ARTICLE IN PRESS

Advances in Accounting xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Advances in Accounting

journal homepage: www.elsevier.com/locate/adiac

Voluntary disclosure of non-financial information and its association with sustainability performance

Zabihollah Rezaee[a,*], Ling Tuo[b]

[a] School of Accountancy, Fogelman College of Business and Economics, The University of Memphis, Memphis, TN 38158, United States
[b] Lawrence Technological University, Detroit, MI, United States

ARTICLE INFO

Keywords:
Information asymmetry
Non-financial disclosures
Sustainability performance
Earnings quality

JEL classification:
M41
G14
G30

ABSTRACT

This paper investigates management incentives for disclosing voluntary non-financial information and whether such disclosure is associated with firms' environmental, social, and governance (ESG) sustainability performance. We hand-collect 580 sample firms' voluntary non-financial disclosure on product, competition, industry, customers, trends, and technology data from their annual reports in 2010. We find that information contents and managerial motivations play an important role in assessing the antecedents and consequences of non-financial disclosure. Specifically, we find that earnings quality is a more pronounced factor in influencing forward-looking non-financial disclosures whereas proprietary cost is a more pronounced factor in influencing historical non-financial disclosures. Using the ratings from the KLD database to construct ESG sustainability performance, we find a two-directional association between non-financial disclosures and sustainability performance. Specifically, forward-looking non-financial disclosures are associated with a one year lead in sustainability performance, whereas current year sustainability performance is linked to more disclosures of historical non-financial information in the year-end annual filings.

1. Introduction

Voluntary disclosure is considered as any financial and non-financial information disclosed by management beyond mandatory financial reports (Dhaliwal, Li, Tsang, & Yang, 2011; Financial Accounting Standards Board, FASB, 2014). Voluntary disclosures can consist of strategic information (product, competition, customers), financial information (management earnings forecast, stock price) and non-financial information (environmental, social and governance sustainability performance) (Li & Yang, 2016; Meek, Roberts, & Gray, 1995; Rezaee, 2016). Prior research shows that voluntary disclosure can improve stock liquidity, reduce the cost of capital, increase information intermediation, and improve earnings quality (e.g., Botosan, 1997; Botosan & Plumlee, 2002; Francis, Nanda, & Olsson, 2008; Healy, Hutton, & Palepu, 1999; Yang, 2012). The extent and type of voluntary disclosures depend on disclosure-related costs (Zhang, 2001), corporate governance (Ho & Wong, 2001), executives' personal backgrounds (Bamber, Jiang, & Wang, 2010), and sustainability performance (Khan, Serafeim, & Yoon, 2016; Ng & Rezaee, 2015). We extend this literature by addressing the antecedents and consequences of non-financial disclosures pertaining to managerial strategic, product, competition, customers, trends, and technology decisions as listed in Appendix A. Specifically, we examine management incentives for the voluntary disclosure of non-financial information and whether such disclosure is linked to firms' environmental, social, and governance (ESG) sustainability performance information.[1]

Motivated by prior research, we construct a model, which simultaneously examine s the link between the voluntary disclosure of non-financial information, earnings quality, and disclosure-related costs. We proceed with our research in two stages and begin by investigating the antecedents of voluntary non-financial disclosure. Consistent with Botosan (1997) and Francis et al. (2008), we hand-collect data on non-financial historical and forward-looking disclosures for 580 firms in 2010. We find that earnings quality is more important than proprietary cost in affecting the firms' strategies toward forward-looking non-financial disclosures. Proprietary cost, on the other hand, is more important than earnings quality in affecting the firms' strategies toward historical non-financial disclosure.

In the second stage, we investigate whether different antecedents of forward-looking and historical non-financial disclosures lead to different consequences that are linked to ESG sustainability performance. We construct the ESG sustainability performance measure from the

* Corresponding author.
E-mail addresses: zrezaee@memphis.edu (Z. Rezaee), ltuo@ltu.edu (L. Tuo).

[1] Voluntary sustainability disclosure of ESG sustainability performance is currently promoted by the Global Reporting Initiative (GRI, 2014, 2013) and addressed in recent research (e.g., Jain et al., 2016; Ng & Rezaee, 2015).

http://dx.doi.org/10.1016/j.adiac.2017.08.001
Received 19 May 2016; Received in revised form 1 August 2017; Accepted 1 August 2017
0882-6110/ Published by Elsevier Ltd.

Kinder, Lydenberg, and Domini (KLD) database. Adams and Simnett (2011) argue that integrated reporting reflecting ESG sustainability information presents a more comprehensive picture of a firm's performance, and Cohen, Holder-Webb, Nath, and Wood (2011) find that ESG sustainability information is valuable to investors. We find that compared to historical non-financial disclosure, forward-looking non-financial disclosure is more likely associated with a one-year lead in ESG sustainability performance. These findings provide further support for the results in the first stage that different information contents and different managerial incentives are associated with forward-looking and historical non-financial disclosures.

This paper is related to, but differs from Hummel and Schlick (2016) in several ways. First, our paper provides a more comprehensive examination of the antecedents and consequences of voluntary non-financial disclosures. Second, we take an alternative approach in testing the association between voluntary disclosures of non-financial information and ESG sustainability performance as discussed in Section 4. Third, unlike Hummel and Schlick (2016) that use a dummy variable, we use continuous scores to measure firms' non-financial disclosure. This method can better describe the diversity or trend in voluntary disclosures.[2] Finally, also different from the Hummel and Schlick (2016) study that examines 195 European companies' standalone sustainability reports, we investigate the non-financial information disclosed in 10-K reports of US public companies and increase the size of the hand-collected sample to 580 firms.

Our results contribute to the voluntary disclosure and sustainability literature in several ways. First, our study simultaneously examines the relationship between earnings quality and proprietary cost relevant to voluntary non-financial disclosures. Second, we examine the link between voluntary non-financial disclosures and ESG sustainability performance, and thus complement recent research on business sustainability (Jain, Jain, & Rezaee, 2016, Khan et al., 2016, Ng & Rezaee, 2015). Third, our findings are relevant to the emerging debate in the disclosure regime (SEC, 2013, 2016) in making financial and non-financial disclosures more meaningful and relevant to all stakeholders. Finally, our results underscore the importance and relevance of ESG sustainability performance disclosures as a growing number of global companies (> 14,000) now provide voluntary disclosures on various ESG dimensions of sustainability performance (Rezaee, 2016).

The remainder of the paper is organized as follows: we review the literature related to voluntary disclosure and its link to sustainability performance in Section 2, and develop our two theory-driven hypotheses in Section 3. We discuss the sample selection and descriptive statistics in Section 4. The detailed research design, including measurements and models, is described in Section 4. We present the empirical results and robustness tests in Section 5, and the conclusion in Section 6.

2. Literature review

2.1. Voluntary non-financial disclosure

The interaction between voluntary and mandatory disclosures has been examined in prior research (Einhorn, 2005), suggesting that voluntary financial disclosure can provide additional information to investors (Cohen et al., 2011). Ball and Shivakumar (2008) argue that mandatory financial reports are not the primary source of timely new information, and Beyer, Cohen, Lys, and Walther (2010) find that mandatory earnings reports and SEC filings account for < 12% of total stock price movement. Anecdotal evidence suggests that investors value meaningful voluntary disclosures and utilize mandatory disclosures to verify the voluntary disclosures (EY, 2014). Scholarly research also supports the importance of the relation between mandatory and voluntary disclosures (Bertomeu & Magee, 2015). On one hand, voluntary disclosures may provide private information for existing competitors and potential entrants, as well as reduce the firm's competitiveness and profitability, described by Verrecchia (1983 and 2001) as proprietary cost. On the other hand, voluntary disclosures can provide benefits for both investors and management by reducing information asymmetry (e.g., Diamond & Verrecchia, 1991; Francis, Khurana, & Pereira, 2005; Lang & Lundholm, 2000; Sengupta, 1998).

The accounting and finance literature, in addressing managerial incentives for voluntary disclosures, focuses on financial voluntary disclosures of management earnings forecasts (MEF) and non-financial voluntary environmental, social and governance (ESG) sustainability (Rezaee, 2016). Healy and Palepu (2001, p. 425) argue that "The extent to which voluntary disclosure mitigates resource misallocation in the capital market depends on the degree of credibility of information." Unlike financial voluntary MEF disclosures, that could be subsequently substantiated by auditors and is often viewed as complements to mandatory financial disclosures (Ball et al., 2012), non-financial voluntary disclosures, including sustainability information, are often not verified by auditors. Thus, management has more latitude to choose the type, content, and timing of such disclosures without bearing high disclosure risk if they prove to be incredible ex post (Choi, Myers, Zang, & Ziebart, 2010).

Li and Yang (2016: 935) state that "A firm's voluntary disclosure decision is an equilibrium outcome of its underlying incentives and disincentives for disclosure." Firms' incentives and policies of voluntary disclosure have been extensively and inconclusively debated in the literature. One stream of research consists of several studies that examine the management incentives of providing voluntary disclosures, including lowering the cost of capital (Botosan, 1997), minimizing agency costs and information asymmetries (Leftwich, 1981), and releasing proprietary information (Healy & Palepu, 2001). Another stream consists of papers regarding the link between voluntary disclosures and earnings quality (e.g., Dichev, Graham, Harvey, & Rajgopal, 2013; Dye, 1985; Francis et al., 2008; Jung & Kwon, 1988; Milgrom, 1981; Penno, 1997; Sengupta, 1998; Tasker, 1998; Verrecchia, 1983, 1990). These studies show that voluntary disclosure is a substitute for earnings quality, and suggest that firms with lower earnings quality tend to disclose more information. Other studies (e.g., Dye, 1985; Francis et al., 2008; Jung & Kwon, 1988; Penno, 1997; Verrecchia, 1990) suggest that firms with higher earnings quality tend to disclose more information. We extend prior research by investigating management incentives for voluntarily disclosure of non-financial information, as well as the link between voluntary non-financial disclosure and sustainability performance as described in the following section.

2.2. Sustainability performance

The increasing demand for sustainability performance information and its link to firm value has been investigated in prior research. For example, Eccles, Ioannou, and Serafeim (2014) suggest that firms that perform better in sustainability performance tend to outperform their counterparts over the long-term in both stock market and accounting performance. Other studies (e.g., Eccles et al., 2014; Golicic & Smith, 2013; Kleindorfer, Singhal, & Van Wassenhove, 2005; Lopez, Garcia, & Rodriguez, 2007; Ng & Rezaee, 2015) report a positive association between non-financial sustainability performance and financial performance and their integrated effect on cost of equity. Hummel and Schlick (2016) find that firms with superior sustainability performance choose high-quality sustainability disclosures to signal their superior sustainability performance in compliance with signaling/voluntary disclosure theory. Firms with poor sustainability performance prefer

[2] In Hummel and Schlick's study the sustainability disclosure is measured as a dummy variable whether the company issue the sustainability report and whether the sustainability report has a high quality. The selection of dummy variable may favor disclosure quality for larger firms, especially when the sample firms of Hummel and Schlick are all large-size companies from the Bloomberg European 500 Index.