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ANALYSIS

Corporate environmental disclosure, financial markets and the media: An international perspective

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ABSTRACT

In this study, we analyze the information dynamics between corporate environmental disclosure, financial markets (as proxied by financial analysts' earnings forecasts) and public pressures (as proxied by a firm's media exposure). We adopt a comprehensive view of disclosure that encompasses environmental information that is both print-based as well as web-based. The sample comprises firms from both continental Europe (Belgium, France, Germany, and Netherlands) as well as North America (Canada and the United States). Relying on a system of equations that controls for endogeneity between environmental disclosure determination and financial analysts' work, we show that enhanced environmental disclosure translates into more precise earnings forecasts by analysts. Such effect is reduced for firms with extensive analyst following and in environmentally sensitive industries. However, these relationships are shown to be starker in Europe than in North America, i.e., environmental disclosure has a greater impact on analysts' forecasts but is also more greatly attenuated by analyst following and membership in an environmentally sensitive industry. Most observed relationships hold for either print- or web-based disclosure, except for North America in which web-based disclosure seems to have no impact on analysts' forecasting work.

1. Introduction

While there is extensive research on the determinants of corporate environmental disclosure from either North American (e.g., Cormier and Magnan, 1999) or European perspectives (e.g., Cormier et al., 2005), its financial and social implications have received scant attention. Furthermore, most studies on the financial impact of environmental disclosure focus on specific disclosure items or events that may or may not be a reflection of a firm's overall environmental disclosure strategy. For instance, Blacconiere and Northcut (1997) and Blacconiere and Patten (1994) analyse how unique regulatory or ecological events affect a firm's stock market performance. Their findings are consistent with the view that environmental disclosure is highly desirable (Epstein and Freedman, 1994). In contrast, using a more comprehensive measure, Richardson and Welker (2001) show that environmental disclosure may actually be detrimental to a firm's cost of capital. These conflicting findings do present a puzzle to managers, market participants, regulators and other stakeholders, as they do not provide clear guidance as to the best course of action.

In this study, we put forward the view that information dynamics underlying corporate environmental disclosure are endogenously driven by both financial markets' and public interest considerations (Roe, 2003). More specifically, we assert, and empirically test, that a firm's environmental disclosure, financial markets (as proxied by financial analysts'

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earnings forecasting work) as well as public pressures upon a firm (as proxied by environmental media exposure or coverage) are closely intertwined. Our analyses rely on a comprehensive measure of environmental disclosure that encompasses both print- and web-based information released by firms. We also focus on two distinct institutional contexts, i.e., continental Europe (civil law) and North America (common law). These two legal regimes are expected to induce different information dynamics between managers, investors and analysts. Our empirical approach involves the investigation of the following four issues. First, consistent with prior research, we assess the determination of environmental disclosure; especially the role played by product market, social and stock market concerns. Second, we assess the implication of environmental disclosure on financial markets, as proxied by analysts' earnings forecasts divergences. Third, we attempt to understand the interface between the public's apprehension of a firm's environmental activities, as proxied by media exposure (i.e., news stories), and a firm's environmental disclosure. Finally, we compare environmental disclosure patterns with respect to determination and implications between firms from each continent. We now elaborate further on our approach.

Information dynamics underlying environmental disclosure involve many parties. For instance, in determining their firm's environmental disclosure strategy, managers cannot be oblivious to the stock markets, product markets (customers and suppliers) as well as to pressures from the media (e.g., Neu et al., 1998). In addition, stock markets and the media exert significant control over a firm's future survival, either by controlling its access to capital or its reputation and standing within the community. Hence, it is likely that stock markets and the media will induce firms to provide them with reliable and/or relevant environmental information that they will likely use. Such use may be through the estimation of earnings forecasts or the writing of topical news stories. For instance, information about environmental activities or events that have long-term consequences (e.g., ecological accident, Superfund sites, etc.) does allow analysts to better map a firm's future earnings. However, these reactions by analysts and the media will be observed by managers, who are then likely to adjust their own disclosure. Hence, there is a three-way flow of information between the firm's managers, financial analysts and media players, with each party taking advantage of available information before taking action. Accordingly, our research design takes into account the simultaneous effects of three dimensions of a firm's environmental communication environment: 1) the determination of its level of environmental disclosure, 2) analysts' divergence in their earnings forecasts and, 3) the extent of firm-specific environmental news exposure.

We analyse and compare the dynamics of corporate environmental disclosure in two different institutional contexts: North America (Canada and the United States) and Continental Europe (France, Germany, Belgium, Netherlands). While there have been numerous expositions of institutional differences between these two continents in financial disclosure matters (e.g., Hope, 2003), to the best of our knowledge, there is limited evidence with respect to environmental disclosure. Most environmental disclosure international comparisons are typically of survey form (e.g., KPMG, 2002) and do not provide an integrated view of the information dynamics prevailing within each institutional setting.

For the purpose of the study, environmental disclosure implies both print- and web-based information. Until a few years ago, most information, environmental or otherwise, was being disclosed through traditional print outlets (e.g. annual report print copy) or through intermediaries (e.g., press releases that may be picked up by some media outlets). However, the advent of the World Wide Web (Web) has led firms to reconsider their reporting strategies as the Web offers much more flexibility than traditional means for both the presentation and content of reporting. Moreover, the Web allows a firm to disclose far more information than is possible through traditional methods. Accordingly, our measure of environmental disclosure comprises two facets that are likely to reach different audiences: 1) disclosure that replicates print-based reports or documents, i.e., annual or environmental reports in PDF (otherwise called print-based disclosure) and, 2) disclosure that is unique to the web such as video about a firm's environmental management or HTML-based information (otherwise called web-based disclosure). In our view, disclosure that is unique to the web is more likely to be of a voluntary nature. Hence, all our analyses are performed separately for each facet of environmental disclosure, web- and print-based.

Overall, descriptive statistics suggest that North American firms exhibit more environmental disclosure related to expenditures and risk, and remediation than continental European firms. However, the opposite is observed for information concerning sustainable development and environmental management. Through distinct determinant regressions using simultaneous equations, we find that there is a relationship between product market concerns (customer relationships and industry concentration) and environmental disclosure among North American firms. In contrast, product market concerns do not appear to affect environmental disclosure among continental European firms. Media exposure, a potential reflection of public pressures, is found to be a significant determinant of environmental disclosure in both continents. Moreover, stock market concerns are weakly relevant as a determinant of print-based environmental disclosure. With respect to the determination of analyst forecasts, results suggest that environmental disclosure is associated with a decrease in analysts' forecast dispersion both in continental Europe and in North America. Furthermore, as expected, environmental disclosure is less important a factor in explaining forecast dispersion for those firms that are followed by many analysts. However, in North America, it appears that the financial implication of a firm's environmental disclosure differs depending on the disclosure platform being used. It appears that web-based disclosure is less relevant for financial analysts in setting earnings forecasts. Moreover, in continental Europe, environmental disclosure increases dispersion of analysts' forecasts for firms operating in more environmentally sensitive industries. Findings suggest that for assessing information usefulness for analysts and investors, it is important to control for the endogenous effect of a firm's decision to disclose information as well as its exposition to news media.