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MULTINATIONALS' ACCOUNTABILITY ON SUSTAINABILITY:

THE EVOLUTION OF THIRD-PARTY ASSURANCE OF SUSTAINABILITY REPORTS

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Abstract

In this paper we explore how multinational corporations (MNCs) adopt assurance practices to develop and sustain organizational accountability for sustainability. Using a panel of Fortune Global 250 firms over a period of ten years, we document the diffusion patterns of third-party assurance of sustainability reports. We specifically investigate how evolving auditing practices, namely diversity of assurance standards and type of assurance providers, shape the quality of sustainability assurance statements. The results illustrate great variability in the adoption of assurance practices in the formative stages of this novel market. Our descriptive analysis indicates the relevance of external institutional pressures as well as internal resources and capabilities as underlying factors driving the adoption of assurance. Our evidence also suggests that several MNCs project a decoupled or symbolic image of accountability through assurance, thereby undermining the credibility of these verification practices. The paper contributes to the emerging literature on international accountability standards and emphasizes the need to enhance theory-based, cross-disciplinary knowledge related to auditing and accountability processes for sustainability.

Keywords: accountability; accountants; assurance; assurance statements; multinationals; reporting; standards; sustainability; verification.

INTRODUCTION

The last decade has witnessed the emergence of international standards aimed at enhancing corporate accountability in the domain of sustainable development. These include certification standards for social and environmental reporting, such as the Global Reporting Initiative (GRI) and the AccountAbility AA1000 Assurance Standard. Since the adoption of international accountability standards (IAS) is in its formative stages, there is a limited understanding of how they diffuse internationally and how they are sustained by organizations over time. Recent studies drawing predominantly on institutional theory provide evidence that various institutional factors (e.g. legal environment, stakeholder pressures, adoption of other certifiable management standards) facilitate or hamper the global diffusion of voluntary standards (Delmas 2002; Boiral and Gendron 2011; Delmas and Montes-Sancho 2011; Gilbert et al. 2011). However, what has been largely lacking in this emerging literature is an explanation of the underlying drivers of adoption beyond institutional or country-level factors (cf. Delmas and Toffel 2011; Heras-Saizarbitoiria and Boiral 2012). While organizational characteristics of both parties involved in the certification process – the verified firm and the certificate provider – may have a significant role in shaping the variability of firms responsiveness to institutional pressures, empirical support for this argument is still limited (Yin and Schmeidler 2009; Smith et al. 2011).

The objective of this paper is twofold. First, we document the trajectories in the adoption of third-party assurance of sustainability reports by addressing the research question: *‘What are the diffusion patterns of sustainability assurance?’*. We then focus on the variability in standards implementation by specifically investigating the role of assurance providers and assurance standards as potential firm-level, supply-driven factors underlying heterogeneous responses in the adherence to the standards (Delmas and Toffel, 2011; Yin and Schmeidler, 2008; Boiral and Gendron, 2011; Smith et al., 2011). This analysis addresses the

research question: *'Are different assurance providers and assurance standards associated with variability in assurance quality?'*. The second goal of the paper is to elaborate on the empirical findings and inform the theoretical debate in the present literature by pointing at potential avenues for future research. We argue that the current institutional framework prevalent in the CSR/business ethics literature could be complemented by theories in strategy (such as the resource-based view of the firm) and accounting (such as voluntary disclosure theory) as plausible richer explanations of variability in IAS adoption (cf. Simnett et al. 2009; Kolk and Perego 2010; Boiral and Gendron 2011; Smith et al. 2011; Ballou et al. 2012).

Using data from a panel of Fortune Global 250 in the decade 1999-2008, we examine trajectories in the international adoption of sustainability assurance, the involvement of various auditors and different reliance on assurance standards. These large MNCs have been much more active in sustainability reporting than other firms, which means that evolving patterns noticeable amongst this panel can help shed light on the diversity of options, as well as aspects and/or dilemmas that play a role more generally in the way MNCs address organizational accountability on sustainability. The paper contributes to the emerging literature on IAS in three ways. First, it provides evidence about the dynamics of sustainability assurance in the early take-up phases of adoption and deepens our understanding of how IAS diffuse internationally and over time. While previous studies on sustainability assurance mostly applied a cross-sectional analysis, our paper takes a longitudinal approach and allows a comparison between early and later phases of diffusion. Second, the paper documents firms' heterogeneous responsiveness to assurance due to the variety of providers and standards. Such a perspective is novel in pointing at supply-side rather than demand-side forces that are likely to affect the dynamics of the IAS adoption process. In this way, we contribute to theory development in this area, particularly emphasizing the need for a cross-disciplinary approach. Third, our evidence suggests that

currently several MNCs project a decoupled or symbolic image of accountability through sustainability assurance, thereby undermining the credibility of this verification practice. The proliferation and opacity of IAS creates dilemmas for managers who must decide the appropriate level of conformity and inherent sustainability assurance levels. The study therefore also has managerial implications that are informative to enhance accountability with regards to CSR and other business ethics practices in organizations. In the next section, the paper provides an overview of recent developments in the area of sustainability assurance. We then motivate our research questions and explain the methodology. The final section discusses findings and implications for theory and practice.

LITERATURE REVIEW AND THEORY

Background on sustainability assurance and standards

An increasing number of MNCs discloses information about their social and environmental activities in so-called sustainability reports to demonstrate a commitment to these issues and be accountable to a wide range of stakeholders (Kolk 2003, 2010). An important driver in improving the quality of social and environmental reports has been the Sustainability Reporting Guidelines. Developed by the Global Reporting Initiative (GRI) as a multi-stakeholder initiative, the Guidelines provide a framework of principles and guidance, together with a list of disclosures and key performance indicators, for voluntary use by organizations in reporting their sustainability performance. A first version of the Guidelines was issued in 1999, and the third version, which showed considerable changes over the years, was released in 2006 (GRI 2006). The latest sustainability reporting framework developed by GRI (G3 Guidelines) also contains recommendations for reporting companies in their approach to the external assurance of sustainability reports.

This broadening of focus in reporting has expanded the scope of traditional (financial) assurance engagements to include non-financial aspects as well (Beets and Souther 1999;

Blair et al. 2008). While smaller as a phenomenon, quite some MNCs seek external, third-party expertise to verify the information included in sustainability, non-financial reports. The results of this largely voluntary assessment (the assurance) are laid down in a verification statement that reports the findings of the assurance provider. According to a worldwide survey, which claims to profile 90-95% of all published reports, between 1997 and 2007 the average annual growth rate in assurance statements has been 20%, while 25% of sustainability reports was externally verified this way (CorporateRegister 2008). The 2008 KPMG Survey of Corporate Responsibility Reporting mentioned that 40% of the Fortune Global 250 companies had sought assurance of their sustainability report (KPMG/UvA 2008).

The voluntary demand of independent verification by MNCs can be explained by their willingness to enhance a sustainability report's credibility vis-à-vis stakeholders. Organisational benefits from the assurance exercise may also arise in the form of improvements in internal information and reporting systems, resulting in better management of social and environmental performance (Viehöver et al. 2010). The analysis in the 2002 KPMG Survey of Corporate Responsibility Reporting (KPMG/UvA 2002, p. 18) suggested that the increased adoption of sustainability assurance indeed arises from "...the demand for reliable and credible information from management, for managing the company's environmental and social risks, and from stakeholders who want assurance that the report truly represents the company's efforts and achievements". This reflects a view of sustainability assurance services as a way to generating greater transparency and consensus on the purpose of business, catalyzing an effective and constructive dialogue with a firm's stakeholders. Similarly, the Federation of European Accountants (FEE 2002, 2006) encouraged companies in the early phase of diffusion of sustainability standards to raise shareholder confidence by enhancing the credibility of their sustainability reporting with independent assurance. These claims are consistent with financial auditing practices

indicating that voluntary, third-party verification provides greater user confidence in the reliability and accuracy of the information disclosed (Carey et al. 2000).

Regardless of the exact purpose and types of stakeholders targeted, the need for enhanced credibility of sustainability reporting to both internal (e.g. management and employees) and external (e.g. stakeholders) audiences has accelerated the development of relevant assurance standards (FEE 2004; Zadek and Raynard 2004; FEE 2006; Manetti and Becatti 2009). In addition to the Sustainability Reporting Guidelines by GRI previously mentioned, two international standards used by assurance practitioners to provide sustainability assurance but designed for different objectives have taken a dominant role. The AA1000 Assurance Standard (AA1000AS) was developed by the London-based Institute of Social and Ethical AccountAbility (more commonly known as AccountAbility) and launched in March 2003 (AccountAbility 2003a, 2003b). AA1000 is a free, open-source set of principles that focuses on the learning aspects of addressing sustainability/CSR. The ISAE3000 standard ('Assurance Engagements Other Than Audits or Reviews of Historical Financial Information'), published in 2003 by the International Auditing and Assurance Standards Board (IAASB 2003), is a standard which provides guidance in the form of basic principles and essential procedures for professional accountants on how to conduct non-financial assurance engagements.

The GRI Guidelines, AA1000AS and ISAE3000 standards do not directly compete amongst themselves, as some assurance providers seem to reference them in different combinations in view of overlap in minimum content of assurance (for a comparison among standards see Iansen-Rogers and Oelschlaegel 2005; O'Dwyer and Owen 2005; Manetti and Becatti 2009; Viehöver et al. 2010). AccountAbility's AA1000 standards are known for their unique focus on stakeholder accountability (Adams et al. 2004). O'Dwyer and Owen (2005, p. 212) note that "of the three pieces of guidance, AA1000 most closely aligns itself with the

stakeholder accountability perspective”. Assurance is not a mandatory requirement under the GRI Guidelines, but it is recognized that auditability, which is one of the reporting principles in the guidance, is essential for underpinning a balanced and reasonable report.

Besides the existence of the different standards and the voluntary nature of sustainability assurance, another peculiarity of the sustainability assurance market that deserves attention is the presence of different assurance providers. They include the traditional ‘Big Four’ accounting firms, certification bodies, specialist consultants, and non-governmental organisations (NGOs), which vary in degree of technical expertise and credibility (CorporateRegister 2008). We will pay explicit attention to them as well in this paper.

In sum, the proliferation of procedures and third-party verifiers for the assurance of sustainability reporting provides an opportunity to explore various aspects inherent to the diffusion of a diverse set of initiatives labelled as IAS. Despite the growing popularity in practice, the extent of IAS adoption and integration by MNCs has remained underinvestigated (Heras-Saizarbitoiria and Boiral 2012), and IAS address areas where enforceable transnational regulation has not occurred yet (Jamali 2010; Delmas and Montes-Sancho 2011; Fortanier et al. 2011; Gilbert et al. 2011).

Previous research on sustainability assurance and research questions

A rather consolidated stream of the social and environmental accounting literature argues that the absence of established auditing standards reduces accountability to external audiences and stakeholders groups (see, for example, Power 1997; Gray and Bebbington 2000; Dando and Swift 2003; O'Dwyer 2003; Adams 2004; Cooper and Owen 2007; Smith et al. 2011). Fundamental concerns have been raised in empirical studies over crucial aspects of sustainability assurance (see Deegan et al. 2006 for a review), such as assessor independence in the verification assessment (Ball et al. 2000), major inconsistencies regarding scope of

assurance, criteria employed and levels of assurance provided (Manetti and Becatti 2009) and a general absence of stakeholder participation during the assurance process (O'Dwyer and Owen 2005; O'Dwyer and Owen 2007).

Such concerns and weaknesses can be explained using a neo-institutional lens which seeks to explain how organizations adopt similar ideas or structures in order to conform to external expectations and gain legitimacy (Deegan, 2002; DiMaggio and Powell, 1983). Since the adoption and implementation of organizational practices takes place in an institutionalized social and cultural context (which is distinct from the corresponding technical context), neo-institutional scholars argue that conformity to institutional norms creates structural similarities or isomorphism across organizations (DiMaggio and Powell 1983; Scott 2001). Following these arguments, Boiral and Gendron (2011, p. 339) define the current status of sustainability assurance as a 'rational myth'. Rational myths reflect the ceremonial and superficial adhesion to apparently rational structures and beliefs primarily intended to meet external pressures and reinforce organizational legitimacy, yet they are actually 'decoupled' from organizational practices (Meyer and Rowan 1977; Jamali 2010).

It can be assumed that the inherent opacity around sustainability assurance fails to demonstrate convincingly organizational accountability because these practices are subject to 'capture' by powerful managerial and professional interests (Ball et al., 2000; O'Dwyer and Owen, 2005, 2007). On the demand side, senior company management or professional associations tend to take control of or 'capture' sustainability policy and practices by appropriating the language and processes of traditional financial auditing in order to meet their own commercial and professional objectives (cf. Boiral and Gendron, 2011; Smith et al. 2011). Likewise, on the supply side, assurance providers may be primarily concerned with promoting their own commercial objectives through, for instance, limiting the scope of their engagements in order to minimise any potential liabilities and litigation costs. The practical

outcome is that third-party assurance does not add credibility to sustainability reporting because “report readers would often have great uncertainty in understanding how the assurance provider undertook the engagement, what they reviewed, [and] what was the meaning of conclusion” (Deegan et al. 2006, p. 368).

While acknowledging these valuable analyses and insights on sustainability assurance, what has been largely neglected in the literature so far is how ‘managerial capture’ (Smith et al. 2011) and ‘rational myths of certification’ (Jamali 2010; Boiral and Gendron 2011) are produced, sustained and become institutionalised over time. We therefore apply a dynamic analysis of the adoption of third-party assurance in a panel of global firms to obtain insight into how sustainability assurance has actually evolved. Based on a cross-country comparative analysis, the first research question addresses the differences in adoption levels of sustainability assurance:

RQ1 *What are the diffusion patterns of sustainability assurance?*

Critics of neo-institutional theory have noted its focus on homogeneity and stability, and its lack of attention to the role of active agency and self-interest seeking behaviour in organizations (Dacin et al. 2002). Neo-institutional theory also does not sufficiently differentiate and articulate the role of specific organizations involved in the complex dynamics at the heart of the institutional process (Greenwood and Hinings 1996; Dacin et al. 2002; Greenwood et al. 2002). Oliver (1991) suggested that organizations craft strategic responses when confronted with institutional pressures, and these strategic responses are a function of a firm’s internal culture, norms and values. Some scholars have suggested the resource-based view of the firm as alternative theoretical explanation for variability of management practices by emphasizing the role of internal resources and capabilities (Barney 1991). Such a perspective argues that the unique resources and capabilities that firms possess are important factors affecting the implementation and long-term performance of similar

management practices (Teece et al. 1997). Resources and capabilities within an organization are embedded in the organization, and the degree to which they are able to add value may depend upon the presence of complementary assets and supporting routines. In the area of environmental management and ISO14001 certification, a major point of reference has been the natural-resource-based view (Hart 1995; Hart and Dowell 2011) which maintains that proactive environmental management is in itself a potential internal strategic resource that may give firms a sustainable competitive advantage. Drawing on this approach, Christmann and Taylor (2004) suggested that a company's existing skills may be important in determining its ability and willingness to implement standards. They found that companies that are characterized by a capacity for innovation, an ability to absorb new information thanks to an educated workforce, and a widespread involvement of employees in the implementation of an environmental management system, are in a much better position to adopt strategies of environmental self-regulation such as the ISO14001 standard. Likewise, King and Lenox (2001) concluded that a company's pool of resources and capabilities like commitment to R&D and ISO9000 certification significantly affects the likelihood of ISO14001 adoption.

In the empirical context of our study, it can be argued that a firm's decision to demand assurance of its sustainability report requires appropriate managerial and organizational capabilities. In a similar vein, it can be posited that resources and capabilities embedded in different types of assurers are potential firm-level, supply-driven factors underlying heterogeneous responses in the adherence to the standards (cf. Delmas and Toffel, 2011; Yin and Schmeidler, 2008). Under the resource-based view of the firm, non-substitutable and valuable resources that reside in an audit firm depend on both its size and human capital owned, such auditor's education, experience, and professional training (Everaert et al. 2007). For professional service firms, tacit knowledge is primarily acquired through practice, which makes it almost unattainable to transfer or imitate (Brock 2012). What makes our setting

unique is the presence of alternative types of professional service firms involved in providing third-party assurance, namely accounting firms, environmental consultants, management consultants and non-governmental organizations. Prior research using a limited amount of assurance statements has shown that the approaches in sustainability assurance differ significantly between accountants and consultants, the two dominant professional groupings in the market for third-party verification (Ball et al. 2000; O'Dwyer and Owen 2005; Manetti and Becatti 2009). Deegan et al. (2006) found great variability in the presentation format and contents across assurors, both within particular regions and across European countries. Mock et al. (2007), based on 130 firms worldwide that issued a sustainability report between 2002 and 2004, pointed out that different characteristics inherent to the level of assurance provided are positively associated to the type of assurance provider, lending support to higher level of expertise in non-financial assurance by larger accounting firms in comparison with other types of assurance providers. Edgley et al. (2010) analyzed the level of stakeholder inclusivity of assurance processes with a sample of twenty accountant and consultant assurors, revealing varying levels of stakeholder engagement in these practices. More recently, O'Dwyer et al. (2011) qualitatively examined how assurance practices and underlying legitimization strategies in a large accounting firm shaped up differently among key constituencies.

Our paper is a first attempt to explore the dynamics of the interaction among verified companies, assurance providers and the context in which they operate. We aim to shed a light on similarities and differences among assurance providers with the conjecture – to be tested in further research – that different types of assurors develop a range of critical resources and capabilities that ultimately affect the choice of assurance standards and inherent assurance quality. We will therefore highlight variation in audit quality across types of assurance providers and assurance standards by addressing our second research question:

RQ2 Are different assurance providers and assurance standards associated with variability in assurance quality?

SAMPLE AND METHODOLOGY

Sample

The firms belonging to the first half of the Fortune's Global 500 list as published on 3 August 1998 were initially approached and requested to send their most recent environmental, social, and/or sustainability report. This could be either a separate report or, if not available, a copy of the annual financial report if it contained this kind of information (also called 'integrated report'). MNCs' websites were visited to actively search for reports, and if this did not yield results, the companies were contacted, several times if necessary, by letter, mail and /or phone, in order to have certainty about sustainability reporting for the whole group of firms.

Once a sample of firms was established for the year 1999, the subsequent collection of sustainability reports took place with intervals of three years to form a final panel of 212 MNCs over the years 1999, 2002, 2005 and 2008. These were the firms that survived over the full period, taking into account that some companies were subject to mergers and acquisitions or disappeared altogether. Collecting data with three-year intervals over the years 1997/1998 – when none of the current assurance standards was available – to 2008 provides sufficient coverage of the evolutionary pattern of sustainability assurance adoption for the purpose of a descriptive analysis. Moreover, even with our interrupted time-series, we posit that the MNCs in our panel have been much more active in sustainability reporting than other firms.

[Insert Table 1 about here]

As exhibited in Table 1, the panel of 212 firms comprises most companies respectively from the United States (33.0%), Japan (22.6%), Germany (9.9%), France (8.5%) and the United Kingdom (6.1%). Our data indicate that the adoption of environmental, social, and/or sustainability reports in the panel was highest in Japan (125 reports in total), followed by the United States (108 reports), Germany (59), the United Kingdom (50) and France (43), for a total number of 488 reports. Assurance statements were most frequent in Japan (39

statements), followed by the United Kingdom (37), Germany (18), and The Netherlands (15), for a total number of 180 statements available in the period examined.

Content analysis: assessing sustainability assurance quality

The quality of assurance statements is determined by means of a content analysis based on the evaluative framework provided by O'Dwyer and Owen (2005), who introduced the minimum requirements of a high quality assurance statement as indicated by the leading initiatives in this area to enhance comparability, credibility and stakeholder responsiveness of sustainability reporting like GRI (2002), FEE (2002) and AccountAbility (1999, 2003). In total, 19 aspects or ranking criteria are included in our analysis.

In order to ensure reliability in the content analysis, we followed the guidelines of standard content analysis methodology (Neuendorf 2002). The coding procedure involved a team of coders formed by one author of the paper as lead researcher and two graduate students as independent coders. Reliability, the extent to which a measuring procedure yields the same results on repeated trials, translates into inter-coder reliability when human coders are involved in content analysis. Following Neuendorf (2002), reliability needs to be assessed at two points in time. Pilot reliability is to be established on a random sub-sample before the study begins. For this purpose, a random sub-sample of 30 assurance statements was drawn from the 180 statements available in our panel and separately content analyzed by two coders and the lead researcher. This preliminary content analysis revealed that a few improvements had to be made to the codebook. Accordingly, the coding rules for some variables were slightly modified compared to the original approach in O'Dwyer and Owen (2005) to avoid bias. Based on the revised codebook, an extended random sub-sample of additional 30 assurance statements was obtained and independently content analyzed by both coders and the lead researcher. This analysis resulted in proper training of the coders that translated in high levels of agreement, such that the robustness of the codebook was established. The content

analysis of the remaining statements was then performed independently by the two coders.

The codebook and the accompanying coding rules (refer to the column 'Scale') used for the content analysis are included in the Appendix. As can be derived from the codebook, the possible range of scores obtained from the content analysis is from zero to 27, whereby zero represents the lowest and 27 the highest quality level. For most of the 19 items in our codebook, the coding procedure is the result of assessing the various items on the basis of existence/mentioning/reference of a specific item in the sustainability assurance statement (for instance, whether an addressee is internal or external does not alter the score given in the content analysis, but both occurrences are awarded with a score of one point). Some criteria referring, for example, to materiality and general conclusion/opinion, required a distinction between reference only versus reference and explanation of an item.

Neuendorf (2002, p. 149) notes that percent agreements between coders is appropriate in such instances "wherein each pair of coded measures is either a hit or a miss". The final level of agreement between the two coders was 100% for 9 items, and above 85% percent on the other measures. The threshold for a satisfactory level of inter-rater reliability is 80% for the simple percentage agreement suggested by Neuendorf (2002). The few instances of conflicting codes were eventually reconciled through re-examination of the text in the assurance statements with the involvement of the lead researcher. Such a high reliability level should not be a surprise given the limited amount of words that comprise an assurance statement (rarely exceeding one page), in combination with the use of a standardized and technical jargon that tends to reduce subjective interpretation in the coding procedure.

RESULTS

Evolution of patterns of sustainability assurance

As shown in Table 2, MNCs issuing a sustainability report increased from 39.6% (84 reports in 1999) to 69.3% (147 reports in 2008) in our panel. The percentage of assurance statements

accompanying these reports significantly increased from 1999 to 2008 (from 21.4% in 1999 to 55.8% in 2008). The reporting hikes for Japanese and French firms in respectively 2005 and 2008 have been related to the institutional context (Kolk 2010). In Japan, the government published rules and guidelines on environmental reporting and accounting that have led many firms to start reporting. In France, legislation was adopted that mandates publicly quoted firms to report on environmental and social issues – this applied to the 2005 set only. It might be suggested that this has been applicable to assurance statements included in reports as well. The influence of country-of-origin factors also seems to have played a role by a large percentage of U.S. firms that are currently not opting for a third-party verification statement of the sustainability report (only 11.1% of the reports, i.e. 12 assurance statements). The litigious tradition of the U.S. market, characterised by a formal legal approach and contestation, appears to have stimulated a compliance orientation, in which voluntary reporting and assurance has consequently made much less headway than in other legal and financial regimes, especially in comparison to European countries (cf. Kolk and Perego 2010).

[Insert Table 2-4 about here]

When we shift our attention to the dynamics of diffusion at the sector level, Tables 3 and 4 reveal that more ‘polluting’ sectors have traditionally been most active in this regard, although the number of Banks & Insurance firms that published a sustainability report and choose for independent verification increased, almost catching up in the most recent period. Besides financial firms, other sectors which have traditionally reported and assured less than average are Trade & Retail, Other services, and Metals & Manufacturing. It must be noted, however, that clear increases were observed here as well. This means that the gaps with (traditionally high reporting) sectors, such as Chemicals & Pharmaceuticals, Utilities, and Oil & Gas, are diminishing.

Moving from general trends to those at the firm-level, various patterns emerge from the data. The most obvious ones are those in which a MNC consistently adopts a sustainability assurance statement, versus a firm that refrains from doing this, which can be labelled as ‘consistent early adopters’ and ‘non-adopters’ respectively (see Table 5). Only 12 companies reported a sustainability assurance statement across the four years without interruptions. These trendsetters are headquartered in Europe (except for one Australian firm) and belong mostly to Oil & Gas and Utilities sectors. The cluster ‘non-adoption’ accounts for a considerable percentage of the panel (n=118), signalling thus significant room for further adoption of sustainability assurance in MNCs, particularly for U.S.-based firms.

[Insert Table 5 about here]

Another category consists of nine firms that started later, that is they did not have a sustainability assurance in 1999, but adopted the practice afterwards (labelled as ‘consistent late adopters’). The subsequent group brings together so-called, ‘consistent followers’, namely 13 MNCs that started to engage in assurance from 2005 onward. A final cluster of 42 companies contains so-called ‘laggards’, firms that were the last to opt for verification in 2008. The remainder of the MNCs in our panel (n=18) do not follow a clear pattern, showing an intermittent trajectory of assurance, and are classified with various labels reflecting all possible combinations.

Trends about assurance providers, standards adoption and assurance quality

Similarly to prior classifications among the assurance providers examined (CorporateRegister 2008), we made a distinction in Table 6 among four categories, namely Accounting firms, Specialists (both broader and specialist consultants), Certification bodies and Others (including academic institutions, non-governmental organizations, stakeholder panels, and individual auditors). The relative number of accounting firms that MNCs asked to provide

assurance showed a stable trend from 55.6% in 1999 to 53.3% in 2005, but data for 2008 revealed a declining market share for these providers (45.1%). The market share of Specialists declined constantly, from 38.9% in 1999 to 13.4% in 2008. A similar, although less strong, trend applies for Certification bodies as well, which accounted for around 11% in 2008. The only assurance providers that seemed to gain recently are those labeled as Others, with a coverage of 30.5% of the statements verified. Such evidence is particularly applicable to Japan, where the role of academic institutions in providing assurance is overrepresented when compared to European-based firms where Accounting firms have been the traditional choice.

[Insert Table 6-7 about here]

When examining the type of adopters (from consistent early adopters to laggards, as distinguished above) and the type of assurance providers, it appears that, among the 12 early adopters, 9 opted immediately in 1999 for an Accounting firm as assurance provider. Consistent with data presented in Table 6, there is a diminishing reliance on Specialists and Certification bodies over time, with the category Others prevailing in capturing the MNCs that decided to have their sustainability report verified lately in 2008. It is worth noticing that switches from assurance providers occurred in only a few occasions in the total panel, thereby suggesting a rather established relationship between MNCs and independent assurance providers.

Focusing on the standards used in assurance engagements in the panel, Table 7 shows that, in the two years where all standards were available (2005 and 2008), the penetration of the standards applies to respectively 31% and 51% of the statements examined. There is therefore a large number of verifications that do not formally comply to any standardized approach. It is interesting to note that the most frequent adoption of standards applies in the form of combinations among the three guidelines currently available. The most recent trend in 2008 highlights a relatively higher preference for AA1000 in combination with GRI

guidelines (13.4% of all statements), followed by ISAE3000 in combination with GRI (12.2%). Such a trend emphasizes recent attempts to improve the credibility of sustainability reports by asking for verified certificates that abide to each standard available in this unregulated area of assurance.

[Insert Table 8 about here]

As further evidence, an analysis that disaggregates the adoption per type of adopter provides a scattered picture. Among the early adopters, the combination of AA1000AS with GRI guidelines seems to be popular. When the association among assurance providers and standards adopted is examined (see Table 8), the Accounting firms seem to draw more frequently on ISAE3000 standards, which is not surprising given that these standards stem from an international auditing body. The category Others, despite their increased popularity in 2008, appears to rely on standards in a limited way, thereby raising doubts about the quality of the assurance provided by this group.

[Insert Table 9-10 about here]

The results of the content analysis are summarized in Tables 9-12. As a general trend, Table 9 shows an improvement of the quality of sustainability assurance statements over time. The average score in 1999 of 9.72 is significantly lower than the score in 2008 of 12.93. However, the pace of improvement seems rather limited, given that, on average, the score in 2008 remains stable compared to 2005. Moreover, the average score is rather low compared to the maximum score possible (27 points), suggesting significant room for improvement in the current level of assurance levels.

The analysis of mean scores per country/year (see Table 10) shows considerable variation. Statements examined from the first two years show higher scores in the United Kingdom, Germany and The Netherlands respectively. Across the following two years the

pattern is heterogeneous, with firms headquartered in specific countries showing a regular improvement over time (Germany, The Netherlands, Norway) while the rest exhibiting an irregular trend. Notably, the score by Japanese MNCs declined considerably in 2008, due to a substantial move to Others as assurance providers. Australian firms experienced a remarkable improvement in assurance quality, probably also due to the implementation of more stringent disclosure policy on social and environmental performance promulgated in the same period. The trajectory followed by firms headquartered in the United States is irregular and heavily depending on the specific firms that embarked on the assurance engagement across the years, confirming a general reluctance in such an institutional context to abide to assurance practices that are potentially prone to high litigation costs.

[Insert Table 11 about here]

Among the best-scoring multinationals in our panel, the first 10 are all European-based firms with one Australian firm. These MNCs mostly operate in Oil & Gas and Banks & Insurance. The assurance quality also differs substantially per sector examined, as summarized in Table 11. Higher scores refer to traditionally more polluting sectors, like Mining and Oil & Gas, although the highest scores belong to Food & Beverages firm (average of 16.90 across the whole period). MNCs in the financial services sector show a huge variety in terms of quality, with some excellent scores as well as extremely low rankings. Overall, our content analysis of assurance documents a significant variation in assurance quality levels. It seems mainly a country-specific phenomenon, with European MNCs taking the lead. Firms headquartered in Japan experience an increasing rate of adoption of assurance statements, but their predominant reliance on assurance providers in the Other category appears to undermine the credibility of their accountability efforts.

[Insert Table 12 about here]

Table 12 presents a comparison among assurance providers. Despite their consolidated expertise in assurance engagements in financial reporting and their higher penetration in the sustainability assurance market, Accounting firms (average of 13.71 points) appear to score only slightly better than Certification bodies (average of 13.50 points). Across the whole sample, it also appears that Accounting firms did not deliver a statement ranking higher than 22 points, while Certification bodies were associated with higher scores (up to 27 points). A significant difference is evident among these two assurance providers on the one hand and Specialists (average of 10.80 points) and Others (with a quite low average of 5.89 points, particularly for firms headquartered in Japan).

The content analysis thus reveals that the quality of assurance is highly dependent upon the type of provider. Accounting firms and Certification bodies seem to deliver higher quality with respect to items concerning the reporting format, as well as the procedures followed in the assurance process (e.g. items 1-11 which include formal aspects such as clear references to name and location of the assurator or the respective responsibilities of reporter and assurator). In contrast, when it comes to formulating a recommendation and providing positive assurance, Specialists and Certification bodies assurers tend to be more elaborate and informative. From a further analysis (not reported in detail here), it appears that Accounting firms apply a more conservative and cautious approach than consultants. Accountants are hesitant to draw clear and precise conclusions from the assurance engagement given the uncertainties surrounding the domain of sustainability assurance provision. Since no mandatory standard exists and many assurers make use of a combination of different guidelines, it seems that accountants are hesitant to report on compliance and provide high levels of assurance. They further show on average a lack of transparency in the assurance engagement especially with respect to reporting on completeness and responsiveness (items 17-18 in the Appendix).

DISCUSSION, CONCLUSIONS AND IMPLICATIONS

Discussion and conclusion

Auditing and third-party assurance practices play a prominent role in developing and sustaining accountability for sustainability. A debate has arisen in the accounting and business ethics literatures focused on structural deficiencies that supposedly undermine the credibility of such novel verification mechanisms (Ball et al. 2000; Deegan et al. 2006; Manetti and Becatti 2009; Jamali 2010; Boiral and Gendron 2011; Smith et al. 2011). What is missing in the extant literature is an analysis of how sustainability assurance diffused over time, in different national contexts, and taking into account different types of auditors involved and standards used. In this paper, using a panel of the Fortune Global 250, we show how patterns of sustainability assurance by MNCs have evolved.

In line with previous studies on the diffusion of sustainability reporting (e.g. Kolk 2005; Kolk 2010; Fortanier et al. 2011), it appears that country-level factors are significant drivers of sustainability assurance. As our results show for Japan and France, the promulgation of a more stringent legislation on social and environmental reporting increased regulatory pressure and acted as powerful coercive mechanisms, thereby lending support to the institutional theory perspective of IAS adoption (e.g. Delmas 2002; Delmas and Montes-Sancho 2011; Gilbert et al. 2011; Heras-Saizarbitoiria and Boiral 2012). More specifically, assurance practices in the domain of sustainability can be viewed as reflecting a process of normative isomorphism (DiMaggio and Powell 1983; Boiral and Gendron 2011), implying a transposition of professional rules and procedures from financial into non-financial auditing. Such normative pressures are particularly evident in the early stages of diffusion, in which the institutionalization process is prompted by the powerful role of professional accounting and auditing entities.

At the same time, our exploratory analysis highlights a potential tension between

normative and coercive or authoritative forces, particularly because national contexts characterized by high litigation costs may hamper the diffusion of emerging auditing practices (Simnett et al. 2009; Kolk and Perego 2010). While a national government or accounting professional bodies may send positive signals favouring the adoption of sustainability assurance, high levels of litigation in the legal environment and peer pressures among compliance professionals could become an impediment to the adoption. We therefore confirm the intuition built upon neo-institutional theory by recent studies like Delmas and Montes-Sancho (2011) that aim to disentangle timing and interaction among various isomorphic pressures in shaping institutionalization of IAS, particularly in their formative stages.

While institutional forces appear to condition MNCs activities, our analysis found considerable variability in the adoption pattern and adherence to the standards in our panel. Our exploratory data indicate a potential role of organizational, firm-level factors in explaining why MNCs adopt heterogeneous management practices when facing isomorphic pressures. This intuition is in line with the resource-based view of the firm which argues that a set of complementary organizational resources and capabilities may facilitate the adoption of advanced environmental management practices (cf. Delmas and Toffel, 2011). In our setting, mimetic mechanisms seem less prominent in early-stages of adoption than in other contexts (like ISO14001), thereby supporting the intuition that MNCs with superior environmental resources and capabilities seem more likely to demand higher levels of accountability standards and assurance quality. An important implication of our findings is that the lack of firm capabilities can therefore act as an impediment for the diffusion of sustainability assurance, notwithstanding the institutional forces promoting and pressuring MNCs to adopt it.

Similarly, our study does not exclude the conjecture that the resource-based perspective may hold as well for the assurers on the supply-side. Such an argument is

confirmed by drawing a parallel with a paper by Greenwood et al. (2002), who examined how the accounting profession in Canada responded to market demand for an extended range of professional services by redefining and extending the scope of their advisory services. As emphasized in Smith et al. (2011, p. 433), the notion of professional bodies as active agents suggests that quite complex network dynamics operate within organizational fields involving professional service firms in the global economy (cf. Brock 2012). Different types of assurance providers seem to possess a pool of resources and capabilities particularly embedded in their human capital that clearly influences the quality of verification engagements and the underlying adoption processes. This explanation complements the rationale that assurance providers are mere instruments of their corporate clients ('the paymaster' as described by O'Dwyer and Owen, 2007) and assurance practices are decoupled from the organizational processes. It points at the need to disentangle the dynamics taking place in the market for assurance services in which a set of resources and capabilities possessed by MNCs (demand-side) interact with different types of assurance providers (supply-side) to eventually shape the adoption of IAS.

In conclusion, from our descriptive data we can merely speculate that a combination of (external) institutional pressures and (internal) set of resources and capabilities provides most fruitful insights in explaining variation of firms' adoption and integration of standardized management tools (Delmas and Toffel 2011; Aguilera-Caracuel et al. 2012; Heras-Saizarbitorra and Boiral 2012).

Directions for further research

Future studies could jointly examine country-level and firm-level factors as potential drivers of sustainability assurance, linking to a stream of studies in the international accounting and auditing literature that examines the determinants of voluntary corporate financial disclosure or audit quality in cross-country contexts. Drawing primarily on agency theory (cf. Beyer et

al. 2010) and institutional theory (e.g. Shi et al. 2012), recent accounting studies examined country-specific (macro-level) characteristics (such as a macroeconomic, socio-historical, cultural and legal environment) or firm-specific (micro-level) variables (such as ownership structure, corporate governance or financial leverage) as drivers of corporate financial reporting or auditor's choice (see Dong and Stettler 2011 for a review). Building upon initial evidence from our paper and previous studies (Simnett et al. 2009; Kolk and Perego 2010; Ballou et al. 2012), the sustainability assurance setting could serve as empirical context to simultaneously test the relative importance of country- versus firm-determinants of (non-financial) auditing services in an international context. The approach recently suggested by Dong and Stettler (2011) to apply hierarchical modelling aiming at disentangling multi-level drivers seems very suitable for this context and could be informative for both CSR/business ethics and accounting academic audiences.

More broadly, our study emphasizes the need to extend the firm-level analysis from demand-side characteristics (i.e. the auditee firm) to supply-side characteristics (i.e. the auditor or assurance provider). Follow-up studies could examine the effect of engaging specific assurance providers on the quality of sustainability assurance, adding insights in how MNCs adopt and sustain specific legitimization strategies towards their stakeholders using different assurance approaches (cf. Edgley et al. 2010; O'Dwyer et al. 2011). Similarly, research could draw on the resource-based view of the firm to investigate how standardized auditing practices are adopted and implemented differently in different organizations. It would be fruitful to understand how heterogeneous responses to identical institutional pressures are the result of unique resources and capabilities developed by the auditee (demand-side focus) and/or auditor (supply-side focus) organizations. Such a line of research would be highly informative for strategy researchers that seek to theorize how external legitimacy and internal efficiency of IAS work in combination (Yin and Schmeidler 2009;

Delmas and Toffel 2011; Toffel and Marquis 2011).

Furthermore, whereas our paper provides descriptive evidence about firm-, sector- and country-level patterns of adoption, future research could examine whether and how institutional pressures and organizational factors among MNCs interact with individual-level executives' characteristics (e.g. professional background or personality traits of CEOs/CFOs that would potentially denote an inclination towards CSR and sustainability issues) as significant drivers of sustainability assurance engagement. An in-depth investigation would also be useful to better understand how specialized users of sustainability reports, namely financial analysts, react to the provision of assurance statements in supplementing investment decisions based purely on financial information (see Pflugrath et al. 2012 for a recent example of an experimental study in this direction).

With regard to assurance standards, it appears – different than some other IAS in which alternative voluntary standards are available – that the multi-stakeholder standard approach which involves business and NGOs (AA1000 and GRI) does not seem to absorb the business-centred standard developed by the accounting profession (ISAE3000). Multi-stakeholder standards have emerged in recent years because of their potential for consensus building, knowledge sharing and interest representation. From our panel of MNCs, it appears that assurance providers use aspects of the various standards available on an *ad hoc* 'pick and mix' basis (O'Dwyer and Owen 2007; CorporateRegister 2008). This is an interesting area for future investigation, especially when considering the involvement of the various actors over the years. Néron (2010, p. 342) refers to the diversity of standards in the area of sustainability assurance as the 'politics of accountability' involving 'complex networks of exchanges, collaboration, deliberation and confrontation'. A further study of the dynamics of sustainability assurance standards would therefore add to our limited understanding of the nature and extent of the demand and supply of IAS (Fransen and Kolk 2007; Fortanier et al.

2011; Gilbert et al. 2011; Heras-Saizarbitoiria and Boiral 2012).

Societal and managerial implications

At an aggregate level, we have documented that the depth of penetration of sustainability assurance has not exhausted all its possibilities, since a substantial portion of the firms in our panel have not yet chosen this option. While the percentage of verified reports increased from 21% to 56%, the diffusion of sustainability assurance remains limited in the United States, and relatively high in numbers and percentages in Japan and quite some European countries. It is noteworthy that the rate of improvement in assurance quality over a period of a decade seems to stabilize in the last year that we examined. Such a trend is quite worrying from a stakeholder accountability perspective, since the average assurance statement covers less than half of the best-practice criteria. The confusion arising from the plurality of standards undermines the credibility of assurance among stakeholders. At this stage, it thus seems important to continue monitoring the quality of assurance statements among MNCs over time, particularly to inform the discussion about the need to promulgate well-established international standards. This links a societal consideration to an area for ongoing research.

On the basis of our descriptive analysis, we can further speculate that some assurers may lack sufficient technical knowledge and may uncritically verify a report's content without the necessary expertise. In particular, the assurance statements accompanying the reports of several Japanese MNCs empirically confirm the worrisome phenomenon of auditing mechanisms as symbolic 'rational myths' (Jamali 2010; Boiral and Gendron 2011) decoupled from firms' practices. Moreover, our study highlights that the quality of assurance delivered by Accounting firms does not outperform Certification bodies. These findings have implications with regard to the choice of assurance providers by MNCs. Firms that opt for a verification process for the first time, or enforce a corporate policy of auditor rotation, should be aware of the specific competencies and expertise of the assurance provider. Attention also

needs to be paid to the potentially problematic relationship between the auditor and the audited company, in an audit process that lacks transparency, and where professional and managerial ‘capture’ can take place (Ball et al. 2000; O'Dwyer 2003; Jamali 2010; Smith et al. 2011).

In summary, the proliferation and opacity of IAS creates dilemmas for managers who must decide the appropriate level of conformity with specified standards and inherent sustainability assurance levels. MNCs should be aware of the operational and reputational risks associated with the selection of allegedly lenient assurers if they intend to maintain acceptable levels of transparency and accountability over time. Future research regarding this issue could examine whether a minimum adherence to sustainability assurance standards (as a form of ‘greenwashing’) negatively impacts MNCs reputation and other related effects (e.g. reduced access to credit, increased stakeholders pressure).

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Table 1 – Aggregate statistics per country

	Number of firms	% of firms	Number of sustainability reports	% of sustainability reports	Number of assurance statements	% of assurance statements	% of assurance statements per report
Australia	2	0.9%	6	1.2%	4	2.2%	66.7%
Belgium	1	0.5%	2	0.4%	1	0.6%	50.0%
Brazil	2	0.9%	6	1.2%	1	0.6%	16.7%
Canada	1	0.5%	2	0.4%	0	0.0%	0.0%
China	2	0.9%	0	0.0%	0	0.0%	0.0%
France	18	8.5%	43	8.8%	13	7.2%	30.2%
Germany	21	9.9%	59	12.1%	18	10.0%	30.5%
Italy	5	2.4%	15	3.1%	12	6.7%	80.0%
Japan	48	22.6%	125	25.6%	39	21.7%	31.2%
Mexico	1	0.5%	3	0.6%	3	1.7%	100%
Netherlands	7	3.3%	25	5.1%	15	8.3%	60.0%
Norway	1	0.5%	4	0.8%	4	2.2%	100%
Russia	1	0.5%	3	0.6%	0	0.0%	0.0%
S. Korea	6	2.8%	5	1.0%	3	1.7%	60.0%
Spain	2	0.9%	6	1.2%	5	2.8%	83.3%
Sweden	2	0.9%	6	1.2%	1	0.6%	16.7%
Switzerland	6	2.8%	20	4.1%	12	6.7%	60.0%
UK	15	6.1%	50	10.2%	37	20.6%	74.0%
US	70	33.0%	108	22.1%	12	6.7%	11.1%
Venezuela	1	0.5%	0	0.0%	0	0.0%	0.0%
<i>Total</i>	212	100%	488	100%	180	100%	

Table 2 – Disaggregate statistics per country/year

	1999		2002		2005		2008		<i>Total</i>	
	REP	AST	REP	AST	REP	AST	REP	AST	REP	AST
Australia	1	1	1	1	2	1	2	1	6	4
Belgium	0	0	0	0	1	0	1	1	2	1
Brazil	0	0	2	0	2	0	2	1	6	1
Canada	0	0	0	0	1	0	1	0	2	0
China	0	0	0	0	0	0	0	0	0	0
France	3	0	7	0	16	5	17	8	43	13
Germany	11	2	12	3	18	3	18	10	59	18
Italy	3	2	4	3	4	3	4	4	15	12
Japan	22	1	32	6	36	8	35	24	125	39
Mexico	0	0	1	1	1	1	1	1	3	3
Netherlands	5	2	6	4	7	4	7	5	25	15
Norway	1	1	1	1	1	1	1	1	4	4
Russia	0	0	1	0	1	0	1	0	3	0
S. Korea	0	0	1	0	1	0	3	3	5	3
Spain	1	0	1	1	2	2	2	2	6	5
Sweden	2	0	2	0	1	0	1	1	6	31
Switzerland	3	1	5	3	6	4	6	4	20	12
United Kingdom	9	6	11	10	15	12	15	9	50	37
United States	23	2	24	2	31	1	30	7	108	12
Venezuela	0	0	0	0	0	0	0	0	0	0
<i>Total</i>	84	18	111	35	146	45	147	82	488	180

The table reports the amount of sustainability reports (REP) and assurance statements (AST) per country in the panel of Fortune G250 firms (n=212) in the four years examined.

Table 3 – Disaggregate statistics per sector

	Number of firms	% of firms	Number of sustainability reports	% of sustainability reports	Number of assurance statements	% of assurance statements	% of assurance statements per report
Automotive	15	7.1%	50	10.2%	12	6.7%	24.0%
Banks & Insurance	56	26.4%	91	18.6%	36	20.0%	39.6%
Chemicals & Pharmaceuticals	11	5.2%	40	8.2%	15	8.3%	37.5%
Communications & Media	12	5.7%	24	4.9%	13	7.2%	54.2%
Construction	3	1.4%	7	1.4%	0	0.0%	0.0%
Electronics & Computers	21	9.9%	74	15.2%	24	13.3%	32.4%
Food & Beverages	9	4.2%	20	4.1%	10	5.6%	50.0%
Forestry	1	0.5%	4	0.8%	2	1.1%	50.0%
Metals & Manufacturing	8	3.8%	17	3.5%	3	1.7%	17.6%
Mining	1	0.5%	4	0.8%	4	2.2%	100%
Oil & Gas	14	6.6%	44	9.0%	28	15.6%	63.6%
Other services	11	5.2%	15	3.1%	3	1.7%	20.0%
Trade & Retail	35	16.5%	51	10.5%	15	8.3%	29.4%
Transport	5	2.4%	14	2.9%	3	1.7%	21.4%
Utilities	10	4.7%	33	6.8%	12	6.7%	36.4%
<i>Total</i>	212	100%	488	100%	180	100%	

Table 4 – Disaggregate statistics per sector/year

	1999		2002		2005		2008		<i>Total</i>	
	REP	AST	REP	AST	REP	AST	REP	AST	REP	AST
Automotive	11	2	12	1	14	1	13	8	50	12
Banks & Insurance	11	1	16	10	32	12	32	13	91	36
Chemicals & Pharmaceuticals	10	4	10	4	10	4	10	3	40	15
Communications & Media	2	1	5	2	8	3	9	7	24	13
Construction	0	0	1	0	3	0	3	0	7	0
Electronics & Computers	16	1	20	3	19	6	19	14	74	24
Food & Beverages	2	1	4	1	7	4	7	4	20	10
Forestry	1	1	1	1	1	0	1	0	4	2
Metals & Manufacturing	5	0	4	0	4	0	4	3	17	3
Mining	1	1	1	1	1	1	1	1	4	4
Oil & Gas	9	4	11	7	12	7	12	10	44	28
Other services	0	0	1	0	7	1	7	2	15	3
Trade & Retail	7	1	11	3	16	2	17	9	51	15
Transport	4	0	4	1	3	1	3	1	14	3
Utilities	5	1	10	1	9	3	9	7	33	12
<i>Total</i>	84	18	111	35	146	45	147	82	488	180

The table reports per sector the amount of sustainability reports (REP) and assurance statements (AST) per sector in the panel of Fortune G250 firms (n=212) in the four years examined.

Table 5 – Adoption patterns of sustainability assurance

<i>Adopters categories</i>		<i>Firms (n=212)</i>	<i>1999</i>	<i>2002</i>	<i>2005</i>	<i>2008</i>
1. Early adopters	Consistent	12	Yes	Yes	Yes	Yes
	Non-consistent	1	Yes	No	Yes	Yes
		2	Yes	Yes	No	No
		2	Yes	Yes	No	Yes
		1	Yes	Yes	Yes	No
2. Late adopters	Consistent	9	No	Yes	Yes	Yes
	Non-consistent	3	No	Yes	No	Yes
		6	No	Yes	Yes	No
3. Followers	Consistent	13	No	No	Yes	Yes
	Non-consistent	3	No	No	Yes	No
4. Laggards		42	No	No	No	Yes
5. Non-adopters		118	No	No	No	No

The table exhibits the adoption patterns of sustainability assurance in the panel of firms (n=212). Five categories of firms are identified on the basis of presence ('Yes') or absence ('No') of a sustainability assurance statement across the four years examined.

Table 6 – Disaggregate statistics per assuor/year

	Accountants	Specialists	Certification bodies	Others
1999	10	7	1	0
	55.6%	38.9%	5.6%	0.0%
2002	22	11	2	0
	62.9%	31.4%	5.7%	0.0%
2005	24	11	8	2
	53.3%	24.4%	17.8%	4.4%
2008	37	11	9	25
	45.1%	13.4%	11.0%	30.5%
<i>Total</i>	93	40	20	27
	51.7%	22.2%	11.1%	15.0%

The table exhibits the number and proportion of assurance statements per assuors in the four years investigated.

Table 7 – Disaggregate statistics per standard/year

	2005 (%)	2008 (%)
No standard mentioned	31(68.9%)	40 (48.8%)
AA1000AS only	2 (4.4%)	4 (4.9%)
ISAE3000 only	3 (6.7%)	7 (8.5%)
GRI only	4 (8.9%)	5 (6.1%)
AA1000AS+ISAE3000	0 (0.0%)	3 (3.7%)
AA1000AS+GRI	5 (11.1%)	11 (13.4%)
ISAE3000+GRI	0 (0.0%)	10 (12.2%)
AA1000AS+ISAE3000+GRI	0 (0.0%)	2 (1.1%)
<i>Total</i>	45	82

The table exhibits the reference to specific standards or combination thereof in 2005 and 2008 assurance statements.

Table 8 – Aggregate statistics per standard/assuror

	No standard	AA1000AS only	ISAE3000 only	GRI only	AA1000AS +ISAE3000	AA1000AS +GRI	ISAE3000 +GRI	AA1000AS+ ISAE3000+GRI
Accountants	56	3	11	3	3	5	10	2
Specialists	30	2	1	2	0	5	0	0
Certification	10	1	0	4	0	5	0	0
Others	24	0	0	2	0	1	0	0

The table reports the reference to specific standards or combination thereof for each type of assurance provider.

Table 9 – Quality of assurance statements per year

	Number of statements	Mean	S.D.	Min	Max
1999	18	9.72	2.85	6	16
2002	35	9.46	3.47	1	17
2005	45	12.67	4.78	1	23
2008	82	12.93	6.50	2	27
<i>Total</i>	180	11.87	5.31	1	27

The table reports the average score, standard deviation, minimum and maximum scores of assurance quality in the four years investigated.

Table 10 – Quality of assurance statements per country

	1999	2002	2005	2008	Number of statements	Mean	S.D.	Min	Max
Australia	6.00	12.00	21.00	20.00	4	14.75	7.09	6	21
Belgium	n.a.	n.a.	n.a.	19.00	1	19	0	19	19
Brazil	n.a.	n.a.	n.a.	16.00	1	16	0	16	16
France	n.a.	n.a.	11.40	12.75	13	12.23	2.45	8	18
Germany	10.50	10.00	13.33	14.90	18	13.33	5.02	3	19
Italy	9.50	9.00	9.00	12.25	12	11.25	3.86	7	19
Japan	9.00	9.67	9.00	7.25	39	8.03	4.39	1	17
Mexico	n.a.	11.00	17.00	19.00	3	15.67	4.16	11	19
The Netherlands	11.50	12.25	14.00	16.20	15	13.93	4.22	5	22
Norway	6.00	10.00	14.00	17.00	4	11.75	4.78	6	17
South Korea	n.a.	n.a.	n.a.	18.00	3	18.00	0	18	18
Spain	n.a.	9.00	12.00	18.50	5	14.00	5.57	7	19
Sweden	n.a.	n.a.	n.a.	19.00	1	19	0	19	19
Switzerland	6.00	3.67	8.75	18.25	12	10.42	7.1	1	24
United Kingdom	12.00	9.63	14.70	18.57	37	13.86	6.12	2	27
United States	7.50	4.50	19.00	10.71	12	9.83	6.28	1	21

The columns with years exhibit the average per country in respectively 1999, 2002, 2005 and 2008. The column 'Mean' summarizes the average of the assurance quality score across the four years examined. The label 'n.a.' means that, for a specific year/country, assurance statements were not available.

Table 11 – Quality of assurance statements per sector

	1999	2002	2005	2008	Number of statements	Mean	S.D.	Min	Max
Automotive	10.50	15.00	12.00	9.00	12	10.00	4.69	3	18
Banks & Insurance	13.00	8.20	11.82	16.67	34	12.50	5.99	1	27
Chemicals & Pharmaceuticals	9.00	7.25	11.50	14.67	15	10.33	4.10	5	18
Communications & Media	9.00	9.50	11.33	14.86	13	12.77	6.32	2	21
Electronics & Computers	10.00	9.67	10.67	12.93	24	11.83	4.50	3	21
Food & Beverages	10.00	11.00	17.75	19.25	10	16.90	4.77	10	24
Forestry	7.00	1.00	n.a.	n.a.	2	4.00	4.00	1	7
Metals & Manufacturing	n.a.	n.a.	n.a.	4.00	3	4.00	1.00	3	5
Mining	6.00	12.00	21.00	20.00	4	14.75	7.09	6	21
Oil & Gas	11.50	11.43	15.29	14.20	28	13.39	4.23	6	22
Other services	n.a.	n.a.	11.00	15.50	3	14.00	4.36	11	19
Trade & Retail	10.00	11.00	5.33	7.60	17	7.94	5.71	1	18
Transport	n.a.	10.00	12.00	16.00	3	12.67	3.06	10	16
Utilities	7.00	10.00	15.33	n.a.	12	12.33	5.37	3	19

The columns with years exhibit the mean per sector in respectively 1999, 2002, 2005 and 2008. The column 'Mean' summarizes the mean of the assurance quality score across the four years examined. The label 'n.a.' means that, for a specific year/sector, assurance statements were not available.

Table 12 – Quality of assurance statements per assesor

	Number of statements	Mean	S.D.	Min	Max
Accountants	93	13.71	4.25	1	22
Specialists	40	10.80	5.11	2	21
Certification	20	13.50	6.80	1	27
Others	27	5.89	4.11	1	21

The table exhibits the average score of assurance quality in the four years investigated for each type of assurance provider.

Appendix

Ranking criteria	Definition	Scale (total 27 points)	
1. <i>Title</i>	Title of the assurance statement	0 1	No reference Reference
2. <i>Addressee</i>	Party to whom the assurance statement is formally addressed (either in title separate addressee line or within text)	0 1 2	No reference Addressee is internal or “the readers” Stakeholder mentioned in the addressee
3. <i>Name of assurator</i>	Name of the firm that conducts the assurance engagement	0 1	No reference Reference
4. <i>Location of assurator</i>	Location of the office of the assurance provider	0 1	No reference Reference
5. <i>Report date</i>	Reference to the date at which the assurance exercise was finished	0 1	No reference Reference
6. <i>Responsibilities of reporter</i>	Explicit statement that reporter is responsible for preparation of report (keywords: responsible, responsibility)	0 1	No reference Reference
7. <i>Responsibilities of assurator</i>	Explicit statement that the reporter is responsible to express an (independent) opinion on the subject matter (the sustainability/environmental/social report)	0 1	No reference Reference
8. <i>Independence of assurator from reporting organization</i>	Statement expressing the independence of the two parties involved (a 1 is assigned as soon as the word(s) independent or independence appear anywhere in the assurance statement or its title. Thus, remarks such as “this is an independent opinion...” would already qualify for a 1)	0 1	No reference Reference or mere statement expressing that independence can be looked up on the internet
9. <i>Impartiality of assurator towards stakeholders</i>	Assurator’s declaration of impartiality with respect to stakeholder interests	0 1	No reference Reference (a remark that such a declaration can be made available on request or reference to an internet site already qualifies for a 1)
10. <i>Scope of the assurance engagement</i>	Assurance statement coverage (a 1 should be assigned if anywhere in the assurance statement the coverage of the assurance exercise is stated)	0 1	No reference Reference
11. <i>Objective of the assurance engagement.</i>	Objective to be achieved through the engagement (indicating the level of assurance intended)	0 1 2	No reference Review, limited assurance, independent opinion, independent assurance, external verification, external assurance or validation Reasonable Assurance or reasonable and limited assurance (e.g. two different levels of assurance for different parts of the report)
12. <i>Competencies of assurator.</i>	Description of the professional skills that enable the engagement team to conduct the assurance exercise	0 1 2	No reference Statement claiming competency (but no explanatory note) or mere reference to an internet site Explanatory statement of competencies based on prior experience/engagements

(continued)

Ranking criteria	Definition	Scale (total 27 points)	
13. <i>Criteria used to assess evidence and reach conclusion</i>	A statement that makes reference to particular criteria against which the sustainability report has been prepared (e.g. GRI and often internally developed standards)	0 1 2	No reference Reference to publicly unavailable criteria Reference to publicly available criteria (e.g. internally developed criteria that are published anywhere in the report or GRI)
14. <i>Assurance standard used</i>	Standards used which govern the work of the assurance provider (e.g. AA1000AS or ISAE3000)	0 1 2	No reference Reference to publicly unavailable criteria Reference to publicly available criteria
15. <i>Summary of work performed</i>	Statement explaining the actions taken to arrive at a conclusion	0 1	No reference Reference
16. <i>Materiality (from a stakeholder perspective)</i>	Degree of information provision on materiality level. If the conclusion states that the report is in conformance with the AA1000 principles (Materiality, Completeness and Responsiveness) this qualifies for a reference and thus a 1 is assigned	0 1 2 3	No reference Reference limited to a broad statement (e.g. “covers all material aspects” or “...in all material respects...”) but also negative statements claiming that assessor has <u>not</u> undertaken any work to confirm that all relevant/material issues are included Reference and explanation of materiality setting or reference limited to a broad statement and stakeholder perspective introduced (e.g. “issues material to stakeholders have been considered”) Reference, explanation of materiality setting and stakeholder perspective introduced
17. <i>Completeness</i>	Statement expressing that all material aspects are covered by the report. If the conclusion states that the report is in conformance with the AA1000 principles (Materiality, Completeness and Responsiveness) this qualifies for a reference and thus a 1 is assigned	0 1	No reference Reference
18. <i>Responsiveness to stakeholders</i>	Statement referring to the organization’s procedures (or lack of them) for identifying stakeholder interests and concerns. If the conclusion states that the report is in conformance with the AA1000 principles (Materiality, Completeness and Responsiveness) this qualifies for a reference and thus a 1 is assigned	0 1	No reference Reference
19. <i>General Conclusion/Opinion</i>	Statement expressing the result of the assurance exercise. If there is no general conclusion but the conclusion <u>solely</u> refers to the 3 principles of AA1000 (Materiality, Completeness and Responsiveness) a 0 is assigned	0 1 2	No reference Mere statement expressing the opinion of the assessor (e.g. “XY’s report is a fair presentation of XY’s CSR performance”). A 1 should be assigned only if the conclusion consists only of one sentence Explanatory statement (more than one sentence, but recommendations for improvement are not considered part of the conclusion)