OULU BUSINESS SCHOOL

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# THE EFFECT OF CORPORATE SOCIAL RESPONSIBILITY (CSR) DISCLOSURE ON THE COST OF DEBT IN THE TEXTILE INDUSTRY.

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Abstract

Corporate social responsibility, CSR is the requirement for firms to take responsible actions towards the environment and society which are beyond their traditional roles and legal obligations. CSR has received much significance and firms are expected to announce CSR activities in the form of CSR disclosure. CSR is also claimed to be a waste of scarce resources making it unattractive to managers.

The study looks at the textile industry which is extensively export-aligned, cost-sensitive and labor-intensive and faces criticism and scrutiny for its ill effects on societal welfare. Therefore, the purpose of this paper is to examine the effect of CSR on the cost of debt to motivate managers understand the importance of CSR. Present literature is reviewed discussing, the benefits of CSR to firms in the form of reduced firm risk and information asymmetry and the negative relationship of cost of debt with the benefits of CSR.

A total of 110 companies are selected from Thomson Reuters database with complete financial data from 2015 to 2016. The CSR disclosure data have been collected from companies' official websites. The result of the regression model contradicts the hypothesis, which predicted a highly negative relationship between CSR disclosure and cost of debt.

The findings of this study add to current studies on the effects of CSR on cost of debt. The outcome suggests that banks do not associate CSR disclosure with reduced risk profile of textile firms. Future research could focus on obtaining bigger samples to verify if the results of this study still apply. To the best of my knowledge, this study is the first empirical study to examine the effect of CSR on the cost of debt in the textile industry.

Keywords
CSR, CSR disclosure, firm performance, cost of debt, textile industry, environmental impacts, role of banks, CSR risk-mitigation

Additional information

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# 1 INTRODUCTION

## 1.1 Background

Corporate social responsibility (CSR hereafter) has gained immense interest and attention in the past few decades. Discussions and arguments over the trade-off between (firms') personal and social value of corporate activities has progressed in the last century. However, this debate hit a new climax when several significant corporate scandals appeared because of unethical practices and shocked the corporate world. As a consequence, society at large began to re-evaluate the aims and goals of managers and regulations. In addition, the financial crisis of 2007-2008 provoked the need for CSR practices by corporations. The public has shown greater interest in knowing whether social responsibility is being sacrificed for the attainment of financial benefits by management (Cooper and Uzun 2015; Liu and Veenstra 2014). Firms are viewed as being responsible for the impacts that their business activities have on the society and environment. Therefore, the significance of reporting firm CSR information to the public has increased (Verbeeten et al. 2016).

The past decade has seen a growing interest in investment in CSR activities by firms. According to a survey by the CECP and the Conference board, more than 50% of firms raised their CSR activities between 2012 to 2014. A similar study by LGT Capital Partners, Ltd. shows that institutional investors demonstrate higher preference for companies with higher CSR endeavours when making investment decisions (Magnanelli and Izzo 2017; Cooper and Uzun 2015). In addition to that, El Ghoul et al. (2011) report that large corporations including government agencies like CalPERS (California, USA) give priority to CSR active firms when making investment choices.

CSR has also gained immense importance in recent years as a result of the rapid increase in organisations, mutual funds, and online studies and academic researches that focus exclusively on motivating firms to adopt more socially responsible strategies and change their business practices in consonance with social responsibility benchmarks. El Ghoul et al. (2011) recognise the effects of pressure and attention given to CSR performance and report that more than fifty percent of the Fortune 1000 US firms issue regular CSR reports to manage the increasing demand of improved

CSR. They also report that about ten percent of investments are scanned in the US to guarantee that they satisfy CSR requirements. Furthermore, statistics have shown that the number of firms endeavouring to CSR integration in their firms is increasing globally, add El Ghoul et al. (2011).

CSR has now turned into a prominent theme in the corporate world over the last decade (Goss and Roberts 2011). The discussion over the benefits of CSR ponders upon whether CSR investments are "value enhancing" or "value destroying" expressions of agency conflict. Although a considerable amount of research exists on the relationship between CSR and firm performance, most of the research aims at studying the association between CSR and cost of equity. This paper contributes to the present literature by transferring the focus to cost of debt.

One financial form of competitive advantage that could be achieved through CSR is reduced cost of debt (Cooper and Uzun 2015). Reduced cost of debt allows a firm to become competitively advantaged by using the debt at low price in financing its assets and future development. In addition, reduced cost of debt results in reduced cost of capital which in turn elevates firm value. Therefore, if investors appreciate CSR positively, a firm can increase its value by incorporating CSR activities in its business strategy.

## 1.2 Research question

The research question that this paper tries to investigate is whether there is a relationship between CSR and cost of debt and whether it is highly negative as predicted by studies described in later sections. This study examines textile firms over a period of two years, 2015-2016 and analyse the correlation between the cost of debt for which the proxy used is interest rate and CSR disclosure which is represented by a dummy variable getting a value of 1 in the presence of a CSR report.

This study would support firms' efforts to use CSR disclosure as a strategic tool to increase financial efficiency. This would also support stakeholder theory according to which firms must consider all stakeholders involved in the business and align their interests with those of the firm to achieve a competitive advantage over low CSR performing firms (Cooper and Uzun 2015). This paper attempts to enhance our

knowledge of the relationship between CSR and cost of debt by investigating whether CSR disclosure affects firm's cost of debt. In addition, investigating this relationship is important and interesting as it is costly but also reported to be enhancing financial performance, firm value, finance access, certainty of analyst forecasts, and reducing firm risk and cost of equity (Dhaliwal et al., 2011; Verbeeten et al. 2016).

This study contributes to accounting literature in various ways. First, while research exists on the relationship between CSR and cost of debt, this is the first investigation to my knowledge to use a broad group of textile firms to study the effects of CSR disclosure on cost of debt. The textile and apparel industry are extensively export-aligned, cost-sensitive and labor-intensive. CSR is reported to be low in this industry (Cooke and He 2010). This study is motivated by present research indicating that CSR disclosure influences firm value through its reducing impact on firm risk (e.g. Izzo and Magnanelli 2017; Sengupta 1998; Shi and Sun 2015; Ye and Zhang 2011; Waddock and Graves 1997).

### 1.3 Prior research and motivation

Accounting literature does not provide extensive research on the link between CSR disclosure and cost of debt directly but has many studies about the relationship between CSR disclosure and financial performance which have varied results and use estimates that are based on either company books or the market to measure financial performance. For example, Cooper and Uzun (2015) discuss that higher the CSR of a firm the better the impact on firm valuation. The same is confirmed by Orlitzky et al. (2003) and Blomé (2012).

Goss and Roberts (2011) use social responsibility rankings by KLD Research and Analytics Inc. for measuring CSR and report that in debt financing firms with low CSR have to pay 7-18 basis points more than CSR active firms. Their study shows that firms that have unrestricted policies regarding environmental and societal protection face higher cost of debt. Oikonomou et al. (2014) record that a unit increase in CSR strengths decreases the cost of debt by 21.2% where as a unit decrease increases the cost of debt by 56.3%. They study the association between CSR strengths and weaknesses and cost of corporate bonds as well as credit ratings. They examine how

CSR disclosure affect pricing of debt and credit quality of bond issues and demonstrate that higher CSR exhibits such as social projects, product safety and quality, and nonparticipation in questionable business operations like tobacco can help minimise the concerns associated with bonds resulting in lower cost of debt. They also show that credit quality is enhanced by better CSR and lower credit risk. Cooper and Uzun (2015) report that high CSR is linked with higher credit ratings and that CSR weaknesses are directly connected with higher spreads.

Schneider (2010) examines the effect of environmental malpractices on bond pricing and reports that environmental performance does affect bond pricing. He studies chemical, pulp and paper companies and indicates that environmental malpractices imply huge costs in the shape of clean-up, legal and governmental costs resulting in higher cost of debt. Cooper and Uzun (2015) also support this debate and provide evidence that firms with environmental damaging actions pay notably greater interest rates on debt by investigating about 6,000 debt contracts of more than 1,300 U.S. firms.

Studies show a possible risk-shrinking impact of CSR. El Ghoul et al. (2011) hypothesize and prove that high CSR performing firms have lower risk and attain more investments. Based on risk mitigation theory, Ye and Zhang (2011) study the relationship between CSR and cost of debt in China, the world's largest developing market. They use ordinary least square and two-stage instrumental variable regression to report that improved CSR reduces the cost of debt when the level of CSR investment is lower than an optimal level. CSR performance above this optimal level reverses its effect and increases the cost of debt. In short, firms with excessively low or high CSR activities results in increased cost of debt. Their results show that the selected optimal level for CSR is kept higher for small firms and lower for larger organizations. This paper is the first to report a U-shaped association between CSR and cost of debt. The focus is on the corporate philanthropy side of CSR when examining the link between CSR and cost of debt. Corporate philanthropy has been reported to be an important measure of CSR (Brammer and Millington 2008) and has been used as proxy more frequently than other measures of CSR. Ye and Zhang (2011) hypothesize that increased CSR activities reduces firm risk by creating positive ethical capital among shareholders and by reducing firm's exposure to unfavorable circumstances. Since firm

risk is a major determinant of cost of debt, a decline in firm risk leads to reduced cost of debt.

Shi and Sun (2015) report that elevated CSR disclosure show a negative relationship with the number of bond covenants. Additionally, the results are more significant for companies with higher spread and agency cost highlighting the influence of CSR concerned stakeholders on the bond agreements. They argue and identify CSR as one of the determinants of bond covenants. According to their investigation, the number of debt covenants are considerably fewer for companies with CSR disclosure. They report that CSR results in lesser bond covenants due to its aspects of reputation improvement, information asymmetry reduction and risk minimization. A contract with more covenants confines the borrower firm more, giving banks more conditional power and control. They argue that well CSR performing firms have reduced number of debt covenants as compared to firms with lower CSR performance. They use a sample of 2,732 observations at the bond-level in US firms between years 1991 - 2010 and report that firms scoring high on CSR enjoy a more financial flexibility and are able to issue bonds with fewer covenants.

Di Giulio et al. (2011) report negative relationship between CSR disclosure and the weighted average cost of capital (WACC). They use stakeholders' perceived risk as a proxy for firm WACC. Dhaliwal et al. (2011) demonstrate that firms enjoy reduced cost of debt by increased CSR performance. Menz (2010) and Schneider (2011) study the link between CSR and corporate bonds. They examine CSR with a risk affecting perspective and bonds with pricing perspective and show varied results.

In addition, CSR disclosure helps in developing steady association with the government and hence reduces the litigation risk that is harmful for future financial performance. Firms with disclosure showing high level CSR performance therefore have lower risk. Ye and Zhang (2011) investigate 42 utility firms in developed market and demonstrate that a deficiency in CSR performance endangers a firm with unessential high risk. Firms with better CSR performance show necessarily lower idiosyncratic risk. Vanhamme and Grobben (2009) report that firms with high levels of CSR from a long time can face and survive the adversities of crises more efficiently than firms with shorter CSR record. Since cost of debt is established by investors'

assessment of firms' predicted risk (Sharfman and Fernando 2008), it is expected that highly active CSR firms maintain lower cost of debt due to their reduced risk.

El Ghoul et al. (2011) find that firms are benefited by not only improved corporate governance but also corporate social responsibility. They use a direct proxy for firm predicted returns and agree with findings of Hong and Kacperczyk (2009) that firms in the sin industry generally offer marked up returns as they are perceived to be of high risk with higher chances to face litigation as well as can attract fewer of the "norm-constrained" investors. They report that among the sin industry, nuclear power and tobacco companies have rather increased cost of equity capital.

All the studies, showing a positive relationship between CSR disclosure and firm value (Cooper and Uzun 2015; Orlitzky et al. 2003; Blomé 2012), significant negative relationship between CSR and cost of debt (e.g. Goss and Roberts 2011; Oikonomou et al. 2014; Cooper and Uzun 2015; Shi and Sun 2015; Di Giulio et al. 2011; Dhaliwal *et al.* 2011; Menz 2010; Schneider 2011), negative impacts of sub-standard environmental policies on cost of debt (Schneider 2010; Cooper and Uzun 2015), and support to the risk-reduction benefit of CSR (e.g. El Ghoul et al. 2011; Ye and Zhang 2011; Vanhamme and Grobben 2009; Sharfman and Fernando 2008; Hong and Kacperczyk 2009), guide and lead to the research question of this paper which is whether a negative relationship exists between CSR and cost of debt.

The remainder of the paper is structured as follows: Sections 2-3 are dedicated to the literature review discussing in detail the different theories, ideas and approaches presented by current literature of CSR, firm performance, and cost of debt. Section 4 which ends with the hypothesis development, also provides explanation of the importance and motivation of focusing on the textile industry. Section 5 presents the data and methodology followed by the empirical results in section 6. The conclusion of the study in section 7 provides insights on the findings and results, implications for managers, limitations of the study and future research opportunities.

# 2 CORPORATE SOCIAL RESPONSIBILITY, CSR

CSR originated in the USA as a theory during the late 19th century. Before that, CSR was a concept linked to firms' level of production and marketing. The research on CSR dates back to 1950 with the underlying focus on the philanthropy aspect of CSR (Gupta and Hodges 2012; Cooke and He 2010). Some studies also report that during the last century, large US firms have achieved maximum autonomy in legal and cultural understanding (Byrne 2007). Business ethics emerged after the striking misuse of this autonomy by firms. Gradually CSR gained much popularity and attention.

Confusion has existed regarding the definite description of CSR. Bowen (1953) is the first to research and examine the idea of CSR (Gupta and Hodges, 2012). He describes CSR as a set of policies that firms are required to exercise and that is suitable and supportive of society's morals and goals. Other definitions require businesses to take responsible actions beyond their traditional obligations (Gupta and Hodges 2012) and legal requirements (Cooke and He 2010). CSR includes, the ability of a firm to maximize wealth, honour ethical morals and values, meet social demands, avail political power, conserve the environment, and to abide by the law and its constraints. This approach also discusses the level to which management is responsible to keep the CSR norms. They include mandatory as well as voluntary CSR activities (Byrne 2007). Carroll (1979) divides CSR activities into ethical, philanthropic, economic and legal aspects that need fulfillment on a parallel basis rather than sequential basis. Whereas European Commission (2005) divide them into 5 groups: "workforce, environmental, marketplace, community, company leadership activities, vision and values". Different definitions of CSR have one thing in common: the opinion that firms are accountable for societal good. Two sets of beliefs exist in this regard; the efficiency theory that proposes that the only CSR of firms is to efficiently and legally use its resources and maximize shareholders' wealth staying and the social responsibility theory to integrated-strategy perspective, according to which CSR of firms include being accountable to broader stakeholders which include employees, consumers, society, and environment (Cooke and He 2010).

CSR practices are affected by several driving forces (Cooke and He 2010). Firstly, there is a growing increase in awareness of CSR, associated with the environment,

health, human rights and animal rights. Secondly, there is a growing pressure from international and national CSR supportive groups. Therefore, at one hand, firms are faced with increased global competition and on the other hand are forced to invest in better practices in favour of their employees, their families, international and local community, and the environment.

Research has shown that CSR is one of the most significant determinants of firms' competitive advantage and it can help firms to achieve a better corporate reputation (Worcester 2009). The corporate advantages of CSR are still subject to discussion and controversy. Advocates of CSR claim and provide evidence that CSR benefits firms in various ways. CSR reduces business risk, gets easier access to capital funding, attracts efficient employees, generates new growth opportunities, develops customer loyalty, and helps gain a reputable position in the society. As an illustration, Cooke and He (2010) suggest that CSR affects company costs directly as well as serves as a strategic tool that gains competitive advantage. Stakeholder involvement rooted from mutual trust and cooperation decreases agency cost by pressurizing managers to engage in long-term oriented operations rather than short-term (Serafeim and Ioannou 2014). Improved stakeholder participation expands revenue creation by developing efficient relationship with consumers, employees, and business partners. Furthermore, CSR serves as a strategic and marketing medium and has the ability to change a company's competitive context (Yu et al. 2017). This means that firms have opportunities as well as threats in strategically choosing CSR activities. CSR activities prove to be opportunities when they result in firm promotion, for example, the increase in costumers with the Lenovo's Youth Public Entrepreneurship project, whereas, they can prove to be threats when they result in loss of staff motivation, for instance, when managers exercise financial charity. This is labeled as "responsive CSR" by Yu et al. (2017).

A variety of worries have been expressed by opponents of CSR. Some believe CSR to be an aberration to the traditional purpose of organizations (Cooke and He 2010). Others doubt managers' motivations to engage in CSR activities; they find CSR as a tool to boost public relations (Rodriguez et al. 2006). Some recognize the importance of governmental regulations in making CSR a legal requirement rather than leaving it as a voluntary exercise (Cooke and He 2010). A few studies report doubts about the

effectiveness of CSR while others discuss how companies use CSR as a "public relations coup" (Byrne 2007). Liu and Veenstra (2014) find with strong empirical support that when investors find their social values interacting with financial benefits, they sacrifice their faithfulness to social values for financial incentives. For instance, Hechter (2008) analyse the high and low of the Arthur Andersen accounting firm and report that although the firm appeared to be deeply committed to professional standards of accounting, that commitment highly depended upon gain of financial rewards and internal conflicts. Blanthorne and Kaplan (2008) determine that ethical awareness in taxpayers do not get birth merely by economic observance but are rather affected by probabilities of evading taxes. In other words, the opportunity to avoid effects of formation of ethical values which further affects the avoidance of decisions and motives. Hunton and Rose (2008) report that directors holding multiple directorships are not keen to support the issue of restatements due to their disadvantageous effect on reputation which is important to generate income in future. Therefore, they suggest that it is not always the case that investors find CSR active firms profitable to invest in. Thus, a choice between right and profitable arise in front of investors.

Critics of CSR further argue that CSR does not lead to financial benefits because many firms view CSR as an insignificant matter that can be resolved by addressing the damage done to society. Such firms choose to participate in responsive CSR without acknowledging its strategic worth (Yu et al. 2017). Responsive CSR is visible in developing countries where firms adopt CSR policies that are enforced by the government or to regain reputation after an unfavorable event. Noticeably, the current research on the effects of CSR remains indecisive. Sen and Bhattacharya's (2001) report that CSR does not affect purchasing decisions of consumers positively in all cases. It is advised that stakeholders of firms, the satisfaction of which increases profits, do not include society and social issues. Moreover, high CSR performance has constructive effects on only those potential employees who have more job choices and increased CSR awareness (Cooke and He 2010).

The remaining section presents detailed theoretical arguments motivating this paper's expectation that ceteris paribus, the cost of debt is lower for high performing CSR firms than low performing CSR firms.

The past decade has seen a growing interest in CSR performance by firms with elevated allocation of resources to CSR investments. Studies show that there are various reasons leading to this increased interest. They include firm reputation, legitimacy, stakeholders' relationships, workers' health and safety measures, societal stakeholders, and brand image (Izzo and Magnanelli 2017). One major factor that has caused the growth in interest in CSR is its positive relationship with financial performance of firms. Studies have reported that one reason for the positive link between CSR and firm performance is that CSR develops harmony and alliance between firms and their stakeholders (Wang et al. 2016). The increased interest in CSR is also one of the consequences of financial crises (Cooper and Uzun, 2015). Literature has researched chiefly CSR and its relationship with financial crises. For example, (Cooper and Uzun 2015) report that the financial crisis of 2008 resulted in negative impacts on firms' CSR activities. It is reported that till today, CSR engagements of firms are down sized during a financial crisis. Gangi and Trotta (2015) show that after a financial crisis, CSR active firms were able to recover and perform better in short time as compared to CSR inactive firms.

Not much research has been conducted on the relationship between CSR and cost of debt. The following sections look at the present academic literature regarding CSR and cost of debt as well as to the textile industry. Most research centralises definition of CSR and firms' financial performance. Other studies examine the association between CSR and cost of financing examining both cost equity and cost of debt. Other research has used risk-reduction and information asymmetry effects of CSR while some use stakeholder theory to analyse the relationship between CSR and cost of debt. Several researchers have chosen to look at the environmental and the human resource side of CSR and its effects on cost of debt.

This study's goal is to reduce the information gap by focusing on CSR and cost of debt in the context of the textile industry. Thus, this study enlarges the empirical results on CSR effects on cost of debt. It contributes in filling the void in the accounting literature on the relationship between CSR and cost of debt and takes the current research on CSR and firm performance to the next level. This study also has implications for firm managers in the real world as it provides them understanding and motivation to

incorporate CSR in firm strategic management and use it as a strategic tool to improve performance and reduce financing costs.

## 2.1 CSR and financial performance

The considerable surge in CSR activities has triggered research on the connection of CSR with firm performance which till date, has generated varied results (El Ghoul et al. 2011). These findings demonstrate the divergent theoretical concepts on the effects of CSR on firm performance. Most of the previous research uses accounting or market-based elements to measure firm financial performance resulting in mixed results (Izzo and Magnanelli 2017). Recent papers focus on increasing insight on the role of capital markets as a transitional mechanism which enables CSR to develop long term value (Serafeim and Ioannou 2014). Orlitzky et al. (2003) report a positive relationship between CSR and firm performance by conducting a meta study of CSR reports. Blomé (2012) discusses CSR in the light of real estate management and reports that high CSR performance lowers firms' operating costs per year by about 4.5% improving financial performance particularly if the rental properties are remarkably maintained to increase rent revenue.

Ruf *et al.* (2001) study the association of CSR with sales over three financial periods and find a positive relationship between CSR and sales progress. An efficient market is expected to acknowledge a premium to CSR active firms as all stakeholders including shareholders, consumers, institutions, society, and environment take CSR issues sensitively and are impressed by and analyse CSR engagements of firms with a positive attitude. This results in improved image and value of the firm. Yu et al. (2017) applies signaling theory to study whether CSR reporting results in a competitive advantage in China using intellectual capital as a proxy for competitive advantage. They find a great difference between the impairment of competitive advantage with environmentally responsible policies and those without such policies. For instance, intellectual capital or any other variable to be used as a proxy for competitive advantage may not capture the entire link between CSR and competitive advantage.

On the contrary, Brammer et al. (2006) study returns of CSR active firms and find that companies with high CSR performance offer lower returns. Nelling and Webb (2009)

are not able to find any link between CSR and firm performance. On the whole, CSR has found a significant place in management strategy. It is now an issue of corporate governance with a profound influence on management and financial performance. Many studies have expressed that high CSR performance results in improved financial performance (Magnanelli and Izzo, 2017).

## 2.2 CSR and cost of financing

Literature about the relationship between CSR and cost of financing consider both cost of equity and cost of debt. Studies show that CSR involvement can influence cost of capital (Izzo and Magnanelli 2017; Cooper and Uzun 2015). Other studies investigate the understanding of CSR by members of the market. Renneboog et al. (2008) has examined miscellaneous CSR papers and report a doubt about the pricing of CSR by capital markets and therefore support studying CSR impact on cost of equity capital directly. Di Giulio *et al.* (2011) and Izzo and Magnanelli (2017) report negative relationship between CSR and the weighted average cost of capital (WACC). They use stakeholders' perceived risk as a proxy for firm WACC. Previous studies discussing CSR effects focus on its relationship with cost of equity (Ye and Zhang, 2011) and show a possible risk-shrinking impact of CSR. Generally, equity investors give preference to CSR active firms allowing the firm to enjoy reduced cost of equity capital due to high stock demand. Dhaliwal et al. (2011) support these results by studying 196 US companies which disclose their CSR activities. They report that firms with higher CSR engagements have access to decreased cost of equity capital.

Izzo and Magnanelli (2017) concentrate on the effects of CSR activities on risk profile of firms. Their hypothesis is formulated on the basis of stakeholder theory (Freeman, 1984). They believe that CSR activities create firm value, show responsibility and answerability to broader stakeholders, and build prestige influencing firm performance. Their research focus on the relationship between CSR and cost of debt and consider banks as unbiased agents that make their lending decisions based on their assessment of a firm's financial leverage, risk profile and capability to fulfil financial obligations. They show that investors who perceive CSR as risk reducing prefer to invest in such firms and abstain from associating with riskier firms having harmful environmental activities.

Serafeim and Ioannou (2014) study whether high CSR result in better access to finance. Access to finance can be made better with the reduction of agency costs due to increased stakeholder engagement and information asymmetry due to increased transparency. They find a negative relationship between CSR performance and capital constraints. They demonstrate that both reduced agency cost and reduced information asymmetry are required for lower capital constraints. They also show that both the social and environmental aspects of CSR are necessary for lower capital constraints.

Research argues that effective CSR practices and policies result in lower idiosyncratic capital restrictions because of two reasons (Serafeim and Ioannou 2014). Firstly, advanced CSR performance illustrates the firm commitment and involvement with stakeholders which is based on interactive trust and participation (Jones 1995). As a result, it is determined that firms with relationship based on mutual trust have decreased costs including agency costs, transaction costs, and production costs. The agency cost can be divided into monitoring, trust building, research, assurance costs as well as cost of residual deficit. Additionally, stakeholder engagement may also embellish financial profit or revenue creation (Serafeim and Ioannou 2014). This also contributes towards the stable profitability via better quality association with consumers and partners. In other words, advanced stakeholder involvement may reduce short-term managerial opportunistic practices. Secondly, earlier research shows that firms with better CSR practices tend to disclose more CSR activities in their sustainability reports (Dhaliwal et al. 2011) that are verified by third parties providing more transparency increasing the sustainability reports' and firms' credibility. Serafeim and Ioannou (2014) provide evidence that better CSR practices are beneficial to companies as they reduce capital constraints. However, Richardson and Welker (2001) find a positive association between CSR reporting and cost of equity capital suggesting that it might be of advantage to firms through its influence on external or potential investors rather than existing ones.

## 2.3 CSR and the cost of debt

As pointed out earlier, limited research is present on the relationship between CSR and cost of debt while most of the studies have been conducted on studying CSR and financial performance. Besides the prominent research discussed below, not much has

been studied about CSR effects on cost of debt. Goss and Roberts (2011) highlight that 52 papers that Orlitzky et al. (2003) and 103 studies that Margolis and Walsh (2003) analysed, not even a single study examined the relationship between CSR and corporate debt. In a study by Goss and Roberts (2011) it is found that companies with CSR concerns are demanded higher interest rate on their bank loans than companies with better CSR performance. Improved CSR lowers the cost of interest bearing debt. It is argued that good CSR lessens agency costs and results in availability of useful information about the expected future performance of a firm which further results in lower cost of debt (Sengupta 1998). In addition, firms with weaker CSR position pay 7-18 basis points more on bank loan as compared to firms with stronger CSR position. Other studies presented below, investigate CSR and corporate debt using different approaches to determinate the cost of debt. They include corporate bonds, debt covenants, and firm size (Serafeim and Ioannou, 2014).

Studies on the efficiency of socially screened bonds of mutual funds report no yield differences based on risk adjustment (Goss and Roberts 2011). Menz (2010) analyse company bonds and suggest only a weak positive link between CSR and European bond spreads. Oikonomou et al. (2014) study the association between CSR strengths and weaknesses and cost of corporate bonds as well as credit ratings. They examine how CSR performance affects pricing of debt and credit quality of bond issues. They demonstrate that higher CSR engagements such as social projects, product safety and quality, and nonparticipation in questionable business operations like tobacco can help minimise the concerns associated with bonds resulting in lower cost of debt. They also show that credit quality is enhanced by better CSR performance and lower credit risk. Menz (2010) and Schneider (2011) study the link between CSR and corporate bonds. They examine CSR with a risk affecting perspective and bonds with pricing perspective and show varied results. Brammer and Millington (2008) also find that firms with aggressive CSR activities tend to perform better in the long term as they achieve a distinguished place in the view of influential stakeholders.

Managers can damage bondholders' interests by actions like mergers, increased dividend returns, sale of assets, increased borrowing etc (Shi and Sun 2015). To avoid such interest hurting activities, bondholders can make use of contracts to regulate such activities and management to protect their interests. Clauses in the contracts result in

reduced agency costs and information asymmetry, the outcome of which is reduced financing costs and elevated firm value. Previous research has recorded a number of determinants of debt covenants. These include financial leverage; higher the leverage more restrictive the debt covenants, growth opportunities; debt covenants increase for firms with growth opportunities, managerial entrenchment; this and managerial fraud impacts the use of covenants, corporate governance; bond covenants are reduced with larger board size, increased expertise of board members, and association of highly influential shareholders and CSR. Out of these CSR is the only determinant that has been least explored. Shi and Sun (2015) report that CSR engagements regarding society, corporate governance, employee relations, diversity, environments and human rights has more impact on the number of bond covenants. Furthermore, the strengths score results in fewer bond covenants, whereas the concerns score results in increased covenants. Therefore, firms with more CSR strengths and lesser concerns are able to offer lesser restricted bonds. They also conclude that the information asymmetry reducing effect of CSR provides an incentive to managers to invest in CSR activities accordingly and take benefit of this aspect of CSR when applying for debt financing.

According to Shi and Sun (2015) CSR affects debt covenants in three ways which include through influencing reputation, information asymmetry and firm risk. Firstly, an exceptional CSR performance demonstrates a firm's commitment to the ethical side of its relationship with stakeholders (Jones 1995). Studies have shown that CSR involvement has the ability to improve firms' reputation bringing additional benefits in the future. It can make, borrowing an easier process, credit ratings higher, bondholders exceedingly assured, and debt covenants fewer and more permissive (El Ghoul et al. 2011). Secondly, in times of uncertainty, investors require more information on securities to make investment selection (Merton 1987; Shi and Sun 2015). Firms with improved CSR policies disclose more information to the market and potential investors (Dhaliwal et al. 2011) which helps in the decrement of information asymmetry increasing their chances to be selected by investors (El Ghoul et al. 2011; Shi and Sun 2015). Reduced information asymmetry also results in lesser capital constraints, reduced cost of capital, better liquidity, and reduced debt covenants (Shi and Sun, 2015). Thirdly, previous studies show that CSR active firms are most likely to have a lower degree of firm volatility and risk (Spicer 1978).

Firm size changes the positive impact of corporate governance on cost of debt (Aldamen and Duncan 2012). Small-sized firms do not have much bargaining power to arrange loan terms and conditions or alter them. Also, smaller firms have limited resources which affects its ability to survive in times of adversity. As a consequence, small firms are more likely to face loan repayment issues and have lesser chances of survival. The possibility of the issues discussed above are captured in the cost of debt for smaller firms. Furthermore, smaller firms are more likely to operate in weak information environment. Due to the increased information cost, analysts have low incentive to examine and report on small-sized firms. The analysts' negligence magnifies the concern of information asymmetry resulting in increased uncertainty for banks and influencing the cost of debt (Chang et al. 2006). Although large-sized firms are expected to gain more from efficient corporate governance, it is the smaller firms that can gain more by implementing better corporate governance mechanisms in place to improve their reputation and elevate information transparency and reporting.

Related empirical research so far has resulted in contradictory findings, ranging from positive to negative association, U-shaped relationship and even an inverse U-shaped connection This may be due to certain theoretical and empirical limitations of these studies (Margolis and Walsh 2003; Serafeim and Ioannou 2014). The limitations include, for instance, "stakeholder mismatching", failure to consider contingency elements, incorrect measurement (Waddock and Graves 1997), and omission of variable bias (Serafeim and Ioannou, 2014).

Literature is not unanimous about the negative relation of CSR with cost of debt. This is because CSR investments are an additional (to traditional business activities) costly use of shareholders' funds (Magnanelli and Izzo 2017). On the other hand, managers take advantage of CSR investments as a strategic tool that creates firm value. CSR engagement can be seen as a risk management tool that improves financial performance. Companies are seen taking CSR initiatives to avoid various kinds of risks for example reputational risk. Critics, due to this reason, label CSR functions of firms as marketing tools and window dressing activities to appear ethical and stakeholder caring businesses without any actual commitment to social responsibility. Izzo and Magnanelli's (2017) study results show that although it is expected that CSR would have negative relationship with cost of debt, the relationship is actually positive. This

provides evidence that banks may not consider CSR engagement as risk reducing and performance enhancing, they perceive it as rather a resource wastage resulting in stricter loan conditions and higher cost of debt.

As mentioned earlier, El Ghoul et al. (2011) document that firms with higher CSR activities have lower cost of equity. They hypothesize that firms with higher CSR performance have reduced risk and enjoy more and bigger investments. Goss and Roberts (2011) assume the role of banks as "quasi-insiders" of firms to analyse whether ignorant CSR firms face any discrimination by lenders such as banks. They use the presence of collateral as an indication of firm quality in order to study whether lenders differentiate between CSR actions of low-quality borrowers and those of high-quality ones proving that banks do differentiate between CSR activities of low and high-quality borrowers and discriminate weaker CSR firms against stronger CSR firms. Banks show discrimination between honest efforts to align the firm interests with those of society and value destroying excessive CSR initiatives (agency costs). They find that it is very unlikely for management to get success when trying to dodge exploit stakeholders with dishonest CSR involvement. They use a two-step technique containing hierarchical clustering continuing with analysis by optimally scaled principal components to separate the complex measure of CSR. This technique lets them study CSR strengths and weaknesses at individual levels which is important as weaknesses are generally external to the firm while investment seen as strengths are generally unrestricted. After controlling for known determinants, they find 7-18 basis points for firms with unsatisfactory environmental, social and governance policies. They do not find that lenders show better treatment to firms with higher CSR activities. They suggest that banks make decisions based on firm quality regardless of CSR involvement.

# 3 CSR ASPECTS AFFECTING COST OF DEBT

This section presents the research on cost of debt using specific benefits and aspects of CSR.

## 3.1 Risk-reduction and cost of debt

The most crucial benefits of CSR are its risk reducing and information asymmetry reducing effects which at least theoretically have a negative relationship with cost of debt (Magnanelli and Izzo 2017). Research on CSR shows that CSR activities of firms reduce their risk factors (Magnanelli and Izzo 2017; Ye and Zhang 2011). Generally, research on sources of cost of debt report a positive association between cost of debt and risk profile of an organisation. Sengupta (1998) reports that regular comprehensive reporting of CSR engagements creates a perception of responsibility and risk reduction for the firm resulting in lower cost of debt. In today's aggressively competitive business world, minimisation of internal and external firm risks, which may have influence on firm value, are critical to an organisation's continuity and viability. Overall, firms risk can be defined as the sum of market risk and firm specific risk which can affect firm strategy, structure and financial performance (Magnanelli and Izzo 2017). However, as reported by Menz (2010) firm risk cannot be described merely by risks like firm specific risk, market risk, credit risk and liquidity risk. These are all constituents of risk premium but do not define it fully. He indicates that corporate governance and CSR are the "missing risk factors" that also make up the risk premium.

Shi and Sun (2015) describe two types of risks that CSR reduces. Firstly, it reduces litigation risk as well as cost of litigation. This is particularly evident at the time of new governmental policies being introduced which always include regulations concerning aspects of CSR such as product safety and environmental conservation. Firms in the vice or sin industry, for example, tobacco and ammunition are studied to experience higher litigation risk regarding CSR aspects including environmental pollution and injurious products (Hong and Kacperczyk 2009). For instance, in 1997, tobacco companies faced huge litigation claims until they and the government agreed on a settlement (El Ghoul et al. 2011). In the same way, Waddock and Graves (1997) report that CSR inactive firms are at the risk of selling injurious products leading to

increased chances of future lawsuits. The effect of CSR on litigation costs also influences earnings management. Highly active CSR firms show lesser preference for earnings management through discretionary accruals or real operations and thus can avoid SEC investigation regarding earnings management (Shi and Sun, 2015). Companies with higher CSR engagement have a general perception of being less risky and show lesser idiosyncratic risk and volatility (Magnanelli and Izzo, 2017). Spicer (1978) exhibits that among investors, institutional investors consider CSR ignorant firms to be of higher risk and not worthy of investment. The risk emerges as a result of chances of costs incurred due to legal actions and court decisions regarding irresponsible company actions creating speculations about company's future revenues and expenses. Waddock and Graves (1997) support the idea by stating that CSR ignorant firms are expected to face unpredictable allegations in future. In addition, improved CSR engagements help in developing steady association with the government and hence reduces the litigation risk that is harmful for future financial performance (Ye and Zhang 2011).

Secondly, it helps reducing financial distress risk. Firms with higher CSR activities have shown not to experience severe financial distress (Serafeim and Ioannou, 2014). CSR active firms also experience reduced risk of bankruptcy and enjoy fewer and rather lenient capital constraints. Sharfman and Fernando (2008) document that firms with high leverage and increased environmental measures are able to keep higher levels of debt because of their reduced risk of bankruptcy. As a whole, advanced CSR results in reduced firm risk and therefore improved creditors safeguard. Since, the main purpose of debt covenants is to protect creditors' interests against corporate risks, firms perceived as high-risk are more likely to face more and stricter debt covenants (Shi and Sun 2015). Furthermore, Serafeim and Ioannou (2014) report a positive influence of CSR on financial analysts' propositions. Vanhamme and Grobben (2009) report that firms with high levels of CSR from a long time can face and survive the adversities of crises more efficiently than firms with shorter CSR record.

Supporters of CSR claim that the best way to view investments is in the context of risk management (Goss and Roberts 2011). From this point of view, companies with socially irresponsible actions exteriorise a part of the production cost. the inherent accountability created in such circumstances.  when firms exteriorise costs, they

negotiate with society about who will carry those costs. The organisation has no legal obligation to pay such costs in the present time, but society could change this case and even enforce penalties on the firm for the past irresponsible behaviour of exteriorisation of costs. The outcome is an implicit agreement according to which the community agrees with business activities provided that firms do not exploit them to the community's loss. Managers who do not understand this, take the risk of having the externalised costs being completely transferred back to the organisation. CSR advocates also argue that efficient managers know the value of CSR as a strategic and risk management tool. This can be named as the risk mitigation viewpoint, continue Goss and Roberts (2011).

Ye and Zhang (2011) also study the effects of CSR on cost of debt from the risk mitigation viewpoint. They focus on the corporate philanthropy aspect of CSR when studying the relationship between CSR and cost of debt. Corporate philanthropy has been reported to be an important measure of CSR (Brammer and Millington 2008; Godfrey 2005) and is used a more effective proxy than other measures of CSR. Godfrey (2005) states that corporate philanthropy may create positive ethical capital among the society including stakeholders. It may minimize the stakeholders' speculative assessment of firms' mal practice, and thus lessens firms' risk. Corporate philanthropy and other elective corporate aspects may create an improved image resulting in improved ethical capital among society and stakeholders if such acts are perceived as to be conducted in genuine social well-being. Using the risk mitigation theory, they hypothesize that enhanced CSR performance reduces firm risk by creating positive ethical capital among shareholders and by reducing firm's vulnerability to unfavorable circumstances. Since firm risk is a dominant determinant of debt capital cost, a decline in firm risk leads to reduced cost of debt (Ye and Zhang, 2011).

Studies in finance postulates that firm risk and firm performance are closely associated and are crucial in investment decisions. A compromise exists between the two and managers must not focus on momentary financial performance. They should rather focus on the stability of their firm performance and risk reduction in the long run (Izzo and Magnanelli 2017). According to Spicer (1978), the theory of finance considers investment in CSR active firms to be more efficient. Investors are better off if they choose a lesser profitable but socially responsible firm as compared to a slightly higher

profitable but socially irresponsible firm. Investors can be sure that at least they would get the same returns but with lesser risk by a CSR active firm. Investors are encouraged to examine both risk and return. CSR active firms provide investment opportunities with lesser risk. This also motivates managers to invest in CSR activities. Under the efficient market theory, institutional investors always consider both the risk and return when choosing a suitable risk-adjusted discount rate to make discounting future cash flows calculations, add (Izzo and Magnanelli 2017).

On the whole, research suggests that investors are more willing to abstain from investing in CSR ignorant firms and do not include them in their investment portfolios (El Ghoul et al. 2011). Heinkel et al. (2001) have formulated an equilibrium model according to which when investors exclude CSR weak firms from their portfolios, such firms are left with only fewer investors. Therefore, CSR weak firms are forced to retain those fewer investors offering high return on investment as a compensation for the risk being shared among only fewer investors. Hong and Kacperczyk (2009) has conducted an empirical study on tobacco, gaming and alcohol firms' stocks. They find that institutional investors such as pension plans consider very few sin stocks in their portfolios. El Ghoul et al. (2011) document that investors view CSR weaker organisations as having an elevated risk level. Waddock and Graves (1997) discuss that CSR inactive firms have higher chances of facing future litigation claims. They give the example that a firm trying to sell unsafe products has higher chances of future lawsuits posing a high cost in future. On the contrary, Gupta and Hodges (2012) report that consumers make decisions densely on the basis of the price tag. They are not ready to pay higher price for products even if they are made in a socially responsible way. A study on Indonesian market reveals that people in developing countries cannot afford to pay more for products manufactured responsibly as they strive to get basic life necessities. But, if the price and quality of two similar products is the same, they tend to choose to buy the one made by a better CSR performing firm, report Arli and Lasmono (2010).

Consumers' purchase decisions have little effect on CSR. This is because that they are not aware of the ethical issues throughout the supply chain of a product and therefore they lack understanding of the effect of their purchase decision on CSR. However, consumers are important to CSR as they possess the power to demand that firms show

social responsibility (Gupta and Hodges 2012). Karpatkin (1999) adds that buyers have the power to pressurize firms to comply with regulations, establish better codes of business ethics, and maintain better internal control systems. When consumers practice their freedom of choice, they turn into the eventual arbitrators of human civility in the market place. Since, consumer knowledge regarding CSR has considerably arisen, it is crucial to study how firms in the apparel industry get benefits from CSR involvement to meet consumer demand. Research has also shown that CSR concerned consumers are keen to reward CSR active firms. For instance, around 80% of consumers in a survey have shown preference for firms with CSR engagements while 76% expressed that firms can take benefit from CSR involvement. Furthermore, 52% show keenness to boycott irresponsible, add Gupta and Hodges (2012).

Since cost of debt is established by investors' assessment of firms' predicted risk (Sharfman and Fernando 2008), it is expected that highly active CSR firms maintain lower cost of debt due to their reduced risk. Godfrey (2005) adds that an optimal CSR level is present from the risk mitigation view. In particular, firms' CSR investments must not surpass the optimal level which is required to insure firms' assets against any losses. Above this level, additional CSR investments enforce additional expenditure reducing the insurance requirement. managers may get involved in investing unnecessarily and excessively in philanthropy for self-interests of managers at the cost of stakeholders which is naturally unacceptable to stakeholders. Therefore, the outcome of investment beyond the optimal CSR level is negative NPV of the firm which increases firm risk (Goss and Roberts 2009). Godfrey (2005) report that firms exhibiting low CSR are more likely to be perceived as high risk and therefore they have a higher optimal CSR level. This is because such kind of firms are more susceptible to adverse incidents and thus are required to have increased optimal CSR level which provides protection against the consequences of such incidents. Smaller firms also have higher optimal CSR levels as they are more exposed to adverse events and thus the insurance provided by CSR actions are valuable to smaller firms and lenders. However, for larger firms, the optimal CSR level is set lower as they have other influential resource contributors that reduces firm risk (Ye and Zhang 2011).

Moreover, Barnett (2007) demonstrate that the financially beneficial effects of CSR involvement differ with "stakeholder influence capacity, SIC". SIC is a design that

describes firms' capability to use CSR as a tool to efficiently improve relationships with fundamental stakeholders. He specifies that as societal assumptions about a firms' CSR goes up, ceteris paribus, the firm's SIC goes down. He exemplifies the expanded expectations of society with the hole of the tub that carries the SIC; the hole of the tub of firms with heightened CSR expectations increases resulting in decreased SIC. Bigger firms usually experience elevated CSR expectations from the society. Therefore, a set level of CSR investment tends to reduce the SIC in larger firms as compared to smaller ones. Reduced SIC inhibits the financial benefits of CSR investments for larger firms. Bhattacharya and Sen (2004) also provide evidence that consumers tend to appreciate positively the CSR activities of smaller firms rather than larger ones. Bigger firms provide more transparency and thus supply substitute source of information to determine firm risk as compared to smaller firms which provide less transparency. This lessens the value of CSR in the evaluation of business risk of larger firms. Collectively, it can be concluded that small-scaled firms are able to take use of CSR risk reduction benefit more than large-scaled firms and that the optimal CSR level is higher for smaller and lower for larger firms. The larger firms discussed above can also include "state-owned enterprises, SOEs", a common phenomenon in socialist economies as China to protect firms from bankruptcy (the idea is referred to as "soft budget constraint") (Ye and Zhang 2011). Such firms have governmental support providing guarantee on their bank debts making them less risky regardless of their size. This leads to the conclusion that SOEs are similar to large firms when it comes to taking advantage of the CSR risk reduction ability and thus have a lower CSR optimal level. Similarly, highly leveraged firms pose higher risk and thus need higher CSR performance to provide guarantee against unfavorable events resulting in higher CSR optimal level (Ye and Zhang 2011).

The contrary viewpoint to the risk mitigation view is the overinvestment view which makes use of the agency theory (Goss and Roberts 2011). According to this approach, CSR involvement reflects a costly deviation of scarce resources. The motivation of such deviations relies upon the kind of agency involved. Firms may behave as "philanthropic agents" and invest in CSR activities due to a growing demand of shareholders. Such authorisation is ineffective and is better left to individual investors. But, in certain circumstances philanthropy can be of benefit. For example, CSR concerned stakeholders are not able to help the poor workers, by for instances sending

money directly, in the coffee plantation sites of Starbucks as they would need precise information regarding the issues and requirements of and the procedure to send funds to different parties in the whole supply chain which takes enormous amount of time and transaction cost. Hence, the merits of designated philanthropy are quite apparent in such cases and it can become a cause of competitive advantage. On the other hand, Goss and Roberts (2011) also agree that CSR expenditure can also mean agency conflicts between the management and shareholders. Under the concept of overinvestment view, managers may invest too much in CSR to improve reputation and perhaps achieve private goals at the expense of shareholders' investments. Extensive CSR investment occurs since the credit of such responsible acts goes to the manager while the shareholders bear all the cost. Therefore, it can be inferred that excessively high CSR increases risk leading to higher cost of debt as a compensation for bearing the risk by lenders. It should also be noted that despite the involvement of different stakeholders, over investment in CSR is of no benefit to lenders, adds (Goss and Roberts 2011).

## 3.2 Information asymmetry and cost of debt

Merits of CSR include reduced information asymmetry. According to Shi and Sun's (2015) investigation, the number of debt covenants are considerably fewer for companies with increased CSR involvement. They report that CSR results in lesser bond covenants due to its aspects of reputation improvement, information asymmetry reduction and risk minimization. They also conclude that the information asymmetry reducing effect of CSR provides an incentive to managers to invest in CSR activities accordingly and take benefit of this aspect of CSR when applying for debt financing. Reduced information asymmetry results in better information sharing which leads to reduced capital restrictions, cost of capital and bond covenants. Moreover, CSR elevates transparency regarding firms' social and environmental effect and their governance framework (Serafeim and Ioannou 2014). CSR reporting also causes changes in internal control system that promotes the compliance and credibility of reporting. This leads to expanded availability of verifiable information about firms' CSR practices which reduces information asymmetry and leads to reduced capital constraints.

With reference to information asymmetry, it has been argued that weaker CSR firms experience information asymmetry more severely. Merton (1987) deviates from the conventional perfect market model which states that in a perfect market information is complete and immediate. He proposes an equilibrium model of capital market which considers information asymmetry. According to the model, an investor includes a security named K in their portfolio only if they have some information about that security. He accepts the fact that firms have to incur costs in collecting and processing data to communicate information to stakeholders.

Theoretically, managers are likely to announce only favorable news in the market to influence the stock price accordingly (Kimbro and Cao, 2011). This makes the use of CSR reporting an efficient strategic tool to handle stakeholders' expectations since the provision of CSR reports is rather an easier way of providing stakeholders with CSR information. The issue that still needs to be resolved is the confirmation to whether in actual the CSR report mirrors and is compatible with the CSR performance standards presenting assurance that the CSR information is trustworthy. Bhattacharya and Sen (2004) determine that CSR investments by companies may generate a source of goodwill as well.

Adding the current discussion to the effect of CSR on firm risks and information asymmetry, it is expected that CSR engagements are negatively linked to the number of debt covenants which in other words means that CSR has a negative relationship with cost of debt.

### 3.3 Stakeholder theory and cost of debt

Studies also try to use stakeholder theory to explain the relationship between CSR and cost of debt which was initially popularised by Freeman (1984) and later advanced by Jones (1995). According to stakeholder theory, firms are not responsible for only shareholders but to broader stakeholders including customers, suppliers, employees, lenders and other creditors. Jones (1995) observes that stakeholder theory concentrates on the relationship between firms and their stakeholders and suggests that firms with a trustworthy and symbiotic relationship with all their stakeholders enjoy a competitive advantage over those that are concerned about only shareholders. CSR engagement is

necessary to develop stakeholder encouragement and acquire resources. Among the resources, financial resources from markets come for a price. Stakeholder theory proposes that this price should be lower when CSR activities are higher of a firm. Apparently, most research support stakeholder theory (Cooper and Uzun 2015).

### 3.4 Intellectual capital and cost of debt

CSR involvement has been researched to have positive effects on firm employees. Research of intellectual capital by (Pulic, 2000) shows that employees form the key value creating area in organizations. Maignan et al. (1999) point out that positive benefits of CSR include attracting talented employees who not only improve firm productivity, but also provide the firm with competitive advantage. Therefore, safeguard of employee interests makes one dimension of CSR in the form of employee or human capital value. Research provides evidence that firms with higher "Employee treatment index" have lower cost of debt (Bae and Wang, 2011). In other words, firms with more employee-friendly guidelines have access to lower cost of debt. When firms protect the interests of employees, the employees are more likely to be satisfied and sincere to the firm resulting in increased efficiency in their performance. CSR engagement boosts employees' morale and efficiency and thus pays back the CSR investment (Izzo and Magnanelli 2017).

Research has shown that firms can gain a competitive advantage by attracting and retaining proficient employees by their involvement in CSR (Cooke and He, 2010). High level CSR firms are more likely to enjoy the presence of motivated and dedicated workforce as employees take pride in being associated with companies with strong reputation in society. In the same way, CSR engagements are reported to be positively related with job satisfaction. CSR projects initiated by companies result in expansion of leadership skills and higher levels of motivation in the company staff who are stimulated to get involved in the CSR projects. Cooke and He (2010) study the human resource side of stakeholders. They link CSR to employees of firms in two ways. First, through human resource management (HRM), firms adopt responsible HR practices to retain and attract talented employees for competitive advantage. Legally, firms are required to maintain minimum labor standards and comply with equal opportunity legislation. Over and above, firms have the moral responsibility to improve employees'

quality by providing better work-life balance for example which has been researched to directly influence the economic and social progress of a country. Second, CSR activities show commitment to broader stakeholders including environment and social wellbeing. This has a positive and motivating effect on employees. employees of CSR active firms show greater interest in accepting and behaving themselves in a more responsible way and are more able to restrain from indulging in self-serving behaviour resulting in broader firm and societal good.

The stakeholder theory of capital structure discusses that organizations that engage in better employee relations and offer better employee compensations are more likely to have access to lower cost of debt (Bae and Wang 2011). Consumers, employees and other stakeholders are not willing to be associated with highly leveraged firms because financial hardships affect a firm's capability to meet its obligatory contracts.

Managerial ownership has not been studied together with studies on CSR and cost of debt; it has the potential to affect and alter the relationship between CSR and cost of debt (Cooper and Uzun 2015). Research shows that a positive relationship exists between increased managerial ownership and increased risk-taking behaviour by managers. Ortiz-Molina (2006) reports a positive relationship exists between managerial ownership and cost of debt. He explains that managerial compensation plan can indicate a company's risk preferences which are used by lenders to price loan issue (Cooper and Uzun 2015). CSR active companies have more chances of reduced cost of debt, but managerial ownership may reverse this cost reducing effect.

However, although CSR is seen at an extensive level in businesses, research determines that firms are still not involving their employees enough to achieve the full benefits of CSR investment. For example, Cooke and He (2010) suggest that most firms are not successful in aligning the motives of their CSR programs with those of their employees. Most firms are not sure about the positive influence that CSR engagements can have on employees through strong firm identification and dedication. A possibility of dispute between the CSR activities of firms and employees also exists when the motives of both diverge. For instance, monetary donations may hurt the sentiments of those employees who consider their salaries as low and working conditions as sub-standard (Cooke and He 2010). The donation can be seen as a hypocritical act making the employees feel that they are not valued in the company.

Overall, research suggest that a negative relationship exists between employee treatment and firm debt (Bae and Wang 2011). This has important implications for policy makers and managers. For instance, a governmental regulation that checks organizations' treatment with their employees should consider the organizations' debt since highly leveraged organizations are not likely to provide employees with fair treatment. Similarly, the negative relationship shows that managers need to consider the possible additional cost of high leverage; knowledgeable employees realize the incentive of highly leveraged companies to cut workers' costs and so will demand increased salaries (Bae and Wang 2011). Therefore, managers need to manage their debt properly to attract and retain talented employees with reasonable wages.

### 3.5 Environmental stakeholders and cost of debt

Dhaliwal et al. (2011) demonstrate that firms enjoy reduced cost of debt by high CSR performance. Many studies examine cost of equity capital in the context of the environmental management aspect of CSR. Research has shown that voluntary environmental reporting displays a firm's accountability, practices, and performance in relevance with the environment (Kimbro and Cao, 2011). Spicer (1978) report that firms in the pulp and paper industry have higher PE ratios and reduced cost of equity capital if they have improved policies regarding environmental pollution (Ye and Zhang 2011). Sharfman and Fernando (2008) get similar results and record a negative association between advanced environmental policies and cost of equity capital.

Investors who perceive CSR involvement as risk reducing prefer to invest in such firms and abstain from associating with riskier firms having harmful environmental activities (Izzo and Magnanelli 2017). Goss and Roberts (2011) show that CSR ignorant firms that have unrestricted policies regarding environmental and societal protection face higher cost of debt. Cooper and Uzun (2015) also supports this debate and provides evidence that firms with environmental damaging actions pay notably greater interest rates on debt by investigating about 6,000 debt contracts of more than 1,300 U.S. firms.

El Ghoul et al. (2011) agree and discuss that corporations having environmentally friendly policies enjoy a substantial decline in investors' risk perception.

environmental stakeholders place specific risks on firms including image related, financial, and litigation. firms displaying harmful environmental actions can be faced with excessive penalties and gives rise to severe adverse response from all stakeholders. Thus, CSR engagements can affect a company's cost of debt applying stakeholder theory (Cooper and Uzun 2015). They use information from about 600 US firms between 1995-2006 and report that high cost of debt is linked with environmental damages by firms whereas lower costs are linked with environment friendly operations. Schneider (2010) examines the effect of environmental malpractices on bond pricing. He reports that environmental performance does effect bond pricing. He studies chemical and pulp and paper companies and indicate that environmental malpractices imply huge costs in the shape of clean-up, legal and governmental costs resulting in higher cost of debt. Sharfman and Fernando (2008) also focus on environmental risk management aspect of CSR when studying the association between CSR and cost of debt. They examine the connection between environmental performance and cost of capital and report that efficient environmental performance gives firms higher bond yields, but such firms also have increased leverage. They conclude that CSR active firms can access and receive debt financing rather easily (Goss and Roberts 2011).

### 3.6 Criticism

Public insistence on firms to exhibit an ethical and socially accountable behaviour has increased (Kimbro and Cao 2011). However, opponents of CSR still support the shareholders' wealth maximization idea and are not willing for social welfare to rest on firms' shoulders. A different view argues that CSR activities are value destroying as they represent a costly deviation of scarce resources (Goss and Roberts 2011). CSR investments can be seen as an additional expense incurred at the cost of investors' funds. If firms undertake CSR activities owing to the demand of investors, only then they are considered as committed socially responsible entities as they show sensitivity towards societal good and to perform responsibly they depart from the traditional wealth maximisation of shareholders role. However, the reverse can happen if firms invest excessively in CSR engagements in order to brighten managers' images as socially responsible agents at the expense of investors. This demonstrates an agency cost of equity identical to holding general meetings and conferences at exotic

locations, the purchase of corporate jets or other extravagant expenditures. It should be appreciated though, that disregarding the motivation, the deviation of scarce resources to fulfil societal demands gives no advantage to creditors. In accordance with studies by Goss and Roberts (2011), this idea can be named as the over-investment viewpoint.

# 4 CSR AND THE TEXTILE INDUSTRY

In the past few decades, CSR has marked its significance in academic research, as demonstrated by a growing number of research papers dedicated to the subject matter. One reason of this is the fact that globalization has generated job markets in developing countries giving rise to the profiteering of "more human and natural resources" (Gupta and Hodges 2012). This is specifically visible in the textile and apparel industry where millions of workers work under "sweatshop conditions" (Dirnbach 2008). The age of globalization means that mostly, retailers are not owners of their production factories. They opt for outsourcing for manufacturing goods. Developing countries such as Bangladesh, India and Sri Lanka appeal to retailers as they provide the possibility of low-priced labor and low manufacturing costs. Being a labor-intensive industry with extensively changing business dynamics due to accelerated changes in clothing fashion and changing fabric requirements and increased fabric variety, meeting competition requires meeting inflexible deadlines putting severe pressure on workers at the cost of their welfare (Gupta and Hodges 2012; Dirnbach 2008). Retailers are tempted to take benefit of the cheap labor and other costs offered by developing countries when simultaneously the country is also struggling to accomplish their export demands. About 35 million workers are employed in the textile and apparel industry in India making it the second largest labor provider in India after agriculture (Gupta and Hodges 2012).

Welford and Frost (2006) have conducted an interview study in Asia and find that in contrast to western countries, Asian firms feel no pressure from society to exercise CSR activities and produce responsibly. Asian companies try to implement a code of ethics due to requirement from the retailers but there is no actual monitoring and thus no pressure. Interviewees express that CSR is beneficial in attracting and retaining employees. Khan and Atkinson (1987) find that western theories of CSR are being interpreted differently in the developing countries. CSR in developing countries is perceived more to link with industries like health and education and not with industries impacting environment and society in general. A worth mentioning example is that of Rana plaza, Bangladesh.

24 April 2013 witnessed the collapse of the four-story building Rana Plaza in Savar, Bangladesh resulting in the death of more than a thousand (mostly women) and injury of about 3,000 workers. The building, built as a shopping mall, was converted into textile factories with heavy machinery (Sinkovics et al. 2016; Reinecke and Donaghey 2015). The unfortunate incident resulted in financial, reputational and operational damage to the companies linked to the whole supply chain containing the Rana plaza. The event also alarmed other companies outsourcing products (especially) from the developing countries, as they are more likely to neglect workers' wellbeing due to the existence of leniently enforced CSR rules and regulations. It is reported that of the damages that companies face, reputational ones are more harmful. Degraded image has the potential to affect company performance and operations (Champion and Shanahan 2014). The Bangladesh Safety Accord has originated as a safety measure to prevent reoccurrence of such disasters. It requires the member companies to conduct safety inspections and submit reports. The aim of the agreement is to maintain secure and sustainable industry where workers need not fear the occurrence of life threatening accidents (Manners-Bell 2014).

Research studies have shown that a causal relationship exists between work place noise and hearing loss among employees (Franks 1988; Noweir and Jamil 2003). More recent studies try to assess the intensity of the issue in manufacturing industries. Research agrees that industrial noise is enhanced by the usage of high speed and highly efficient machines in manufacturing industries, especially in textile mills. It has been studied that noise is one of the leading occupational risk factors in the Spanish textile industry. Similar results have been reported from the textile industries of Ukraine and Russia. Increased concern exists about the industrial noise pollution in the developing countries' textile industries. In 1985, 500 000 workers in the textile industry of Egypt were reported to be at a risk of noise pollution hazard (Noweir and Jamil 2003). Hearing disorders, cardiovascular and nervous disorders are reported in the sample (n = 2652). Other adverse instances of unsafe noise exposure summarized by Noweir and Jamil (2003) include bio-chemical changes, reduced fertility, high absence from work and employee accidents. Similar researches have been conducted in China, India, Singapore, Thailand and Tanzania.

Textile factories affect the environment is a number of ways; it may result in water and air pollution, reduced water quality, shortfall in water supply, noise pollution, and reduced fertility of lands etc. Textile manufacturing uses water, energy, and chemicals extensively (You and Yan 2009). Synthetic textile production also results in marine pollution. The environmental effects of textile manufacturing processes are provided below.

## 4.1 Environmental impacts of textile manufacturing

This part briefly describes how a traditional textile manufacturing procedure affects the environment (You and Yan, 2009).

Yarn formation: Cotton cultivation is being performed with the use of toxic pesticides. For efficient transport of cotton to factories, the cotton balls are squashed into packets which is called baling and generate dirt, dust and noise. Baling is followed by blending, carding, combing, drawing, roving, and spinning, all resulting in air, water, land, and noise pollution. Lubricating oils are used in the spinning machines which consumes enormous amount of energy and also produce polluted discharge (Slater 2003; Walters et al. 2005).

Fabric formation: It is most commonly done by knitting and weaving. Both use up large amount of energy and produce objectionable levels of noise (Slater 2003). Since different machines operate concurrently, noise control becomes a big issue in textile manufacturing (Noweir and Jamil 2003) as it has the ability to cause permanent auditory damage to employees (Klyszejko 1980). Weaving machines with shorter width helps in noise reduction. A sizing agent is applied to yarn to make it stronger which needs to be washed up frequently resulting in water pollution (Walters et al. 2005). In case of production of synthetic fabrics, Poly vinyl alcohol (PVA) is a non-biodegradable but durable and water-soluble sizing agent used for synthetic fibers. PVA has been found to be a main cause of water pollution (Chen et al 2013).

Wet processing: It includes pre-treatment (whitening of the fabric), coloring and finishing. About 50 to 150 liters of water is used for each kilo of textile material in this stage (Achwal 1998). The water waste from the pre-treatment contains hydrogen peroxide, hypochlorite and chlorine dioxide, and sodium hydroxide which can poison

water life (Walters et al. 2005; Slater 2003). If a fabric does not pick up a color during coloring, it is left in the water waste (Slater 2003). The most common ways in which textile production causes water pollution include change in water pH, alkalinity, dissolved substances, chlorides, sulphates, and so on. The finishing process that gives the fabric durability and other properties consume various chemicals that are hazardous for both the environment and human health. One such chemical is formaldehyde, the excessive use of which is reported to be a human skin irritant. Most of the air pollutants are produced during the processes of singeing, thermofixing, thermosoling and impregnating. Increased energy (electricity) consumption means increased emission of greenhouse gases.

Other textile manufacturing processes: The USA Environmental protection agency (1996) states that using high temperature in the drying and curing ovens release the most air pollutants which include formaldehyde and amine odors which harm the respiratory system. Outside the factories, the transpiration to and from production sites also produces toxic gases. Furthermore, solid waters like selvage trimmings, fly ash, aluminum cans and wooden plates also make the textile industry a source of waste cascade (USA Environmental Protection Agency 1996).

Another effect of textile manufacturing on the environment is in the form of marine pollution which is mainly caused by micro-plastics. A micro-plastic is defined as a particle of plastic which is less than 1-5 mm in size. Synthetic fibers from synthetic textile production are a form of micro-plastics and have been found in polluted marine samples. Research shows that around 60% of world total fiber production is of synthetic fibers. As textile manufacturing increases, the rate of micro-plastics entering the environment also increases resulting in disturbingly elevated levels of marine pollution effecting marine flora and fauna (Almroth et al 2018).

## 4.2 Hypothesis development

Literature of both management and finance contain research on the association between CSR and financial performance but there is a scarcity in the research on CSR and its relationship with cost of debt (Goss and Roberts 2011). Orlitzky et al. (2003) meta study of 52 CSR efficiency papers show that none of the papers discuss CSR and

corporate debt. Renneboog et al. (2008) has conducted a similar study with no evidence of research on cost of debt (Goss and Roberts, 2011; Ye and Zhang 2011). Since debt markets determine risks oppositely to equity markets (Sharfman and Fernando 2008), it is constructive and valuable to research the association of CSR with cost of debt.

Accompanying to the deficiency of empirical research on the relationship between CSR and cost of debt, and the CSR issues of the textile industry, the interest of this paper to study firm cost of debt and CSR is driven by the following particulars, the significant role of banks, and the risk mitigation effect of CSR.

### 4.2.1 Role of banks

A fundamental input of this paper is to exploit the specific intermediating role of banks in debt markets. The banking literature asserts that banks are essentially different from other stakeholders. As part of their accredited monitory role, banks have access to detailed information about organisations that is unlikely to be available to outsiders (Goss and Roberts 2011). Banks use this data to be able to make effective initial decisions about the company's financial position and its ability to commit to its debt obligations as well as to control the firm to assure loan repayments after the settlement of the debt contract. Banks have several options to ensure timely repayments including fulfilment of security demands, granting short term loans, applying covenants for example restrictions on borrowings and payment of dividends etc, or increasing the interest rate to reflect the risk borne by the bank. Consequent to this accessible and overseeing role of banks, informational efficiency exists in the debt market. An example is given by (Goss and Roberts 2011) that syndicated debt markets demonstrate higher informational efficiency as compared to bond markets and that the debt market exhibits the chances of default before the bond markets. In their study, they consider that banks exist and provide services without any private agenda or motive and are interested in only the capability of borrowing firms to discharge their debt obligations.

As banks are more deeply involved in gaining access to detailed information, tailor desired loan covenants and the monitoring of firms, they are more synchronised with

any effect of CSR than are other lenders. Therefore, banks among all other stakeholder entities hold the most suitable position to evaluate the degree of firm CSR engagements and this evaluation should be mirrored in the debt contract terms. In effect, the positive impact of good corporate governance on the quality, reporting, and transparency of firm information reduces the rate of return required by debt holders. Early research report that being intermediaries and dependent on deposits, banks exist to supply low-cost check to settle incentive problems for borrowers. Moreover, banks are provided with confidential information which helps in information asymmetry between the banks and borrowing firms. Therefore, the practices of banks including loan initiation, determination of terms and conditions, renegotiation and termination, are valued in the external market (Aldamen and Duncan 2012).

### 4.2.2 The risk mitigation viewpoint

The risk mitigation perspective focuses on the principal benefit of CSR which is the fact that CSR initiatives reduce risk. Various papers have been written discussing the relationship between CSR and risk followed by research promoting the idea that "idiosyncratic risk" is priced in financial markets. Thus, if a firm with effective governance, social, and environmental policies has lesser idiosyncratic risk, it will be shown in price premiums. Earlier studies find that high CSR firms hold lower idiosyncratic firm risk as well as lower returns together with above average market-to-book ratios. Boutin-Dufresne and Savaria (2004) studied a group of Canadian CSR risk benchmarks and report that high CSR scores are linked with reduced idiosyncratic volatility of firms. The concept of idiosyncratic risk is germane to this paper as the risk of financial adversity influences the ability of firm to meet its debt obligations. If CSR engagement results in lower risk and better financial performance, banks should provide more tempting loan conditions to CSR active firms.

Many studies have shown that CSR disclosure has numerous constructive effects and has also impact on firm risks and resources (Orlitzky et al. 2003; Izzo and Magnanelli 2017). Research on the elements of cost of debt support a negative relationship between risk and cost of debt. The research on CSR, as discussed above, shows that risk reduction is a major advantage of CSR. As a result, it is anticipated that a negative relationship exists between CSR and cost of debt of firms.

This study examines the effect of CSR disclosure on cost of debt financing or CDF which is a crucial element of financial performance. Debt financing is of critical significance to firms' financing and growth. It has been reported that between 1993 - 2002 72% of debt financing accounts for the external financing in US-listed firms (Fama and French 2005). Similarly, between 1970 and 1985, debt financing was used for 79% of the total external financing in the United Kingdom, 66% in Japan, 49% in Germany, 78% in France, and 41% in Canada from 1970 to 1985 (Ye and Zhang 2011). Statistics from Thomson Financial expresses that the size of syndicated debt markets is about 5 times larger than the size of equity markets globally (Goss and Roberts 2009. Financial performance and progress depend largely on the ability to get low-cost debt (Ye and Zhang, 2011).

### 4.2.3 Hypothesis development

The above discussion of CSR results in testable hypothesis to direct the empirical research. Organisations with prominent CSR weaknesses will receive higher cost of debt and vice versa. CSR weaknesses include increased firm risk, compromising the ability of the firm to meet its debt obligations. Consequently, banks can charge higher debt costs as a compensation for the higher risk. This study expands the research on CSR and cost of debt in the textile industry particularly in the context of stakeholders' theory and CSR's risk reduction effect. Firms with well engaged CSR structure are expected to have lessened cost of debt by reason of stakeholder theory that stresses that companies looking after broader stakeholders get a competitive advantage over those concentrating only on shareholders. CSR participating firms are perceived as low-risk by creditors.

Taking guidance from the research by Goss and Roberts (2011), it is assumed that banks are unbiased agents with no personal motivation to promote and are only concerned with the borrowing firm’s ability to meet its debt obligations. If CSR does result in risk reduction, improved image and higher financial performance, banks should formulate more favourable loan arrangements to CSR active firms. On the contrary, if CSR does not result in the advantages discussed above, banks should implement stricter loan conditions to CSR active firms. This generates the following hypothesis:

*H1: CSR disclosure has a negative relationship with cost of debt*

A linear regression model is formulated to test the above hypothesis. This paper empirically studies the relationship between CSR disclosure and cost of debt using a sample of 110 textile firms for years, 2015-2016.

# 5 DATA AND METHODOLOGY

This paper looks at how CSR disclosure affects the cost of debt in the textile industry which comes in the broader, manufacturing sector of the business world and faces criticism and scrutiny for its ill effects on societal welfare. The industry transforms raw materials into usable items and has seen much investigation throughout its supply chain management. Thus, it is expected that the cost of debt of the textile industry is impacted significantly negatively by improved CSR performance. This paper considers, the fact that CSR performance takes time to show its positive effects and supposes that banks require at least one year to assess the CSR performance of firms. Therefore, like Izzo and Magnanelli (2017), a lag time effect is acknowledged between the dependent and independent variables of cost of debt and CSR disclosure respectively by using the CSR values for the previous year i.e. 2015. Besides the time lag effect, this paper also uses other factors such as country area of the firms to improve the validity of the results.

## 5.1 Sample and data collection

The regression analysis tests the hypothesis for a homogenous sample of 110 textile firms from around the world, covering a time period of two years, 2015-2016. The sample is acquired from the entire sample provided by the Thomson Reuters Asset4 ESG database consisting of 1,925 textile firms for years 2015-2016. Out of the 1,925 firms, only 50 firms had some while 47 had complete financial and CSR data available. Due to the low number of firms with CSR information, only financial data is being used from the database for 110 firms. CSR data has been acquired through online search of firms' official websites. Outliers are identified with the help of scatter charts for individual variables and are removed to reduce skewness and bias in the analysis. The financial data from Thomson Reuters is for 110 firms for which CSR data is acquired from their official websites. Table I below summarizes the data collection process.

**Table 1. Data collection.**

| | Source | Total number |
|---|---|---|
| Textile firms with complete financial data | Thomson Reuters | 1925 |
| Firms with complete CSR reporting data | Firms' official websites | 120 |
| Less: Outliers | | 10 |
| Sample textile firms | | 110 |

### Dependent variable - Cost of debt

Present literature shows that common proxies used to measure the cost of debt include interest rate on debt (Izzo & Magnanelli 2017; Francis et al. 2005) and credit ratings as they indicate the value and quality of a debt (Attig et al. 2013). This paper utilizes the interest rate as a proxy for cost of debt provided by Thomson Reuters Asset4 ESG database for 2015-2016.

### Independent variable – CSR disclosure

CSR disclosure is an important form of non-financial disclosure. Typically, a CSR report contains extensive information about firm expenses that are not provided in financial statements but are important to assess firm value. They include expenses related to environmental conservation, charity, and employee wellbeing (Dhaliwal et al. 2014). As mentioned earlier, the demand for enhanced CSR reporting has been sustained by the increased interest in the stakeholder theory which does not limit the interaction of firms with only current shareholders. Firms issue CSR reports to announce their CSR activities in the annual financial report or in a separate CSR or sustainability report. The reports provide information about firms' CSR activities and performance and are also used by institutions that want to rank companies based on their CSR performance. CSR reports provide additional non-financial information showing the non-financial CSR performance which assist investors and creditors to assess the potential and future performance of the firm (Verbeeten et al. 2016).

CSR disclosure provides information about the expertise and potential of a firm and discloses the firm's risk management strategies which are the CSR activities leading

to constructive attributions from stakeholders and providing "social capital" to the firm. In addition, CSR disclosure may indicate investments that produce positive returns as well as show that the firm expects better future performance. Verbeeten et al. (2016) find that financial investors show reliance on CSR disclosure and consider it when making investment decisions as it provides information about firms' future performance.

Literature has shown that CSR activities and accomplishments disclosed in CSR reports may improve image and financial performance. CSR activities demonstrate a firm's determination to fulfil firm's CSR goals and meet the standards set by their social agents. Firms need to implement socially and environmentally liable CSR activities and report them in their CSR report to indicate their CSR efforts. Wang et al. (2018) suggest that firms with higher CSR performance are more likely to disclose that in an easily understandable language whereas firms with low CSR performance would tend to issue CSR reports with a "difficult-to-understand" language. They find that companies with improved CSR performance disclose their CSR information with "higher readability". Therefore, this paper gives a value of 1 to firms that issue CSR reports with high readability; the reports cover social and environmental aspects of CSR and clearly report their CSR strategies, activities, and achievements and issues. Firms, not doing so, or simply mentioning that they consider the wellbeing of society and environment in their business operations are given a value of 0.

Following Sengupta's (1998) and Izzo and Magnanelli's (2017) study, the CSR reporting is adjusted for the time lag effect by using the CSR reporting information for the previous $year_{t-1}$ i.e. 2015. The time lag effect occurs because CSR performance indicated by CSR reports does not show its positive results immediately. Therefore, banks need time to see its effects for example its risk reducing effect to incorporate it in their lending decisions.

**Control variables**

The control variables included in the regression are derived from previous CSR and cost of debt related studies (e.g. Sengupta 1998; Izzo and Magnanelli 2017). Consistent with arguments given in this paper, all the control variables are directly or indirectly

linked with firm risk. The risk profile of a firm is related to factors like its financial structure, size, and operating profitability. Thus, in uniformity with present literature on the cost of debt, following are the control variables studied in this regression analysis.

**Operating profitability**: ROI is the return on invested capital and represents the operating profitability in the regression. It is also anticipated as inversely correlated with the cost of debt as increased profitability decreases firm risk (Izzo and Magnanelli 2017; Sengupta 1998; Verbeeten et al. 2016).

**Financial leverage**: It is labeled as FINLEV and calculated as the net debt/total assets. It represents financial pressure on a firm; greater the leverage higher is the cost of debt expected (Izzo and Magnanelli 2017; Sengupta 1998).

**Size**: The proxy used for firm size is total assets (TA) and represents the sum of total current assets, long term receivables, investment in unconsolidated subsidiaries, other investments, net property plant and equipment and other assets. It is expected to be negatively associated with the cost of debt as it has a negative effect on the risk profile of a firm. Bigger firms are being reported to survive adverse situations and endure negative financial impacts and thus are not likely to default. Moreover, larger firms generally have better corporate reputation leading investors and lenders to presume that they are less risky (Izzo and Magnanelli 2017; Sengupta 1998).

**Country area**: Three dummy variables, EUROPE, and N_AMERICA, are used to study the effect of the region in which the textile firms operate. A firm with a value of 0 for all the variable represents a firm in Other country area which is pre-dominantly south-east Asia.

**Table 2. Firms' country area.**

| Country area | Total firms |
|---|---|
| Europe | 24 |
| North America | 20 |
| Other (south-east Asia) | 66 |
| Total | 110 |

All values of independent variables are standardized and can be called the standard scores. The variables are standardized to ensure that they provide uniformly to a scale

when components are added together. It also makes it easier and clearer to interpret the outcomes of a regression or other statistical analyses. In standardization, a variable is rescaled to have a mean of 0 and a standard deviation of 1. The value of a standardized variable shows its difference from the mean of the original variable in number of standard deviations of the original variable. For instance, a value of 0.5 for ROI means that it is half or 50% a standard deviation above the mean of ROI where as a value of -0.5 means it is half a standard deviation below the mean. Standardization can be easily done in statistical analysis softwares. Here, it is done using MS Excel. Manually, a value is standardized by subtracting the mean from the value and dividing it by the standard deviation (Stata FAQ, 2018).

### 5.2 Model specifications

This paper studies whether a better CSR disclosure in the previous year reduces its cost of debt in the current year of a textile firm in the sample consideration. The effect of CSR disclosure on a textile firm's cost of debt is investigated by testing the hypothesis through the linear regression model given below.

$$COD_t = f\,(CSR_{t-1},\ Control\ variables_t)$$

where $COD_t$ is the cost of debt at year t and $CSR_{t-1}$ is a measure of CSR disclosure for the previous year, t-1. Control variables are all in year t as the dependent variable COD as their effect on COD is considered to occur in the same year in which the COD is tested. This results in the following regression model to be estimated.

$$COD_t = \alpha + \beta_1\, CSR_{(t-1)} + \beta_2\, ROI_t + \beta_3\, FINLEV_t + \beta_4\, TA_t + \beta_5\, EUROPE + \beta_6\, N_AMERICA + \varepsilon$$

where COD is the cost of debt measured as the interest rate at year t i.e. 2016.

Below is the summary of the variables stated above.

**Table 3 – Variables' measurements.**

| Variable | Measurement | Source | Predicted sign |
|---|---|---|---|
| $COD_t$ | Cost of debt measure by interest rate | Thomson Reuters | |
| $CSR_{t-1}$ | A dummy variable given a value of 1 in case of a CSR report being issued. | Firms' official websites | - |
| $ROI_t$ | Return on invested capital, used as proxy for firm operating profitability | Thomson Reuters | - |
| $FINLEV_t$ | Financial leverage | Thomson Reuters | + |
| $TA_t$ | Total assets used as proxy for firm size | Thomson Reuters | - |
| *EUROPE* | A dummy variable given a value of 1 in case of a company operating in a European country | Thomson Reuters | |
| *N_AMERICA* | A dummy variable given a value of 1 in case of a company operating in a USA or Canada | Thomson Reuters | |

The predictions on the correlations between dependent and independent variables mirrors previous researches that report that large sized firms are less risky as they reduce information asymmetry, that higher ROI depicts increased profitability and reduced risk, and that high financial leverage poses threats to firm ability to fulfill its liabilities making its risk profile high (Izzo & Magnanelli (2017). Furthermore, Izzo & Magnanelli (2017) and Sengupta (1998) have used interest rate as a proxy to estimate cost of debt. The model estimated, and variables used are derived by the research of Izzo & Magnanelli (2017). The next section provides the empirical results to the regression model.

# 6 EMPIRICAL RESULTS

The cross-sectional regression analysis is based on 110 textile firm-year observations. Most of the firms in the original 1,925 firms lacked complete CSR related data which included ESG score. The final sample after the removal of outliers contains firms with complete CSR as well as financial data and gives 110 observations from year 2015-2016. To keep the sample number high, CSR reporting data is taken from the official websites of the sample firms. The data is analyzed with Microsoft Excel and SAS. The descriptive statistics is given below followed by the correlation between the variables.

**Table 4. Descriptive statistics.**

| | COD | CSR | ROI | FINLEV | TA |
|---|---|---|---|---|---|
| Mean | 5.65 | 0.29 | -0.01 | 0.00 | -0.16 |
| Median | 3.02 | 0.27 | -0.05 | -0.12 | -0.34 |
| Standard Deviation | 6.83 | 0.02 | 0.73 | 0.94 | 0.42 |
| Kurtosis | 8.12 | -1.95 | 0.51 | -0.44 | 13.74 |
| Skewness | 2.71 | 0.30 | -0.12 | 0.39 | 3.31 |
| Minimum | 0.00 | 0.27 | -2.11 | -1.70 | -0.39 |
| Maximum | 35.88 | 0.31 | 1.73 | 2.17 | 2.38 |
| Count | 110.00 | 110.00 | 110.00 | 110.00 | 110.00 |

COD is the cost of debt, CSR is CSR disclosure, ROI is the rate of invested capital showing the financial performance, FINLEV is the financial leverage, and TA is the total assets representing the firm size.

The skewness of the variables shows that the distribution for except ROI which is skewed negatively indicating a longer left tail, the rest of the variables are skewed positively to the right, indicating a longer right tail. The kurtosis for COD and TA also indicates high skewness and a very pointed distribution, also known as leptokurtic distribution.

**Table 5. Correlations Data**

| | COD | CSR | ROI | FINLEV | TA |
|---|---|---|---|---|---|
| COD | 1 | | | | |
| CSR | -0.02 | 1 | | | |
| ROI | 0.06 | 0.25 | 1 | | |
| FINLEV | 0.00 | 0.03 | -0.27 | 1 | |
| TA | -0.16 | 0.30 | 0.01 | 0.02 | 1 |

COD is the cost of debt, CSR is CSR disclosure, ROI is the rate of invested capital showing the financial performance, FINLEV is the financial leverage, and TA is the total assets representing the firm size.

The regression results are provided below in Table 6 showing insignificant results. It shows an insignificantly positive result for CSR (p-value = 0.770). The results show insignificant positive relationship between cost of debt and CSR. It shows a positive relationship between ROI and cost of debt as well, but the relationship is insignificant (p-value = 0.557). The relation of financial leverage is highly insignificantly negative (p-value = 0.996) whereas the relation of total assets with cost of debt is very slightly significantly (at a significance level of 5%) negative (p-value = 0.071). For the country region, the cost of debt goes down by $2.57 if the textile firm operates in Europe whereas it goes down by $0.31 if the textile firm is in the USA or Canada. However, both the relationships are highly insignificant ((p-value = 0.154 and 0.864 respectively). The sample data was studied in several other ways with variations in the variables, but all gave insignificant results.

**Table 6. Regression Results.**

| | COD |
|---|---|
| Intercept | 2.625 |
| | (0.25) |
| CSR | 10.64 |
| | (0.29) |
| ROI | 0.581 |
| | (0.59) |
| FINLEV | -0.003 |
| | (-0.00) |
| TA | -3.138 |
| | (-1.82) |
| EUROPE | -2.571 |
| | (-1.44) |
| N_AMERICA | -0.312 |
| | (-0.17) |
| N | 110 |

N = number of observations, t-values in parentheses,
* = 0.05 level of significance ($p<0.05$), ** = 0.01 level of significance ($p<0.01$), and *** = 0.001 level of significance ($p<0.001$).
All insignificant in this case.

## 6.1 Discussion

The results of the regression models contradict the hypothesis, which predicted a highly negative relationship between CSR disclosure and cost of debt. This suggests that in the textile industry, banks do not consider disclosure as an important indicator of low risk but probably a costly diversion of scarce resources. More straightforwardly, it is an activity that at least statistically increases firm risk resulting in increased cost of debt. This result is in agreement with studies that investigate effects of CSR on investment. When managers invest excessively in CSR to achieve private gains and improve firm image at the cost of shareholders investments, they are not perceived as better companies despite high CSR performance (Barnea 2010). The insignificant relationship between CSR and cost of debt weakens the argument that CSR reduces risk. This can be explained in a number of ways.

Firstly, stakeholders might doubt the certainty of CSR performance of firms making the firms' CSR unreliable and stakeholders ignoring firms' CSR performance in their

financial decisions. Secondly, stakeholders might misunderstand the CSR performance that firms report in their corporate sustainability reports. Lastly, stakeholders might lack motivation to spend the time required to understand and effectively conclude about firms' CSR and thus simply keep it away from financial decisions (Izzo & Magnanelli 2017).

The first point discussed above can be considered as the most important reason for the negative relationship of CSR with firm risk. Studies have been conducted reporting stakeholders showing distrust in CSR reports and other such CSR communication tools. They suggest other forms of reporting and stress on the need of the enforcement of mandatory guidelines for sustainability reporting. This is expected to increase market's trust and understanding of the CSR performance of firms. Implementation of mandatory guidelines seems to be impossible for near future doubts (Izzo & Magnanelli 2017). The second point poses a communication issue. Mostly stakeholders are unaware of the importance and positive results of CSR due to which they assume that their investment is being used for an unprofitable activity. The last point exhibits the long time taken to witness the benefits of CSR by stakeholders and market, but the regression result reduces this effect offering opportunity of further research using longer time duration, add Izzo & Magnanelli (2017).

According to the empirical results a positive relationship exists between cost of debt and ROI and it is insignificant. Higher the profitability, lower the cost of debt the company is expected to pay which cannot be proved in this case, however. Financial leverage, FINLEV calculated as a ratio between the net debt and the total assets, show an insignificantly negative association with cost of debt demonstrating that results are as expected but insignificant. Firm size (TA) show an extremely slightly significantly negative relationship with cost of debt. As expected, large sized firms are perceived as less risky and thus lesser cost of debt is being demanded.

# 7 SUMMARY AND CONCLUSION

Examining the effects of CSR disclosure on cost of debt is of value to managers as well as academics. Previous research is limited and shows mixed results on the relationship between CSR disclosure and cost of debt. This paper revisits the relationship and aims to advance the literature in this field by investigating the effects of CSR disclosure on cost of debt in the textile industry arguing that CSR reduces the cost of debt by reducing firm risk profile. The paper studies a total of 110 textile firms from all over the world over a period of two years from 2015 to 2016. The paper focuses on risk profile of firms and its theoretical positive relationship with both cost of debt; higher the risk higher the cost of debt, and CSR performance; higher the CSR performance lower the risk (and thus lower the cost of debt). The study is targeted specifically at textile industry due its serious CSR related impacts as well as lack of previous related research. Future research could focus on obtaining bigger samples and use more advanced techniques to study the data and to verify if the results of this study still apply. The findings of this study add to current studies on the effects of CSR performance as shown by CSR reporting on financial funding of firms. This paper enhances the research on CSR effects by studying CSR and cost of debt in the textile industry. According to the output of the regression analysis of the study, CSR disclosure has no significant role that affects cost of debt. This contrasts with the hypothesis of this paper that CSR disclosure is associated highly negatively with cost of debt. Therefore, it is concluded that the hypothesis is not proved correct.

The outcome of this study suggests that banks do not associate CSR disclosure with reduced risk profile of firms. To my knowledge, this paper is the first to study the effects of CSR disclosure on cost of debt in the textile industry. Although prior literature has not studied the textile industry in the context of CSR and cost of debt, it does pose an interesting and relevant area to be explored, as financial debt is a prevalent form of financial funding for firms and the increasing pressure felt by firms to improve their CSR performance and disclose it, could be justified if a negative relationship between CSR and cost of debt is confirmed with high significance. As shown earlier, the textile industry causes extreme harm to the environment and generally has low cost factories in the under developed countries which have minimum

CSR requirements, proving a negative relationship could greatly help in making the managers understand the importance and benefits of CSR.

The results are in partial coherence with Goss and Roberts (2011), who report that banks arrange higher loan spreads with shorter maturity for firms with low CSR performance ("low-quality borrowers"). This suggests that in the case of this paper, the above discussed CSR benefits of risk reduction and information asymmetry are not counted as consequential when banks make their lending decisions. This research paper also contributes to CSR theory in relation to the association of CSR and cost of debt by augmenting the limited literature on the CSR and cost of debt association.

Further investigations may help examining CSR and cost of debt in more depth with appropriate variables and try to study how the managers and market perceive CSR performance shown via CSR reports in the textile industry. As mentioned before, a lack of understanding the importance of CSR exists within and outside firms. Managers need to increase their knowledge about CSR and the ways in which it is communicated to the external world. They need to account for the fact that misleading communication of CSR implementations and outcomes could counter act towards the firm and waste the benefits that CSR promises to provide.

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