

ASSURANCE ON CORPORATE SOCIAL RESPONSIBILITY REPORTS: DOES IT REDUCE DECOUPLING PRACTICES?

Isabel-María García-Sánchez^a

Universidad de Salamanca

Nazim Hussain^b

University of Groningen

Cristina Aibar-Guzmán^c

Universidad de Santiago de Compostela

Beatriz Aibar-Guzmán^d

Universidad de Santiago de Compostela

^a Catedrática de Economía Financiera y Contabilidad. Facultad de Economía y Empresa. Campus Miguel de Unamuno. Edificio FES. 37007. Salamanca. Spain.

^b Assistant Professor. Faculty of Economics and Business. Nettelbosje 2. 9747 AE Groningen. The Netherlands.

^c Profesora Titular de Economía Financiera y Contabilidad. Facultad de Ciencias Económicas y Empresariales. Universidad de Santiago Compostela. Av. Burgo, s/n 15782. Santiago Compostela. Spain.

^d Profesora Titular de Economía Financiera y Contabilidad. Facultad de Ciencias Económicas y Empresariales. Universidad de Santiago Compostela. Av. Burgo, s/n 15782. Santiago Compostela. Spain.

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Palabras Clave: CSR decoupling, CSR assurance, GRI guidelines, Legitimacy theory, Reporting quality.

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Abstract

Recent research shows the existence of a selective Corporate Social Responsibility disclosure strategy that generates a gap between CSR disclosure and actual performance. These CSR decoupling practices compromise the credibility of CSR reports, triggering the demand for adoption of credibility enhancement mechanisms, such as adherence to the Global Reporting Initiative (GRI) reporting guidelines and external assurance of CSR reports. Drawing on legitimacy theory, this paper addresses the effect of assurance and the compliance with GRI reporting standards on CSR decoupling. The analysis of an international sample of 1,939 firms shows that the use of GRI guidelines reduces CSR decoupling practices.

Keywords: CSR decoupling, CSR assurance, GRI guidelines, Legitimacy theory, Reporting quality.

1. INTRODUCTION

Corporations around the globe are nowadays producing integrated and stand-alone corporate social responsibility (CSR) reports (KPMG, 2017). At the same time, stakeholder scepticism about CSR disclosures has increased in recent years (Ballou et al., 2018; Clarkson et al., 2019; Jauernig & Valentinov, 2019; Knight, 2020), as has the incidence of greenwash, that is, communication that misleads people into forming overly positive beliefs about an organization's CSR practices (Du & Wu, 2019).

This selective disclosure strategy generates a gap between a firm's CSR disclosure and its actual performance (García-Sánchez et al., 2020b; Sauerwald & Su, 2019; Tashman et al., 2019), often referred to as CSR decoupling. Given that the accuracy of disclosure regarding the firm's CSR performance is critical (Clarke, 2007), researchers have recently paid some attention to corporate engagement in such CSR-related facades (Kim & Lyon, 2015) and in other kinds of selective sustainability disclosure (Clarkson et al., 2019).

In this sense, prior research has shown that monitoring mechanisms can reduce the likelihood that firms engage in CSR decoupling. Sauerwald and Su (2019) found that the board of directors (an internal corporate governance mechanism) plays a role in mitigating CSR decoupling through the deterrent effect derived from the effective monitoring by outside and qualified directors. Other authors have focused on external monitoring mechanisms, such as governmental monitoring (Marquis & Qian, 2014), stakeholder scrutiny (Tashman et al., 2019), SRI rating services (Knight, 2020) and

financial analyst coverage (García-Sánchez et al., 2020b), observing that all of them discourage CSR decoupling.

However, surprisingly, the role of CSR assurance in mitigating CSR decoupling remains largely unexplored. As an external monitoring mechanism, the main purpose of assurance is to improve the credibility of the CSR reports (Adams & Evans, 2004; Brown-Liburd & Zamora, 2015; Dalla Via & Perego, 2020; Du & Wu, 2019; Simnett et al., 2009). Thus, external assurance is linked to a higher quality of CSR reporting (Ballou et al., 2018; Moroney et al., 2012; Prado-Lorenzo et al., 2009; Sethi et al., 2017) and enhanced transparency (Christensen, 2016). Accordingly, it can be expected that external assurance of CSR reports will reduce the gap between CSR reporting and actual CSR performance (Sauerwald & Su, 2019).

Another mechanism which is considered to be important for the credibility of CSR reports is adherence to elite reporting standards (Lock & Seele, 2016). Essentially, adherence to these standards should improve corporate transparency concerning CSR activities (Behnam & MacLean, 2011). In this sense, the Global Reporting Initiative (GRI) reporting framework is acknowledged elite global standard for CSR reporting (Clarkson et al., 2019; Michelon et al., 2015; Talbot & Boiral, 2018). Implementation of the GRI guidelines signals higher transparency and CSR reporting quality (Ballou et al., 2018; Du & Wu, 2019; King & Bartels, 2015)

Nevertheless, the possibility of a symbolic use of both CSR assurance and the GRI reporting framework by companies has been acknowledged by the extant literature (Brown et al., 2009; Michelon et al., 2015; Talbot & Boiral, 2015). This acknowledgment casts doubts about their actual ability to enhance CSR reporting transparency (Adams & Evans, 2004; Behnam & MacLean, 2011; Boiral et al., 2019). Anecdotal evidence shows that despite the adherence to GRI standards and assured by third party many reports have ambiguity, opacity and a lack of completeness (Michelon et al., 2015; Talbot & Boiral, 2018).

Drawing on legitimacy theory, this paper addresses the issue of symbolic versus substantive use of assurance and the compliance with GRI reporting standards by analysing their effect on CSR decoupling. The analysis of an international sample of 1,939 firms (15,219 observations) indicates that the preparation of CSR reports according to the GRI guidelines aligns CSR disclosure with true performance. However, although we note a negative association of assurance with CSR decoupling, it is econometrically insignificant.

We contribute to the literature in several ways. First, this study provides original evidence about the role of CSR assurance and adherence to GRI guidelines in mitigating CSR decoupling and complements the research concerning the ability of reporting standards

and CSR assurance to enhance CSR reporting quality (Adams & Evans, 2004; Behnam & MacLean, 2011; Hahn & Lülfes, 2014; Michelon et al., 2015, Talbot & Boiral, 2018).

Second, we contribute to the literature on CSR decoupling by reinforcing and extending prior research on the role of external monitoring mechanisms (i.e., CSR assurance) and the adherence to CSR reporting standards (i.e., GRI guidelines) in reducing the gap between CSR reporting and actual CSR performance. Furthermore, compared to prior studies on mitigating mechanisms of CSR decoupling focused on a single country (García-Sánchez et al., 2020b; Marquis & Qian, 2014) or specific situations (Knight, 2020; Tashman et al., 2019), we adopt a broader approach including firms from 10 industries and 31 different countries, which contributes to the generalization of our results. Additionally, we consider a long analysis period (2002 to 2017), which allows us to broaden the time frame hitherto used. This fact, along with the breadth of our sample (55,445 observations relating to 3,682 firms worldwide), should be stressed as distinctive traits of this research.

In the next section, we present the theoretical framework for the development of hypotheses. Section 3 outlines the empirical framework. Section 4 summarizes the main results along with their discussion. The last section summarizes the main conclusions and implications.

2. THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

According to legitimacy theory, the conformity of an organization's structures and behaviors to socially constructed norms and principles guarantees social acceptance and, therefore, its survival. In this sense, legitimacy is a condition or status that is reached when an organization's value system is consistent with the prevailing value system in society (Lindblom, 1994). Adopting a broad definition of legitimacy that simultaneously incorporates a cognitive and evaluative dimension, Suchman (1995, p. 574) defined legitimacy as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" and posited that organizational legitimacy can be considered from two perspectives: institutional legitimacy and strategic legitimacy (Suchman, 1995).

According to Ashforth and Gibbs (1990), in the search for legitimation an organization may follow two different approaches: substantive management and symbolic management. The first one posits that organizations seek to legitimize themselves through a real change in their objectives, strategies, structures, processes and/or practices to align them with institutionalized values and norms; while in the case of symbolic management the search for legitimacy does not entail a real change in an

organization, but it only uses different symbols to project an image in accordance with social values and expectations in order to influence stakeholder perceptions (Michelon et al., 2015).

The largely voluntary and unregulated nature of CSR reporting (Knight, 2020) opens the door for subjectivity in the elaboration of CSR reports (Dhaliwal et al., 2011; Marquis & Qian, 2014), where firms enjoy considerable latitude to selectively choose the scope of the CSR reports and the kind of CSR information to be disclosed (Clarkson et al., 2019), which is mostly focused on the favourable/positive aspects of the firm's CSR performance and omits or masks the negative ones, providing an incomplete and biased picture of its actual CSR performance (Arena et al., 2018; Ballou et al., 2018; Du & Wu, 2019; García-Sánchez et al., 2020b; Kim & Lyon, 2015; Martínez-Ferrero et al., 2018; Sauerwald & Su, 2019).

This discretionary disclosure strategy generates a gap between a firm's CSR disclosure and its actual performance (García-Sánchez et al., 2020b; Tashman et al., 2019) so that it is possible to observe a discrepancy between talk (what is being portrayed in CSR reports) and walk (what firms are actually doing). As noted by Deegan (2009, p. 364), "this decoupling can be linked to some of the insights from legitimacy theory, whereby social and environmental disclosures can be used to construct an organizational image that might be very different from the actual organizational social and environmental performance".

Although decoupling is generally identified with a form of greenwashing (Tashman et al., 2019; Sauerwald & Su, 2019), the misalignment between reporting and actions comprises both overstatement and understatement (García-Sánchez et al., 2020b). In the latter case, companies underreport their good CSR practices and, consequently, convey an opaque image of their actual CSR performance (Crilly et al., 2012; Delmas & Burbano, 2011) due to several reasons, such as uncertainty regarding the reaction of the market, the intention of mitigating possible conflicts with stakeholders when their demands are divergent and/or incompatible, or to detract attention from some stakeholders (Crilly et al., 2012; Hawn & Ioannou, 2016; García-Sánchez et al., 2020a). In this sense, although these underreporting practices may seem less harmful than overstating practices, as García-Sánchez et al. (2020b) showed, both types of decoupling are equally damaging and have a detrimental effect on firm value.

Indeed, CSR decoupling compromises the integrity and reliability of CSR reports (Boiral et al., 2019; Knight, 2020) and hampers their credibility (Clarkson et al., 2019; Jauernig & Valentinov, 2019; Lock & Seele, 2016; Michelin et al., 2015). As a result, CSR decoupling can have a detrimental effect on firm value (García-Sánchez et al., 2020b; Hawn & Ioannou, 2016; Tashman et al., 2019), negatively affecting the relationship

between a company and its stakeholders. Although, CSR decoupling aims to create “legitimacy façades” (Arena et al., 2018), the public awareness of such deception (Graafland & Smid, 2019; Knight, 2020) leads to users’ scepticism (Ballou et al., 2018; Clarkson et al., 2019; Michelon et al., 2015), which, in turn, may result in loss of legitimacy (MacLean & Behman, 2010; Tashman et al., 2019). Therefore, there is a need for mechanisms enhancing the credibility of CSR reports (Clarkson et al., 2019).

2.1. CSR Reporting Standards and CSR Decoupling

The GRI reporting framework offers comprehensive guidelines on what and how to report on CSR issues (Vigneau et al., 2015). The implementation of the GRI guidelines signals higher transparency and CSR reporting quality (Ballou et al., 2018; Du & Wu, 2019; King & Bartels, 2015). Due to their widespread use and international acceptance (Talbot & Boiral, 2018), the GRI reporting guidelines are considered “the de facto global standard” in CSR reporting (KPMG, 2011, p. 20), becoming an institutionalized practice (Brown et al., 2009), so that the implementation of such guidelines is often associated with CSR reporting quality (Du & Wu, 2019; Graafland & Smid, 2019) and, thus, affects positively the stakeholders’ perceptions of the credibility of the disclosed information (Lock & Seele, 2016).

However, the reasons behind the adoption of GRI guidelines may be related to “reputation management and brand protection” (Brown et al., 2009, p. 573), rather than enhancing CSR reporting quality. In other words, the GRI guidelines may be used for reputation enhancement purposes, with the aim of obtaining legitimacy (Hahn & Lülfes, 2014; Vigneau et al., 2015), without introducing substantive changes in the content (e.g., completeness, consistency, materiality) and the quality (e.g., balance, accuracy) of reports (Michelon et al., 2015).

As a result, the implementation of the GRI guidelines does not necessarily lead to enhanced transparency and reliability of CSR reports (Behnam & MacLean, 2011; Michelon et al., 2015), but, in fact, it may produce the opposite result, facilitating instead of inhibiting the kind of behaviors the standards were designed to dissuade (Behnam & MacLean, 2011). On the one hand, the broad principles and open-ended time frame that are featured in the GRI framework give companies discretion and flexibility in relation to compliance with the standard (Clarkson et al., 2019; Michelon et al., 2015). Thus, companies may state that they report according to the GRI guidelines although they do not achieve their full implementation (Behnam & MacLean, 2011), raising expectations about the completeness, balance and materiality of the CSR reports that do not correspond to the reality (Boiral et al., 2019). In this regard, Talbot and Boiral (2018) found that most of the analyzed GRI reports were incomplete and omitted information on

climate performance, whereas Boiral and Henri (2017) stresses the difficulty to measure and compare the information regarding 92 GRI indicators disclosed by firms belonging to the same industry due to its ambiguous and incomplete nature. On the other hand, companies can use the GRI guidelines in a symbolic way by adopting a “box ticking” approach (Lock & Seele, 2016) and, thus, increasing the volume of information disclosed without improving the reporting quality (Michelon et al., 2015). In this sense, Du and Wu (2019) found that compliance with the GRI guidelines does not prevent the occurrence of future misconduct in CRS reporting by Taiwanese firms.

In contrast to this critical view, another research stream shows that GRI compliance does enhance reporting quality (Ballou et al., 2018). The standardization of the content of the reports provides a better-defined framework that favors consistency (Knight, 2020) and allows users to assess the completeness of reports and identify potential omissions (Lock & Seele, 2016). Furthermore, given that the adherence to the GRI framework entails a cost (Behnam & MacLean, 2011), the fact that a firm decides to report according to the GRI guidelines may be indicative of a greater commitment to CSR (Michelon et al., 2015). In this sense, Graafland and Smid (2019) found that the adoption of the GRI guidelines improves implementation of CSR-related programs and fosters a reduction of the gap between CSR policies and actual practices. Additionally, the GRI guidelines recommend using independent assurance in order to verify that sustainability reports really provide a reasonable and balanced picture of CSR performance and, thus, add credibility to reports (Adams & Evans, 2004). Therefore, GRI adoption might influence the decision of obtaining external assurance.

In this sense, Michelon et al. (2015) report a significant, although weak, positive association between the adoption of the GRI framework and the completeness of sustainability reports (their measure of reporting quality), which they attribute to a substantive way of approaching CSR reporting. In a similar vein, Ballou et al. (2018) found a significant association between the adoption of the GRI guidelines and CSR restatements, which led them to conclude that GRI compliance enhances reporting quality. Likewise, Sauerwald and Su (2019) note that adherence to the GRI guidelines reduces the gap between CSR reporting and actual performance (i.e., CSR decoupling). We share this view about a substantive effect of the adoption of the GRI guidelines on CSR reporting quality not only because the higher commitment to CSR associated with the adherence to this framework but also because we believe that the requirements, principles, and protocols of the GRI framework favor relevant and transparent disclosure in such a way that CSR reporting will better reflect CSR actions. Accordingly, we hypothesize the following:

H1: There is a negative relationship between the adoption of the GRI guidelines in CSR reporting and CSR decoupling

2.2. CSR Assurance and CSR Decoupling

Assurance services on CSR reports are growing (Accountancy Europe, 2017). As more firms around the world report on CSR practices, the number of firms that have their reports assured by third parties has also increased (KPMG, 2017). Under pressure from regulation, stock exchanges, and investors, an increasing number of firms opt to have their CSR reports assured (Moroney & Trotman, 2016). As a result, assurance on CSR and sustainability reports has evolved as an emerging market for non-financial audit services (Cuadrado-Ballesteros et al., 2017; Simnett et al., 2009). CSR assurance can be provided by a variety of third-party assurance providers and on various levels of assurance quality based on tailored non-financial audit approaches (Dalla Via & Perego, 2020).

The literature concerning the role of assurance in enhancing reliability of CSR disclosure has two contrasting views. The symbolic view argues that external assurance is used by companies for impression management purposes (Adams & Evans, 2004; Boiral et al., 2019; Michelon et al., 2015). From this perspective, the hiring of CSR assurance services would be motivated by the need for enhanced credibility (Birkey et al., 2016; Brown-Liburd & Zamora, 2018; Cho et al., 2014; Park & Brorson, 2005; Simnett et al., 2009). Hence, CSR assurance can be used symbolically to convey a misleading image of reporting transparency and reliability (Boiral et al., 2019; Talbot & Boiral, 2015), while maintaining opacity about the company's actual CSR performance (Martínez-Ferrero & García-Sánchez, 2017b).

The fact that CSR assurance is voluntary along with the unregulated nature of CSR assurance services and the lack of clearly defined procedures (Ballou et al., 2018; Boiral et al., 2017) open the door for those companies interested only in the legitimacy value of assurance use it to create a "credibility cover" aimed at positively influence stakeholders' perceptions (Behnam & MacLean, 2011). This possibility that CSR is subject to "managerial capture" (Michelon et al., 2015) not only casts doubt about the impartiality of the assurance provider (Boiral et al., 2019) but also affects its effectiveness to provide assurance that CSR reports reflect an accurate, complete, and balanced picture of the firm's CSR performance (Adams & Evans, 2004).

In this regard, Michelon et al. (2015) showed that CSR assurance was not associated with the quality and quantity of the data disclosed in sustainability reports. In a similar vein, Talbot and Boiral (2015) found that CSR assurance does not reinforce the quality of sustainability reports which continue disclosing opaque data, whereas Christensen

(2016) found no evidence that CSR assurance reduces firm engagement in high-profile misconduct in CSR reporting. Talbot and Boiral (2018) observed that, although assured sustainability reports were incomplete and suffered from a lack of reliability, these problems were not cited in the assurance statements. Likewise, Boiral et al. (2017) found that assurance statements are characterized by “an optimistic and cautious rhetoric” which lets the weaknesses of CSR reports pass. These findings hint about the possibility that CSR assurance can be for a mean of “greenwashing” (Clarkson et al., 2019) and hence support the argument of a symbolic use of assurance in CSR reporting.

Conversely, the substantive view of CSR assurance implies that external assurance does affect reporting in a substantive way, so that it would be more transparent and better reflect the firm’s CSR activities. Proponents of this view argue that obtaining assurance is associated with a stronger commitment with transparency (Brown-Liburd & Zamora, 2018) as it performs a monitoring function (Adams & Evans, 2004; Sethi & Williams, 2000) and exerts “a disciplinary effect” (Boiral et al., 2017). Park & Brorson (2005) point out as one of the benefits from assurance the greater reliability of the data disclosed in sustainability reports.

In this regard Moroney et al. (2012) found that CSR assurance is associated with a higher quality of the disclosed information, whereas Ballou et al. (2018) provided empirical evidence of a positive effect of CSR assurance on CSR restatements. Therefore, external assurance is linked to a higher quality of CSR reporting (Ballou et al., 2018; Moroney et al., 2012; Prado-Lorenzo et al., 2009; Sethi et al., 2017) and enhanced transparency (Christensen, 2016), thereby reducing information asymmetry between a company and its stakeholders (Cuadrado-Ballesteros et al., 2017; Hawn & Ioannou, 2016).

The only study that has analyzed the effect of CSR assurance on CSR decoupling (i.e., Sauerwald & Su, 2019) documents a negative effect, which implies that CSR assurance restrains CSR decoupling. We defend this substantive view and, therefore, expect that external assurance of CSR reports, as a monitoring mechanism, will reduce the gap between CSR reporting and CSR actual performance (Sauerwald & Su, 2019). Accordingly, we hypothesize the following:

H2: There is a negative relationship between external assurance of CSR reports and CSR decoupling

3. RESEARCH METHOD

To test our hypotheses, we collected data from Thomson Reuters EIKON for the 2002–2017 period. Our initial unbalanced sample is composed of 3,682 firms (55,445 observations) from 10 industries and 71 different countries. We drop those firms that

have not issued a CSR report. The final sample is composed of 1,939 firms (15,219 observations) from 10 industries and 31 different countries for the same period. The model estimation aims to examine the effect of GRI compliance and assurance quality on CSR decoupling.

$$\begin{aligned} \text{CSR_Gap}_{it+1} = & \delta_1 \text{DGRI}_{it} + \delta_2 \text{DAssurance}_{it} + \delta_3 \text{DGRI} * \text{DAssurance}_{it} + \\ & \delta_4 \text{BSize}_{it} + \delta_5 \text{BActivity}_{it} + \delta_6 \text{CEOduality}_{it} + \delta_7 \text{BInd}_{it} + \delta_8 \text{WoB}_{it} + \delta_9 \text{CSRCom}_{it} + \\ & \delta_{10} \text{Analysts}_{it} + \delta_{11} \text{InstInv}_{it} + \delta_{12} \text{Size}_{it} + \delta_{13} \text{Leverage}_{it} + \delta_{14} \text{Advert_intensity}_{it} + \\ & \delta_{15} \text{MtoB}_{it} + \delta_{16} \text{ROA}_{it} + \delta_{17} \text{Crisis}_{it} + \delta_{18} \text{NCSRPI}_{it} + \delta_{19} \text{Country}_i + \delta_{20} \text{Industry}_i \\ & + \delta_{21} \text{Year}_t + \mu_{it} + \eta_i \end{aligned}$$

where *i*, and *t* refer to firm and the time period, respectively, and δ are the parameters to be estimated. The models also incorporate a specific company effect, where η represents the unobservable heterogeneity that can affect corporate decision making, and where μ is the disturbance produced. We use a fixed-effect linear regression for panel data in order to control heterogeneity problems. We use lagged independent variables to avoid endogeneity problems due to in management, there is strong relationship between the different business decisions. In this sense, several papers have observed that firms with better CSR performance disclose higher levels of standardized information and a higher predisposition to hire assurance services (i.e., Clarkson et al. 2019). For interactions terms, centering variables have been used in order to control multicollinearity problems.

CSR_Gap identifies the decoupling practices, for which, we adopt the measurement of Hawn and Ioannou (2016), who constructed the gap measure as an absolute gap between the score of 24 external and 21 internal actions. However, we have dropped several external and internal items in order to avoid potential duplications with the control variables of the estimated model. More concretely, this variable is the gap between standardized CSR disclosures - 20 external items -and CSR performance - 18 internal items - derived from Thomson Reuter's ASSET4. It shows a -1 to +1 distribution.

DGRI is a dummy variable that takes the value of 1 if the CSR report is prepared according to GRI guidelines, and 0 otherwise. This measure has been widely used in previous studies (i.e., Dhaliwal et al., 2011). Following the convention of the existing assurance literature, we operationalized the external assurance variable **DAssurance** as a dummy which takes 1 when the report is assured and 0 otherwise (Kolk & Perego, 2010; Martínez-Ferrero & García-Sánchez, 2017b; Simnett et al., 2009). The interactions of **DGRI*DAssurance** allow us to observe the joint effect of the quality of the CSR report on **CSR_Gap**.

We also include various firm and institutional-level controls. Following Jo and Harjoto (2012), Martínez-Ferrero and García-Sánchez (2017a), we include board size as **BSize**—the total number of directors on board—and as **BActivity**—the total number of meetings. We include a dummy for **CEOduality**. We also controlled for board independence, **BInd**, and gender diversity, **WoB**, measured as the percentage of independent and female directors on board, respectively. We controlled for other governance aspects like CSR committee (**CSRCom**), analyst coverage (**Analyst**), and institutional ownership (**InstInv**).

Among other firm-level aspects, we include the following: **Size**, measured as the natural logarithm of total assets; **Leverage**, as the ratio of long-term debt to total assets; market-to-book value, **MtB**, as the market-to-book ratio; advertising intensity, **Advertising_intensity**, as the advertising-to-sales ratio calculated by dividing total advertising expenses by sales revenue; and return on assets, **ROA**, as the return-on-assets ratio. **Crisis** is a dummy variable that reflects the economic recession in years 2008–2010. We also control for the institutional pressures at the country level by the national composite index proposed by Amor-Esteban et al. (2019), **NCSRI**. Finally, we control for country, industry and year.

4. RESULTS

4.1. Descriptive Results

Table 1 shows the descriptive statistics for the numerical variables and the frequencies for the dichotomous variables. In the sample, 62.60% of companies follow GRI guidelines, on different levels, which confirms arguments regarding the widespread use of the GRI reporting framework (Clarkson et al., 2019; Michelon et al., 2015; Talbot & Boiral, 2018).

The percentage of companies that assure their CSR report is lower, 46.01%. The mean of 0.010 (+0.015) is indicative of the existence of CSR decoupling practices between CSR performance and CSR reporting, showing that there are greenwashing firms that use CSR reporting to fake their underperformance and firms that under-disclose, but the underperformance is higher due to the median is positive from a -1 to +1 distribution (Delmas & Burbano, 2011; García-Sánchez et al., 2020b; Sauerwald & Su, 2019; Tashman et al., 2019).

Regarding the characteristics of the board of directors, the body responsible for the credibility and consistency of the corporate information disclosed, we note that, on average, the boards are made up of 11 members, less than half of them corresponding

to independent directors. A specialized committee on CSR has been created in 74.21% of companies. On average, the companies are followed by 14 analysts.

Table 1. Descriptive Statistics

Table 2 summarizes the bivariate correlations for the variables used in the analysis. In this regard, it can be seen that the coefficients indicate the absence of multicollinearity problems.

Table 2. Correlation Matrix

4.2. Main Results and Discussion

The main regression results are presented in Table 3. It shows both the global model and three previous step estimations in which only the variables relating to GRI report or CSR assurance have been included, or both without its interaction. In Model 1 reflected in column (D), we can see that the adoption of GRI guidelines decreases decoupling practices, leading more transparent disclosure. This negative association between GRI adoption and CSR decoupling confirms the positive effect of the use of the GRI guidelines on CSR reporting quality documented in some previous studies (Ballou et al., 2018; Lock & Seele, 2016) and, specifically, it coincides with the finding obtained by Sauerwald and Su (2019), who also found that the adherence to the GRI guidelines reduces CSR decoupling. Furthermore, this finding indicates a substantive way of approaching CSR reporting by the analyzed companies and contradicts the arguments about a symbolic use the GRI framework for reputation enhancement purposes (Brown et al., 2009) and for obtaining legitimacy (Hahn & Lülfs, 2014; Vigneau et al., 2015). However, it contrasts with other studies (Boiral & Henri, 2017; Diuof & Boiral, 2017; Talbot & Boiral, 2018) which provide evidence of a symbolic rather than substantive adoption of the GRI guidelines, evidenced by the lack of completeness, ambiguity, and opacity of many GRI reports.

The results concerning **DAssurance** are negative but insignificant, which provides support to the argument that assurance may have been used to enhance reputation (Birkey et al., 2016; Cho et al., 2014) rather than reducing information asymmetry and CSR decoupling. The no significant association between CSR assurance and CSR decoupling suggests that there is a case of a symbolic use of assurance in CSR reporting (Cho et al., 2014; Michelon et al., 2015) and, consequently, assurance does not comply with its role of improving the reliability and relevance of CSR reports. Our finding is in line with the results obtained by Michelon et al. (2015), Talbot and Boiral (2015), Christensen (2016) and Boiral et al. (2019), who documented a symbolic rather than substantive use of CSR assurance. However, this finding is inconsistent with previous evidence regarding a positive effect of assurance on disclosure quality (Ballou et al.,

2018) and about its capability to prevent the occurrence of future CSR-related misconduct (Du & Wu, 2019) and, specifically, to restrain CSR decoupling (Sauerwald & Su, 2019).

The lack of a significant effect of CSR assurance on CSR decoupling is also reflected in the joint effect of both decisions, since issuing a CSR report according to the GRI guidelines which is also assured is statistically not significant. This result suggests that following the recommendations of the GRI guidelines restricts decoupling practices, regardless of whether or not CSR reports are assured. A tentative explanation of this finding could be the fact that the GRI guidelines recommend using external assurance and, therefore, GRI adoption might influence the decision of obtaining assurance. This finding indicates that CSR assurance is not a substitute for the use of the GRI guidelines in terms of reducing CSR decoupling, which contrasts with the findings obtained by Christensen (2016), who showed that GRI adoption does not increase the effect of CSR assurance in pre-empting the incidence of misconduct in CSR reporting, and Ballou et al. (2018), who found that, compared to the GRI reporting framework, CSR assurance plays a more relevant role in improving reporting quality. However, these findings are in line with those obtained by Michelon et al. (2015), who found a weak effect of GRI adoption on reporting quality but an insignificant effect of assurance.

Regarding control variables, only the number of analysts following a firm and a larger size of the board of directors negatively affect decoupling practices. Surprisingly, the traditional measures of effectiveness of the board of directors are not relevant from an econometric point of view, in the case of board independence, or favour these practices, in the case of board diversity. These results contrast with those obtained by Sauerwald and Su (2019), who found that internal corporate governance mechanisms (specifically, the presence of outside directors with CSR expertise) help mitigate CSR decoupling.

Table 3. Explanatory Models

The absence of impact of CSR assurance requires a deeper analysis of corporate information policies and their interrelations. Specifically, in Figure 1, it can be seen that how there has been a favourable evolution in the use of the GRI guidelines to elaborate CSR reports, while a constant evolution is observed for CSR assurance. It can also be noted that, since 2008, the companies that assure their CSR reports prepare such reports according to the GRI guidelines, a convergence that could explain why the hiring of CSR assurance services lacks significant relevance in our analysis.

Figure 1. Dynamic evolution of GRI compliance and CSR assurance

5. CONCLUSIONS

As the credibility of CSR reports is questioned, they lose their value for stakeholders (García-Sánchez et al., 2020b; Talbot & Boiral, 2018), which has triggered the adoption of credibility enhancement mechanisms by companies (Clarkson et al., 2019), such as adherence to the GRI reporting guidelines and the assurance of CSR reports, the use of which has become widespread in recent years and has become an institutionalized business practice (Ballou et al., 2018; Brown et al., 2009). However, the “inflationary dynamics”, through which the more companies that publish CSR reports, the greater the number of such reports that are produced according to the GRI guidelines and are assured by independent third parties, has raised doubts about whether such initiatives constitute protective tactics used to manage organizational legitimacy or in fact are actual accountability tools. In this sense, it should be noticed that the symbolic use of the GRI guidelines and/or CSR assurance in CSR reporting has ethical implications because it creates a false image of transparency and reporting quality with the aim of inspiring confidence in stakeholders whereas undesired behavior and practices with a detrimental effect on firm value, such as CSR decoupling, persist.

Drawing on legitimacy theory, this study addresses the dilemma about the symbolic versus substantive use of CSR assurance and the GRI reporting framework by analysing its effect on CSR decoupling. The results indicate that the elaboration of CSR reports according to the GRI guidelines causes decoupling practices to be reduced, leading to the firms’ CSR disclosure being consistent with their CSR performance. This result indicates a substantive way of approaching CSR reporting by the analyzed companies and contradicts the arguments about a symbolic use of the GRI guidelines for reputation enhancement purposes (Brown et al., 2009) and for obtaining legitimacy (Hahn & Lülfes, 2014; Vigneau et al., 2015). However, with regard to CSR assurance, although a negative association with CSR decoupling was found, it is not significant from an econometric viewpoint, indicating that there is no corrective effect of hiring CSR assurance services on the CSR decoupling practices carried out by management. The no significant association between CSR assurance and CSR decoupling supports the arguments that assurance may have been used to enhance reputation (Birkey et al., 2016; Cho et al., 2014) rather than reducing information asymmetry and CSR decoupling, and suggests that there is a case of a symbolic use of assurance in CSR reporting (Cho et al., 2014; Michelon et al., 2015).

This study adds to the literature on symbolic management. The debate between substantive versus symbolic management in the field of CSR has been a recurrent research topic in recent years (Behnam & MacLean, 2011; Michelon et al., 2015; Marquis et al., 2016). To the extent that this study provides further insights into how firms manage

stakeholder pressures by using symbolic and/or substantive signals, the results have several implications for companies, investors, stakeholders and regulatory bodies. For companies, it is essential to know the divergence that the quality of the adoption of the recommendations of the GRI guidelines involves in the control of decoupling practices and the disclosure of more relevant and accurate CSR information.

In addition, our empirical evidence also provides useful information to investors and shareholders regarding how the adoption of standards in relation to the preparation and assurance of CSR reports affects information asymmetries, correcting decoupling practices. Investors should be aware that the use of standards reinforces the quality of sustainability reports and, consequently, it can be a signal that will affect future investment decisions. Thus, CSR assurance can add value to shareholders and investors by showing management's commitment to credible CSR information disclosure. For other stakeholders, the findings are interesting because the absence of generalizable standards and regulations throws into question the credibility of the CSR assurance (Perego & Kolk, 2012).

In relation to regulatory bodies, our findings may be informative given the increased demand for assurance services. Although standard setters and regulators often assume that CSR assurance is linked to enhanced transparency and higher quality of CSR reporting, thereby improving disclosure credibility (Cho et al., 2014; Michelon et al., 2015; Simnett et al., 2009), this study findings indicate that assurance not always complies with this role but it can be used as a tool to legitimize the quality of disclosure (Boiral et al., 2017).

REFERENCES

- AccountAbility (2003). AA1000 assurance standard. London, UK: AccountAbility
- Accountancy Europe. (2017). *How to respond to assurance needs on non-financial information*. Brussels: Accountancy Europe.
- Adams, C. A., & Evans, R. (2004). Accountability, completeness, credibility and the audit expectations gap. *Journal of Corporate Citizenship*, (14), 97-115.
- Amor-Esteban, V., Galindo-Villardón, M.P., & García-Sánchez, I. M. (2019). A Multivariate Proposal for a National Corporate Social Responsibility Practices Index (NCSRPI) for International Settings. *Social Indicators Research*, 143(2), 525-560. <https://doi.org/10.1007/s11205-018-1997-x>
- Arena, C., Liong, R., & Vourvachis, P. (2018). Carrot or stick: CSR disclosures by Southeast Asian companies. *Sustainability Accounting, Management and Policy Journal*, 9 (4), pp.422-454. <https://doi.org/10.1108/SAMPJ-06-2016-0037>
- Ashforth, B. E., & Gibbs, B. W. (1990). The double-edge of organizational legitimation. *Organization science*, 1(2), 177-194. <https://doi.org/10.1287/orsc.1.2.177>
- Ballou, B., Chen, P. C., Grenier, J. H., & Heitger, D. L. (2018). Corporate social

- responsibility assurance and reporting quality: Evidence from restatements. *Journal of Accounting and Public Policy*, 37(2), 167-188. <https://doi.org/10.1016/j.jaccpubpol.2018.02.001>
- Behnam, M., & MacLean, T. L. (2011). Where is the accountability in international accountability standards?: A decoupling perspective. *Business Ethics Quarterly*, 21(1), 45-72.
- Boiral, O., & Henri, J. F. (2017). Is sustainability performance comparable? A study of GRI reports of mining organizations. *Business & Society*, 56(2), 283-317. <https://doi.org/10.1177/0007650315576134>
- Boiral, O., Heras-Saizarbitoria, I., & Brotherton, M. C. (2019). Assessing and improving the quality of sustainability reports: The auditors' perspective. *Journal of Business Ethics*, 155(3), 703-721. <https://doi.org/10.1007/s10551-017-3516-4>
- Brown, H. S., de Jong, M., & Levy, D. L. (2009). Building institutions based on information disclosure: lessons from GRI's sustainability reporting. *Journal of Cleaner Production*, 17(6), 571-580. <https://doi.org/10.1016/j.jclepro.2008.12.009>
- Brown-Liburd, H., & Zamora, V. L. (2015). The role of corporate social responsibility (CSR) assurance in investors' judgments when managerial pay is explicitly tied to CSR performance. *Auditing: A Journal of Practice & Theory*, 34(1), 75-96.
- Birkey, R. N., Michelon, G., Patten, D. M., & Sankara, J. (2016). Does assurance on CSR reporting enhance environmental reputation? An examination in the US context. *Accounting Forum* 40(3), 143-152.
- Cho, C. H., Michelon, G., Patten, D. M., & Roberts, R. W. (2014). CSR report assurance in the USA: An empirical investigation of determinants and effects. *Sustainability Accounting, Management and Policy Journal*, 5(2), 130-148. <https://doi.org/10.1108/SAMPJ-01-2014-0003>
- Christensen, D. M. (2016). Corporate accountability reporting and high-profile misconduct. *The Accounting Review*, 91(2), 377-399. <https://doi.org/10.2308/accr-51200>
- Clarke, T. (2007). The materiality of sustainability: Corporate social and environmental responsibility as instruments of strategic change?. In S. Benn & D. Dunphy (Eds.), *Corporate governance and sustainability: Challenges for theory and practice* (pp. 219-251). Abingdon, Oxon: Routledge.
- Clarkson, P., Li, Y., Richardson, G., & Tsang, A. (2019). Causes and consequences of voluntary assurance of CSR reports: International evidence involving Dow Jones Sustainability Index Inclusion and Firm Valuation. *Accounting, Auditing & Accountability Journal*, 32 (8), 2451-2474. <https://doi.org/10.1108/AAAJ-03-2018-3424>
- Crilly, D., Zollo, M., & Hansen, M. T. (2012). Faking it or muddling through? Understanding decoupling in response to stakeholder pressures. *Academy of Management Journal*, 55(6), 1429-1448. <https://doi.org/10.5465/amj.2010.0697>
- Cuadrado-Ballesteros, B., Martínez-Ferrero, J., & García-Sánchez, I-M. (2017). Mitigating information asymmetry through sustainability assurance: The role of accountants and levels of assurance. *International Business Review*, 26(6), 1141-1156. <https://doi.org/10.1016/j.ibusrev.2017.04.009>
- Dalla Via, N., & Perego, P. (2020). The Relative Role of Firm Incentives, Auditor Specialization, and Country Factors as Antecedents of Non-financial Audit Quality. *Auditing: A Journal of Practice and Theory*. <https://doi.org/10.2308/ajpt-18-085>
- Deegan, C. (2009). *Financial accounting theory*. McGraw Hill, North Ryde, NSW,

Australia

- Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64-87. <https://doi.org/10.1525/cmr.2011.54.1.64>
- Dhaliwal, D.S., Li, O.Z., Tsang, A., Yang, Y.G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review*, 86(1), 59-100. <https://doi.org/10.2308/accr.00000005>
- Du, K., & Wu, S. J. (2019). Does external assurance enhance the credibility of CSR reports? Evidence from CSR-related misconduct events in Taiwan. *Auditing: A Journal of Practice & Theory*, 38(4), 101-130. <https://doi.org/10.2308/ajpt-52418>
- Fédération des Experts Comptables Européens (FEE) (2004). FEE call for action: Assurance for sustainability. Brussels, Belgium: FEE.
- García-Sánchez, I. M., Hussain, N., Khan, S. A., & Martínez-Ferrero, J. (2020a). Do Markets Punish or Reward Corporate Social Responsibility Decoupling?. *Business & Society*. <https://doi.org/10.1177/0007650319898839>
- García-Sánchez, I. M., Hussain, N., Khan, S. A., & Martínez-Ferrero, J. (2020b). Managerial entrenchment, corporate social responsibility, and earnings management. *Corporate Social Responsibility and Environmental Management*. <https://doi.org/10.1002/csr.1928>
- Graafland, J., & Smid, H. (2019). Decoupling among CSR policies, programs, and impacts: An empirical study. *Business & Society*, 58(2), 231-267. <https://doi.org/10.1177/0007650316647951>
- Hahn, R., & Lülfes, R. (2014). Legitimizing Negative Aspects in GRI-Oriented Sustainability Reporting: A Qualitative Analysis of Corporate Disclosure Strategies. *Journal of Business Ethics* 123(3), 401–420. <https://doi.org/10.1007/s10551-013-1801-4>
- Hawn, O., & Ioannou, I. (2016). Mind the gap: The interplay between external and internal actions in the case of corporate social responsibility. *Strategic Management Journal*, 37(13), 2569–2588. <https://doi.org/10.1002/smj.2464>
- Jauernig, J., & Valentinov, V. (2019). CSR as hypocrisy avoidance: a conceptual framework. *Sustainability Accounting, Management and Policy Journal*. <https://doi.org/10.1108/SAMPJ-05-2018-0141>
- Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics*, 106(1), 53-72. <https://doi.org/10.1007/s10551-011-1052-1>
- Kim, E. H., & Lyon, T. P. (2015). Greenwash vs. brownwash: Exaggeration and undue modesty in corporate sustainability disclosure. *Organization Science*, 26(3), 705-723. <https://doi.org/10.1287/orsc.2014.0949>
- King, A., & Bartels, W. (2015). *Currents of Change: the KPMG Survey of Corporate Responsibility Reporting 2015*. Netherlands: KPMG
- Knight, B. A. (2020). *Green or Greenwashed? Organizational Strain as an Antecedent to Decoupling in Corporate Environmental Sustainability Reporting*. Doctoral dissertation, The University of North Carolina at Charlotte. Accessed at <https://search.proquest.com/docview/2394924156?pq-origsite=gscholar&fromopenview=true>
- Kolk, A., & Perego, P. (2010). Determinants of the adoption of sustainability assurance statements: An international investigation. *Business Strategy and the Environment*, 19(3), 182-198. <https://doi.org/10.1002/bse.643>

- KPMG. (2011). KPMG International Survey of Corporate Responsibility Reporting 2011. New York: KPMG
- KPMG (2017). The KPMG Survey of Corporate Responsibility Reporting 2017. Amsterdam: KPMG Global Sustainability Services.
- Lindblom, C.K. (1994). The implications of organizational legitimacy for corporate social performance and disclosure. Paper presented at the Critical Perspectives on Accounting Conference, New York, NY.
- Lock, I., & Seele, P. (2016). The credibility of CSR (corporate social responsibility) reports in Europe. Evidence from a quantitative content analysis in 11 countries. *Journal of Cleaner Production*, 122, 186-200. <https://doi.org/10.1016/j.jclepro.2016.02.060>
- Marquis, C., & Qian, C. (2014). Corporate social responsibility reporting in China: Symbol or substance?. *Organization Science*, 25(1), 127-148. <https://doi.org/10.1287/orsc.2013.0837>
- Martínez-Ferrero, J., & García-Sánchez, I. M. (2017a). Coercive, normative and mimetic isomorphism as determinants of the voluntary assurance of sustainability reports. *International Business Review*, 26(1), 102-118. <https://doi.org/10.1016/j.ibusrev.2016.05.009>
- Martínez-Ferrero, J., & García-Sánchez, I.M. (2017b). Sustainability assurance and cost of capital: Does assurance impact on credibility of corporate social responsibility information?. *Business Ethics: A European Review*, 26(3), 223-239. <https://doi.org/10.1111/beer.12152>
- Martínez-Ferrero, J., García-Sánchez, I-M., & Ruiz-Barbadillo, E. (2018): The quality of sustainability assurance reports: The expertise and experience of assurance providers as determinants. *Business Strategy and the Environment*, 27, 1181-1196. <https://doi.org/10.1002/bse.2061>
- Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. *Critical Perspectives on Accounting*, 33, 59-78. <https://doi.org/10.1016/j.cpa.2014.10.003>
- Moroney, R., & Trotman, K. T. (2016). Differences in auditors' materiality assessments when auditing financial statements and sustainability reports. *Contemporary Accounting Research*, 33(2), 551-575. <https://doi.org/10.1111/1911-3846.12162>
- Moroney, R., Windsor, C., & Aw, Y.T. (2012). Evidence of assurance enhancing the quality of voluntary environmental disclosures: An empirical analysis. *Accounting & Finance*, 52(3), 903-939. <https://doi.org/10.1111/j.1467-629X.2011.00413.x>
- Park, J., & Brorson, T. (2005). Experiences of and views on third-party assurance of corporate environmental and sustainability reports. *Journal of Cleaner Production*, 13(10-11), 1095-1106. <https://doi.org/10.1016/j.jclepro.2004.12.006>
- Perego, P., Kolk, A. (2012). Multinationals' accountability on sustainability: The evolution of third-party assurance of sustainability reports. *Journal of Business Ethics*, 110(2), 173-190. <https://doi.org/10.1007/s10551-012-1420-5>
- Sauerwald, S., & Su, W. (2019). CEO overconfidence and CSR decoupling. *Corporate Governance: An International Review*, 27(4), 283-300. <https://doi.org/10.1111/corg.12279>
- Sethi, S. P., & Williams, O. F. (2000). Creating and implementing global codes of conduct: An assessment of the Sullivan Principles as a role model for developing international codes of conduct—Lessons learned and unlearned. *Business and Society Review*, 105(2), 169-200. <https://doi.org/10.1111/0045-3609.00077>

- Sethi, S.P., Martell, T.F., & Demir, M. (2017). Enhancing the role and effectiveness of corporate social responsibility (CSR) reports: The missing element of content verification and integrity assurance. *Journal of Business Ethics*, 144(1), 59-82. <https://doi.org/10.1007/s10551-015-2862-3>
- Simnett, R., Vanstraelen, A., & Chua, W.F. (2009). Assurance on sustainability reports: An international comparison. *The Accounting Review*, 84(3), 937-967. <https://doi.org/10.2308/accr.2009.84.3.937>
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571-610. <https://doi.org/10.2307/258788>
- Talbot, D., & Boiral, O. (2015). Strategies for climate change and impression management: A case study among Canada's large industrial emitters. *Journal of Business Ethics*, 132(2), 329-346. <https://doi.org/10.1007/s10551-014-2322-5>
- Talbot, D., & Boiral, O. (2018). GHG reporting and impression management: An assessment of sustainability reports from the energy sector. *Journal of Business Ethics*, 147(2), 367-383. <https://doi.org/10.1007/s10551-015-2979-4>
- Tashman, P., Marano, V., & Kostova, T. (2019). Walking the walk or talking the talk? Corporate social responsibility decoupling in emerging market multinationals. *Journal of International Business Studies*, 50(2), 153-171. <https://doi.org/10.1057/s41267-018-0171-7>
- Vigneau, L., Humphreys, M., & Moon, J. (2015). How do firms comply with international sustainability standards? Processes and consequences of adopting the global reporting initiative. *Journal of Business Ethics*, 131(2), 469-486. <http://dx.doi.org/10.1007/s10551-014-2278-5>

Table 1. Descriptive Statistics

	%		
DGRI	62.60%		
DAssurance	46.01%		
DGRI*Dassu	37.93%		
CEODuality	65.65%		
CSRCommittee	74.21%		
Crisis	15.72%		
		Mean	Std. Dv.
CSR_Gap		0.010	0.015
BSize		11.248	3.841
BActivity		9.931	9.699
BIndep		46.631	30.509
WoB		13.176	12.158
Analysts		13.652	9.415
InstInv		25.296	24.602
Size		17.072	3.009
ROA		5.215	28.130
Leverage		77.239	11.679
Advert_Intensity		1.457	1.173
MtoB		1.110	2.641
NCSRI		0.527	8.997

Table 2. Correlation matrix

	1	2	3	4	5	6	7	8	90
1 CSR_Gap	1								
2 DGRI	0.01	1							
3 DAssurance	0.07***	0.38***	1						
4 DGRI_DAssu	0.06***	0.60***	0.85***	1					
5 BSize	0.03***	0.14***	0.17***	0.17***	1				
6 BActivity	0.01	-0.01	0.11***	0.08***	-0.16***	1			
7 CEODuality	-0.03***	-0.02***	0.02**	0.02**	-0.08***	0.28***	1		
8 Bindep	-0.21***	0.02**	-0.07***	-0.05***	-0.15***	-0.22***	-0.09***	1	
9 WoB	-0.12***	0.07***	0.03***	0.05***	0.02***	-0.01	0.05**	0.33***	1
10 CSRCommittee	0.04***	0.28***	0.25***	0.28***	0.04***	0.03***	-0.02**	0.07***	0.11***
11 Analysts	0.02*	0.07***	0.07***	0.08***	0.07***	-0.08***	-0.06***	0.08***	0.06***
12 InstInv	0.00	0.03***	0.00	0.02**	0.03***	0.04***	0.07***	-0.15***	-0.01
13 Size	0.40***	0.10***	0.10***	0.12***	0.09***	0.01	-0.03***	-0.20***	-0.19***
14 ROA	-0.04***	0.00	0.00	0.00	-0.01	-0.04***	-0.02**	0.00	-0.01
15 Leverage	-0.01	0.02**	0.01	0.02**	0.01	0.00	-0.01	0.01	0.01
16 Adver_Intensity	0.01	-0.01	-0.01	-0.01	0.00	-0.02	-0.01	0.01	0.01
17 MtoB	-0.09***	0.00	-0.02***	-0.02**	-0.04***	-0.01	0.00	0.03***	0.03***
18 NCSRI	-0.07***	-0.04***	0.06***	0.03***	-0.06***	0.22***	0.12***	-0.02**	0.06***
19 Crisis	-0.03***	-0.01	-0.05***	-0.03***	0.04***	-0.05***	-0.07***	0.02	-0.12***

	10	11	12	13	14	15	16	17	18
10 CSRCommittee	1								
11 Analysts	0.06***	1							
12 InstInv	-0.05***	-0.06***	1						
13 Size	0.03***	0.28***	0.07***	1					
14 ROA	-0.02**	0.04***	0.02**	0.00	1				
15 Leverage	0.01	0.01	0.00	0.05***	0.00	1			
16 Adver_Intensity	-0.02	0.00	-0.01	0.00	-0.01	0.00	1		
17 MtoB	-0.01	0.01	0.04***	-0.18***	0.03***	-0.02***	0.00	1	
18 NCSRI	0.01	0.00	-0.02***	-0.09***	0.02**	0.00	0.00	-0.03***	1
19 Crisis	0.00	-0.08***	-0.02**	-0.04***	-0.01	0.00	0.00	0.01	-0.01

Significance levels: *** p-value < 0.01; ** p-value < 0.05

Table 3. Explanatory models

	Model 1			
	(A)	(B)	(C)	(D)
DGRI	-0.00153** (0.000641)		-0.00178*** (0.000680)	-0.00218*** (0.000784)
DAssurance		0.000159 (0.000634)	0.000745 (0.000671)	-0.000348 (0.00126)
DGRI*DAssurance				0.00148 (0.00145)
BSize	-0.000231** (9.96e-05)	-0.000222** (9.96e-05)	-0.000233** (9.96e-05)	-0.000237** (9.97e-05)
BActivity	1.23e-05 (3.16e-05)	1.07e-05 (3.16e-05)	1.20e-05 (3.16e-05)	1.12e-05 (3.16e-05)
CEODuality	0.000434 (0.000657)	0.000469 (0.000658)	0.000458 (0.000658)	0.000454 (0.000658)
Blndep	-2.13e-05 (1.31e-05)	-2.09e-05 (1.32e-05)	-2.15e-05 (1.31e-05)	-2.15e-05 (1.31e-05)
WoB	0.000150*** (2.80e-05)	0.000149*** (2.80e-05)	0.000150*** (2.80e-05)	0.000152*** (2.80e-05)
CSRCom	0.000406 (0.000716)	0.000372 (0.000717)	0.000379 (0.000716)	0.000383 (0.000716)
Analysts	-0.000402*** (7.78e-05)	-0.000409*** (7.79e-05)	-0.000402*** (7.78e-05)	-0.000406*** (7.79e-05)
Instlnv	5.25e-05* (2.88e-05)	5.28e-05* (2.89e-05)	5.17e-05* (2.89e-05)	5.20e-05* (2.89e-05)
Size	0.00704*** (0.000953)	0.00698*** (0.000955)	0.00700*** (0.000954)	0.00701*** (0.000954)
Leverage	-2.81e-05 (2.81e-05)	-2.79e-05 (2.81e-05)	-2.66e-05 (2.81e-05)	-2.70e-05 (2.81e-05)
Adver_Intensity	2.75e-07 (3.07e-07)	2.82e-07 (3.08e-07)	2.66e-07 (3.07e-07)	2.56e-07 (3.08e-07)
MtoB	0.000189 (0.000145)	0.000187 (0.000145)	0.000187 (0.000145)	0.000186 (0.000145)
ROA	0.000916** (0.000436)	0.000899** (0.000437)	0.000894** (0.000437)	0.000890** (0.000437)
Crisis	-0.00126 (0.000792)	-0.00122 (0.000796)	-0.00119 (0.000795)	-0.00125 (0.000797)
NCSRI	-0.000112 (0.000133)	-0.000114 (0.000133)	-0.000117 (0.000133)	-0.000116 (0.000133)
Constant	-0.124*** (0.0161)	-0.124*** (0.0161)	-0.123*** (0.0161)	-0.123*** (0.0161)
<i>R-square</i>	11.97%	11.90%	12.00%	12.01%
F	8.84***	8.47***	8.39***	7.98***
VIF value: DGRI 1.71 DAssurance 2.79 DGRI*DAssurance 3.09 Bsize 1.17 BActivity 1.23 CEODuality 1.14 Blndep 1.29 WoB 1.14 CSRCom 1.11 Analysts 1.15 Instlnv 1.12 Size 1.17 Leverage 1.01 Adver_Intensity 1.01 MtoB 1.23 ROA 1.14 Crisis 1.05 NCSRI 1.19				

n= 15,219 firm-year observations.
Significance levels: * p<.05. **p<.01. ***p<.001. Coefficient and standard errors (in parentheses) are reported

Figure 1. Dynamic evolution of GRI compliance and CSR assurance

