



“Relevance of voluntary environmental and social reporting in the French context: Does CSR assurance matter?”

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RELEVANCE OF VOLUNTARY ENVIRONMENTAL AND SOCIAL REPORTING IN THE FRENCH CONTEXT: DOES CSR ASSURANCE MATTER?

Abstract

Corporate social responsibility (CSR) reporting is of high importance for firms that wish to communicate their environmental and social actions to stakeholders and society at large. Of course, the credibility of CSR reporting affects considerably the market reaction to the information provided. Although research on environmental and social reporting is important, empirical evidence regarding the relevance of environmental and social disclosure to firms' market values is scarce. This paper specifically analyzes the moderating role of external CSR assurance on the relationship between voluntary environmental and social reporting and firm market value. A content analysis index is then developed based on disclosure items specified in the Global Reporting Initiative guidelines. Using hand-collected data on a sample of French companies, the authors find that CSR assurance has a negative moderating effect on the relationship between high environmental and social reporting and firms' market value, raising questions about the role of external assurance in assessing CSR reporting credibility.

Keywords

corporate social responsibility (CSR), CSR assurance, environmental and social reporting, firm market value, France

JEL Classification

G32, G41, M14, Q56

INTRODUCTION

The managerial and theoretical literature on corporate social responsibility (CSR) reporting has greatly expanded with the development of environmental and social practices (Perrini, 2005), especially after the Enron scandal in 2001. CSR reporting is presented as a part of the constructive dialogue between the firm and its various stakeholders (Nielsen & Thomsen, 2007), and represents part of the evolution of firms' governance systems for environmental and social activities, on the one hand, and sustainability activities, on the other hand. However, CSR reporting, and especially environmental and social reporting, has been widely criticized for not providing meaningful information, for being partial and, in most cases, for being relatively trivial. Such communications cannot provide reliable measures for readers of the organization's CSR performance (Cho, Michelon, Patten, & Roberts, 2014). Among the several categories of stakeholders, shareholders are those most concerned with the environmental and social disclosure strategy because they bear the full costs of communication, monitoring, and any managerial misbehavior. Although research on CSR practices has been growing since the 2000s, there is little empirical evidence that this is specific to environmental and social disclosure.

Extended literature exists concerning the role of CSR assurance, as an external sustainability-oriented corporate governance mecha-

nism¹ in the field of environmental and social reporting practices (Ruhnke & Gabriel, 2013; Peters & Romi, 2015; Clarkson, Li, Richardson, & Tsang, 2019; Boiral & Heras-Saizarbitoria, 2020). In this respect, the signals of high-quality reporting and credibility that are given by CSR assurance complement each other (Ruhnke & Gabriel, 2013). Whereas the publication of environmental reports in accordance with Global Reporting Initiative (GRI) guidelines implies an interest in publishing high-quality information (Simnett, Vanstraelen, & Chua, 2009; Ruhnke & Gabriel, 2013), a voluntary assurance engagement may signal the credibility of both the information and its source (Peters & Romi, 2015). Although CSR assurance is considered a tool to enhance credibility and reinforce legitimacy (Casey & Grenier, 2014; Du & Wu, 2019), no studies have yet investigated the incremental effect of CSR assurance on the relevance of environmental and social reporting to firm market value.

The present paper addresses this gap by analyzing the moderating role of voluntary CSR assurance, as an environmental-oriented corporate governance mechanism, in the relationship between voluntary environmental and social reporting and the firm market value. On a conceptual level, the objective is to provide new inputs for *social and environmental accounting* research stream, understood as a form of corporate accounting that takes into account the social, environmental, and sustainable behavior of companies (Gray, Adams, & Owen, 2017). The paper is organized as follows. In section 1, the two essential elements of the theoretical framework are introduced based on a brief literature review, namely the impact of CSR reporting on the firm market value, and the potential impact of CSR assurance; a research hypothesis is then proposed. In section 2, the study's methodology is introduced, specifying the field of application (France), the variables selected, and the research model used. In sections 3 and 4, the main results are described, and the research hypothesis is tested. In section 5, a discussion highlights the contributions but also the limitations of research, which suggest new avenues for future research. Final section concludes the paper.

1. THEORETICAL FRAMEWORK

Several studies have examined whether investors value information provided in CSR reports, including CSR reporting as a valuable tool of legitimacy for an environmentally responsible company. Cormier, Aerts, Ledoux, and Magnan (2009) focus on disclosure concerning social and human capital and find a positive impact of quantitative disclosure on the market value measured by Tobin's *q*. Similarly, Qiu, Shaukat, and Tharyan (2016) show that firms with higher environmental and social disclosure scores have higher share prices, thus implying that investors care about environmental and social disclosure. M. Nekhili, Nagati, Chtioui, and A. Nekhili (2017a) introduce a content analysis index based on disclosure items defined by the French Grenelle II Act in accordance with GRI guidelines, and find a positive relationship between voluntary environmental and social reporting and French firms' market value measured by Tobin's *q*. Although research on the

relationship between environmental and social reporting and firm market value has grown considerably over the past decade (Durand, Paugam, & Stolowy, 2019), the positive impact on market value is still unclear, and this may depend on various factors.

Cho, Michelon, Patten, and Roberts (2014) point out that it is still uncertain whether environmental and social disclosure should be expected to correlate with firm market value. Cahan, De Villiers, Jeter, Naiker, and Van Staden (2016) investigate whether national-level institutional factors influence the potential impact of environmental and social disclosure on firm market value (measured by Tobin's *q*). Studying the effect of environmental and social disclosure on firms in 21 countries, they show that additional information provided by unexpected environmental and social disclosure is more relevant in terms of market value in countries where financial information is more opaque, that is, in countries with less democracy and commitment to the environment. In addition

¹ CSR assurance is provided by auditors who certify the veracity and completeness of CSR disclosure. It is, therefore, a signal of credibility addressed to investors and, more broadly, to all stakeholders.

to country-level institutional factors, other studies point to firm-level confounding factors affecting the relevance of environmental and social disclosure to firm market value. More generally, environmental and social reporting produces large volumes of information, “*often without identification of strategic or financial implications or relation to information contained in the annual report, which has rendered it of little use to information users, especially providers of financial capital*” (Zhou, Simnett, & Green, 2017, p. 95).

Moroney, Windsor, and Aw (2012) show that assured information reduces information asymmetry between principals and agents, in other words, between shareholders and managers, and Ruhnke and Gabriel (2013) find that the greater the company’s agency costs, the higher the probability that the company will voluntarily obtain external assurance on its environmental and social report. Consequently, CSR assurance is an effective monitoring mechanism to enhance the credibility of the CSR report and reduce agency costs. Nevertheless, the provision of environmental and social disclosure may also be considered as impression management by engaging in symbolic communication without meaningfully addressing CSR duties by undertaking strategic actions. In the context of the possibility of such opportunism, the assurance of CSR reports constitutes a valuable corporate governance instrument for the legitimization of environmental-related aspects of firms’ disclosure (Simnett, Vanstraelen, & Chua, 2009; Gillet-Monjarret & Martinez, 2012; Clarkson et al., 2019), thereby enhancing the credibility of firms’ reports and promoting the firm’s environmental and social activities in a manner that matches that of its main competitors (Simnett, Vanstraelen, & Chua, 2009).

Again, the outcomes of previous studies surrounding the relevance of environmental and social disclosure are not conclusive. Cho, Michelon, Patten, and Roberts (2014) examine whether assurance on environmental and social reporting impacts firms’ market value in the US context and underline that investors in the United States perceive that CSR assurance does not add any further value to disclosing companies. Like Cho et al. (2014), Fazzini and Dal Maso (2016) find no statistically significant impact on firm valuations of CSR assurance by market participants in the Italian context. In

contrast, Casey and Grenier (2014) show that CSR assurance is associated with a reduced cost of capital. These conflicting results give evidence that shareholders may attribute more value to CSR assurance when the perceived benefits of purchasing CSR assurance exceed its potential costs. Indeed, shareholders may perceive voluntary CSR assurance as a source of additional costs (Cho et al., 2014), leading firms to determine whether to procure assurance for their CSR reports on the basis of the cost-benefit analysis. Given the above findings, research hypothesis is formulated as follows: environmental and social reporting is more relevant when CSR assurance is provided.

2. DATA AND METHODS

The present empirical study analyzes French listed companies on the SBF120 index for the period 2001–2011, with the exclusion of financial, insurance, and real estate companies. In France, from the introduction of the NRE (New Economic Regulations) legislation in May 2001, governments and legislators have recommended that all firms listed on the French Stock Exchange report on their CSR activities in their annual reports (or in independent sustainability reports). The later Grenelle II legislation in 2012 requires companies to include information on environmental and social performance in their annual report in accordance with GRI guidelines. Accordingly, this study, therefore, examines data for qualifying SBF120 index companies for the period when environmental and social reporting and the assurance of such disclosures were *voluntary* from 2001 to 2011. The data used in the present study on governance variables, ownership variables, and CSR information was hand-collected from firms’ annual reports, and financial data were taken from the ThomsonOne database.

2.1. Dependent variable: Tobin’s q

Following Cormier, Aerts, Ledoux, and Magnan (2009), Cahan et al. (2016), and Nekhili et al. (2017a,b), Tobin’s q is used as dependent variable to measure the value of the firm’s intangible capital (i.e., reporting on CSR performance). Tobin’s q is measured as the sum of market value of common equity, book value of preferred stock, long-term debt and short-term debt, divided by the book value of total assets.

Tobin's q , as a market-based measure of firm performance, reflects growth opportunities and the quality of a firm's current and future investments.

2.2. Endogenous variables

Two variables are simultaneously and endogenously determinants of firm value: environmental and social, on the one hand, reporting and CSR assurance, on the other hand. To measure firms' levels of environmental and social reporting, a GRI-based content analysis index is developed based on the Grenelle II Act. Following Botosan (1997), the unweighted disclosure index methodology is used. In other words, the level of aggregate CSR reporting is measured by considering the total number of items specific to each of the social, environmental, and sustainability reporting components. The measurement items used in this study comprise 42 items sub-divided into three categories: social information (19 items), environmental information (14 items), and sustainability information (9 items). As in M. Nekhili, Nagati, Chtioui, and A. Nekhili (2017a), Nekhili, Nagati, Chtioui, and Rebolledo (2017b), the firm's level of disclosure is measured by the sum of the scores for the three categories of CSR information concerning each of its components (social, environmental, and sustainability reporting).² An index is then calculated as the ratio of the firm's aggregate score for CSR reporting to the maximum possible score, equal to the sum of relevant items. CSR assurance is a dichotomous variable that takes a value of 1 if the firm has external CSR assurance, and otherwise takes a value of 0.

2.3. Control variables

Based on the CSR literature, several relevant control variables can be identified. One first controls for whether the firm adopts a CSR committee at the board level. Such a committee is responsible for both reporting of CSR activities and their evaluation and control, thus allowing companies to provide more reliable CSR information. Consistent with Giannarakis (2014), board size is positively associated with environmental and social reporting, such that board with a large number of directors brings diverse and important resources to the effective promotion of CSR activities and promotes a wider infor-

mation and experience exchange. Martinez-Ferrero and Garcia-Sanchez (2017) suggest that the probability of a company obtaining external assurance for its sustainability reporting decreases as board size increases. Following the research related to the impact of the presence of women on boards, M. Nekhili, Nagati, Chtioui, and A. Nekhili (2017a) find that a gender-diverse board enhances the relevance of environmental and social reporting to firm value. Consequently, CSR assurance may act as a substitute governance mechanism for non-diverse boards.

Michelon and Parbonetti (2012) show that the presence of independent directors on the board is not in itself positively linked to sustainability disclosure. However, board independence is likely to increase the probability of the use of CSR assurance services (Martinez-Ferrero & Garcia-Sanchez, 2017). The number of board meetings a company holds is a proxy for diligence and also an indicator of directors' concerns regarding matters such as CSR obligations (Giannarakis, 2014). CEO duality (i.e., where the CEO also holds the position of chair of the board) is associated with a reduction in transparency concerning social activities (Giannarakis, 2014; Nekhili et al., 2017a,b), and may then influence the demand for CSR assurance (Liao, Lin, & Zhang, 2018). According to Hermalin and Weisbach (1998), CEO tenure is a proxy for CEO power *vis-à-vis* the board of directors. Along the similar lines, Lewis, Walls, and Dowell (2014) find evidence that high-tenured CEOs are less likely than newly appointed CEOs to comply with stakeholders' needs regarding voluntary environmental disclosure.

Regarding ownership structure, three variables are considered: family shareholding, institutional shareholding, and employee shareholding. Although family-owned firms report less information on their CSR activities, they may be able to gain shareholders' support more easily than non-family firms (Nekhili, Nagati, Chtioui, & Rebolledo, 2017b). Dhaliwal, Li, Tsang, and Yang (2011) show that voluntary environmental and social reporting attracts institutional investors with long-term perspectives and monitoring incentives. Peters and Romi (2015) suggest that institutional shareholding is positively associated with the decision to obtain assurance for the sustainability report, which is consistent with the growing demand

² Items of Grenelle II Act and their accordance with the GRI guidelines are available from the authors upon request.

for sustainability information from institutional investors and incentives for reporting credibility.

In common with prior studies (Nekhili et al., 2017a,b), one also controls for firms' accounting and financial characteristics, such as beta value, R&D expenditure, ownership of foreign assets, leverage, and firm size (turnover) known to affect the relationship between environmental and social reporting and market performance. One also adds industry and year fixed effects to take into account the different interests of the various stakeholders in different industries and to control for unobserved factors common to all firms in a given year. Table 1 summarizes the variables used in the regression analysis³.

Table 1. Variables used in the regression analysis

| Variable status | Variable* | Definition |
|---------------------------------------|-------------------|------------------------------------|
| Dependent variable (firm performance) | TQ | Tobin's q |
| Endogenous variables | CSR_REP | Environmental and social reporting |
| | CSR_ASS | CSR assurance |
| | CSR_COM | CSR committee |
| | BOARD_SIZE | Board size |
| | FEM_DIR | Female directorship |
| | BOARD_IND | Board independence |
| | BOARD_MEET | Board meeting |
| | DUAL | CEO duality |
| | TENURE | CEO tenure |
| | Control variables | FAM_SH |
| INST_SH | | Institutional shareholding |
| EMPL_SH | | Employee shareholding |
| DEBT | | Leverage |
| RISK | | Market risk |
| R&D | | R&D intensity |
| FOR_ASS | | Foreign assets |
| SIZE | | Firm size |
| Industry | Industry | |

Note: * variables from ThomsonOne are winsorized at the 1% and 99% levels.

2.4. Model

Certain unobservable features may affect the relationships between environmental and social reporting, CSR assurance, and market value. Further, as reported by Cai, Lee, Wu, Xu, and Zeng (2017), past performance may affect firms' environmental and social disclosure practices. The

classical problem of endogeneity, therefore, arises here. Therefore, the two-step General Method of Moments (GMM) estimation specification is used following Blundell and Bond (1998):

$$\begin{aligned}
 TQ_{i,t} = & \beta_0 + \beta_1 LagTQ_{i,t} + \beta_2 CSR_REP_{i,t} + \\
 & + \beta_3 CSR_ASS_{i,t} + \beta_4 CSR_COM_{i,t} + \\
 & + \beta_5 BOARD_SIZE_{i,t} + \beta_6 BOARD_IND_{i,t} + \\
 & + \beta_7 FEM_DIR_{i,t} + \beta_8 MEET_{i,t} + \\
 & + \beta_9 DUAL_{i,t} + \beta_{10} TENURE_{i,t} + \\
 & + \beta_{11} FAM_SH_{i,t} + \beta_{12} INST_SH_{i,t} + \\
 & + \beta_{13} EMPL_SH_{i,t} + \beta_{14} DEBT_{i,t} + \\
 & + \beta_{15} RISK_{i,t} + \beta_{16} R\&D_{i,t} + \beta_{17} FOR_ASS_{i,t} + \\
 & + \beta_{18} SIZE_{i,t} + \beta_{18} YEAR_FE + \\
 & + \beta_{18} INDUSTRY_FE + \varepsilon_{i,t},
 \end{aligned}
 \tag{1}$$

where ε_{it} is the error term and the subscripts i and t denote a firm i at the time period t , respectively. All variables are as defined in Table 1. Two well-known tests are used to support the consistency of the GMM estimators: the second-order autocorrelation test for error terms and the Sargan/Hansen test of over-identifying restrictions.

3. PRELIMINARY RESULTS

Table 2 presents the step-by-step results of equation (1). Results of Model 1 show a negative and significant impact of environmental and social reporting on firms' market value (with $\beta_2 = -0.132$, $t = 2.27$, $p < 0.01$), suggesting that voluntary environmental and social disclosure, albeit in accordance with the GRI guidelines, is negatively valued by shareholders. This finding is consistent with the one of M. Nekhili, Nagati, Chtioui, and A. Nekhili (2017a) in the French context and confirms the credibility problem surrounding voluntary environmental and social disclosure. In Model 2 of Table 2, one considers the presence of CSR assurance. The impact of CSR assurance on Tobin's q is positive, albeit not significant. This result may be explained by the fact that shareholders are concerned about the cost of purchasing assurance because they may believe that assurance does not add value to the firm's reporting.

3 The measurement of each item is available from the authors upon request.

Table 2. Regression of Tobin's q on CSR reporting and CSR assurance

| Variables | Model 1 | | Model 2 | |
|---------------------------------------|-----------------------|--------|-----------------------|--------|
| | Coefficient | z-test | Coefficient | z-test |
| Lag TQ | 0.636*** | 92.47 | 0.647*** | 49.51 |
| CSR_REP | -0.132** | -2.27 | -0.069* | -1.78 |
| CSR_ASS | - | - | 0.149 | 1.22 |
| CSR_COM | -0.179*** | -5.01 | -0.175*** | -4.97 |
| BOARD_SIZE | -0.088*** | -4.30 | -0.086*** | -3.07 |
| BOARD_IND | -0.037 | -1.16 | -0.072* | -1.76 |
| FEM_DIR | -0.297*** | -3.74 | -0.374*** | -4.39 |
| BOARD_MEET | -0.058*** | -3.56 | -0.025 | -1.03 |
| DUAL | -0.077*** | -5.16 | -0.116*** | -5.83 |
| TENURE | -0.001 | -0.02 | 0.004 | 0.24 |
| FAM_SH | 0.141*** | 3.23 | 0.101 | 1.61 |
| INST_SH | -0.041 | -1.00 | -0.036 | -0.99 |
| EMPL_SH | -0.810*** | -4.60 | -1.059*** | -3.90 |
| DEBT | -0.298*** | -6.22 | -0.317*** | -4.15 |
| R&D | -0.062 | -0.46 | -0.054 | -0.24 |
| RISK | 0.069** | 2.50 | 0.099** | 2.36 |
| FOR_ASS | -0.123*** | -3.98 | -0.178*** | -4.52 |
| SIZE | -0.001 | -0.17 | -0.011 | -1.22 |
| Intercept | 0.979*** | 8.17 | 0.873*** | 6.93 |
| YEAR | Yes | | Yes | |
| INDUSTRY_FE | Yes | | Yes | |
| Number of observations | 784 | | 784 | |
| Fisher (Prob > F) | 41,666.59 (p = 0.000) | | 34,160.63 (p = 0.000) | |
| Arellano-Bond test AR(1) (z, p-value) | -2.89 (p = 0.007) | | -2.90 (p = 0.004) | |
| Arellano-Bond test AR(2) (z, p-value) | 1.37 (p = 0.172) | | 1.40 (p = 0.163) | |
| Sargan test (Chi-square, p-value) | 637.82 (p = 0.000) | | 637.07 (p = 0.000) | |
| Hansen test (Chi-square, p-value) | 78.60 (p = 0.225) | | 75.37 (p = 0.309) | |

Note: *, **, *** represent significance at 0.05, 0.01 and 0.001 levels, respectively.

Concerning control variables, the results of Model 1 in Table 2 are similar to those of previous studies conducted in the French context (Nekhili et al., 2017a,b). Tobin's q is negatively associated with board size, board gender diversity, frequency of board meetings, CEO duality, and employee ownership, and positively associated with family shareholding. No significant relationship, however, is found for board independence, board tenure, and institutional shareholding. The results presented in Table 2 also reveal a positive relationship between market risk, as measured by Beta value, and firms' market value as measured by Tobin's q. Finally, the regressions show that increases in the ratio of foreign assets and leverage tend to reduce firms' market value as measured by Tobin's q.

4. RESEARCH HYPOTHESIS TESTING

The research hypothesis states that environmental and social reporting is more relevant to firms' market valuations in the presence of CSR assurance, i.e., that CSR assurance moderates the effect of environmental and social reporting on firm market value. This hypothesis is tested by implementing the joint test technique, the most appropriate test for the effect of categorical variables. Accordingly, we derive a dummy variable (high environmental and social reporting) that takes a value of one if the level of environmental and social reporting – measured by the proportion of Grenelle II Act items that were reported – is greater than the median (47.62%) and 0 otherwise. The results presented in Table 2 show that the coefficient for the main effect of high environmental and social reporting on firm market value (as measured by Tobin's q) is negative and statistically significant in Model 1, suggesting that more extensive voluntary environmental and social reporting is negatively perceived by shareholders. This result is in accordance with Nekhili et al. (2017a) who find that a high level of CSR voluntary disclosure does not provide value relevant information.

To determine the way in which high environmental and social reporting and CSR assurance conjunctively affect firms' market value, a joint test of the coefficients for high environmental and social reporting "HIGHCSR_REP" and the interaction term "HIGHCSR_REP*CSR_ASS" is conducted (see Table 3):

$$\begin{aligned}
 TQ_{i,t} = & \beta_0 + \beta_1 LagTQ_{i,t} + \\
 & + \beta_2 HIGHCSR_REP_{i,t} + \beta_3 CSR_ASS_{i,t} \\
 & + \beta_4 (HIGHCSR_REP_{i,t} \cdot CSR_ASS_{i,t}) + \\
 & + \beta_6 Control\ variables + \varepsilon.
 \end{aligned} \quad (2)$$

The sum of the coefficients of $HIGHCSR_REP_{i,t} \cdot CSR_ASS_{i,t}$ suggests a non-trivial negative effect of high environmental and social reporting on Tobin's q for firms having CSR assurance ($\beta_2 + \beta_4 = -0.292$, $t = -2.44$, $p < 0.01$). This negative effect is stronger than the negative effect attributable to high environmental and social reporting, and the difference between the two effects is statistically significant. Thus, CSR assurance is shown to have a negative moderating effect on the

relationship between high environmental and social reporting and firms' market value. This finding is inconsistent with the research hypothesis. The impact of high environmental and social reporting on the firm's market value is negative when firms adopt CSR assurance, indicating that the market negatively values the provision of high environmental and social reporting when firms assure their sustainability reports by independent third party.

Table 3. Regression of Tobin's q on high CSR reporting and CSR assurance

| Variables | Model 1 | | Model 2 | |
|-------------------------------------------------|--------------------------|--------|-------------------------|--------|
| | Coefficient | t-test | Coefficient | t-test |
| Lag TQ | 0.643*** | 42.99 | 0.647*** | 49.51 |
| HIGHCSR_REP | -0.092*** | -3.35 | -0.069* | -1.78 |
| CSR_ASS | -0.077** | -2.18 | 0.149 | 1.22 |
| HIGHCSR_REP*CSR_ASS | - | - | -0.223* | -1.67 |
| CSR_COM | -0.142*** | -4.85 | -0.119*** | -3.65 |
| BOARD_SIZE | -0.070 | -2.25 | -0.082*** | -2.80 |
| BOARD_IND | -0.001 | -0.02 | -0.065 | -1.16 |
| FEM_DIR | -0.334*** | -3.28 | -0.281** | -2.48 |
| BOARD_MEET | -0.036 | -1.45 | -0.059** | -2.40 |
| DUAL | -0.080*** | -3.93 | -0.074*** | -3.76 |
| TENURE | 0.006 | 0.34 | 0.002 | 0.08 |
| FAM_SH | 0.171*** | 3.35 | 0.101 | 1.62 |
| INST_SH | 0.006 | 0.13 | -0.003 | -0.07 |
| EMPL_SH | -0.875*** | -3.15 | -0.827*** | -3.21 |
| DEBT | -0.313*** | -4.29 | -0.283*** | -3.59 |
| R&D | 0.026 | 0.11 | -0.239 | -0.50 |
| RISK | 0.126*** | 3.21 | 0.097** | 2.36 |
| FOR_ASS | -0.166*** | -4.30 | -0.169*** | -4.37 |
| SIZE | 0.130*** | 10.92 | 0.127*** | 9.62 |
| Intercept | 0.581*** | 3.23 | 0.656*** | 3.92 |
| YEAR | Yes | | Yes | |
| INDUSTRY_FE | Yes | | Yes | |
| Number of observations | 784 | | 784 | |
| Wald Chi2 (Prob > F) | 27253.75 ($p = 0.000$) | | 9881.94 ($p = 0.000$) | |
| Arellano-Bond test AR(1) (z, p-value) | -2.88 ($p = 0.004$) | | -2.90 ($p = 0.004$) | |
| Arellano-Bond test AR(2) (z, p-value) | 1.42 ($p = 0.155$) | | 1.40 ($p = 0.161$) | |
| Sargan test (Chi-square, p-value) | 637.31 ($p = 0.000$) | | 290.51 ($p = 0.000$) | |
| Hansen test (Chi-square, p-value) | 74.92 ($p = 0.322$) | | 71.58 ($p = 0.269$) | |
| Joint test: HIGHCSR_REP + (HIGHCSR_REP*CSR_ASS) | | | -0.292** | -2.44 |

Note: *, **, *** represent significance at 0.10, 0.05 and 0.01 levels, respectively.

5. DISCUSSION

This paper examined whether CSR assurance is associated with greater relevance of voluntary environmental and social reporting to firms' market values. Prior research documents that CSR assurance is associated with a lower cost of equity capital and a stronger information environment. This implies that the market values the use of CSR assurance and its implications for the relevance of environmental and social reporting. In this context, the authors studied a special case of the time period in France when environmental and social reporting was mandated (by NRE legislation), but assurance of the reported disclosure was not mandated and was voluntary (as was the case prior to the passing of the Grenelle II Act in 2012). The research examines whether the choice to engage in CSR assurance boosts or deteriorates the perceived relevance to firm's market value of environmental and social reporting. The study's main finding is that the adoption of environmental and social reporting is significantly and negatively associated with firm market value; this result presents a severe challenge to the salience of CSR disclosures, and raises the main question of why should firms be forced by the regulators to engage in costly CSR activities if such activities are punished by the market?

5.1. Limitations

When the variable for the level of environmental and social reporting is made into a binary variable and interacted with CSR assurance, high environmental and social reporting reduces firm market value, and assurance of such CSR disclosures increases the negative effect on firm value to a statistically significant and substantial degree (approximately 29% of Tobin's q). This seems to indicate that the market believes that a higher level of environmental and social reporting destroys value, and that assurance of such reporting destroys value further. This finding raises further questions. Does the market believe that such assurance is simply an unnecessary cost? If so, is the cost sufficiently high to justify such a substantial discount on the firm's value?

One of the limitations of the present study is that it does not conduct a detailed comparative analy-

sis to understand whether there may be a difference in the way that French firms disclose CSR that makes assurance in the French context more or less likely to boost the relevance of environmental and social reporting to firm value. From a managerial point of view, the concept of CSR underlines the freedom of a company to engage (or not) in such CSR policies. In contrast, along with Romano-Germanic law, the French vision considers that all economic and social stakeholders must respect the law of any country in which they act, as well as the universal standards of men at work, respect for the environment, human rights, and non-corruption. According to this French singularity, another main limitation of the paper is then the generalizability of its findings, which is suggested by the difference to the findings of different international studies. This suggests that further research for other countries and other parts of the French market may be of value.

5.2. Research avenues

Future investigations should consider other firm performance measures in order to investigate whether CSR assurance is valuable for other types of stakeholders, and not only for shareholders. To go beyond the simple presence of CSR assurance, it would be important to take into account the level, criteria, and scope of assurance and the identity of the assurance pro-

vider (Peters & Romi, 2015; Nishitani, Haider, & Kokubu, 2020), as well as the standardization and regulation of sustainability auditing (Gillet-Monjarret, 2018; Hassan, Elamer, Fletcher, & Sobhan, 2020). Furthermore, prior research documents that the impact that CSR assurance has on CSR relevance is increased when an accounting firm manages the assurance service; it would be interesting to examine whether this finding holds in our research setting by comparing findings for external CSR assurance by an accounting firm and by an external party that is not an accounting firm.

Another interesting avenue for further research could be to attempt to measure whether the negative effect on firm value of CSR assurance was greater or lesser than the net present value of estimated projected future CSR costs. Such costs could be extrapolated based on the disclosure of total audit fees (assuming these are disclosed in French financial statements), taken together with a reasonable apportionment of ordinary and CSR audit fees – where the same auditor performed both functions – and an appropriate discounting rate for the market. If the negative impact on firm value exceeded the net present value of such audit costs, this would suggest that attention to CSR activities, in general, may be perceived by the market as managerial misbehavior, or at least as inherently value-destroying.

CONCLUSION

CSR practices are challenging to establish credibility in the eyes of shareholders. This study provides evidence for the relationship between environmental and social reporting and the firm's market value according to whether or not firms obtain CSR assurance for their CSR reports. The results show that market value is negatively and significantly associated with the adoption of CSR assurance in the French context. Interestingly, voluntary reporting of CSR-related information is perceived to have a negative effect on firm value when CSR assurance is provided, giving evidence that shareholders may attribute less value to CSR assurance when the primary benefits of engaging CSR assurance do not exceed its potential costs. This result supports the legitimacy theory argument that CSR assurance is conducted in response to stakeholder pressure and to manage firms' image, which is an interesting contribution to a better understanding of impression management behavior.

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APPENDIX A

Table A1. Pairwise correlation matrix

| No. | Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | VIF |
|-----|------------|---------|---------|--------|---------|---------|---------|---------|---------|---------|---------|--------|---------|--------|---------|---------|--------|--------|--------|-------|------|
| 1 | TQ | 1.000 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 2 | Lag TQ | 0.774* | 1.000 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1.40 |
| 3 | CSR_REP | –0.157* | –0.150* | 1.000 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1.52 |
| 4 | CSR_COM | –0.067 | –0.047 | 0.389* | 1.000 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1.25 |
| 5 | CSR_ASS | –0.119* | –0.096* | 0.422* | 0.176* | 1.000 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1.44 |
| 6 | BOARD_SIZE | –0.253* | –0.248* | 0.376* | 0.238* | 0.268* | 1.000 | – | – | – | – | – | – | – | – | – | – | – | – | – | 2.18 |
| 7 | BOARD_IND | –0.179* | –0.184* | 0.215* | 0.086* | 0.253* | 0.096* | 1.000 | – | – | – | – | – | – | – | – | – | – | – | – | 1.58 |
| 8 | 8. FEM_DIR | 0.030 | 0.042 | –0.026 | 0.017 | 0.032 | –0.253* | –0.168* | 1.000 | – | – | – | – | – | – | – | – | – | – | – | 1.41 |
| 9 | BOARD_MEET | –0.071 | –0.060 | 0.138* | 0.151* | 0.146* | 0.055 | –0.041 | 0.116* | 1.000 | – | – | – | – | – | – | – | – | – | – | 1.20 |
| 10 | DUAL | –0.085 | –0.087 | 0.071 | –0.094* | –0.050 | 0.038 | –0.175* | 0.061 | 0.012 | 1.000 | – | – | – | – | – | – | – | – | – | 1.20 |
| 11 | TENURE | 0.082 | 0.099* | 0.265* | 0.136* | 0.218* | 0.163* | 0.028 | 0.148* | –0.043 | 0.172* | 1.000 | – | – | – | – | – | – | – | – | 1.27 |
| 12 | FAM_SH | 0.282* | 0.278* | –0.083 | –0.069 | –0.213* | –0.148* | –0.278* | –0.037 | –0.101* | –0.020 | 0.017 | 1.000 | – | – | – | – | – | – | – | 1.62 |
| 13 | INST_SH | –0.192* | –0.197* | 0.178* | 0.049 | 0.136* | 0.060 | 0.301* | 0.023 | –0.072 | 0.046 | –0.061 | –0.426* | 1.000 | – | – | – | – | – | – | 1.41 |
| 14 | EMPL_SH | –0.236* | –0.233* | 0.127* | 0.031 | 0.036 | 0.179* | –0.017 | 0.024 | 0.025 | 0.188* | 0.110* | –0.173* | 0.083 | 1.000 | – | – | – | – | – | 1.29 |
| 15 | DEBT | –0.206* | –0.209* | 0.009 | –0.056 | 0.079 | 0.023 | –0.006 | 0.015 | 0.120* | 0.045 | –0.079 | –0.046 | 0.049 | –0.093* | 1.000 | – | – | – | – | 1.20 |
| 16 | R&D | 0.233* | 0.262* | 0.110* | –0.006 | 0.019 | –0.033 | 0.086* | –0.156* | –0.002 | –0.067 | 0.168* | 0.037 | –0.067 | –0.101* | –0.192* | 1.000 | – | – | – | 1.26 |
| 17 | RISK | 0.019 | 0.005 | 0.073 | 0.040 | 0.153* | 0.002 | 0.104* | 0.059 | 0.239* | –0.033 | 0.042 | –0.224* | –0.017 | –0.071 | –0.031 | 0.084* | 1.000 | – | – | 1.30 |
| 18 | FOR_ASS | –0.062 | –0.045 | 0.007 | –0.022 | 0.001 | 0.059 | 0.247* | –0.173* | 0.036 | –0.117* | 0.107* | –0.106* | 0.063 | –0.168* | –0.052 | 0.001 | 0.093* | 1.000 | – | 1.25 |
| 19 | SIZE | –0.281* | –0.258* | 0.465* | 0.273* | 0.462* | 0.459* | 0.308* | –0.155* | 0.139* | –0.079 | 0.146* | –0.265* | 0.091* | 0.100* | 0.104* | –0.012 | 0.200* | 0.127* | 1.000 | 2.65 |

Note: * represents significance at 0.01 level. Variables are as defined in Table 1.