The credibility of CSR reports in Europe. Evidence from a quantitative content analysis in 11 countries.

1 Introduction

Credibility is central to every kind of communication, whether personal interaction, political speeches, or companies communicating their role and responsibilities in society. Companies have communicated ever more information regarding their corporate social responsibility (CSR), even though this has not led to more goodwill on the side of stakeholders, but to more mistrust (Waddock and Goggins, 2011). Stakeholders often view CSR communication as strategic in nature and thus not credible (Elving, 2012; Illia et al., 2013). Such criticism surfaces particularly in one of the most prominent tools for companies to communicate about their CSR, sustainability, and corporate citizenship¹ achievements: CSR reports. Just as credibility is central to everyday communication (Jackob, 2008), it is also central to this communication tool. Hence, this article endeavors to analyze whether CSR reports are credible. CSR reports have received considerable scholarly attention in recent years and most research has focused on the emergence of CSR reporting (Marimon et al., 2012; Hahn and Kühnen, 2013), firm characteristics such as size, country, or industry regarding CSR reporting (Chen and Bouvain, 2009; de Villiers et al., 2014b; Fifka, 2013), and its impact on financial figures (Ioannou and Serafeim, 2014b; Cheng et al., 2014; Fifka, 2013). Far too little attention has been paid to the quality of these reports and very little is known about the contextual factors that affect reporting quality (Hahn and

¹ Throughout this paper, ‘CSR reporting’ is used as an umbrella term for non-financial, sustainability, corporate citizenship, or corporate responsibility-labeled reports. In the corporate world, these terms are used interchangeably, although there has been a trend toward ‘sustainability’ in CSR report titles (Gatti and Seele, 2014). In academia, these concepts are defined differently, which becomes obvious when comparing definitions of sustainability (Dyllick and Hockerts, 2002) with the multitude of CSR definitions (van Marrewijk, 2003). In this journal, however, studies so far have referred to ‘sustainability reporting’ (Hahn and Kühnen, 2013; Roca and Searcy, 2012), ‘non-financial disclosure’ (Skouloudis et al., 2014), or as in this case ‘CSR reporting’ (Dong et al., 2014). This showcases that researchers all contribute to advancing knowledge in the field, but by using different labels.

Kühnen, 2013). Nonetheless, CSR reports have been harshly criticized for lacking credibility (Dando and Swift, 2003), being pseudo-transparent (Coombs and Holladay, 2013), and being poor in quality (Milne and Gray, 2013), despite voluntary standardization. Hence, CSR reports are accused of deepening the credibility gap (Dando and Swift, 2003; MacLean and Rebernak, 2007) and threatening companies' legitimacy in society instead of facilitating dialogue with stakeholders adding to corporate greenwashing (Seele and Gatti 2015). The central goal of this paper is to tackle the issue of CSR reporting quality in terms of CSR report credibility. CSR reports' credibility is analyzed and investigated with respect to how extensively content, format, firm-level, and contextual factors affect reporting credibility. To accomplish this, credibility is conceptualized and operationalized along communicative action theory (Habermas, 1984). Furthermore, by applying a European perspective, this paper examines whether mandatory reporting regulations render CSR reports more credible and investigates the role of voluntary reporting standardization in this respect.

Data were collected in the 11 economically most powerful European countries, sampling CSR reports from corporations of these countries' leading stock indices. Quantitative content analysis was applied using human as well as software coding. The present study has operationalized, for the first time, CSR reporting credibility as a multilayered concept using political CSR and communicative action theory (Scherer and Palazzo, 2011; Habermas, 1984). The resulting data were analyzed with multiple regression models and other parametric statistics. The findings indicate that CSR reports are credible at a mediocre level, leaving much room for improvement in terms of reporting quality. Credibility in CSR reports was achieved through contents and standardization, while external factors were secondary to reporting quality in this sample. Hence, the impact of reports' length, their format in terms of stand-alone or combined reports, the size of the firm, its reporting experience, the regulatory context, and the company's industry on credibility resulted less important. On a conceptual level, understandability is found to be a precondition for credibility in CSR reports, before truth, sincerity, and appropriateness can be addressed to lead to reporting credibility.

This study makes an original contribution to several important areas: It is one of the first studies to deliver empirical evidence on the issue of credibility in CSR reporting. Second, it provides a two-phase-model of CSR reporting credibility and thus contributes to filling the gap in theory in the field (Hahn and Kühnen, 2013). Third, it provides new insights into the impact of mandatory regulation of

CSR reporting on reporting quality and the role of voluntary standards. Fourth, it presents suggestions for how companies can make their CSR reports more credible to maintain legitimacy with stakeholders.

The paper proceeds as follows: After a literature review that outlines the applied theories and develops the hypotheses, a methods section provides details on sample selection, operationalization, and data analysis. The following section reports the empirical results, which are in consequence discussed against existing literature. Finally, the conclusions part presents the theoretical, practical, and policy implications along with limitations of the study.

2 Literature Review

CSR reporting is one of the most effective tools for communicating CSR; it encompasses both codes of conduct and online reporting (predominantly CSR reports). These reports are defined as discrete, independent corporate editorial works that provide information about CSR (Biedermann, 2008). Thus, CSR reports are a formalized means of communication (Schaltegger et al., 2006) that may take the form of stand-alone reports or integrated publications that combine economic, social, and environmental information in one annual report (Daub, 2007).

Currently, CSR reports are harshly criticized for their contents and lack of credibility (Coombs and Holladay, 2013). Companies have extensive leeway in choosing what to report, which has led to diverse topics being included in CSR reports. Therefore, the reports are said to address few stakeholders, to “cherry pick” elements of news despite standardization (Milne and Gray, 2013, p. 17), and to be self-laudatory public relations publications (Seele and Knebel, 2015). This low credibility has challenged stakeholders’ trust in the tools and the practice, resulting in a credibility gap (Dando and Swift, 2003) between companies and stakeholders with regard to CSR reporting. This gap, following - amongst other factors such as general cynicism toward CSR (Illia et al., 2013) - from inconsistencies between CSR activities and what is reported (Basu and Palazzo, 2008), has led stakeholders to question the moral legitimacy of corporations in society (Claasen and Roloff, 2012). This comes at a time when corporations’ license to operate is put on the spot by corporate hypocrisy (Wagner et al., 2009) and stories of scandals such as the Rana Plaza factory fire have hit the news.

2.1 Moral Legitimacy and Habermasian Communicative Action Theory

The basic assumption in this paper is that CSR reports can re-establish moral legitimacy by being credible tools that facilitate communication and thereby bridge the credibility gap. According to the political notion of CSR, this moral legitimacy is established and maintained through deliberative discourse, a form of communication that is based on reaching consensus in a Habermasian sense (Scherer and Palazzo, 2011). This CSR theory holds that the nation state's power is declining, giving rise to private actors such as transnationally operating corporations. It views multinational corporations as important actors in efforts to resolve global public issues through voluntary self-regulation. Corporations' legitimacy is constituted through moral legitimacy. It is based on deliberation between stakeholders and corporate actors that leads to consensus (Scherer and Palazzo, 2011), following deliberative democracy theory (Habermas, 1996). Such deliberative discussions, ideally, happen in situations of ideal speech, where the "unforced force of the better argument" (Habermas, 2002, p. 96) leads all actors to agree on an issue. To arrive at such a situation, four validity claims must be redeemed by the discourse participants (Habermas, 1984):

- *Truth* (objective truth of the statements made)
- *Sincerity* (also translated as truthfulness: subjective truth of the propositions, the speaker is honest about what he/she says)
- *Appropriateness* (also translated as rightness: the message is appropriate in its context, sender and recipient agree to the same social context) of communication
- *Understandability* (also translated as intelligibility or comprehensibility: degree of comprehensiveness of the message, clarity)

In his later writings, Habermas regarded understandability as a precondition for communication rather than a redeemable claim (Zinkin, 1998). In this study, however, it is considered a crucial element of ideal speech and thus explicitly studied. Hence, the four claims are interrelated constructs that together constitute the multilayered concept of credibility.

Accordingly, deliberative communication of CSR helps corporations establish and maintain their legitimacy-based license to operate. From a political-normative perspective on CSR communication, communication is rational if it is credible (Seele and Lock, 2015) and credibility is an outcome of

reporting quality (Perera Aldama et al., 2009). If CSR reports are credible tools, they can facilitate ideal speech and deliberation between companies and stakeholders and thus help build up moral legitimacy. The credibility of European CSR reports is therefore analyzed and the influence of content, format, firm-level, and contextual factors is addressed. Thus, the overarching research question (RQ) tackled by this article is: *Are CSR reports credible?*

2.2 Factors Influencing CSR Report Credibility

Much research on the emergence and characteristics of CSR reports has been ongoing. However, the quality of CSR reports is still under-investigated (Hahn and Kühnen, 2013), with few exceptions (Adnan, 2009). To the authors' knowledge, no research has thus far been conducted on the credibility of CSR reports, although their lack of credibility has been much criticized (Milne and Gray, 2013). In addition to content-related factors, format, firm-level, and contextual factors are also likely to influence the credibility of CSR reports, as described by the hypotheses below.

The contents of CSR reports are decisive for credibility. Standards are used to determine reporting contents, and most companies in Europe rely on the Global Reporting Initiative's (GRI's) guidelines for CSR reporting (Brown et al., 2009), which are considered the best option available for companies to use in reporting on CSR issues (Marimon et al., 2012). A big advantage of such CSR reporting standards is thus the operationalization of the fuzzy term (de Colle et al., 2014). Although the GRI has been criticized for representing work-in-progress (Milne and Gray, 2013) and for being a challenge for reporting (Knebel and Seele, 2015), it is the backbone of most voluntary and mandatory regulatory attempts (Rufflet et al., 2014). This is underscored by the fact that ever more companies report according to the GRI (Marimon et al., 2012) and that it supports transparency in reporting (Fernandez-Feijoo et al., 2014). The guidelines come in the form of three subsequent sets (G3, G3.1, and G4) of general reporting indicators applied by the companies in the sample. To further standardize CSR reports, GRI also offers sector-specific supplementary reporting material (the so-called sector supplement, for instance, for the financial services industry), which are additional reporting indicators that can be reported voluntarily by companies to target industry-specific topics. Moreover, until introduction of the most recent guideline G4, GRI offered a self-referencing application-level check that could receive (upon payment) official confirmation by the GRI. Companies could self-classify

into three categories of reporters ranging from A to C, with A being the best. Furthermore, a report marked with a “+” indicated external assurance. Although assurance is not necessarily an indicator of objectivity (Milne and Gray, 2013), it may have a positive impact on credibility (Dando and Swift, 2003; Simnett et al., 2009). If assured, GRI’s best-in-class reports (Lozano, 2013) could obtain an “A+” grade. In fact, Fernandez-Feijoo et al. (2014) used the application level as one variable for reporting transparency. In the G4 guidelines, the application-level check is replaced by the “materiality matters check,” which is a paid service by the GRI checking the materiality of the report. With regard to credibility, standardization along GRI guidelines and their supplements and features leads to these hypotheses:

H1a. CSR reports using standardized reporting guidelines from the GRI (G3, G3.1, G4) are more credible than those without.

H1b. The more the guidelines are used (in terms of a sector supplement), the more credible is the CSR report.

H1c. CSR reports with high application levels (or materiality matters check) are more credible than those without.

A recent trend in CSR reporting has been to integrate non-financial information into annual financial reports (Searcy and Buslovich, 2014), which is a first step toward integrated reporting (International Integrated Reporting Council - IIRC, 2011). This development initiated in South Africa in 2009 and has since spread to Europe. France has even made financial and non-financial reporting mandatory for large enterprises (de Villiers et al., 2014a). Companies engaging in integrated reporting were found to have improved the quality of the reported data and developed more positive stakeholder relationships (IIRC, 2014). The most prevalent form of integrated reporting is the “combined report,” which companies nonetheless label “integrated report,” where CSR information is integrated into the annual financial report as a separate section. This represents one first step toward integrated reporting (IIRC, 2011). Integrated reports are said to explain a company’s performance more broadly (Frias-Aceituno et al., 2013) and are considered a “new reporting paradigm that is holistic” (Adams and Simnett, 2011) and thus meant to arrive at all-round credibility (Kolk, 2004). Such “combined reports” are usually longer than stand-alone publications, because they also contain financial information. Currently, the length of CSR reports varies widely, as do the contents (Roca and Searcy, 2012). Reports’ length was investigated with regard to the UK and Finland finding big variations within the national samples

(Fifka and Drabble, 2012). Boiral (2013) analyzed CSR reports for their disclosure of real-life sustainability issues and found that length of report does not necessarily mean broader coverage of topics. However, so far reports' length was not analyzed regarding quality of reporting. Building on previous research claiming that integrated reporting leads to positive outcomes for the firm (Kolk, 2004; IIRC, 2011; Adams and Simnett, 2011; Frias-Aceituno et al., 2013), it is hypothesized:

H2a. A positive relationship exists between CSR reports' length and their credibility.

H2b. Combined reports are more credible than stand-alone reports.

CSR reporting research has also examined firm-level characteristics such as size, age, and experience in reporting. Studies have almost unanimously confirmed that the size of a firm has a positive influence on its reporting (Hahn and Kühnen, 2013; Fifka, 2013; Skouloudis et al., 2014), its likelihood of reporting (de Villiers et al., 2014b; Frias-Aceituno et al., 2014), and the quantity of disclosure (Albertini, 2014). In this vein, it is hypothesized that this also holds for reporting credibility:

H3. The bigger the firm (in terms of employees and turnover), the more credible its CSR report.

For the French case, Albertini (2014) found that reporters experience a learning curve over the years: Disclosure of CSR-related topics becomes more precise over time. The older the firm, the more experience it has in business, and the longer it has reported on CSR issues, the more practice it has acquired. Hence, it is assumed:

H4. The more experienced the firm (in terms of age and reporting experience), the more credible its CSR report.

Several contextual effects influence CSR reporting. Cultural differences in reporting in terms of the company's country of origin exist in Europe and elsewhere (Fifka, 2013), in terms of CSR reporting developments (de Villiers et al., 2014a), CSR disclosure on the web in developing countries (Wanderley et al., 2008), CSR adoption (Marimon et al., 2012), likelihood of integrated reporting (Jensen and Berg, 2012), assurance of reporting (Simnett et al., 2009), or level of reporting (Van der Laan Smith et al., 2005). However, again the relationship between quality of reporting and company

domicile is under-researched (Hahn and Kühnen, 2013), with the exception of a few studies that have reported differences on the country level (Lock and Seele, 2015; Vormedal and Ruud, 2009).

The trend toward regulation of non-financial disclosure has also reached Europe, exemplified by the recently passed directive of the European Commission mandating that large companies report on CSR issues (EU, 2014). Following Ioannou and Serafeim's (2014a) classification, comprehensive CSR reporting legislation mandates that publicly traded companies report on environmental, social, and governance issues². This is consistent with the EU directive and the GRI approach. Legally enforced CSR reporting is a new research field that has seen some pioneering work (Hahn and Kühnen, 2013). Albertini (2014) found that regulation in the chemicals industry elicited companies' environmental engagement in France. Legal regulation of CSR reporting also promoted the adoption of standards such as the GRI guidelines (Marimon et al., 2012). For China and South Africa, non-financial disclosure increased when laws were passed and this regulation had a positive effect on companies' financial position (Ioannou and Serafeim, 2014a). Hence, a similar effect for reporting credibility is expected:

H5. CSR reports from countries with legally mandated CSR reporting regulations are more credible than CSR reports from countries without such legislation.

Sector-level differences are a main determinant of CSR reporting (Fifka, 2013). Sweeney and Coughlan, for instance, observed a "clear industry effect in reporting of CSR" (2008, p. 120). Researchers have found in particular that firms with a high impact on the environment reach higher levels of CSR reporting because they are forced to respond to stakeholder pressure (Hahn and Kühnen, 2013) and, as evident in the extractive industries, adhere more tightly to CSR standards (Raufflet et al., 2014). In fact, environmentally sensitive industries such as extraction, energy, forestry, chemicals, construction materials, and steel report more on CSR (Branco and Rodrigues, 2008; Jenkins and Yakovleva, 2006; Fifka and Drabble, 2012). Thus, it is hypothesized that this also holds for reporting credibility:

² In this sample, such legislation is in place in France, Spain, and the Netherlands. The Dutch sample comprises only 19 reports and thus could not be used for statistical significance tests. For more information on the French law, visit: <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000022470434&categorieLien=id>. For more information on the Spanish reporting regulations, refer to: http://www.empleo.gob.es/es/sec_trabajo/autonomos/economia-soc/resposocempresas/legislacion/index.htm.

H6. Credibility levels differ according to the impact of the company on the environment. Environmentally sensitive industries' reports are more credible than less sensitive sectors' reports.

3 Method

As in many studies on CSR reporting (Fifka, 2013), a quantitative content analysis (Riffe et al., 1998; Campbell, 2003) from a population comprising the leading 320 stock-listed companies from the 10 biggest countries by gross domestic product (GDP; World Bank, 2012) in the EU and Switzerland (Table 1) was conducted to represent the most powerful economies in Europe. European companies were chosen as a sample to reflect current CSR reporting practices in one of the most important markets worldwide (World Bank, 2015). The diversity of the European market is unique and in the light of mandatory CSR reporting provides an interesting field of study as it combines regulated and unregulated national legislations in one market. The final sample consisted of 237 CSR reports in the English language (74.06% of the population) that were downloaded from the internet or obtained directly from the companies; 88.2% are from 2013 and the others are from 2011, 2012, and 2014. This variance exists because companies have different publication routines; some publish a report every year, others bi- or triennially. The most recent reports as of summer 2014 were collected.

Table 1. Countries and stock market indices of the population and sample.

Country	Index	Population	Sample	Human as well as software coding was applied (details below). The codebook comprised 11 content, 17 formal, and 62 GRI indicator variables ³ (see appendix B.). To pre-test the codebook and refine the selected categories of variables in an inductive process, 25 CSR reports from the same sample but from previous years were coded in three consecutive rounds, each followed by consensus sessions with the coders and the study's authors. Three independent coders
Austria	ATX	20	10	
Belgium	BEL20	20	12	
France	CAC	40	36	
Germany	DAX	30	28	
Italy	FTSE MIB	40	28	
Netherlands	AEX	25	19	
Poland	WIG	20	8	
Spain	IBEX	35	28	
Sweden	OMX	30	22	
Switzerland	SLI	30	22	
United Kingdom	FTSE 30	30	24	
Total	---	320	237	

from three different European national backgrounds who were not involved in the conceptualization of

³ The codebook is available from the authors upon request.

the codebook coded a sample of 237 CSR reports in summer 2014, summing to 613 coding hours; 27 different industries were represented by these reports (see appendix A.). The coders' objectivity and reliability were checked regularly by six intercoder reliability tests. Three reliability tests were performed on the pre-test sample to validate the codebook and apply changes. The other three rounds were performed on the final codebook during the coding process (Table 2), resulting in an aggregated and reliable value of 87.04 using the Holsti formula. These figures were calculated using the online tool ReCal (Freelon, 2010).

Table 2. *Intercoder reliability measured over four rounds.*

Method		Round 4	Round 5	Round 6	All Rounds
No. of coders		3	3	3	3
No. of variables		31	93 (31 content, 62 completeness)	93 (31 content, 62 completeness)	217
No. of cases		10	10	18	38
Content	Holsti	88.93	85.16	89.24	88.08
Completeness	Holsti	-	80.21	87.78	85.04
Overall	Holsti	88.93	82.94	88.27	87.04

Reliability tests other than Holsti or percentage agreement could not be applied because most of the codebook is conceptualized as nominal variables with binary codes. As Krippendorff's alpha, Scott's pi, or Cohen's kappa only produce meaningful results with scale data, they could not be computed for this study (Krippendorff, 2013). Balance and readability analyses were performed using two software packages, QDA Miner/Wordstat and Flesh. SPSS was used for statistical analyses.

The four validity claims were operationalized through relevant CSR reporting literature (Reynolds and Yuthas, 2008; Morsing et al., 2008) and with the help of the GRI G3.1 reporting guidelines (GRI, 2011; Table 3), consistent with other studies on CSR reports (de Villiers et al., 2014b; Skouloudis et al., 2014; Lozano and Huisinigh, 2011; Dong et al., 2014; Mosene et al., 2013). Each validity claim resulted in a summative scale ranging from 0 to 10. Credibility was then calculated as the mean of all four constructs (no weighting applied between the four), also resulting in a range from 0-10.

The objective *truth* of statements in the reports is measured by the form and extent of *assurance* (Dando and Swift, 2003; Reynolds and Yuthas, 2008), the *accuracy* of the indicators and the *completeness* of the covered performance, and the *standards* used (GRI, 2011; Lozano, 2013). The honesty and truthfulness associated with a CSR report – *sincerity* – is tested by looking at the

materiality of the topics covered (Hahn and Kühnen, 2013). This includes six categories: impacts, values, risks, prioritized material topics, goals, scope, and boundary of report (GRI, 2011). In addition, the level of *stakeholder engagement* (Searcy and Buslovich, 2014), subdivided into stakeholder inclusiveness and dialogue (GRI, 2011; Ramos et al., 2013), and the implementation of relevant *management systems* (Windolph et al., 2014) constitute the sincerity dimension. *Appropriateness* is operationalized as the degree to which specific “expert” stakeholders (Morsing et al., 2008) are addressed, hence, the level of stakeholder specificity for three elite stakeholder groups: *investors*, *employees*, and *non-governmental organizations* (NGOs; Morsing et al., 2008, p. 105). The core indicators of the GRI G3.1 guidelines that address the three stakeholder groups were selected and their level of fulfillment in reporting was used as a measure. *Understandability* refers to how comprehensible the report is to readers, not only in terms of how readable it is, but also in style and tone. It is measured along the sub-dimensions of *style*, which refers to the timeliness of the publication and its accessibility, and *tone*, which refers to the report’s readability and the distribution of positive and negative language (balance; Lock and Seele, 2015; GRI, 2011). *Readability* was measured with the Flesch-Kincaid Reading Ease index using the software package Flesch. Balance of language was calculated with the text analysis software QDA Miner/Wordstat and the Wordstat sentiment dictionary that classifies words into positive versus negative. Table 3 provides an overview of the constructs and measured variables.

Table 3. Operationalization of the study’s constructs and measured variables.

Truth		Sincerity		Appropriateness		Understandability	
Sub-dimension	Variables	Sub-dimension	Variables	Sub-dimension	Variables	Sub-dimension	Variables
Assurance	V19, V20, V21, V22	Materiality	V26	Investors (EC1, EC2, EC3, EC4, SO4, SO7, SO8)	V93	Style: Timeliness	V18
Completeness	V93	Stakeholder engagement: Stakeholder inclusiveness	V28	Employees (LA1, LA2, LA4, LA7, LA8, LA10, LA13, LA14)	V94	Accessibility	V14
Accuracy	V23, V24	Stakeholder dialogue	V29	NGOs (4.12, 4.13, 4.15, 4.16, 4.17)	V95	Tone: Balance	V16
Standards	V25	Management system	V27			Readability	V17

4 Results: Credibility of CSR Reports

This chapter presents the empirical findings regarding the research question and hypotheses, reporting results from multiple linear regression analyses, independent samples t-tests, correlation statistics, and analysis of variance (ANOVA) tests.

4.1 Descriptive Statistics of the Sample and Validity Claims

To tackle the overarching research question of whether CSR reports are credible, summative scales of the four constructs of truth, sincerity, appropriateness, and understandability were calculated (range: 0-10; Table 4).

Table 4. Means and standard deviations of the four validity claims.

	Truth	Sincerity	Appropriateness	Understandability
N	237	237	237	212
Mean (<i>M</i>)	5.16	6.78	6.71	4.82
Std. Dev. (<i>SD</i>)	1.88	1.88	2.38	.66
Minimum	.40	.71	.00	1.26
Maximum	8.46	10.00	10.00	6.32

By summing up and dividing by four, an overall summative scale for credibility was established (range: 0-10). Overall, the sampled CSR reports display a credibility mean of $M = 5.74$ ($SD = 1.41$, $Min = 1.27$, $Max = 8.2$), which lies in the middle of the scale (0-10).

The single constructs that constitute credibility show diverse results for their respective means. While sincerity and appropriateness levels lie above the sample mean ($M = 6.78$, $SD = 1.88$, and $M = 6.71$, $SD = 2.38$, respectively), truth falls below the mean at $M = 5.16$, $SD = 1.88$. Understandability has the lowest mean, $M = 4.82$, $SD = .66$. Interestingly, no report scored the maximum for truth or understandability and thus for credibility. No report achieved the maximum score for truth either, which results from a lack of standards (assurance and general CSR-related standards) applied in the reports.

The sampled CSR reports furthermore show the following descriptive characteristics relating to the format of reporting, sector supplement, GRI guidelines used, and the application level check (see Table 5).

Table 5: *Descriptive statistics of the sampled CSR reports given in percentages.*

	Format		Sector supplement		GRI guidelines		Application level	
	Stand-alone	Combined	Yes	No	Yes	No	Yes	No
Sampled reports (%)	74.26	25.74	28.27	71.73	85.23	14.77	64.98	35.02

4.2 Correlations and Reliability of the Credibility Dimensions

As assumed by communicative action theory (Habermas, 1984), the four measured dimensions of credibility should correlate to provide a solid scale with adequate internal consistency (see Table 6).

Table 6. *Correlations of the credibility dimensions.*

	Truth	Sincerity	Appropriateness
Sincerity	0.56**		
Appropriateness	0.75**	0.54**	
Understandability	0.1	0.14*	0.14*

*: Pearson correlation is significant at the 0.05 level (2-tailed).

**: Pearson correlation is significant at the 0.01 level (2-tailed).

The findings indicate a strong positive Pearson's correlation coefficient between truth and appropriateness ($r(237) = 0.75, p < .01$) and moderately positive correlations between truth and sincerity ($r(237) = 0.56, p < .01$) and sincerity and appropriateness ($r(237) = 0.54, p < .01$).

Furthermore, weak positive correlations exist between sincerity and appropriateness ($r(237) = 0.14, p < .05$) and appropriateness and understandability ($r(212) = 0.14, p < .05$; see Table 5). No significant correlation between understandability and truth was found. Given that the correlations of understandability across the other three constructs are weak or non-existent, understandability only weakly contributes to the overall credibility score.

A reliability analysis served to further test and verify the weak contribution of understandability to the total credibility scale. The four constructs were treated as a scale for credibility. Cronbach's alpha, including all four constructs, results in a moderate value of 0.75. However, if understandability is deleted, Cronbach's alpha would result in 0.84 over the remaining three items. These findings suggest

that the understandability dimension does not contribute significantly to the concept of credibility. As a consequence, the validity claim of understandability is not considered a part of the credibility concept and thus excluded.

The reliability of this new scale composed of truth, sincerity, and appropriateness is high, with a Cronbach's alpha of 0.82. As expected, the sample mean rises from $M = 5.75$ (old scale composed of four claims) to $M = 6.22$ (new scale composed of three claims without understandability). All further analyses are based on this new summative credibility scale (Table 7).

Table 7. *Descriptive statistics of the new credibility scale.*

	Credibility New Scale
N	237
Mean (<i>M</i>)	6.22
Std. Dev. (<i>SD</i>)	1.77
Minimum	.46
Maximum	9.17

4.3 Standardization and Credibility

Overall, the standardization of CSR reports is important to credibility. Several findings substantiate this claim (Table 8).

Table 8. *Summary of hypotheses H1a-c and results.*

Hypothesis	Result	Test
H1a. CSR reports using standardized reporting guidelines from the GRI (G3, G3.1, G4) are more credible than those without.	+	Multiple linear regression (MLR)
H1b. The more guidelines are used (in terms of a sector supplement), the more credible is the CSR report.	-	
H1c. CSR reports with high application levels are more credible than those without.	+	

Standardization is hypothesized to lead to higher levels of reporting credibility. A multiple linear regression model (MLR; model 1; method: forced entry) was performed with credibility as the dependent variable (DV) and reporting guidelines, sector supplement, and application level as independent variables (IV) to test hypotheses 1a, 1b, and 1c. Dummy coding was applied for the categorical variables. The R^2 of this model results in 0.49; thus, the IVs explained 49% of the variance of credibility. The ANOVA resulted in $F(11; 199) = 16.24$; $MS = 28.08$ and is significant at $p < .001$.

The Durbin-Watson test results in 1.97. Variance inflation factors (VIFs) are all below the threshold of 5 (Hair et al., 2010; Table 9).

Table 9: Results of the multiple linear regression analysis model 1.

Model 1	<i>N</i>	<i>B</i>	<i>SE B</i>	β	<i>VIF</i>
Sector supplement	67	-.28	.22	-.07	1.24
Application level A+	71	2.15	.37	.58***	3.66
Application level A	8	1.90	.60	.20***	1.42
Application level B+	28	1.51	.41	.29**	2.37
Application level B	23	.27	.43	.05	2.16
Application level C+	3	.13	.83	.01	1.17
Application level C	5	-1.34	.67	-.12*	1.28
Materiality matters	16	.62	.69	.06	1.62
Guideline G3.1	93	1.30	.41	.37**	4.91
Guideline G3	49	1.29	.43	.33**	4.43
Guideline G4	60	2.13	.51	.32***	2.09

***p < .001, **p < .01, *p < .05

Dummy coding results in significant values per category. As displayed in Table 8, second column (*N*), only some categories include enough cases to perform meaningful statistical tests. Thus, the presented findings are based on categories with *N* > 25 only (in bold). The results of MLR model 1 show that a high application level (A+ or B+) and reporting along one of the three GRI guidelines affect credibility positively. The sector supplement, however, was not significant. Thus, H1a and H1c are accepted while H1b is rejected.

4.4 Format, Firm-level, and Contextual Factors' Influence on Credibility

How do format, contextual, and firm-level factors influence credibility? Table 10 summarizes the findings.

Table 10. Summary of hypotheses H2-6 and results.

Hypothesis	Result	Test
H2a. A positive relationship exists between CSR reports' length and their credibility.	+	MLR model 2
H2b. Combined reports are more credible than stand-alone reports.	-	
H3. The bigger the firm (in terms of employees and turnover), the more credible its CSR report.	-	MLR model 3

H4. The more experienced the firm (in terms of age and reporting experience), the more credible its CSR report.	-	MLR model 4
H5. CSR reports from countries with legally mandated CSR reporting regulations are more credible than CSR reports from countries without such legislation.	-	T-test
H6. Credibility levels differ according to the impact of the company on the environment. Environmentally sensitive industries' reports are more credible than less sensitive sectors' reports.	-	ANOVA

It is hypothesized that length and reporting format influence the credibility of CSR reports positively. A MLR (model 2; method: forced entry) with credibility as the DV and length of report and format as IVs was tested. The coefficient of determination R^2 is 0.198 and the regression results are significant ($F(2; 210) = 25.68$, $p < .001$, $MS = 67.31$). The Durbin-Watson statistic for this model is 1.79 and the VIF is below 5 for all IVs (Table 11).

Table 11. *Results of the multiple linear regression analysis model 2.*

Model 2	<i>B</i>	<i>SE B</i>	β	<i>VIF</i>
Format	-.320	.258	-.08	1.023
Length	0. 36E-005	.000	.45***	1.023

*** $p < .001$, ** $p < .01$, * $p < .05$

Model 2 showed that the length of a report positively influences the credibility levels of CSR reports, while a similar effect was not found for reporting format. Hence, hypothesis 2a is accepted, while hypothesis 2b is not.

Regarding firm-level characteristics (H3), size was measured by number of employees and yearly financial turnover (see appendix C.). Including both variables as predictors of credibility, a MLR (model 3; method: forced entry) was performed. The Durbin-Watson test was 1.67. The model showed that IVs did not significantly affect ($R^2 = 0.002$; employees: $\beta = -0.03$, $t(2) = -0.46$, $p > .05$, $VIF = 1.02$; turnover: $\beta = 0.04$, $t(2) = 0.62$, $p > .05$, $VIF = 1.02$) the credibility of CSR reports; thus, H3 is rejected. Moreover, the more experienced a firm is in reporting on CSR, the more credible are its reports (H4). The year of the first report of each company (first report) and the company age were measured. Another MLR (model 4; method: forced entry) with age and first report as IVs and credibility as the DV was estimated. Model 4 resulted in non-significance (Durbin-Watson = 1.70, $R^2 = 0.015$; age: $\beta = -$

0.02, $t(2) = -0.25$, $p > .05$, $VIF = 1.12$; turnover: $\beta = -0.05$, $t(2) = /1.79$, $p > .05$, $VIF = 1.12$). Thus, H4 is not supported.

Several contextual factors have an impact on CSR reporting, but do they also affect credibility? Different credibility means between the reports of the sampled countries were found (see appendix D.). It was assumed that the regulatory context of the country has a positive impact on the report's credibility (H5). Three countries in the data set mandate comprehensive CSR reporting: France, Spain, and the Netherlands. Dutch reports could not be included in the test, since the sample amounts to only 19 reports, which is below the generally agreed sample size required for statistical significance tests (Hair et al., 2010). An independent samples t-test ($t(106.40) = 1.10$, $p > .05$) revealed that reports from these two countries ($M = 6.43$, $SD = 1.86$) are not significantly more credible than reports from countries without regulation ($M = 6.14$, $SD = 1.74$). When looking at the country level, significant differences were found (ANOVA, $F(4; 143) = 6.00$, $p < .01$, $MS = 17.09$) between Germany, France, the United Kingdom, Italy, and Spain⁴. Specifically, Bonferroni post hoc tests revealed that Spanish CSR reports ($M = 7.39$, $SD = 1.39$) are significantly more credible than French ($M = 5.68$, $SD = 1.84$, $p < .01$) and British reports ($M = 5.79$, $SD = 1.7$, $p < .01$). However, this result is inconclusive because both France and Spain have mandatory CSR reporting laws; thus, H5 is rejected.

Finally, it was assumed that the sector's environmental impact positively influences the credibility levels of CSR reporting. Seventy-one reports stem from environmentally sensitive industries, 166 from less sensitive sectors. Although the mean credibility level of sensitive industries' reports is above the sample mean ($M = 6.47$, $SD = 1.93$), less environmentally sensitive industries' reports display an average of $M = 6.11$ ($SD = 1.69$). An independent samples t-test found that this difference is not significant ($p > .05$); hence, H6 is rejected.

5 Discussion

Theoretical papers on CSR reporting often suggest that CSR reports are not credible and are merely a public relations exercise (Milne and Gray, 2013). Instead, the empirical findings indicate that European companies' CSR reports tend to be credible. Nevertheless, they have considerable room for

⁴ Swedish, Dutch, Swiss, Polish, Belgian, and Austrian reports were excluded from this analysis as their sample size is smaller than 25.

improvement: Levels of credibility are above the middle, which makes them mediocre rather than good. However, companies face difficulties in reporting on their CSR, which arises because they must increase awareness on the one hand and prevent skepticism on the other (Coombs and Holladay, 2013; Waddock and Goggins, 2011) and given that they must address a vast audience of multiple stakeholders coupled with an array of topics. The credibility gap in CSR reporting that was proclaimed more than a decade ago (Dando and Swift, 2003; McLean and Rebernak, 2007) is thus still in place. To report more credibly and eventually bridge it, companies must focus on standardization and on the contents of their reports. Secondary for reporting credibility are format-, firm-level, and contextual factors.

5.1 Credibility of CSR Reports and Influencing Factors

Few factors have been found to influence reporting credibility. Voluntary standards aid in reaching higher levels of reporting credibility. Standards codify and operationalize what many researchers and practitioners still regard as a fuzzy and ill-defined concept, namely, CSR. However, an exaggerated focus on standards might lead to a lack of creativity and render CSR reporting a tick-the-box exercise (de Colle et al., 2014), as observed in the finding that the GRI guidelines and a high application level increase credibility, while a sector supplement does not. This finding confirms political CSR theory's postulation that voluntary self-regulation, for instance, through the adoption of reporting guidelines of the GRI, strengthens CSR's impact and can help establish and maintain moral legitimacy (Scherer and Palazzo, 2011).

The CSR reports in this sample varied in length, too (Fifka and Drabble, 2012). The findings show that the lengthier a CSR report, the more credible it is, implying that the more content provided the more qualitative it is. However, no indications were found that combined reports are more credible than stand-alone reports, even though combined reports are usually longer than stand-alone publications. Thus, integrated reporting in the form of combined reports did not have a significant effect on reporting quality in this sample, even though it is deemed to provide a more "holistic" picture of the company's CSR efforts and therefore is supposed to lead to better quality (Adams and Simnett, 2011; Kolk, 2004). This can be due to the fact that combined reports symbolize only a first step towards a complete integration of financial and non-financial reporting (IIRC, 2011).

While the likelihood of reporting in an integrated fashion and the size of the firm showed to be related positively (Frias-Aceituno et al., 2014), similar effects of firm size on reporting credibility were not found in this sample. Although the size of the firm (in terms of number of employees and yearly turnover) is important for the adoption of CSR reporting (Marimon et al., 2012) and for developments in terms of quantity in a given context (de Villiers et al., 2014a), quality of CSR reports is not impacted by size. Furthermore, companies with more experience in reporting did not result to also report more credibly. Thus, first-time reporters can report as credibly as more experienced firms, implying that reporting practice does not necessarily make credible reports.

When looking at contextual factors affecting reporting credibility, the importance of reporting standardization and contents over external factors' influences is even more pronounced. Neither the sector nor the country and its regulatory context showed consistently significant effects on the credibility of CSR reports in the sample. Even though companies from environmentally impactful industries report more on CSR (Branco and Rodrigues, 2008; Jenkins and Yakovleva, 2006; Fifka and Drabble, 2012), they do not report significantly more credibly.

Country-level differences (Fifka, 2013) as evident for the likelihood of integrated reporting (Jensen and Berg, 2012), assurance of reporting (Simnett et al., 2009), or CSR reporting developments (de Villiers et al., 2014a) were observable only at a descriptive level, resulting in diverse mean credibility levels per country. Instead, the regulatory context did not impact reporting credibility. Mandatory reporting of CSR did not consistently benefit reporting credibility, possibly because regulations' effects depend heavily on the cultural and national context (Ioannou and Serafeim, 2014a).

In brief, for quality of reporting in terms of credibility, it is standardization and content that matter most. External influences such as the reporting format, firm size, industry's environmental impact, and regulatory context are secondary, at best.

5.2 The Peculiar Role of Understandability

Another theoretical contribution emerges from the finding that understandability has a special role in the credibility concept: It is a necessary precondition to enter discussions on credibility. This empirical result is consistent with Habermas's re-interpretation of the validity claim structure. In his early writings, understandability is considered one of four validity claims of rational communication

(Zinkin, 1998). Later, he stated that “every speech-act as a whole can always be criticized as invalid from three perspectives: as untrue [...] as untruthful [...] and as not right” (Habermas, 1992, p. 77). Thus, understandability has a peculiar position among the four validity claims; it is considered a precondition or basis for communication rather than a redeemable claim (Germonprez and Zigurs, 2009). Following Zinkin (1998, 459): “Habermas's point [...] seems to be that the fact that there is communication is itself the validation of a claim to intelligibility. If utterances were unintelligible, there would just be no communication.” This interpretation is controversial because it is known that communication is more than the comprehensible use of language and that it entails, in interpersonal communication, non-verbal factors such as gestures and facial expressions (Sperber et al., 1986). In CSR reporting, this refers to images in the reports or design parameters, which were not measured. Hence, Habermas’s assessment also holds with regard to communicational artifacts such as CSR reports.

Understandability takes on a special role within the credibility concept, which empirically confirms Habermas’s theory shift. Referring to theoretical constructs in CSR reporting, understandability is thus regarded as a necessary precondition for CSR reporting that has to be in place (phase I) before truth, sincerity, and appropriateness can be addressed in phase II. Thus, understandability can be considered a necessary precondition for credibility of the entire spectrum (Seele and Lock, 2015) of CSR communication. Only if all four claims are fulfilled, mutual understanding and thus credibility can be reached. The *two-phase-model of reporting credibility* depicted in Figure 1 illustrates this peculiar role of understandability.

Figure 1: The two-phase model of reporting credibility adopting the four validity claims of Habermas.

6 Conclusions and Limitations

It is challenging to translate ideal philosophical theory into practice, as this study attempted with regard to Habermas. But in return results derived from this approach can also lead to theoretical advancements: This study addressed the under-researched area of reporting quality and expanded it by the concept of credibility, which, as shown, emerges from the contents of reports rather than external factors. Conceptually, the study re-defined and operationalized credibility as a multi-dimensional construct of reporting quality along communicative action theory and thus fills the theory void in the field of CSR reporting. The findings indicate that all communicative actors must be on the same page to engage in credible and valid communication. This can be achieved by understandability as a precondition and quality of content as the main factor enhancing the credibility of CSR reports. Being understood is the most important aspect, before only starting a (possibly) credible communication act. Only after ensuring that they are being understood by their stakeholders should companies strive to obtain high levels of truth (via standards and assurance), sincerity (through stakeholder engagement and materiality), and appropriateness (through stakeholder-specific communication), which together render a CSR report credible. That way, CSR reports become crucial facilitators of understanding between companies and stakeholders, which ultimately constitutes moral legitimacy and thus companies' license to operate in society. On the theoretical level of political CSR we hence suggest to strengthen the overall role of understandability. Political CSR needs to acknowledge quality of content as specified above and understandability before embarking on deliberatively addressing CSR issues. Furthermore, this study also confirms the importance of voluntary standardization.

For companies, the findings imply that avoiding jargon and overly positive reporting and being clear, concise, and objective are preconditions for credibility of CSR reports. Moreover, a focus on contents rather than format or contextual factors and following standardized guidelines lead to higher levels of reporting credibility. The fact that a company belongs to a specific industry or cultural context or is of a particular size does not serve to explain low credibility in reporting.

For policy makers, this study showed that credibility levels of CSR reports are mediocre. Policy makers might conclude that laws are needed to lift these levels. Although this study does not provide consistent evidence that regulation leads to higher credibility of reports, it demonstrates with the

examples of France and Spain that different laws can have different impacts on credibility. Thus, comprehensive regulation at a transnational level as proposed by the EU could be a useful move to level the playing field in the market and raise the credibility of reporting.

The study's findings, however, must be moderated at least in the following respects. The focus was on publicly listed companies from the leading stock indices in the biggest European countries. Thus, these findings are not generalizable to small and medium-sized companies.

Next, it would be interesting to monitor how the credibility of CSR reports develops over time, particularly regarding development of mandatory reporting regulations in the European Union. A cross-cultural comparison to other cultural areas such as the US or China would further be valuable. Moreover, very diverse formats of CSR reports were observed during the study, including GRI-only reports, summaries of stand-alone publications, and websites printed as PDFs and "sold" as CSR reports. Mapping these different design developments and their impact on quality provides another fruitful avenue for future studies.

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Appendix

A. Sectors of the sampled CSR reports.

Environmentally sensitive industry? Y/N (1/0)	Sector	Fre- quency
0	Agriculture	1
0	Automotive	9
0	Aviation	2
1	Chemicals	12
0	Commercial services	2
0	Computers	1
0	Conglomerates	9
0	Construction	7
1	Construction materials	7
0	Consumer durables	2
1	Energy (and energy utilities)	33
0	Equipment	4
0	Financial services	48
0	Food and beverage	12
1	Forest and paper	1
0	Health care products	6
0	Household and personal care	7
0	Logistics	2
0	Media	6
1	Metals products	5
1	Mining	9
0	Public agency	1
0	Real estate	4
0	Retailers	7
0	Techn. Hardware	4
0	Telecommunications	17
0	Tobacco	2
0	Tourism/Leisure	2
0	Other	15
	N	237

B. Coding sheet.

FORMAL VARIABLES		
ID	Variable	Coding rules
V1	Company	Open code
V2	Title	Open code
V3	Year	Open code
V4	Sector	Nominal
V5	Country	Nominal
V6	Size I: turnover	Open code
V7	Size II: no. employees	Open code
V8	Age of firm	Open code
V9	First report issued	Open code
V10	Format of report	Nominal: stand-alone or integrated
V11	Guidelines applied	Nominal: GRI G3, 3.1, 4, none
V12	Sector supplement	Nominal: sector supplement used with GRI
V13	Application level	Nominal: application level (A+, A, B+, B, C+, C, materiality matters)
V14	Accessibility	Table of contents, Electronic navigation helps in PDF, Chapter headings close to page number, Imprint, Free download, PDF open, GRI table
V15	Length of report	Open code: no. of words (software)
V16	Readability	Felsh-Kincaid Reading Ease Index (software): 0-100 points
V17	Balance	Amount of pos./neg. words in report (software): scale 0-10
CONTENT VARIABLES		
ID	Variable	Coding rules
V18	Timeliness	Recent data used
V19	Assurance	Nominal: yes/no
V20	Type of assurance	Nominal: Internal, external, none
V21	Reach of assurance	Nominal: entire report, specific sections, not specified
V22	Assurance standards	Nominal: AA1000AS, ISAE3000, General national standard, Sustainability national standard, Other, None
V23	Accuracy I	Nominal: section on methodology yes/no
V24	Accuracy II	Nominal: info on data measurement yes/no
V25	CSR Standards	Nominal: CDP (Carbon Disclosure Project), IFC (International Finance Corporation), OECD Guidelines for Multinational Enterprises, UNGC (United Nations Global Compact), ISO 9001, 14001, AA1000, None
V26	Materiality	Nominal: impacts, values, risks, goals, prioritization of topics, scope and boundary of report
V27	Management system	Nominal: general CSR mngt, environmental mngt, social mngt, health/safety mngt, no mngt system
V28	Stakeholder dialogue	Nominal: section of stakeholder dialogue
V29	Stakeholder inclusiveness	Nominal: stakeholder description, dialogue, issues
GRI INDICATOR VARIABLES		
V30-V92	GRI Performance indicators (core)	Scale 0-3: 0: not, 1: partially, 2: fully reported, 3: not applicable/not material
V93	Completeness	Scale 0-10: percentage of reported performance indicators, rescaled 0-10
V94	Investors	Ordinal: amount and extent of indicators reported specific to investors
V95	Employees	Ordinal: amount and extent of indicators reported specific to employees
V96	NGOs	Ordinal: amount and extent of indicators reported specific to NGOs

C. Sampled companies and their number of employees and turnover figures.

Company	Country	No. of employees 2013*	Turnover in billion US dollars 2013*
Lenzing	Austria	6700	2.729
Oesterreichische Post	Austria	24200	3.347
OMV	Austria	26900	59.357
Raiffeisen Bank International	Austria	59000	7.350
RHI	Austria	8100	2.530
Schoeller-Bleckmann Oilfield Equipment.	Austria	1600	0.637
Telekom Austria	Austria	16000	5.837
Verbund	Austria	3300	4.660
Wienerberger	Austria	13800	3.732
Zumtobel Group	Austria	7200	1.636
Anheuser-Busch InBev	Belgium	154600	444.000
Befimmo S.C.A.	Belgium	70	1.471
Bekaert SA/NV	Belgium	21800	44.000
Belgacom SA	Belgium	15700	87.000
BPOST	Belgium	28	33.000
Cofinimmo	Belgium	110 (2012)	0.3758
Delhaize Group SA	Belgium	160900	312.000
KBC Groep NV	Belgium	38200	106.000
Solvay SA	Belgium	29400	181.000
Telenet	Belgium	2100	23.000
UCB	Belgium	8700	47.000
Umicore	Belgium	10300	136.000
Accor	France	49119	7.730
Air Liquide	France	50250	21.278
Airbus Group	France	144061	82.055
Alcatel-Lucent	France	62311	20.100
Alstom	France	86125	27.947
AXA	France	157000	110.623
BNP Paribas	France	200000	54.139
Bouygues	France	128067	47.373
Cap Gemini	France	131430	13.921
Carrefour	France	363989	105.741
Compagnie de Saint Gobain	France	187726	57.957
Credit Agricole	France	149717	43.813
Danone	France	154941	29.373
Electricite de France (EDF)	France	155000	112.671
Essilor	France	55129	6.992
GDF Suez	France	147200	127.371
Kering	France	35786	17.696
Lafarge	France	54822	20.995
Legrand	France	33272	6.151
L'Oreal	France	77452	31.687
LVMH Group	France	114635	40.199
Michelin	France	111190	27.943
Orange	France	165488	57.464
Pernod Ricard	France	19000	11.263
Publicis	France	62553	9.590
Renault	France	121807	56.467
Safran	France	66289	20.699
Sanofi	France	112128	46.885
Schneider Electric	France	163033	32.718
Societe Generale	France	148324	33.685
Technip	France	38851	12.906
Total	France	98799	237.030
Unibail-Rodamco	France	1538	2.116
Valeo	France	74800	16.701
Veolia Environment	France	202800	31.853
Vivendi	France	46100	30.648
Adidas	Germany	50728	20.325
Allianz SE	Germany	148000	99.366
BASF	Germany	112206	103.081
Bayer AG	Germany	113200	56.433
Beiersdorf	Germany	16708	8.590
BMW Group	Germany	110351	105.501
Commerzbank	Germany	51399	12.765
Continental	Germany	177762	46.346
Daimler	Germany	274616	164.754

Deutsche Bank	Germany	98254	43.374
Deutsche Boerse	Germany	3811	2.998
Deutsche Lufthansa	Germany	118214	42.824
Deutsche Post	Germany	435285	77.898
Deutsche Telekom	Germany	228596	84.601
E.ON	Germany	62239	178.352
HeidelbergCement	Germany	52560	19.514
Henkel	Germany	46850	22.650
Infineon Technologies	Germany	26725	5.213
K+S	Germany	14421	5.519
LANXESS	Germany	17343	11.612
Linde	Germany	63487	23.290
Merck	Germany	38154	15.446
Munich Re	Germany	45000	70.417
RWE	Germany	66341	72.084
SAP	Germany	66572	23.216
Siemens	Germany	367000	103.267
Thyssen Krupp	Germany	156856	54.471
Volkswagen	Germany	572800	280.192
A2a	Italy	12626	7.728
Atlantia	Italy	13388	7.446
Autogrill	Italy	41646	6.446
Banca popolare dell'Emilia Romagna	Italy	11876	3.166
Banco Popolare	Italy	18038	5.000
Banco Popolare Milano	Italy	7846	2.000
Buzzi Unicem	Italy	10629	3.945
CNH Industrial	Italy	3853	3.740
Enel	Italy	71394	111.066
Eni	Italy	82289	160.123
FIAT	Italy	225587	119.822
Finmeccanica	Italy	63835	22.624
Generali	Italy	77000	86.242
Gtech	Italy	8583	4.229
Intesa Sanpaolo	Italy	93935	46.332
Mediolanum	Italy	4407	6.746
Pirelli & C	Italy	37979	8.772
Prysmian	Italy	19374	10.117
Saipem	Italy	48607	17.146
Snam	Italy	6045	5.307
STMicroelectronics	Italy	9464	1.986
Telecom Italia	Italy	65619	32.727
Tenaris	Italy	26673	10.905
Terna	Italy	3445	2.615
UBI Banca	Italy	18337	4.637
Unicredit	Italy	147864	32.853
Unipol	Italy	15000 (2012)	13.387
Yoox	Italy	714	0.628
Bank Polska Kasa Opieki SA	Poland	18900	25.000
Grupa LOTOS S.A.	Poland	5000	95.000
KGHM Polska Miedz SA	Poland	34500	83.000
Lubelski Wegiel Bogdanka	Poland	4000	0.632
Orange Polska S.A.	Poland	19900	44.000
PKN ORLEN	Poland	21600	0.333
Polskie Gornictwo Naftowe	Poland	31200	107.000
PZU (Powszechny Zaklad Ubezpieczen SA)	Poland	16800	52.000
Abengoa S.A.	Spain	24700	108.000
Abertis Infraestructuras	Spain	17100 (2012)	72.000
Acciona	Spain	34100	96.000
Amadeus	Spain	10500	43.000
Banco Popular Espanol SA	Spain	16000	54.000
Banco Sabadell	Spain	18100	58.000
Banco Santander SA	Spain	183000	566.000
Bankia SA	Spain	20400	51.000
Bankinter SA	Spain	4100	20.000
BBVA	Spain	109300	29.000
Bolsas y Mercados	Spain	700	0.422
Caixabank S.A.	Spain	31900	98.000
Enagas	Spain	1200	18.000
Ferrovial S.A.	Spain	66100	113.000
Fomento de Construcciones y Contratas	Spain	19500	96.000
Gamesa	Spain	6300	33.000
Gas Natural	Spain	15000	347.000

Iberdrola	Spain	30700	458.000
Inditex	Spain	128300	226.000
Indra Sistemas	Spain	38600	42.000
Jazztel	Spain	4100 (2012)	14.000
Mapfre	Spain	35600	301.000
Mediaset Espana Comunicacion S.A.	Spain	1300	11.000
Red Electrica Corporacion S.A.	Spain	1700	24.000
Repsol	Spain	30300 (2010)	776.000
Sacyr	Spain	23500	45.000
Tecnicas Reunidas SA	Spain	7900	39.000
Telefonica SA	Spain	126700	794.000
Alfa Laval	Sweden	16300	5.000
Assa Abloy	Sweden	42600	7.550
Atlas Copco	Sweden	41200	13.135
Boliden	Sweden	4800	5.372
Electrolux	Sweden	60800	16.991
Ericsson (Telefonaktiebolaget L. M. Ericsson)	Sweden	17900	35.565
Handelsbanken	Sweden	11500	5.655
Hennes & Mauritz (H&M)	Sweden	81100	19.644
Modern Times Group	Sweden	3400	2.201
Nokia Oyj	Sweden	55200	32.612
Nordea	Sweden	29400	13.615
Sandvik	Sweden	48000	13.677
Skandinaviska Enskilda Banken (SEB)	Sweden	17000	6.468
Skanska	Sweden	57100	21.247
SKF	Sweden	48400	9.914
SSAB	Sweden	8200	5.528
Svenska Cellulosa SCA	Sweden	34000	14.267
Swedbank	Sweden	14200	5.715
Swedish Match	Sweden	4400	1.963
Tele2	Sweden	6100	7.227
Teliasonera	Sweden	25300	15.928
Volvo	Sweden	94800	42.439
ABB Ltd	Switzerland	147700	419.000
Actelion	Switzerland	2400	20.000
Adecco SA	Switzerland	31000	269.000
Clariant	Switzerland	18100	68.000
Compagnie Financiere Richemont	Switzerland	29100	147.000
Credit Suisse Group AG	Switzerland	46000	27.000
Geberit	Switzerland	6200	23.000
Givaudan	Switzerland	9300	49.000
Holcim	Switzerland	70900	224.000
Nestle SA	Switzerland	333000	1044.000
Novartis	Switzerland	135700	602.000
Roche Holding AG	Switzerland	85000	545.000
Schindler	Switzerland	48200 (2012)	99.000
SGS S.A.	Switzerland	81900	65.000
SIKA	Switzerland	16300	58.000
Sonova	Switzerland	9500	22.000
Swiss Prime Sight	Switzerland	3100	1.000
SWISS RE	Switzerland	11600	29.000
Swisscom	Switzerland	20100	130.000
Syngenta	Switzerland	28100	147.000
UBS	Switzerland	60200	65.000
Zuerich Insurance Group	Switzerland	55000	70.000
Aegon	The Netherlands	24400	232.000
Akzo Nobel NV	The Netherlands	49600	208.000
ArcelorMittal	The Netherlands	11900	794.000
ASML	The Netherlands	10400	73.000
Corio	The Netherlands	600	1.000
Delta Lloyd NV	The Netherlands	5800	6.000
Gemalto	The Netherlands	10000	33.000
Heineken N.V.	The Netherlands	81000	267.000
ING Groep	The Netherlands	83700	239.000
Koninklijke Ahold	The Netherlands	222000	450.000
Koninklijke DSM N.V.	The Netherlands	24300	135.000
Koninklijke KPN	The Netherlands	23500	159.000
Koninklijke Philips N.V.	The Netherlands	116700	339.000
Reed Elsevier	The Netherlands	29000	99.000
Royal Boskalis Westminster Dredging	The Netherlands	11000	50.000
Royal Dutch Shell	The Netherlands	92000	4513.000
SBM Offshore	The Netherlands	8400	48.000

TNT Express	The Netherlands	53100	99.000
Wolters Kluwer NV	The Netherlands	19000	5.000
Angloamerican	United Kingdom	159000	29.342
Associated British Foods	United Kingdom	112652	21.529
Barclays	United Kingdom	139600	46.273
BG Group	United Kingdom	5536	19.547
BHP Billiton	United Kingdom	49496	70.079
BP	United Kingdom	83900	379.631
British American Tobacco	United Kingdom	89820	25.628
BT Group	United Kingdom	87800	30.435
Compass Group	United Kingdom	506699	28.360
Diageo	United Kingdom	28410	17.582
Glaxo Smith Kline	United Kingdom	99817	46.137
Glencore Xstrata	United Kingdom	200000	232.694
HSBC	United Kingdom	263000	65.880
Lloyds Banking Group ORD	United Kingdom	97869	30.430
Prudential	United Kingdom	47000	50.231
Reckitt Benckiser	United Kingdom	37100	16.547
Rio Tinto	United Kingdom	66331	52.752
Royal Bank of Scotland	United Kingdom	118600	32.442
SABMiller	United Kingdom	69947	17.084
Standard Chartered	United Kingdom	86640	18.901
Tesco	United Kingdom	391868	106.528
Unilever	United Kingdom	174000	68.675
Vodafone Group	United Kingdom	89000	63.819
WPP Group	United Kingdom	175000	18.147

*unless indicated differently in the table

D. The mean credibility levels of the studied CSR reports per country of origin.

Country	<i>M</i>
Austria	6.09
Belgium	4.67
France	5.67
Germany	6.54
Italy	7.09
Netherlands	6.42
Poland	5.34
Spain	7.39
Sweden	5.97
Switzerland	5.87
United Kingdom	5.79