ESG Literature Review

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Literature Review

The literature on Environmental, Social, and Governance (ESG) issues is extensive, but far from conclusive. The only area of agreement in the literature is about the positive effects of ESG on the cost of capital; companies with better ESG scores tend to be able to borrow more cheaply, have higher credit rankings and lower cost of equity capital. We will review this literature first.

Cost of Capital:

Bauer and Hann (2010) investigate more than 2,200 bond issues in the U.S. and rely on KLD scores as their main data source for Corporate Social Responsibility (CSR) ratings. They find that companies with better environmental management standards have lower loan spreads. Similarly, Chava (2011) investigates 5,879 loan facilities made to 1,341 US-based firms and finds that corporations with several environmental concerns have to pay significantly higher interest rates on their loans. Goss and Roberts (2011) report that firms with CSR concerns pay on average between 7 and 18 basis points more on their loans than firms with no CSR concerns. They attribute it to banks view of CSR concerns as risk factors. Similarly, Schneider (2011) concludes that poor environmental performance presents a significant downside risk in future cleanup and compliance costs. These costs can be so large to threaten the ability of polluting firms to meet their fixed payments to creditors.

Earlier work focused on the effects of governance on the cost of debt financing. Bhojraj and Sengupta (2003) document that a higher percentage of institutional ownership and outside directors is positively correlated with higher bond ratings and lower bond yields. Klock, Mansi and Maxwell (2005) as well as Ashbaugh-Skaife, Collins and LaFond (2006) show that corporations with anti-takeover provisions in place have negative and significant effects on bond

yields. Cremers, Nair and Wei (2007) document that institutional ownership can lower the yields on outstanding corporate bonds. Bradley, Chen, Dallas and Snyderwine (2008) construct a governance index which uses board stability and discretion; this index is shown to be positively related to credit ratings. Chava, Livdan and Purnaanandam (2009) show that firms that have fewer antitakeover devices in place pay on average significantly higher spreads on bank loans.

It is typically more challenging to show convincingly the effects of factors on the cost of equity capital than on debt capital. Nonetheless, several studies have documented the positive effects of ESG on the cost of equity capital. Ashbaugh-Skaife, Collins and LaFond (2004) find that well-governed firms exhibit a cost of equity financing which is 136 BP (or 88 BP on a risk-adjusted basis) lower compared to poorly-governed counterparts. Derwall and Verwijmeren (2007) find that better corporate governance leads to lower cost of equity capital over the period from 2003 to 2005. Ghoul, Guedhami, Kwok and Mishra (2011) find that firms with better CSR quality exhibit lower cost of equity financing for a large sample of US firms. This result is driven by specific sub-categories of CSR; the firm's quality of employee relations, its environmental management quality, and its product quality. Sharfman and Fernando (2008) find that firms with better environmental risk management exhibit significantly lower cost of equity capital. Dhaliwal et al. (2011) report a reduction of 1.8% in the cost of equity capital for first-time CSR disclosing firms with excellent CSR quality. Albuquerque, Durnev and Koskinen (2013) investigate both theoretically and empirically the indirect influence of CSR on the cost of equity through the firm's Beta. They find that their CSR index is significantly and negatively correlated with a firm's Beta, which implies a lower cost of equity financing.

Summing up this section, the literature is clear-cut; better ESG companies have lower costs of debt and equity financing. There seem to be clear benefits for firms to improve their ESG scores given the potential benefits in reducing capital costs.

ESG and Valuation:

Given that better ESG companies have lower financing costs, it is expected that they would also enjoy higher valuations. This indeed is typically what past studies find. Konar and Cohen (2001) show that both the release of toxic chemicals and the number of environmental lawsuits are significantly and negatively related to Tobin's Q. Jiao (2010) argues that corporate environmental performance is the driving force behind the positive relation between stakeholder welfare (such as employees, customers, communities) and Tobin's Q. Derwall, Bauer and Koedijk (2011) indicate that a firm's Tobin's Q is positively and significantly influenced by its eco-efficiency, even after controlling for firm characteristics. Baron, Harjoto and Jo (2011) find that social pressure (measured by KLD concerns) is negatively correlated with Tobin's Q for a large sample, but not with the KLD indictors themselves. Deng, Kang and Low (2013) study 1,556 completed U.S. mergers between 1992 and 2007, and find that acquirers with CSR qualities create value for both acquiring and target shareholders. Hawn and Ioannou (2013) show that symbolic CSR changes significantly increase Tobin's Q. In contrast, Jayachandran, Kalaignanam and Eilert (2013) find that product social performance is associated with higher Tobin's Q, but environmental performance is not. Thus, most studies document a positive relationship between ESG scores and firm valuation; better ESG firms enjoy higher valuations.

ESG and Future Returns:

Assuming that better ESG firms enjoy higher current valuations, it is expected that their future returns should be lower, unless investors are not incorporating the higher current valuations into future returns. The oldest line of ESG research compares the performance of conventional and Socially Responsible Investment (SRI) funds. Bauer et al. (2005) find that SRI funds and conventional funds differ in terms of style but produce similar alphas. SRI funds delivered lower alphas in the early 1990s but then caught up with conventional funds. Barnett and Salomon (2006) find that losses due to poor diversification of SRI funds are offset by better security selection as screening intensifies. Renneboog et al. (2008) find that European and Asian SRI funds, mainly internationally oriented, underperform domestic factor models, but SRI funds do not underperform conventional funds in most countries. Utz and Wimmer (2014) argue that SRI mutual funds do not, on average, hold socially responsible firms to a greater extent than conventional funds, and question whether we can learn from SRI funds anything about ESG investing. In addition to SRI funds, a number of papers, such as Sauer (1997), Statman (2000), Schröder (2004), Statman (2006), Schröder (2007) and Lee and Faff (2009), find the performance of SRI indices comparable to conventional indices. Belghitar, Clark and Deshmukh (2014) find that there is no difference regarding the expected returns and variance between SRI and conventional indices. However, socially responsible investors pay a high price in terms of utility if higher moments are taken into account.

If there are sufficient number of investors who prefer good ESG companies and shun bad ESG firms, the expected returns of the latter should actually be higher. Indeed, Angel and Rivoli (1997) predict that a socially controversial stock that investors shun has a higher expected return, and that the expected return increases with the proportion of socially responsible investors in the

market. Heinkel et al. (2001) find that shareholders of controversial companies receive compensation for holding more shares of environmentally controversial firms than they would if the market was free of boycotts. Brammer, Brooks and Pavelin (2006) demonstrate that for UK companies, firms with good CSR ratings tend to underperform in relation to their poor CSR counterparts and they attribute this finding to the environmental indicators driving this finding. Salaber (2007) finds that a portfolio that comprises European sin stocks outperform a ‘‘sin-free’’ portfolio over the period 1975–2006 by more than 4% annually. Fabozzi et al. (2008) find that controversial industries earn relatively high returns in many countries around the world. Hong and Kacperczyk (2009) find that sin stocks of international markets outperform by 2.5% per year over the period 1985–2006.

In contrast to these studies, the literature has examples of studies that show higher returns for better ESG companies. Van de Velde et al. (2005) use CSR ratings from the French research firm Vigeo to test SRI portfolios in the European Monetary Union (EMU) area for the period 2000–2004. Their results indicate that high-CSR-rated portfolios perform better than low-rated portfolios, but not significantly so. Derwall et al. (2005) use ‘‘eco-efficiency scores’’ to evaluate equity portfolios. They report that a best-in-class portfolio that contains the top 30% of U.S. stocks with the highest eco-efficiency scores relative to industry peers delivers a four-factor alpha of 4.15% per year over the period 1995–2003. In contrast, a portfolio of firms with the lowest scores produces a negative but insignificant alpha of minus 1.8%. Kempf and Osthoff (2007) compare the performance of high- and low-rated ESG companies during 1992-2004. They find the Carhart (1997) four-factor model reveals a significant performance difference of up to 8.7% per year between high and low ESG firms. Statman and Glushkov (2009) and Lee, Faff and Rekker (2013) find similar results. Eccles, Ioannou and Serafeim (2014) follow a combined

approach (using data from several sources, including their own) to identify high and low sustainability firms from a sample of 180 U.S. companies. They also find annual abnormal returns of up to 4.8% for the better ESG firms.

There are also a few studies that are unable to show superior returns either for better or for worse ESG companies. Gerhard et al. (2015) find no significant return differences between companies featuring high and low ESG rating levels. This is a particularly comprehensive study because it uses different ESG databases and provides recent performance. Indeed, Dorfleitner, Halbritter, and Nguyen (2014) reveal significant differences in distribution, level and risk of various ESG rating vendors. Manescu (2011) also is unable to show that ESG ratings can affect stock performance.

To summarize the above findings (or non-findings), there is no clear-cut evidence that good ESG firms earn higher returns, or also for that matter that good ESG firms earn lower returns. It is probably safer to assume that good ESG firms may have lower cost of capital, higher valuations, but at best comparable future returns to bad ESG firms.

ESG and Accounting Performance:

Firms that engage in pure ESG activities incur costs in doing so. Some of these activities are expected to also produce future benefits. For example, investing in improving water utilization is good for the environment, but will also lead to lower future costs. Whether the benefits from ESG investments exceed costs is a question that investors need to address. One way to answer this question is to examine various accounting performance metrics that do not involve stock prices. In that spirit, Russo and Fouts (1997) find a positive and significant relation between environmental and the firm's return-on-assets ratio. Orlitzky et al. (2003) conclude that both

social and environmental responsibility pay off in financial terms, but further argue that CSR seems to be more strongly related to accounting-based performance measures than market-based performance proxies. De et al. (2010) find that overall ESG scores have a positive association with both subsequent stock returns and return on equity (ROE) even after controlling for sector effects. They also find ESG factors have stronger predictive power in the mid- and small-cap range. Similarly, Derwall, Bauer and Koedijk (2011) indicate that better eco-efficiency significantly increases corporations' operating performance, measured by their return-on-assets. Kim et al. (2012) find that socially responsible firms are less likely to manage earnings through discretionary accruals, to manipulate real operating activities, or to be the subject of SEC investigations. Their findings also suggest that ethical concerns are likely to drive managers to produce high quality financial reports. Harrison et al. (2012) find that Goodness spending is much more sensitive to financial slack than is the case for capital and R&D expenditures and firms make more goodness expenditures when they are more profitable. Elroy et al. (2013) find that corporate social responsibility engagements that address ESG concerns are followed by a one-year abnormal return that averages 1.8%, comprising of 4.4% for successful and zero for unsuccessful engagements. After successful engagements, companies experience improvements in operating performance, profitability, efficiency and governance.

In summary, it seems that there is a positive association between ESG ratings and firms' accounting measures, mostly those related to profitability. One caveat to remember is that ESG expenditures and disclosures are voluntary. It is well known that profitable firms are more likely to voluntarily disclose more information and they are also in a better financial position to afford spending on ESG-related activities. This casts some doubts on the direction of causality.

Ratings based on Material ESG Factors:

One of the issues confronting a user of ESG disclosures is the large number of items that are available by most vendors. For example, Asset4 has more than 500 items that it tracks. Needless to say, not every company reports all of these items. Furthermore, not all items are equally relevant for each firm. It is intuitively appealing that some ESG items are important for one industry but largely irrelevant for another. CO_2 emissions may be relevant for utilities, but largely irrelevant for financial companies. A relatively new not-for-profit organization was founded in 2011 to determine which ESG items are the most relevant for each industry. This body is Sustainability Accounting Standards Board (SASB). Similar to its namesake, the Financial Accounting Standards Board which promulgates accounting rules, SASB determines the ESG items that are material to each industry after consulting with industry experts, investors and analysts. SASB has now completed a mapping of material ESG items in each industry, or sometimes sub-industries.

Using those SASB material ESG items that were available at the time of their study, Khan et al. (2016) find that firms with better material ESG ratings have superior future stock returns. Similarly, Grewal et al. (2016) find that shareholders proposals for disclosures of material ESG items lead to future improvements in market to book ratios, whereas those that are for disclosures that are not material do not.

These two studies show the importance of using a targeted approach to rating ESG practices of companies that is based only on material items for that industry.

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