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THE INFORMATIONAL QUALITY OF CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE: AN EXPLORATORY ANALYSIS

Jean-Noel Chauvey
Sophie Giordano-Spring
Maîtres de Conférences
Institut des Sciences de l'Entreprise et du Management
Université de Montpellier 1
34960 Montpellier Cedex 2, France
E-mail: jean-noel.chauvey@univ-montp1.fr
E-mail : sophie.spring@univ-montpl.fr

Charles H. Cho
Associate Professor of Accounting
ESSEC Business School
Avenue Bernard Hirsch
BP 50105
95021 Cergy Pontoise Cedex, France
E-mail: cho@essec.edu

Dennis M. Patten
Professor
Department of Accounting - 5520
Illinois State University
Normal, IL 61761, USA
E-mail: dmpatte@ilstu.edu

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THE INFORMATIONAL QUALITY OF CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE: AN EXPLORATORY ANALSYSIS

ABSTRACT

In this exploratory study, we measure the quality of corporate social responsibility disclosures based on informational quality attributes as discussed by the International Accounting Standards Board, the Financial Accounting Standards Board and the Global Reporting Initiative. Based on 2004 disclosures by a sample of 98 publicly traded French companies, we find that the quality of disclosure is extremely low. We further document that differences in the informational quality of the disclosures are positively associated with firm size, media exposure, and the disclosure of negative performance information, all factors assumed to lead to a greater need for corporate legitimization. Finally, our analysis shows that membership in the ASPI social responsibility index is negatively associated with disclosure of negative performance information but positively related to higher informational quality scores. Overall, our results suggest a need for finding a way to enhance the quality of corporate social responsibility disclosure.

1. INTRODUCTION

Almost all prior studies of corporate social responsibility (CSR) disclosure[1] use measures based primarily on the space allocated to the disclosure or a theme-based content analysis of what information is being provided. As such, the disclosure metrics tend to capture the extensiveness of disclosure, as opposed to the quality of the information being provided.[2] In the financial reporting domain, conceptual frameworks developed by both the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) stress the importance of informational quality in the reporting of financial information and offer several attributes that enhance such quality. The Global Reporting Initiative (GRI), arguably the leading proponent of efforts to standardize and improve corporate CSR reporting (Ballou, Heitger, and Landes, 2006; Gray, 2006), has also highlighted informational quality attributes in its G2 and G3 reporting guidelines (see http://www.globalreporting.org) for sustainability-type reports.

In this exploratory study, we develop a content analysis scheme for CSR disclosure based on informational quality attributes as recommended by the IASB, the FASB, and the GRI and attempt to determine the quality of CSR reporting by major French firms following the passage of the social and environmental reporting requirements contained in the *Nouvelles Régulations Économiques* (NRE) #2001-420. We also attempt to determine whether, consistent with findings on the extensiveness of CSR disclosure, differences in the quality of reporting are

[1] We use the terms "CSR disclosure" and "social and environmental disclosure" interchangeably throughout the paper.

[2] As we discuss below, some researchers have introduced limited measures of informational quality based on, for example, whether the data is quantitative or monetary in nature.

associated with legitimization variables. Finally, we also investigate whether inclusion in a social responsibility index (the ASPI) is related to CSR disclosure quality.

Based on the disclosure in financial and standalone reports (where issued) by 98 French companies drawn from the SBF 120 for 2004, we find that the informational quality of the CSR reporting packages, on average, is extremely low. The sample firms averaged an informational quality score of only 6.66 (out of a possible 45 points) based on a range from zero to 21 points. Perhaps not surprisingly, we did find that disclosure quality scores were higher for companies issuing standalone CSR reports and that, overall, more extensive disclosure (based on pages of information provided) was associated with higher quality scores. We also find that differences in informational quality are significantly associated with factors previously argued to lead to a greater need for corporate legitimization attempts. Firm size, media exposure, and the disclosure of negative performance information are all positively related to CSR informational quality for the French firms. Finally, we find that membership in the ASPI is negatively associated with the choice to disclosure negative CSR performance information but positively related to informational quality as captured by our scoring metric. Overall, these results suggest more needs to be done to enhance the informational quality of CSR reporting. We begin our paper with a discussion of CSR disclosure and informational quality.

2. JUSTIFICATION FOR THE STUDY AND HYPOTHESES DEVELOPMENT

2.1 Measuring CSR Disclosure

There is considerable debate in the social and environmental accounting literature over methods used to *measure* the disclosure of CSR information. Both Al-Tuwaijri, Christensen, and Hughes (2004) and Smith and Taffler (2000) distinguish these measurement techniques across two basic groups – space measures and content scores. Space measures in essence attempt to quantity disclosure extensiveness in terms of a “unit of analysis” (Milne and Adler, 1999). Disclosures have been measured by counting the number of words (see Deegan and Rankin, 1996; Neu, Warsame and Pedwell, 1998), sentences (see Buhr, 1998; Hackston and Milne, 1996; Tsang, 1998), or pages (see Guthrie and Parker, 1989; Patten, 1992, 1995). Space-based disclosure measures have also been calculated as the percentage of pages (Gray, Kouhy and Lavers, 1995a; O’Dwyer and Gray, 1998) or the percentage of total disclosures[3] (Trotman and Bradley, 1981). Smith and Taffler (2000, p. 627) refer to this approach as “form oriented” (objective) analysis. This count method focuses solely on the extent, or more specifically, the amount of space allocated to CSR disclosures. And while the allocation of more space to the provision of CSR information might be expected to be associated with higher quality in the disclosure, it is at best an imprecise surrogate for information quality.

In contrast to the use of space measures, other studies use a disclosure scoring index based on a content or “meaning oriented” (subjective) analysis (Smith and Taffler, 2000, p. 627). With this technique, the examination focuses primarily on the underlying themes or topics that are textually present in the disclosures of interest.[4] Researchers identify the areas of CSR

[3] The percentage of pages is computed as the number of pages (or fractions of pages) dedicated to discussions about social and environmental issues over the total number of pages of the report analyzed. Similarly, the percentage of total disclosures is determined by the total amount of social and environmental disclosures (on a line-by-line or sentence-by-sentence basis) over the total amount of discussions on all issues.

[4] There are also hybrid combinations of these two basic approaches. For example, Ernst & Ernst (1978) identify the amount of space devoted to each of the various areas of CSR disclosure examined for.

information they are interested in measuring and attempt to determine whether these topics are addressed or discussed by corporate managers in the reporting media of choice. Accordingly, the researchers utilize a scoring index categorizing those themes and assess the presence or the absence of each identified item in the disclosures using a “yes/no” (or 1, 0) coding methodology. After their quantification, an aggregate score, generally labeled as the disclosure score variable, is determined for each firm in the sample (e.g., Barth, McNichols and Wilson, 1997; Cho and Patten, 2007; Cho, Patten and Roberts, 2006; Ingram and Frazier, 1980; Patten and Trompeter, 2003). Such measures have been particularly prevalent in the environmental disclosure literature and the metrics have ranged from rather limited scales (e.g., Blacconiere and Patten, 1994 use a five item scheme) to more detailed and extensive indices (e.g., Clarkson, Li, Richardson and Vasvari’s 2008 scale includes a possible 95 points).

While both the amount (“how much”) and the themes (“what”) of CSR disclosure are potentially important for firm managers and report users, neither is necessarily a measure of the *quality* of the information that is being provided.[5] Accordingly, other studies, again primarily within the environmental disclosure arena, have modified the traditional content analysis scoring method in an attempt to better capture what they argue are higher quality informational items. For example, some researchers assign different levels or weights to the scoring according to whether the disclosure contains monetary, quantitative or qualitative terms (e.g., Al-Tuwaijri et al., 2004; Choi, 1999; Wiseman, 1982), or whether the disclosures are descriptive, vague or immaterial (e.g., Hughes, Anderson and Golden, 2001). While these weighting schemes do capture some additional aspect of information quality, their use has been

[5] Content analysis schemes are often presented as a measure of quality (see, e.g., Brammer and Pavelin, 2006; Clarkson et al., 2008). And while we agree that disclosure that addresses more areas of CSR interest exhibits higher quality than disclosures that are more limited in scope, traditional content analysis schemes do not usually take into account the qualitative aspects of the information being presented.

largely limited to assessments of only environmental information (although see Guidry and Patten, 2010) and they focus on only one aspect of (assumed) improved informational quality.

2.2 Informational Quality

Given the limitations with the prior attempts to better measure the informational quality of CSR disclosures, we explore in this study an alternative method for capturing the quality of the CSR reporting package. It focuses more broadly on what Solomon (2000, p. 33) refers to as the “qualitative characteristics for decision useful information,” and is rooted in the conceptual frameworks of financial reporting standard-setting bodies including the IASB and the FASB (of the U.S.). Solomon (2000) argues that because both financial reporting and CSR reporting[6] are aimed at providing information to facilitate decision making by interested parties, the beneficial informational qualities identified by the financial reporting boards ought to be applicable to a large extent to CSR disclosure. It also appears that the GRI, the organization probably most responsible for the advancement of corporate sustainability reporting over the past decade (Ballou et al., 2006; Gray, 2006), agrees, in that its discussion of desirable qualitative dimensions of reported information closely aligns to those of the FASB and IASB.

Based on a review of GRI guidelines and the conceptual frameworks of both the IASB and the FASB, we identified five major quality characteristics for CSR information: relevance, comparability, verifiability, clarity, and neutrality. We discuss each of these in more detail below.

2.2.1 Relevance

[6] Solomon (2000) limits his discussion to the environmental reporting domain. The extension to the broader CSR arena is our extension.

Financial reporting conceptual frameworks typically define relevance as “information that is capable of making a difference in the decisions made by users” (FASB, 2010, p. 17). The GRI, in its G3 reporting guidelines, similarly suggest that the extent to which a user will consider a piece of information significant in the decision making process determines the relevance of CSR reporting. However, as noted by Jeffrey and Perkins (2011), the GRI, in discussing CSR information relevance, stress the importance of stakeholder inclusiveness. By consulting its stakeholders an organization can better identify their information needs and desires. Further, the GRI notes that, because an ideal report should include CSR information that is useful and relevant for both the organization and its users, disclosure of the organization’s activities and related risks (and risk factors) can also contribute to the relevance of information.

2.2.2 Comparability

The FASB (2010, p. 19) defines comparability as “the qualitative characteristic that enables users to identify and understand similarities in, and differences among items.” The IASB (www.iasplus.com/standard/framework.htm) further argues that information “is more useful if it can be compared with similar information about other entities and with similar information about the same entity for another period or another date.” The GRI notes that providing comparative data allows both external and internal stakeholders to compare performance and assess any progress made in various areas and activities. In short, information comparability makes it possible, within a pre-defined report perimeter, to assess the evolution of data over time, or to evaluate them consistently and objectively with those of other companies.

2.2.3 Verifiability

Both the IASB and the FASB note that the quality of verifiability means that “different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement, that a particular depiction" faithfully represents the underlying phenomena it is attempting to capture (FASB, 2010, p. 20). In other words, verifiable information is data and/or claims that an independent agent could likely tie back to the underlying phenomena.

2.2.4 Clarity

The GRI notes that clarity, referred to in the financial reporting conceptual frameworks as understandability, is an information characteristic that allows various groups of users to properly understand and exploit such information, and ultimately utilize it for analysis or decision-making. And while the standardized nature of accounting information inherently confers a large degree of clarity, CSR-type information can be made more clear and intelligible to a wide group of users by providing a clear *definition* of presented data and indicators, as well as an *explanation* about the methods of elaboration, calculation and/or reporting mechanisms.

2.2.5 Neutrality

Our final qualitative aspect is neutrality. The FASB (1980, p. 41) states neutrality means that "the primary concern should be the relevance and reliability of the information" not the effect that it may have on a particular interest. The GRI refers to this concept as 'balance' and notes that both the positive and the negative aspects of organizations' activities should be reported to allow for a reasoned assessment of overall performance. However, as noted by Li, Richardson, and Thornton (1997) in discussing environmental liability information, firms are reluctant to disclose bad news owing to potentially increased proprietary costs. As such, Patten (2000) argues that when companies do disclose negative items of CSR data, they have an incentive to offset that disclosure via the provision of other more positive pieces of information.[7] Thus, to the extent that quality matters in providing an offsetting image, disclosure of negative CSR information might also be associated with higher overall quality in the reporting package. Given this potential impact on the reporting, and due to our empirical tests related to disclosure quality (discussed below), we treat neutrality as a separate component of CSR informational quality.

2.3 Breadth of CSR Disclosure

As stated above, almost all of the prior attempts to assign quality attributes to CSR disclosure have focused on only the environmental information being provided. But, as noted by the GRI, among others, measuring the impacts of business organizations requires taking into account dimensions of corporate social responsibility beyond just the environment. As such, we believe it is important to assess the informational quality attributes of disclosure across the CSR

[7] Patten (2000) documents that mandated increases in U.S. firm disclosure of hazardous waste remediation exposures were accompanied by significant increases in the voluntary disclosure of positive environmental information items.

domain. Based on prior research (e.g., Cormier and Magnan, 2003; Cormier, Magnan and van Velthoven, 2005; Ernst and Ernst, 1978; Gray et al., 1995b), we identified five categories of CSR disclosure for our analysis. These are (1) environment and energy,[8] (2) business practices, (3) human resources, (4) community, and (5) products. Figure 1 provides more detail on what aspects of disclosure each category represents.

---------- Figure 1 about here ----------

Based on this discussion of the qualitative aspects of CSR information disclosure, the first intent of our investigation is to identify the extent to which the CSR disclosures of our sample of French firms exhibit quality. We discuss our metric for capturing disclosure quality in Section 3 below.

2.4 Quality and Legitimacy

Regardless of whether prior studies used space-based or item-specific content measures, almost all were interested in using the metrics to examine what drives differences in the disclosure or whether those differences impacted users. As such, beyond just identifying the degree to which French corporate CSR reporting captures informational quality, we also attempt to explore whether differences in quality (1) are driven by concerns with corporate legitimacy, and (2) impact membership in social responsibility indices.

2.4.1 Legitimacy and CSR Disclosure

Gray, Owen, and Adams (1996, p. 45) note that legitimacy theory is a "systems-oriented" theory that underlies the explorations of "the role of information and disclosure in the

[8] Energy disclosures are sometimes listed as an area separate from environment (see, e.g., Ernst and Ernst, 1978). However, in our review we found the two categories difficult to distinguish and as such, merge them for our analysis.

relationship(s) between organizations, the State, individuals, and groups." Deegan (2002, p. 292) further states that systems-oriented theories recognize disclosure as an "important means by which management can influence external perceptions about their organization." Where firms face exposures to the social and political processes through which social legitimacy is monitored and bestowed (Patten, 1991; 1992), they have an incentive to use disclosure to enhance their legitimacy. As such, differences in social and political exposures are expected to be associated with differences in CSR disclosure. Deegan (2002, p. 297) notes that a large body of research studies provide evidence that "corporate social and environmental disclosure strategies have been linked to legitimizing intentions" (also see Deegan, 2007). More specifically, this prior body of work documents that differences in the extent of CSR disclosure (some studies use space-based measures while others rely on item-specific content schemes) tend to be associated with factors assumed to capture differences in exposures to social and political pressures. As we discuss in more detail below, these factors include firm size, industry membership, and media exposure.

Given the substantial body of evidence documenting the relation between social and political exposures and the extent of CSR disclosure, we attempt in our investigation to determine if differences in informational quality can also be explained as attempts at legitimization. We argue that if the assumed intent of CSR disclosure is indeed to enhance the social legitimacy of the organization, firms facing greater legitimacy threats (social and political pressures) have an incentive to provide more informational quality in their reporting package so as to improve the likelihood of being considered socially legitimate. We formally state this expectation as:

Hypothesis 1: Ceteris paribus, differences in CSR disclosure quality will be associated with differences in legitimacy concerns.

2.4.2 CSR Disclosure Quality and Index Membership

In addition to explaining what drives differences in the extent of CSR disclosure, a growing body of research has also explored whether these differences impact users of the information. For example, a number of studies (e.g., Blacconiere and Northcut, 1997; Blacconiere and Patten, 1994; Freedman and Patten, 2004; Patten and Nance, 1998) document that at times of events assumed to increase social and political exposures, firms with more extensive prior environmental disclosures experience less negative market price effects. More recently, both Toms (2002), focusing on a sample of U.K. firms and looking at only environmental information, and Brown, Guidry, and Patten (2010), using a broader social and environmental disclosure metric for a sample of U.S. companies, present evidence that more extensive disclosures are associated with more positive corporate reputations.

Similar to Toms (2002) and Brown et al. (2010), we also attempt in our investigation to determine whether differences in disclosure informational quality by our sample of French firms is associated with differences in perceived reputation. Following Robinson, Klefner, and Bertels (2008), we proxy for CSR reputation using membership in a CSR index. Fombrun (1996, p. 60) claims there is a whole "performance assessment and reputation-building industry" that "scrutinizes, evaluates, and champions companies" on their social, environmental, and economic performance. As such, membership in such indexes is interpreted as evidence of a higher perceived reputation.

Both Fombrun (1996) and Fowler and Hope (2007) note that ratings organizations rely, at least to some degree, on company provided disclosures, and because of this, we anticipate that the quality of the CSR reporting package will influence membership in a CSR index. In general, companies with higher quality disclosure would be expected to have a higher likelihood of being included in an index. However, to the extent that indexing organizations rely on firm disclosure for making their decisions on membership, companies providing negative performance information might also be penalized relative to inclusion on an index (the incurrence of proprietary costs). Given these possibilities, we state the following hypotheses with respect to index membership:

Hypothesis 2a: Ceteris paribus, membership in social responsibility indexes will be positively related to CSR disclosure quality.

Hypothesis 2b: Ceteris paribus, membership in social responsibility indexes will be negatively related to disclosure of negative social or environmental information.

3. RESEARCH METHODS AND ANALYSIS

In order to test our hypotheses we developed a measurement grid according to the CSR information quality characteristics discussed above and analyze the disclosure of companies listed on the French SBF 120 index.

3.1 Sample Selection

Article 16 of French NRE regulation #2001-420 proposed in May 2001 and passed into law in early 2002 requires all publicly listed French companies to disclose information and data on the environmental and social consequences of their activities, along with accounting and finance information, in their annual (management) reports effective January 1, 2002.[9] Hence, we focus on a sample period shortly subsequent to the effective year and as a result sample firms had to meet the following criteria:

1. They had to be listed on the French SBF 120 index for fiscal year 2004.
2. They had to have disclosed social and/or environmental information in either a stand-alone sustainability-type report or as part of their annual report in 2004.

Of the 120 SBF index companies in 2004, three did not publish their reports on their websites and did not respond positively to our request for these documents. Among the 117 companies for which reports were collected, 19 did not publish any social or environmental information in their reports. Therefore, our final sample consists of reports from 98 companies.

3.2 Disclosure Quality Data

We measure disclosure quality based on the characteristics discussed above. More specifically, we examined the sample company disclosures and awarded one point for each of the following attributes:

Relevance

- Identification of stakeholders and their needs.
- Dialog with stakeholders to define their needs.
- Analysis of risk factors specific to the company.

Comparability

- Temporal features and comparisons.

[9] The NRE regulation was founded on the basis of transparency and its broad objective was to reduce the negative effects of internal dysfunctional ties and globalization. However, some limitations of the regulation are: (1) absence of penalties/consequences, (2) lack of control mechanisms and (3) absence of the reporting scope (holding vs. group / international vs. national levels).

- Comparisons with other companies or to external norms.
- Clear definition of the report perimeter and boundaries.

Verifiability

- Verifiability of information presented.

Clarity

- Clear definition of presented data and indicators.
- Explanation about the methods of elaboration, calculation and/or reporting mechanisms.

Because we are trying to identify the disclosure quality for the entire CSR reporting package, we examined for the presence of each of the nine characteristics relative to each of the five areas of CSR disclosure included in our analysis. Thus, the maximum disclosure quality score is 45 points (nine attributes times five areas). Finally, we separately measured neutrality in the reporting by examining for the disclosure of negative performance information across each of the CSR areas. Due to the subjective nature of our analysis, each of the sample company reports was reviewed and scored independently by two members of the research team. All differences were discussed and reconciled.

Table 1 summarizes the attributes and areas of CSR disclosure quality for our sample firms. Individual cells identify the number of sample firms awarded points for each characteristic within each area of disclosure. The final column of the table indicates the sample's average score (out of a possible five points) for each of the quality characteristics while the final row shows the average quality score (out of a possible nine points) by area of disclosure. The bottom right cell of the table shows the mean overall CSR informational quality score.

Certainly, the most striking feature reflected in Table 1 is the extremely low quality of the disclosures. The mean quality score is only 6.66 (out of a possible 45), based on a range (not tabulated) from zero to 21. The informational quality item most reflected in the French disclosures is verifiability with a sample mean of 2.02 (out of a possible five). Only one other attribute, the disclosure of temporal comparisons, reflects an average score higher than one. With respect to the areas of CSR disclosure, environmental disclosures (with a mean score of 2.20 out of a possible nine) and human resource disclosures (an average score of 2.17) exhibited the highest quality. Business practices, community, and product disclosures all averaged a quality score of less than one.

---------- Table 1 about here ---------

Table 2 identifies the disclosure of negative CSR performance information by our sample of French companies. As noted in the table, 25 firms disclosed at least one piece of negative social or environmental performance data in their 2004 reports. The disclosure areas with the highest number of companies including negative performance information are environment (15 firms disclosing) and human resources (14 companies disclosing). Eleven of the sample companies disclosed negative performance data across two different CSR areas.

---------- Table 2 about here ---------

We present differences in disclosure quality and quantity (in pages of disclosure) across media of disclosure in Table 3. Seventy-one of the 98 sample firms did not issue a standalone sustainability-type report in 2004 and their average pages of disclosure of CSR information was 10.74. In contrast, the 27 companies with a standalone report averaged almost 33 pages of disclosure. This difference is statistically significant at $p < .001$, two-tailed. Disclosure quality scores are also statistically higher (at $p < .001$, two-tailed) for those firms with a standalone report versus sample companies including information in only their financial reports. The mean quality score for the companies with standalone reports is 11.37 in comparison to an average of only 4.87 for the financial report sub-sample. These data indicate that companies choosing to issue a standalone sustainability-type report not only dedicate more space to disclosure, but also incorporate better informational quality into the reporting. Finally, the Pearson product-moment correlation between pages of disclosure and quality scores (for the overall sample) is positive and highly significant.

---------- Table 3 about here ---------

In summary, in spite of regulatory requirements for CSR disclosure, the informational quality of the CSR reporting package for our sample of French companies is extremely low. However, the quality is higher for those firms choosing to issue a standalone report. We turn now to our analysis of differences in informational quality.

3.3 Legitimacy Tests

We attempt to identify if CSR disclosure quality is influenced by legitimacy concerns by testing for associations between the disclosure quality scores (DiscQual) and several factors used in prior research as legitimacy measures. The specific legitimacy variables included are firm size, membership in an environmentally sensitive industry, media exposure, and the disclosure of negative performance information. A number of prior studies (e.g., Cowen, Ferreri, and Parker, 1987; Hackston and Milne, 1996; Patten, 1991; 2002b) document that the extent of social and/or environmental disclosure is positively associated with firm size and membership in industries whose activities have greater ecological impacts. Larger firms, presumably due to greater visibility are assumed to face greater social and political pressures, and as such, may use disclosure as a tool to reduce those exposures (Patten, 1991; 2002b). We measure firm size as the log-transformed amount of total assets for each of our sample companies as of the end of 2004. Firms from environmentally sensitive industries are also assumed to face greater social and political pressures (Hackston and Milne, 1996; Patten, 1991) and thus also have an incentive to use disclosure to reduce these exposures. For our analysis, companies from the heavy manufacturing and energy sectors are classified as being environmentally sensitive.

Brown and Deegan (1998) note that media coverage can also lead to increased social pressures for corporations and several recent studies (Aerts and Cormier, 2009; Aerts, Cormier, and Magnan, 2008; Brown and Deegan, 1998; Deegan, Rankin, and Voght, 2000; Patten, 2002a) document a positive association between media exposure and the extent of social and/or environmental disclosure. We measure media exposure for each sample firm as the number of articles identified in the Europresse database for that company in 2004. To control for heteroskedasticity in the distribution we divide the number of articles by each company's total assets (in €1,000) as of the end of 2004.

Our final legitimacy variable centers of the concurrent disclosure of negative social or environmental information. Patten (2000) documents that mandatory increases in the disclosure of hazardous waste related disclosures (negative information) by U.S. companies in the early 1990s were accompanied by associated increases in the provision of other, more positive, environmental information. Given the reluctance of firms to disclose negative information (Li et al., 1997), we anticipate that companies choosing to do so have an incentive to offset that negative information with a higher quality disclosure package. Sample firms disclosing any piece of negative social or environmental performance information are coded one, while the NegDisc variable for non-disclosing companies is coded zero.

In addition to the four legitimacy variables identified above, we also control for firm issuance of a standalone sustainability report. As noted above, disclosure quality is higher for firms issuing the reports and failure to control for this factor could lead to false inferences on the legitimacy variables. We use a one/zero indicator variable (SusRpt) to identify those sample firms having issued a standalone report. Overall, we estimate the following multiple regression model (with the expected direction of association noted in parentheses below each variable):

$$\underset{}{\text{DiscQual}_i} = a_1 + \underset{(+)}{B_1\text{Size}_i} + \underset{(+)}{B_2\text{ESI}_i} + \underset{(+)}{B_3\text{MedExpos}_i} + \underset{(+)}{B_4\text{NegDisc}_i} + \underset{(+)}{B_5\text{SusRpt}_i}$$

Table 4 presents the results of the primary legitimacy test. The overall model is highly significant (based on model *F-statistic*), and the adjusted R-square is 0.375. As shown in the table, three of the four legitimacy variables, firm size (at p = .001), media exposure (at p = .066), and negative disclosure (at p = .002) are positively and significantly associated with firm disclosure quality scores (all significance levels are one-tailed). ESI, while positively signed, is not significant at conventional levels (p = .120, one-tailed). This lack of significance may be due to our focus on the total CSR reporting package rather than just environmental disclosures.[10] Finally, we note that the SusRpt control variable is positively and significantly (at p = .006, one-tailed) associated with differences in disclosure quality scores. In general, our regression analysis supports the claim that, consistent with findings on the extensiveness of disclosure, our sample of French firms appears to use CSR disclosure quality as a tool for increasing legitimacy.

[10] In support of this argument, in sensitivity tests using only environmental disclosure data the ESI variable is statistically significant. Interestingly, in this additional analysis media exposure is no longer statistically significant.

---------- Table 4 about here ----------

In order to assure that the results presented above are not due to potential omitted variables, we conduct several sensitivity tests including additional variables. Several recent studies (e.g., Aerts and Cormier, 2009; Al-Tuwaijri et al., 2006; Clarkson et al., 2008) argue that environmental disclosure may be related to financial performance and accordingly we include firm profitability (measured as 2004 return on assets) and risk (beta) as additional control variables. We also estimate models allowing for industry fixed effects (based on FSE industry classifications). In no cases were any of the additional variables statistically significant and in all additional models the results on the legitimacy variables remained qualitatively unchanged. Thus the results appear to be robust to these alternative controls.

3.4 Index Membership Tests

We use binary logistic regression to test for the significance of disclosure quality on membership in Vigeo's ASPI Eurozone Index (ASPI). Vigeo evaluates companies in the Eurozone on six domains – environment, human rights, human resources, community involvement, business behavior, and corporate governance – and selects the top 120 rated firms for inclusion in the ASPI.[11] Of the 98 sample firms, 48 were included in the Index for 2004 and these firms were coded one, with non-members coded zero. In order to identify whether corporate disclosure influences Index membership, we initially include as explanatory variables only the negative disclosure indicator (coded one if the company disclosed any piece of social or environmental information depicting negative performance and zero otherwise) and the total

[11] See www.vigeo.com/csr-rating-agency/en/3-1-investisseurs-et-gestionnaires-d-actifs for more information on the ASPI.

disclosure quality score. The model, with expected relations noted in parentheses below each of the independent variables, is stated as:

$$ASPI_i = \alpha_1 + B_1NegDisc_i + B_2DiscQual_i$$

$$\qquad\qquad (-) \qquad\qquad (+)$$

In subsequent tests, we also control for three factors assumed to lead to a higher likelihood of being included in the ASPI. These are firm size (log of total assets), profitability, measured as return on assets (ROA), and media exposure as defined in the legitimacy tests identified above. Our expanded logistic regression equation (with expected direction of association indicated in parentheses below each variable) is thus stated as:

$$ASPI_i = \alpha_1 + B_1Size_i + B_2ROA_i + B_3MedExpos_i + B_4NegDisc_i + B_5DiscQual_i$$

$$\qquad (+) \qquad (+) \qquad (+) \qquad (-) \qquad (+)$$

Because the disclosure quality variable was found to be significantly associated with firm size, media exposure, and negative disclosure, the results of the expanded model should be interpreted with caution.[12]

Table 5 presents the results of the logistic regression analysis. Panel A provides the results of the original model while the results of the expanded model are presented in Panel B. As noted in Panel A, the Cox & Snell R Square is 0.164 and 67.3 percent of the cases were correctly classified. As predicted, NegDisc is negatively related to membership in the ASPI while

[12] The concern with the inclusion of the correlated variables on the right hand side of the equation is that the associations may lead to multicollinearity in the model. Although collinearity statistics (variance inflation factor scores) revealed no significant concerns we re-estimated the expanded model using the residuals from the legitimacy model as the measure of disclosure quality (these were not significantly correlated with any of the additional explanatory variables. With the exception that the negative disclosure variable was significant at only the p = .10 level, one-tailed, the results of this additional analysis were similar to those reported below.

DiscQual is positively associated with membership in the Index. Both variables are statistically significant (at $p < .01$, one-tailed). These results indicate, first, that companies including negative social or environmental performance information are less likely to be included in the ASPI than firms with no negative disclosure. As such, the finding leads credence to managerial concerns that disclosure of negative information may lead to proprietary costs being imposed on the company. However, the results also suggest that firms with higher quality CSR disclosures are more likely to be included in the Index. Thus, enhancing the quality of CSR disclosures appears to lead to positive benefits. Inclusion of the control variables, as summarized in Panel B, improves the explanatory power of the model. The Cox & Snell R Square rises to 0.272 and 73.5 percent of the cases were correctly predicted by the model. Two of the control variables, Size (at $p = .002$, one-tailed) and MedExpos (at $p = .045$, one-tailed) are statistically significant in the predicted direction. Firm profitability (ROA) is negatively signed and is not statistically significant. Importantly, each of the disclosure variables remains significantly associated with membership in the Index. The NegDisc measure is negatively related to membership and is statistically significant at $p = .014$, one-tailed while disclosure quality (DiscQual) is positively related to membership in the Index and is statistically significant at the $p = .010$ level, one-tailed. Overall, our results suggest that corporate CSR reporting appears to influence membership selection into the APSI.

---------- Table 5 about here ----------

4. CONCLUSION

In this exploratory analysis, we extend prior CSR disclosure research by assessing the informational quality of corporate CSR reporting based on attributes derived from recommendations of the IASB, the FASB, and the GRI. We find that the 2004 disclosures for our sample of 98 French firms exhibit very low informational quality with a mean disclosure quality score of only 6.66 out of a possible 45 points. We also show that, consistent with prior studies focusing on the extensiveness of social and/or environmental disclosure, companies appear to use CSR disclosure as a legitimizing tool. Firms facing greater legitimacy exposures exhibit higher informational quality disclosure scores. Finally, we document that disclosure quality appears to be associated with membership in a social responsibility index, the ASPI. Disclosure of negative performance information was negatively associated and informational quality was positively associated with membership in the Index.

Overall, our results suggest that France's regulatory reporting requirements did not lead to the issuance of high quality CSR reporting packages by French corporations (see footnote 9 above). Of course, given its exploratory nature, the study has several limitations that must be noted. We examine only one year's disclosure, and as such, we cannot address whether informational quality in the CSR disclosures is changing. We also focus on only French firms. Corporations in other countries may do a better job of incorporating quality into their CSR reporting. Finally, we acknowledge that our disclosure metric is based on a subjective evaluation of how the informational quality attributes discussed by the IASB, the FASB, and the GRI can be captured and measured. Refinements and extensions of the metric could yield more insight into the strengths and weaknesses of corporate CSR disclosure. We would encourage extensions of our work along each of these limiting dimensions.

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Figure 1 – Categories of CSR information.

Categories*	**Specific examples within each category**
Environment and Energy	Pollution, prevention of environmental risks, safety, conservation of natural resources, consumption of energy resources, other
Businesses practices	Employment of minorities and disabled people, gender equity, responsible practices abroad, relations with business partners, other.
Human resources	Hygiene and safety, manpower, competence, compensation, other.
Community	Volunteer help, arts, associations, education, other
Products	Presentation of products, product safety, pollution related to use of the products, social benefits related to the development of the products, performance of the company related to the development of the products, other

* Based on Cormier and Magnan, 2003; Cormier et al. (2005); Ernst and Ernst, 1978, and Gray et al., 1995b.

	Environment	Business Practices	Human Resources	Community	Product	Average Score (Max = 5)
Relevance - Identification	4	18	23	10	12	0.68
Relevance - Dialogue	5	6	6	4	4	0.26
Relevance - Analysis	39	5	7	4	17	0.74
Comparability - Temporal	40	8	43	4	8	1.05
Comparability - Others	3	2	4	0	1	0.10
Comparability – Perimeters	26	7	24	4	8	0.70

Verifiability	54	26	62	34	22	2.02
Clarity - Definitions	32	8	33	6	5	0.86
Clarity - Methods	13	0	11	0	0	0.25
Average Score (Max = 9)	2.20	0.82	2.17	0.67	0.79	6.66 (max = 45)

Table 1 – Quality of disclosure by attribute and area. Cell amounts represent number of sample firms with quality attribute for the given disclosure area. Total number of sample firms is 98.

Table 2 – Companies disclosing negative performance information. Total number of companies is 98.

	Environmental	Business Practices	Human Resources	Community	Products	Any Negative Disclosure
Firms with Disclosure	15	4	14	1	1	25

Table 3 – Disclosure quality by reporting medium.

Disclosure Medium	n	Mean Pages of Disclosure	Mean Disclosure Quality Score
Financial Report Only	71	10.74	4.87

Financial and Standalone Report	27	32.96[a]	11.37[a]
Total Sample	98	16.86	6.66[b]

[a] Difference in mean scores is significant at $p < .001$, two-tailed.

[b] Pearson product-moment correlation between pages of disclosure and disclosure quality scores is 0.588 and is significant at $p < .001$, two-tailed.

Table 4 – Regression results for tests of the relation between disclosure quality scores and legitimacy variables.

The regression model is stated as: $DiscQual_i = a_1 + B_1Size_i + B_2ESI_i + B_3MedExpos_i + B_4NegDisc_i + B_5SusRpt$ where $DiscQual_i$ is the social and environmental disclosure quality score for firm i, $Size_i$ is the natural log of 2004 total assets for firm i, ESI_i is a one/zero classification variable where 1 indicates firms from environmentally sensitive industries,[a] $NegDisc_i$ is a one/zero classification variable where 1 indicates the firm included disclosure of at least one negative social or environmental performance item, and $SusRpt_i$ is a one/zero classification variable where 1 designates firms with a standalone sustainability-type report. The sample size is 98.

Adj. $R^2 = 0.375$ F-statistic = 12.819 Significance of F-stat = .001

Variable	Parameter Estimate	*t-statistic*	Significance of *t-statistic*[b]
Constant	-10.618	-2.766	.007
Size	2.267	3.950	.001
ESI	2.090	1.185	.120
MedExpos	0.103	1.518	.066
NegDisc	3.818	2.955	.002
SusRpt	3.336	2.571	.006

[a] The heavy manufacturing and energy industries were classified as being environmentally sensitive.

[b] Significance levels are one-tailed for all independent variables.

Table 5 – Binary logistic regression results for tests of the relation between membership in the ASPI disclosure variables.

Panel A – Disclosure variables only

-2 Log Likelihood = 116.300

Cox & Snell R^2 = 0.164

Percentage of Cases Correctly Predicted = 67.3

Variable	Parameter Estimate	Significance[a]
Constant	-0.810	.018
NegDisc	-1.634	.005
DiscQual	0.182	.000

Panel B – Disclosure and control variables

-2 Log Likelihood = 104.666

Cox & Snell R^2 = 0.272

Percentage of Cases Correctly Predicted = 73.5

Variable	Parameter Estimate	Significance[a]
Constant	-8.475	.002

Size	1.151	.002
ROA	-0.455	.637
MedExpos	5.426	.045
NegDisc	-1.483	.014
DiscQual	0.130	.010

[a] Significance levels are one-tailed for NegDisc, DiscQual, and Size.