above argument, we propose our three moderating relationships as follows:

Hypothesis 1. *Independent directors moderate the effect of the CSR reporting on firm performance.*

Hypothesis 2. *Independent directors moderate the effect of the CSR reporting on the cost of capital.*

Hypothesis 3. *Independent directors moderate the effect of the CSR reporting on information asymmetry.*

Methods

Sample

We collected data from Thomson Reuters Eikon for a period of 9 years (2006–2014) for all non-financial firms belonging to different regions, comprising 3594 companies from 31 stock indices. We then merged this data with information of CSR performance and disclosure provided by the Ethical Investment Research Service (EIRIS) database. A final sample of 6442 firm-year observations was available once we excluded missing financial, economic, and CSR information. Our study sample was composed of firms from 28 different countries.

Methodology and Technique of Analysis

The econometric models proposed were examined by using dependence techniques for panel data. The panel data methodology leads to more informative data, greater variability, less collinearity among variables, more degrees of freedom, and greater efficiency than cross-sectional or time period methods. Regarding our technique of analysis and despite of our dependent variable being left and right censored, we used the two-step estimator of Arellano and Bond (1991).

We tested our propositions in three models according to our dependent variables, “**TobinQ**”, “**COC**”, and “**IA**” (Model I, II, and III, respectively). In the three models, our dependent variable was regressed on the quality of CSR information “**CSRDisclosures**”, on the independent directors’ indicator, and on the interaction of both variables and the control variables.

$$\frac{\text{TobinQ}}{\text{COC}} - \frac{\text{COC}}{\text{IA}} = \varphi_1 \text{CSRdisclosures}_{it} + \varphi_2 \text{Independent}_{it} + \varphi_3 \text{CSRdisclosures} * \text{Independent}_{it} + \varphi_4 \text{Size}_{it} + \varphi_5 \text{Leverage}_{it} + \varphi_6 \text{FRQ}_{it} + \varphi_7 \text{Board_Size}_{it} + \varphi_8 \text{Board_Activity}_{it} + \varphi_9 \text{Female}_{it} + \sum_{j=10}^{32} \varphi_j \text{Industry}_i + \sum_{n=33}^{41} \varphi_n \text{Year}_t + \sum_{n=42}^{69} \varphi_n \text{Country} + \mu_{it} + \eta_i$$

where “**TobinQ**” represents market valuation as the book value of total assets minus the book value of common equity, plus the market value of common equity divided by the book value of total assets (Martínez-Ferrero and Frías-Aceituno, 2015); “**COC**” represents the cost of capital as the price–earnings–growth (PEG) model proposed by Easton (2004) and operationalized by Ohlson and Juettner-Nauroth (2005); “**IA**” represents information asymmetries as the absolute value of actual earnings per share, minus the median forecasted earnings per share, scaled by share price where lower absolute errors suggest greater availability of information and therefore a lower level of information asymmetry (Lang and Lundholm, 1996; Marquardt and Wiedman, 1998; Martínez-Ferrero et al., 2016); “**CSRdiscosures**” takes values between 0 and 100 and determines the firm’s CSR disclosure practices accounting for the level of utility and comparability of this information (see Table 1); “**Independent**” is the percentage of independent board members (Harjoto and Jo, 2011; Michelon and Parbonetti, 2012; Bansal et al., 2018); “**Size**” is the natural logarithm of sales; “**Leverage**” is the natural logarithm of the ratio of total debt to total equity; “**FRQ**” represents financial reporting quality and is measured following the model proposed by McNichols and Stubben (2008); “**Board_Size**” is the total number of directors on the board; “**Board_Activity**” is the total number of meetings held in the year; “**Female**” is the percentage of female board members; *i* ranges from company 1 to company 956; *t* takes the values of the years from 2006 to 2014; φ represents the estimating parameters; η_i represents the unobservable heterogeneity; and μ_{it} represents the classical error term. We also controlled for industry, year, and country using *j*, *t*, and *n* dummy variables, respectively.

<i>Utility of CSR Information</i>	
0–10 points	Companies that disclose information about employee conditions and human rights.
0–10 points	Companies that disclose information about business ethics.
0–10 points	Companies that disclose information about the community and other stakeholders.
0–10 points	Companies that disclose information about environmental issues.
<i>Comparability of CSR information</i>	
0 points	Companies that do not disclose CSR information.
20 points	Companies that disclose CSR information not adapted to the GRI guidelines.
40 points	Companies that disclose CSR information adapted to the GRI guidelines and state that it is “in accordance” with the Core option. The Core option contains the essential elements of a CSR report. The Core option provides the background against which an organization communicates the impacts of its economic, environmental, and social and governance performance.
60 points	Companies that disclose CSR information adapted to the GRI guidelines and state that it is “in accordance” with the comprehensive option. The Comprehensive option builds on the Core option by requiring additional standard disclosures of the organization’s strategy and analysis, governance, and ethics and integrity. In addition, the organization is required to communicate its performance more extensively by reporting all indicators related to identified material aspects.

Companies that disclose CSR information adapted to the GRI guidelines. The G4 Sustainability Report Guidelines offer two options to an organization in order to prepare its CSR report "in accordance" with the guidelines: the *Core* option and the *Comprehensive* option. Each option can be applied by all organizations, regardless of their size, sector, or location. The focus of both options is on the process of identifying material aspects. Material aspects are those that reflect the organization’s significant economic, environmental, and social impacts; or substantively influence the assessments and decisions of stakeholders.

Source: The authors follow García-Sánchez and Martínez-Ferrero (2017, 2018).

Table 1 CSR disclosures: Comparability and utility of CSR information reports.

Descriptive and Empirical Results

Table 2 reports the descriptive statistics (mean and standard deviation) and correlations for all the analyzed variables.

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. TobinQ	1.963	1.402	1												
2. COC	0.078	0.106	-0.014	1											
3. IA	0.602	7.801	0.08 *	0.098 ***	1										
4. CSRdisclosures	26.764	20.350	-0.033	0.229 ***	0.033	1									
5. Utility	11.093	7.663	-0.199 ***	0.096 *	-0.027	0.489 ***	1								
6. Comparability	14.829	17.227	0.007	0.063 *	0.058 ***	0.939 ***	0.158 ***	1							
7. Independent	6.278	3.367	0.199 ***	0.032	0.015	-0.045 **	-0.265 ***	0.011	1						
8. Size	22.952	1.242	-0.386 ***	0.100 ***	-0.022	0.192 ***	0.460 ***	0.075 ***	-0.322 ***	1					
9. Leverage	0.578	0.191	-0.142 ***	0.076 **	-0.001	0.103 ***	0.171 ***	0.027 *	-0.115 ***	0.269 ***	1				
10. FRQ	1.14 × 10 ⁸	2.89 × 10 ⁸	-0.066 ***	-0.022	-0.007	0.124 ***	0.171 ***	0.047 ***	-0.072 ***	0.365 ***	0.052 ***	1			
11. Board_Size	11.037	3.377	-0.189 ***	0.091 ***	-0.052 ***	0.090 ***	0.228 ***	0.056 ***	-0.559 ***	0.506 ***	0.191 ***	0.0128 ***	1		
12. Female	7.137	34.847	0.114 ***	0.052	-0.067 ***	-0.038 *	-0.067 ***	0.092 ***	0.380 ***	-0.107 ***	-0.072 ***	-0.007	-0.092 ***	1	
13. Board_Activity	9.143	4.611	0.102 ***	0.102 ***	-0.032 **	0.079 ***	0.019	0.049 ***	0.333 ***	-0.056 ***	0.078 ***	-0.025 *	-0.176 ***	0.279 ***	1

N = 6442 firm-year observations. Significance levels: * $p < 0.10$ ** $p < 0.05$. *** $p < 0.01$. Year, Industry, and Country dummies are not included in this table for reasons of space, but were included in all models.

Table 2 Descriptive Statistics and Pearson Correlations.

The results of Table 3 show the results for our aggregate measure of “**CSRdisclosures**”. The estimation for Model I, aimed at analyzing the impact that the dissemination of CSR information has on the market value, allowed us to observe that the variable “**CSRdisclosures**” had a significant positive impact (coef. = 0.003) for a level of 95% confidence. This effect increased by 0.001 when this information was issued by a company with a greater presence of independents on boards of directors (“**CSRdisclosures*Independent**”).

Dependent Variable	TobinQ		COC		IA	
Variables	Model I		Model II		Model III	
Main effects	Coef.	Std. Error	Coef.	Std. Error	Coef.	Std. Error
CSRdisclosures	0.003 **	0.001	0.003 **	0.002	0.001 ***	0.000
Independent	0.012	0.008	0.008	0.012	0.059	0.003
CSRdisclosures*Independent	0.001 ***	0.000	-0.001 *	0.001	-0.001 ***	0.000
<i>Control variables</i>						
Size	-0.462 ***	0.042	-0.138 **	0.061	0.195 ***	0.015
Leverage	0.515 ***	0.128	0.231	0.259	-3.992 ***	0.224
Performance	7.38×10^{-13}	9.27×10^{-12}	3.79×10^{-11} ***	6.80×10^{-11}	1.1×10^{-11} ***	3.0×10^{-12}
Board_Size	-0.001	0.003	-0.006	0.006	0.029 ***	0.002
Board_Activity	0.002	0.002	0.003	0.003	0.004 ***	0.001
Female	0.103 ***	0.013	0.153 ***	0.029	0.058 ***	0.004
Industry dummies	Included		Included		Included	
Year dummies	Included		Included		Included	
Country dummies	Included		Included		Included	
AR(2) Arellano-Bond test	Pr > z = 0.144		Pr > z = 0.892		Pr > z = 0.264	
Hansen test	Prob > chi2 = 1.000		Prob > chi2 = 1.000		Prob > chi2 = 1.000	

N = 6442 firm-year observations. Significance levels: * $p < 0.10$ ** $p < 0.05$. *** $p < 0.01$. Estimated coefficients and associated standard errors are reported.

Table 3 Regression results.

Models II and III, intended to check the effect of the variable “**CSRdisclosures**” on the cost of capital and asymmetry information problems, showed that the dissemination of CSR information was not valued by investors and was not reducing information asymmetries (coef. = 0.001, $p < 0.05$), which led companies to support higher capital costs (coef. = 0.003, $p < 0.01$). Therefore, without the consideration of complementary mechanisms of control of the quality of the information on CSR disclosed, the companies did not obtain economic benefits derived from their sustainability reports. Nonetheless, when considering the presence of independents (“**CSRdisclosures*Independent**”), we could see how both impacts were corrected in 0.001, for a confidence level of 99%.

From the above, we confirm our three hypothesis and report the positive moderating role of independent directors on the relationship between the CSR disclosure and market value, the cost of capital, and information asymmetry. In particular, and as previously suggested, high quality CSR information does not reduce the cost of capital and information asymmetry unless the percentage of independent directors on the board is high. They transmit positive signals to the market that favor a lower cost of capital derived from smaller asymmetry, as well as greater firm performance. The signals they transmit indicate that the quality of the CSR information will be positively evaluated by the market because of independent directors opposed to revealing misleading information that can damage their personal image, reputation, and professional career. Thus, at least in part, board independence solves the lack of credibility/trust of CSR reporting.

Robust Results

We ensured the robustness of our previous results by proposing a sensitive analysis; our objective was to suggest two alternative dependent variables that contain comparability and utility of CSR information. We followed García-Sánchez and Martínez-Ferrero (2018) and divided “CSRdisclosures” into “Utility” and “Comparability” indexes. More concretely, “Comparability” determined the level of comparability as censured variable codes between 0 and 60—these values represented the level of standardization of the CSR information disclosed—(see Table 1). “Utility” determined the level of utility of CSR information and was obtained from the EIRIS database report information about four types of companies’ CSR disclosure related to environmental issues, employee and human rights, ethics, community, and other stakeholders and identified three levels of utility for each piece of information for stakeholders (see Table 1).

Table 4 presents the results of estimating Models I, II, and III (A for “Utility” and B for “Comparability” as explanatory variables), whereas, again, for examining the moderating effect, it was necessary to operate with the coefficients. On the one hand, with respect to market value, results showed that the superior “TobinQ” was the result of the higher utility and comparability of CSR information (coef. “Utility” = 0.032, $p < 0.05$ in Model IA, and coef. “Comparability” = 0.247, $p < 0.01$ in Model IB). Nonetheless, this effect was stronger when the percentage of independent directors as external members on the board was higher (coef. “Utility*Independent” = 0.004, $p < 0.01$ in Model IA; and coef. “Comparability*Independent” = 0.021, $p < 0.01$ in Model IB). Thus, as we expected and was previously evidenced in line with Hypothesis 1, independent directors moderate and reinforce the positive impact of CSR reporting on firm performance.

Meanwhile and similar to the results of Table 3, with respect to Model II, it was possible to affirm that the comparability and utility of CSR information does not reduce the cost of capital (coef. “Utility” = 0.003, $p < 0.01$ in Model IIA, and coef. “Comparability” = 0.043, $p < 0.05$ in Model IIB) unless there is a higher proportion of independent directors on the board (coef. “Utility*Independent” = -0.002, $p < 0.01$ in Model IIA; and coef. “Comparability*Independent” = -0.009, $p < 0.01$ in Model IIB). Similarly, with respect to Model III, information asymmetry does not reduce as a consequence of higher quality CSR reporting (coef. “Utility” = 0.021, $p < 0.01$ in Model IIIA, and coef. “Comparability” = 0.107, $p < 0.01$ in Model IIIB) unless there is a higher proportion of independent directors on the board (coef. “Utility*Independent” = -0.001, $p < 0.05$ in Model IIIA; and coef. “Comparability*Independent” = -0.009, $p < 0.10$ in Model IIIB). As we proposed and evidenced before, in line with Hypotheses 2 and 3, the impact of CSR reporting on the cost of capital and information asymmetry is moderated by the presence of external directors on the board.

Overall, the market positively assesses the utility and comparability of CSR information, meaning firms benefit from superior performance. However, market agents, particularly those related to investors and creditors, do not trust this information and so the cost of capital/information asymmetry does not decrease unless the board has a high percentage of independent directors. A high percentage of independent directors on the board allows the market to positively assess CSR information by increasing the market’s confidence in it, which translates to firms benefitting from higher performance and a lower cost of capital and information asymmetry.

Dependent Variable	TobinQ				COC				IA			
	Model IA Utility		Model IB Comparability		Model IIA Utility		Model IIB Comparability		Model IIIA Utility		Model IIIB Comparability	
Variables	Coef.	Std. Error	Coef.	Std. Error	Coef.	Std. Error	Coef.	Std. Error	Coef.	Std. Error	Coef.	Std. Error
<i>Main effects</i>												
Utility	0.032 **	0.013			0.003 ***	0.001			0.021 ***	0.006		
Comparability			0.247 ***	0.081			0.043 **	0.019			0.107 ***	0.041
Independent	-0.076	0.025	0.026	0.0167	0.010	0.001	0.020	0.005	0.020	0.008	0.015	0.009
Utility*Independent	0.004 ***	0.002			-0.002 ***	0.001			-0.001 **	0.000		
Comparability*Independent			0.021 **	0.009			-0.009 ***	0.003			-0.009 *	0.005
<i>Control variables</i>												
Size	-0.563 ***	0.083	0.071	0.078	0.073 ***	0.004	0.059 ***	0.011	-0.039	0.032	0.049	0.043
Leverage	1639 ***	0.358	-0.773 **	0.329	-0.047 ***	0.015	-0.113 ***	0.038	-1545 ***	0.214	-0.951 ***	0.265
Performance	1.6×10^{-11}	1.3×10^{-11}	3.5×10^{-12}	3.0×10^{-11}	5.6×10^{-12} ***	3.4×10^{-13}	6.5×10^{-12} ***	1.9×10^{-12}	-1.5×10^{-11} ***	4.4×10^{-12}	4.1×10^{-12}	9.7×10^{-12}
Board_Size	0.009	0.009	0.051 ***	0.019	0.009 ***	0.000	0.006 ***	0.002	0.031 ***	0.006	0.024 **	0.011
Board_Activity	0.008 ***	0.001	0.006 ***	0.001	0.001 ***	0.001	0.001 ***	0.000	0.002 ***	0.001	0.003 **	0.001
Female	0.121 ***	0.039	0.044	0.045	-0.003 ***	0.001	-0.002 ***	0.004	0.017 **	0.007	0.026	0.019
Industry dummies	Included0		Included		Included		Included		Included		Included	
Year dummies	Included		Included		Included		Included		Included		Included	
Country dummies	Included		Included		Included		Included		Included		Included	
AR(2) Arellano-Bond test	Pr > z = 0.164		Pr > z = 0.353		Pr > z = 0.883		Pr > z = 0.100		Pr > z = 0.670		Pr > z = 0.257	
Hansen test	Prob > chi2 = 0.960		Prob > chi2 = 0.643		Prob > chi2 = 0.998		Prob > chi2 = 0.739		Prob > chi2 = 1.000		Prob > chi2 = 1.000	

N = 6442 firm-year observations. Significance levels: * $p < 0.10$ ** $p < 0.05$. *** $p < 0.01$. Estimated coefficients and associated standard errors are reported.

Table 4 Robust results.

Complementary Results

For reinforcing our previous evidence, we examined our research questions by breaking-down the sample, considering the level of CSR performance (see Appendix A for the description of the CSR measure). We obtained two subsamples accounting for the mean value of CSR performance. The quality of CSR information could be determined by the quality of CSR performance (Wang et al., 2018), determining its impact on firm performance, cost of capital, and information asymmetry. These authors defend that greater environmental performance leads to higher voluntary report of this type of information. As these authors report, firms with stronger CSR performance have higher quality CSR reports.

After examining the evidence obtained by breaking down the sample attending to CSR performance, the following findings are reported in Table 5. Firstly, under a lower CSR performance, the quality of CSR disclosures (an aggregate measure of the utility and comparability of information) does not impact performance, cost of capital, or information asymmetry. Secondly, we only support the moderating effect of independent directors on the relationship between CSR disclosures, performance, cost of capital, and information asymmetry in firms with a higher CSR performance. Specifically, the superior performance obtained by firms with high quality CSR reporting is reinforced when the ratio independent to total directors on the board is higher (coef. “**CSRdisclosures*Independent**” = 0.001, $p < 0.01$). Meanwhile, a decrease in the cost of capital and information asymmetry is only supported when independent directors ensure the credibility of this information and translate it to the market (coef. “**CSRdisclosures*Independent**” = -0.001 , $p < 0.01$ in Model II and coef. “**CSRdisclosures*Independent**” = -0.004 , $p < 0.01$ in Model III).

From the complementary results, the above evidence of the moderating effect of independent directors on the relationship between the utility and comparability of CSR information and firm performance is only supported when CSR performance is superior. Similarly, the cost of capital and information asymmetry are only reduced as a result of CSR disclosures when the ratio independent to the total directors is higher and, in particular, when the CSR performance of a firm is also higher.

Dependent Variable	TobinQ				COC				IA			
	Weak CSR		High CSR		Weak CSR		High CSR		Weak CSR		High CSR	
Variables	Coef.	S. Error	Coef.	S. Error	Coef.	S. Error	Coef.	S. Error	Coef.	S. Error	Coef.	S. Error
<i>Main effects</i>												
CSRdisclosures	-0.005 **	0.002	0.006 ***	0.002	-0.001	0.002	0.001 ***	0.001	0.006	0.005	0.004 ***	0.000
Independent	-0.092	0.011	0.039 ***	0.012	-0.006	0.009	0.017 ***	0.001	0.037	0.025	0.029 ***	0.001
CSRdisclosures*Independent	0.001	0.000	0.001 ***	0.000	0.000	0.001	-0.001 ***	0.0001	-0.002	0.001	-0.004 ***	0.001
<i>Control variables</i>												
Size	-0.316 ***	0.063	-0.150 **	0.067	-0.037	0.099	0.035 ***	0.006	0.481 ***	0.101	0.444 ***	0.002
Leverage	-0.554 ***	0.199	1.218 ***	0.258	0.088	0.144	-0.032	0.027	-5.844 ***	1.288	-0.975 ***	0.003
Performance	4.8×10^{-11} ***	8.9×10^{-12}	3.3×10^{-11} ***	7.3×10^{-12}	-17×10^{-12}	4.2×10^{-11}	-8.5×10^{-12}	6.6×10^{-13}	-1.5×10^{-10} ***	4.1×10^{-11}	1.8×10^{-11} ***	1.4×10^{-13}
Board_Size	-0.089 ***	0.009	-0.003	0.006	-0.031	0.029	0.015 ***	0.001	0.013	0.012	0.005 ***	0.001
Board_Activity	0.001	0.001	0.006 ***	0.001	-0.003	0.003	0.001 ***	0.001	-0.002	0.001	-0.001 ***	0.001
Female	-0.002	0.019	0.044	0.028	0.049	0.052	0.016 ***	0.002	0.114 ***	0.042	0.039 ***	0.001
Industry dummies	Included				Included				Included			
Year dummies	Included				Included				Included			
Country dummies	Included				Included				Included			
AR(2) Arellano-Bond test	Pr > z =0.361		Pr > z =0.209		Pr > z =0.628		Pr > z =0.998		Pr > z =0.684		Pr > z =0.536	
Hansen test	Prob > chi2 =0.217		Prob > chi2 =1.000		Prob > chi2 =0.996		Prob > chi2 = 1.000		Prob > chi2 =1.000		Prob > chi2 =0.676	

N = 6442 firm-year observations. Significance levels: * $p < 0.10$ ** $p < 0.05$. *** $p < 0.01$. Estimated coefficients and associated standard errors are reported.

Table 5 Complementary results.

Discussion of Results

Overall, our results support that board independence moderates the relationship between the quality of CSR information, market value, information asymmetry, and cost of capital. On the one hand, market value is superior when companies report CSR information of superior comparability and utility, while the cost of capital and information asymmetry do not decrease as a result. However, because independent directors ensure the consistency of the CSR information reported, as well as its credibility and reliability, we show that the quality—utility and comparability—of CSR disclosure reduces information asymmetry problems; it achieves a lower cost of capital with the increased presence of these directors.

In light of the above evidence, on the one hand, we support the existing literature about the positive relationship between CSR reporting and market value (e.g., Mackey et al., 2007; Weber et al., 2010; Li et al., 2013; Martínez-Ferrero and Frías-Aceituno, 2015). We support and reinforce previous studies that document how well-developed firms in terms of CSR and those that disclose CSR information are those with superior firm performance. However, based on our findings, we cannot support the extant literature about the lower cost of capital and information asymmetry as a result of CSR reports (for instance, Barberis and Thaler, 2003; Dhaliwal et al., 2011, 2012; Frías-Aceituno et al., 2012; El Ghouli et al., 2011; Core et al., 2015). In contrast with these studies, our results do not confirm that voluntary CSR information increases the availability of information to investors, and decreases the estimation risk component or the cost of capital.

On the other hand, the lack of evidence about the negative link between the quality of CSR information and the cost of capital/information asymmetry are in line with some interesting arguments. Specifically, as Adams (2002) and Gray (2006) pointed out, there is a debate around the relevance of the information disclosed in CSR reports and, in particular, around the lack of neutrality and objectivity in the data reported. This lack of credibility leads investors to doubt the comparability and utility of this information. In this regard, our findings indicate that CSR reporting is only relevant for firms with complementary control mechanisms that guarantee information quality, scenarios in which shareholders and investors benefit from a decrease in information asymmetry and include this voluntary information in their investment decisions (Mackey et al., 2007); in other cases, CSR reports do not benefit from a lower estimation risk, information asymmetry, or cost of capital.

Finally, from our main findings, we clearly support the assertion that independent directors guarantee the quality of disclosed information, which allows investors, shareholders, and other stakeholders to positively evaluate such reporting (increasing market valuations and minimizing the cost of capital and asymmetries of information). When considering the moderating effect of board independence as a control mechanism to decrease agency problems, we agree that independent directors achieve a reduction in asymmetries of information by reinforcing the credibility of CSR disclosure (García-Sánchez and Martínez-Ferrero, 2017). We support the position that board independence ensures the reliability and credibility of CSR information, alleviating concerns about the risks associated with CSR issues, as Cheng and Courtenay (2006) documented, which can be associated with damage to the personal image and reputation of independent directors. As Cramer and Hirschland (2006), Ravina and Sapienza (2009), and García-Sánchez and Martínez-Ferrero (2018) found, we highlight that independent directors ensure a minimum of objectivity between the CSR information reported and the real performance of the firm, and in so doing maintain the reliability, relevance, and comparability of the information disclosed. In other words, our results support the notion that quality CSR disclosure achieves superior economic benefits—higher market value and a lower cost of capital and information asymmetry—where firms have a large percentage of independent directors.

Our results go further, and we confirm, in addition, that there are additional factors that influence the moderating effect of the independent board. Specifically, when the CSR performance of a firm is higher, the moderating effect of independent directors is greater with respect to the impact of the utility and comparability of the market valuation and cost of capital. As Wang et al. (2018) showed, the higher CSR performance, the higher probability of voluntarily disclosing this type of performance; this, therefore, leads to a series of benefits, namely performance, cost of capital, and information asymmetries. Again, and as Clarkson et al. (2008) and Cheng and

Courtenay (2006) showed, higher board independence aims to increase CSR performance in order to solve credibility and transparency concerns around CSR information.

Concluding Remarks

With the aim of examining the impact of the quality of CSR reporting on market aspects associated with firm performance, cost of capital, and information asymmetry, as well as the moderating effect of independent directors as a control mechanism, we made use of an international database to propose several regressions models for panel data. This research provides evidence that the market positively assesses the utility and comparability of CSR information, allowing firms to perform to a higher standard. However, market agents, particularly those related to investors and creditors, do not trust this information, and so the cost of capital and information asymmetry do not decrease unless the board has a higher percentage of independent directors. This allows the market to positively assess CSR information by increasing the market's confidence in it, which translates to firms benefitting from higher performance and a lower cost of capital and information asymmetry.

This paper makes a number of contributions to the previous literature related to socially responsible disclosure—and its consequences—and board independence, and adds exploratory evidence using a panel dataset. Firstly, this paper enriches the understanding of the impact of the quality of CSR reporting in different market aspects, namely firm performance, cost of capital, and information asymmetry. It provides new insights into the consequences of this reporting that affect stakeholders' perceptions and assessments of the firm; we clearly provide evidence about what control governance mechanisms are needed for CSR disclosure to obtain benefits associated with capital market (market value, information asymmetries, and cost of capital). Previous studies consider as a measure of disclosure the number of pages, words, sentences, and so on; however, we contribute by also examining utility and comparability of information. With our criteria, as **Ballou et al. (2012)** emphasized, we responded to the research call to evaluate the content of CSR disclosures (utility and comparability) beyond the existence of CSR reporting. Secondly, regarding board independence, its possible influence as a mechanism of corporate governance allowed it special consideration in terms of CSR disclosure. Previous research examined the effect on board CSR; nevertheless, our study reinforces the understanding about the role of independent directors in CSR disclosure by accounting for their consequences. Thus, we contribute significantly to examinations of how the benefits of CSR disclosure are reinforced by higher board independence. Thus, we clearly reinforce the previous literature that defends the assertion that a higher percentage of independent directors on the board favors a positive evaluation of the CSR information by market agents. As methodological contributions, as opposed to previous studies focused on the USA, UK, or Asian countries, we use an international sample of analysis including 28 countries that examined the period from 2006 to 2014. Moreover, the GMM estimator of **Arellano and Bond (1991)** was used for regressing our research models.

The above evidence provides some implications regarding the composition of corporate governance. Firms must recognize in independent directors their role in ensuring the alignment between firms' decisions and stakeholders' objectives, as well as in legitimizing firms' CSR impacts of their actions. However, the main implication of these results is the relevance for regulatory bodies in terms of corporate governance recommendations. It is true that a greater effort has been made to promote stronger corporate governance and boards over the few last years. However, additional effort and compromise is required. Regulatory bodies and governments find that in ensuring greater board independence, one of the mechanisms that favors the interests of different shareholders and stakeholders is satisfied and CSR performance is emphasized, guaranteeing even more the utility and credibility of CSR information and the positive outcomes stemming from it. To achieve these positive outcomes, it is necessary that these bodies work in tandem for developing and promoting new requirements in terms of board composition to ensure higher representation of independent directors on boards.

Nonetheless, this paper presents a number of limitations, which can be addressed through future research. First, despite the use of an international database being one of the contributions, the examination of institutional

conditions at the country level is necessary because of legal, regulatory, or cultural differences. Furthermore, future research could also examine how the relationships here tested differ by industry groups. Moreover, some control variables were omitted given data availability (for instance, firm age, ownership, internationalization aspects, and so on). Finally, additional board characteristics can also impact the quality of CSR communication (diversity of board directors, tenure, remuneration, and so on).

Funding: Ministerio de Ciencia e Innovación, Grant/Award Number: ECO2013-43838P; Ministerio de Ciencia, Innovación y Universidades, Grant/Award Number: RTI2018-093423-B-I00; Universidad de Salamanca, Grant/Award Number: USAL2017-DISAQ.

Appendix A. CSR Performance Measures

Information on CSR performance was compiled from the EIRIS database, which is widely used in academic research (see, among others, [Fabrizi et al., 2013](#); [Martínez-Ferrero et al., 2016](#)). Through the information that companies disclose online and through questionnaires and surveys sent to companies, EIRIS addresses different areas (human rights, environmental concerns, relationships with employees and stakeholders, and ethical issues), as shown in Table A1, assigning criteria grades to specific attributes addressing each of these areas. This procedure might involve a subjective assessment of relevant corporate practices, but the topics addressed and the questions posed are designed in such a way as to enable a reasonable assessment of the activities evaluated. Moreover, EIRIS combines a broad range of environmental and socio-labor data points to assess how companies respond to the various CSR challenges they face and to identify corporate leadership in tackling environmental and social challenges through policies, systems, reporting, and documented improvements in performance.

To obtain the CSR performance of companies, we make use of an aggregate measure that takes into consideration a range of important issues across companies according to the 26 issues shown in Table A1. Similar to [Fabrizi et al. \(2013\)](#) and [Martínez-Ferrero et al. \(2016\)](#), we transformed the EIRIS criterial rating for each measure into a numerical rating. According to the scoring criteria of EIRIS (inadequate, weak, moderate, good, and exceptional), we assigned five values (0, 1, 2, 3, and 4). Overall, companies were considered socially/environmentally responsible with regard to a specific aspect when the score was above the threshold of 2 and were otherwise not considered socially/environmentally responsible. Because CSR was determined based on the non-weighted sum of these 26 items, it was in the range 0 to 104.

<i>Human Rights Issues</i>	<i>Inadequate</i>	<i>Weak</i>	<i>Moderate</i>	<i>Good</i>	<i>Exceptional</i>
What is the extent of policy addressing human rights issues?	0	1	2	3	4
What is the extent of systems addressing human rights issues?	0	1	2	3	4
Does the Company report on human rights issues?	0	1	2	3	4
<i>Environmental issues</i>					
How does EIRIS rate the Company's environmental management system?	0	1	2	3	4
How does EIRIS rate the Company's environmental policy system?	0	1	2	3	4
How does EIRIS rate the Company's environmental reporting system?	0	1	2	3	4
What level of improvements in environmental impact can the Company demonstrate?	0	1	2	3	4
<i>Stakeholders issues</i>					
Does the Company have policies on maintaining good relations with customers and/or suppliers?	0	1	2	3	4
How clear is the Company's commitment to community or charitable work?	0	1	2	3	4
Does the Company have policies on maintaining good relations with customers and/or suppliers?	0	1	2	3	4
How clear is the evidence of systems to maintain good relations with customers and/or suppliers?	0	1	2	3	4
How many stakeholder issues have been allocated to board members?	0	1	2	3	4
What level of engagement with stakeholders is disclosed by the Company?	0	1	2	3	4
How good are the Company's policies towards its stakeholders overall?	0	1	2	3	4
How good is the Company's quantitative reporting on stakeholder relationships?	0	1	2	3	4
How good are the Company's management systems for stakeholders overall?	0	1	2	3	4
<i>Employees issues</i>					
How good is the Company's policy on equal opportunity and diversity issues?	0	1	2	3	4
How clear is the evidence of systems and practices to support equal opportunities and diversity?	0	1	2	3	4
How clear is the evidence of health and safety systems?	0	1	2	3	4
How clear is the evidence of systems to manage employee relations?	0	1	2	3	4
How clear is the evidence of systems to support employee training and development?	0	1	2	3	4
How clear is the evidence of systems and practices to advance job creation and security?	0	1	2	3	4
<i>Ethical issues</i>					
Does the Company have a code of ethics and, if so, how comprehensive is it?	0	1	2	3	4
Does the Company have a system for implementing a code of ethics and, if so, how comprehensive is it?	0	1	2	3	4
What is the extent of the Company's policy for countering bribery?	0	1	2	3	4
What is the extent of the Company's system for countering bribery?	0	1	2	3	4
What is the extent of the Company's reporting on countering bribery?	0	1	2	3	4
<i>Values for CSR</i>	0	26	52	78	104

Table A1 Corporate social responsibility according to external and internal stakeholders.

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