Voluntary environmental disclosure quality and firm value: Further evidence
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Abstract
This study reexamines the relationship between the quality of a firm’s voluntary environmental disclosures and firm value by exploring the relationship between the components of firm value (expected future cash flows and cost of equity) and voluntary environmental disclosure quality. We measure voluntary environmental disclosure quality using a disclosure index consistent with the Global Reporting Initiative (GRI, 2006) disclosure framework for a sample of US firms across five industries. In addition to overall disclosure quality, we consider the type (i.e., hard/soft) and the nature (i.e., positive/neutral/negative) of the disclosure in our analysis. Our analyses provide evidence that voluntary environmental quality is associated with firm value through both the cash flow and the cost of equity components, consistent with our expectations. More importantly, however, we demonstrate that both the type and nature of the environmental disclosures is informative in establishing the predicted relations. Thus, in addition to providing evidence on the association between voluntary disclosure quality and firm value, our results highlight the benefit of parsing broader measures (e.g. voluntary environmental disclosure quality) when examining complex relationships.

1. Introduction

In this study we reexamine the relation between voluntary environmental disclosure quality (VEDQ) and firm value by exploring the association between the disclosure quality and the two components of firm value – expected future cash flow and cost of equity capital (COEC). Our study builds
on prior and concurrent research that presents inconsistent results surrounding the relation between corporate social responsibility (CSR) and/or environmental disclosure and the COEC. For example, Richardson and Welker (2001) document a significant positive association between CSR and the COEC for a sample of Canadian firms during the early 1990s, inconsistent with theory. In contrast, Dhaliwal et al. (2011) find that firms with CSR performance superior to that of their industry peers enjoy a reduction in the COEC upon the initiation of standalone CSR reports, while Clarkson et al. (2013) fail to document a significant relation between VEDQ and COEC but find that firms with higher VEDQ report higher future return on assets. In light of these diverse results, we reexamine the relation between VEDQ and firm value by examining the association between VEDQ and both the numerator (expected future cash flows) and denominator (COEC) of firm value.

Our primary contributions to the literature lie in refining the measures employed in the analyses, in terms of both the independent measures (i.e., VEDQ) and the dependent measures. Most of the prior studies in this area use relatively crude measures of VEDQ. For example, Dhaliwal et al. (2011) use the initiation of CSR reports, an indicator variable, in their analysis. Clarkson et al. (2013) rely on a single value obtained from summing across a completed environmental disclosure index in their primary regression, which implicitly presumes that each disclosed item measured has the same impact as all other items.1 If this presumption is not descriptive, then the summed measure may not capture the relevant cross-sectional variation. We consider this in our analysis by parsing the data from our disclosure index (which is similar to the Clarkson et al., 2013 index) in the following manner. First, consistent with Clarkson et al. (2013), we classify the items in the voluntary environmental disclosure index into those that are related to hard/objective and soft/subjective disclosures.2 We also consider the “nature” (positive, negative, or neutral3) of the items in the environmental disclosure index, similar to Hutton et al. (2003), who document systematic differences in managers’ voluntary disclosures around good and bad news earnings. We contend that decomposing total VEDQ into these more precise measures allows us to capture variation in aspects of the disclosures expected to differentially affect firm value.

In addition to providing finer measures of VEDQ, our analyses employ measures of environmental performance that consider both positive (e.g., recycling) and negative (e.g., pollution) environmental performance, rather than relying on a single negative aspect of environmental performance as in some studies (e.g. Al-Tuwaijri et al., 2004; Clarkson et al., 2013).4 We provide analyses based on both a “net” measure of environmental performance (that captures positive and negative environmental performance in a single proxy) and positive and negative environmental performance as two independent variables. Doing so allows us to consider and control for a broader range of environmental performance.

We also decompose firm value into its COEC and cash flow components. We use two implied COEC proxies that rely on stock price and expectations of future cash flows, consistent with a broad stream of research that examines disclosure related issues using implied COEC (e.g. Clarkson et al., 2013; Dhaliwal et al., 2011). Botosan et al. (2011) examine the construct validity of the various implied COEC proxies available and provide strong support for the target price and PEG methods, with particular support for the target price method. Thus, we use the COEC based on the target price method for our primary analysis. We also include the PEG method COEC in order to provide a comparison to concurrent studies that employ this measure (e.g. Clarkson et al., 2013). Finally, we explicitly include the cash flow effects of disclosure in our analysis, which is generally not considered in prior research. We estimate the expected cash flow component of firm value, again relying on analysts’ forecasts of future expected cash flows and firm-specific COEC.

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1 In supplementary analyses, the authors disaggregate their VEDQ measure, although doing so does not change the tenor of their results.

2 An example of a hard/objective item would be item 1A in the index (Appendix A), which would have a “1” if a firm provides a current period absolute amount of materials input into the production process and “0” otherwise. A soft/subjective item would be item 36A, which would have a “1” if a firm indicates that Life Cycle Analysis (LCA) was identified as a corporate tool and “0” otherwise.

3 Examples of positive/negative/neutral items would include: positive = item 2A (materials input into the production process from internally or externally supplied recycled materials); negative = item 10A (emission of green house gases); and neutral = item 1A (current period absolute amount of materials input into the production process).

4 We provide additional details about these data in the paper.