

## **ESG Sustainability and Financial Capital Structure: Where they Stand Nowadays**

**Valter Cantino**

Full Professor of Accounting

**Alain Devalle**

PhD, Associate Professor of Accounting

**Simona Fiandrino**

PhD Candidate

Department of Management

University of Turin

C.soUnione Sovietica 218 bis, 10134

Italy

### **Abstract**

*This study provides a systematic literature review on the linkage between ESG (Environmental, Social, Governance) sustainability and financial capital structure of companies. More specifically, we refer to both ESG sustainability performance and disclosure that literature addresses to be jointly connected to both the cost of equity and the cost of debt. We acknowledge the need to systematically categorize the current literature in order to clearly understand the motifs that guide the association between ESG sustainability and the cost of financing. After conducting a deductive search strategy based on a content analysis, we exploit 31 academics papers, in which both theoretical and empirical results were discussed. We recognize “two-speed theoretical findings”; precisely, we notice that the relation between ESG and the cost of equity is well defined by scholarly researches, whereas there are no clear-cut boundaries between ESG and cost of debt yet, that consequently need to further investigations.*

**Keywords:** ESG sustainability, ESG performance, ESG disclosure, financial capital structure, cost of equity, cost of debt, corporate sustainability

### ***1.Introduction***

Considerable progress has been made on corporate sustainability management over the last few years from diverse streams of research. Corporate social strategies develop responsible actions with the aim at improving firm performance and leading to the value creation for all stakeholders (Freeman, Harrison, Wicks, Parmar, & de Colle, 2010; Harrison & Wicks, 2013). Social finance promotes new ways of making grants, social responsible investing (Duuren, Plantinga, & Scholtens, 2016), credit lending activities through sustainability credit score (Zeidan, Boechat and Fleury, 2015; Attig, El and Omrane, 2013) and social ratings (Birindelli *et al.*, 2015; Cellier and Chollet, 2016) in order to assess the impact of sustainable practices on investments. Also sustainability reporting with regard to environmental, social and governance (also known as ESG) factors has been improved during the last decade. In this line, the Global Reporting Initiative (GRI) guidelines favor ESG disclosure and ESG performance accountability (Boyko & Derun, 2016; Maniora, 2017; Michelon & Parbonetti, 2012).

Consequently, Environmental, Social and Governance (ESG) objectives play a crucial role among companies that nowadays, are facing the imperative call for pursuing at the same time social, environmental and financial performance that leads to corporate sustainability enhancement (Kiron, Kruschwitz, Haanaes, Reeves, & Goh, 2013; Ng & Rezaee, 2015). The common and intuitive research question that academics have been questioning during the last decade concerns the economic return payoff of the investment when companies adopt corporate social strategies. In other words, several studies point out the need to clarify if ESG sustainable performance implies better financial performance (Friede, Busch, & Bassen, 2015; Revelli & Viviani, 2015).

A prominent number of studies highlight that ESG information is value relevant to explain the positive relation between corporate sustainability and financial performance, in the sense that an enhancement of ESG practices foster the achievement of better financial performance. Notwithstanding this increased interest, other studies progress the ESG sustainability issue by clearly examining the value impact of ESG disclosure that leads to better ESG policies (Fatemi, Glaum, & Kaiser, 2017). As a matter of facts, the voluntary disclosure theory (Cheynel, 2013; Dye, 1985; Verrecchia, 1983) suggests that if companies achieve better ESG performance, firms may be more prone to show off these results than companies do with lower level of ESG engagement, or even none inclusion of these criteria. Consequently, the qualitative information on both ESG disclosure and ESG performance jointly affects the firm value by revealing that “investors discriminate strongly among the different dimensions of the ESG score” (A. Fatemi et al., 2017).

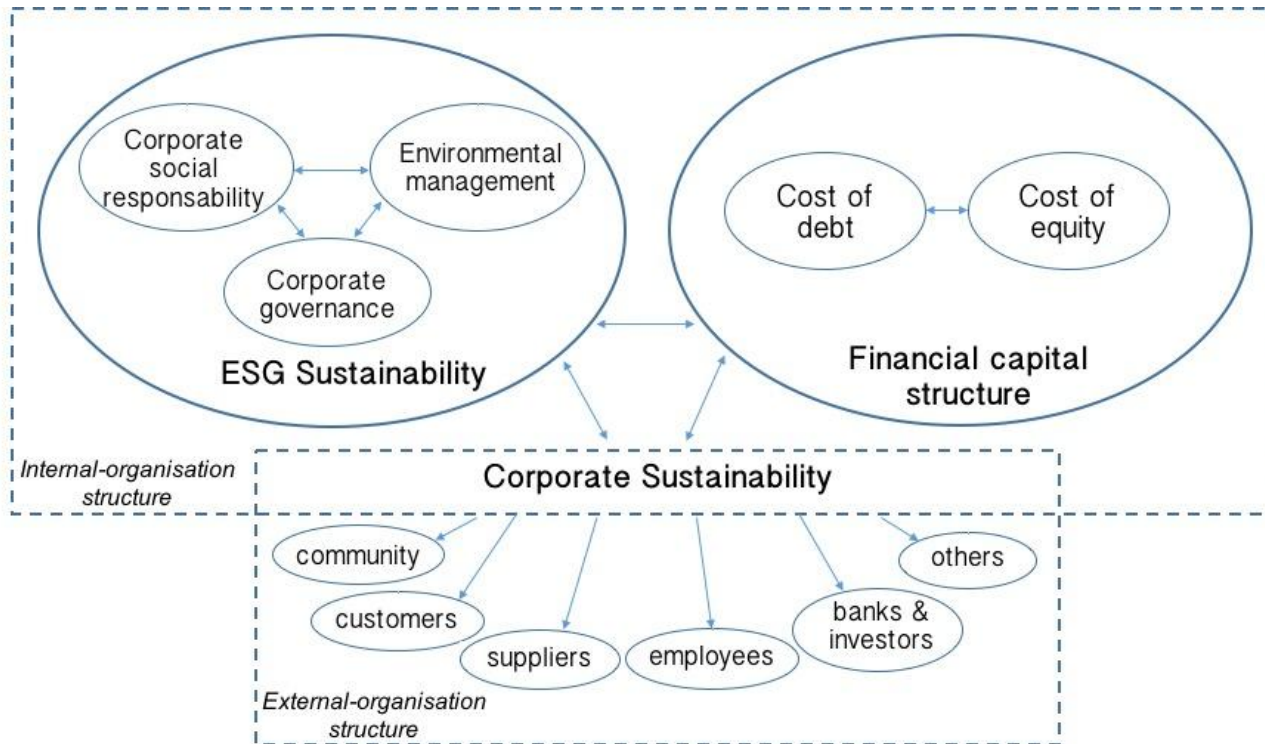
Under these theoretical considerations and the ever-growing interest on this issue, we claim that ESG sustainability refers to both ESG performance measures and ESG disclosure and we argue that ESG criteria should be aligned with the financial capital structure of companies, in terms of risk/reward, in order to jointly pay off both shareholders and stakeholders of the company. In lights of these argumentations, the paper is designed to frame the current state of the art on this topic, which has not been reviewing yet. We address the following research question: Which are the theoretical links that guide the relationship between ESG sustainability and financial capital structure of companies? Therefore, the aim of this research is to shed light on the current literature, outline the present academics works and provide avenues for further researches. We analyze scholarly studies that carry out the linkage between ESG sustainability (in terms of performance metrics and disclosure) and financial capital structure (in terms of cost of equity and cost of debt). The remainder of the paper is organized as follows. The next section details the theoretical background by outlining the theories under which this research is covered. Section 3 describes the methodology by explaining which academics papers have been gathered and how the content analysis has been carried out. Section 4 addresses the linkage between ESG and capital structure under investigation. Section 5 discusses the theoretical findings that have both practical and theoretical implications for future researches and finally, Sections 6 remarks conclusions.

## **2. Theoretical background**

Corporate sustainability management addresses the ethical orientation of sustainability in terms of sustainable resource use, conservation and preservation, rights-based perspective and deep ecology, that should include the intrinsic value of the nature (Schuler, Rasche, & Newton, 2017). In other words, strategy decisions of resource allocations should progress from an instrumental approach through which social, human and environmental interests are computed to an inherent attitude that creates value for all stakeholders (Freeman et al., 2010; Schuler et al., 2017). As a matter of fact, the mainstream goal of a company is to deliver value sustainability taking into account the jointly interests of all stakeholders (Freeman et al., 2010). In other words, sustainability relates to the synergy of social, economic and environmental enhancement with fairness and ethical criteria (Hoepner, Oikonomou, Scholtens, & Scholtens, 2016) and should be incorporated in the organizational wealth through a synergy approach that includes its stakeholders (Post, Preston, & Sauter-Sachs, 2002). Consequently, in order to foster corporate sustainability with the adoption of a more long-term perspective (Bénabou & Tirole, 2009), companies should set up both financial and ESG objectives and try to reduce its overall risk. In other words, social, environmental, governance and financial objectives are targeted by adopting criteria of effectiveness (achievement of the establish commitment) related to efficiency (financial resource allocation). This responsible management aims at delivering both economic, social and ecological aspects by achieving both profitability of its business and social responsibility of its actions through the understanding of the needs of the whole stakeholders (Harrison & Wicks, 2013). These theoretical concepts, as a result, are linked each other because sustainability implies the sustenance of the business itself, with an ethical, economic and financial viewpoint. As Sharfham & Fernando (2008) suggest, “if the firm makes ‘greener’ (i.e. more efficient) use of its resources, generating less pollution and waste from the resources employed, it will be more economically effective”. Heal (2005) provides a comprehensive list of pros that firms could achieve if they apply specific CSR programs: from the waste reduction to the improvement of human relations and employees’ productivity and the risk reputation reduction. Malik (2015) identifies the key concepts through which CSR-benefits outweigh the potential costs by reviewing the literature. Moreover, also capital markets view the engagement in environmental, social and governance issue positive in the sense that the investors’ perception changes in a positive way when

companies foster CRS initiatives as an increasing of earning quality (Choi, Korea, Moon, & Korea, 2016). However, for a company, what becomes tricky is to establish a certain investment decision-making process, balancing the combination of social, environmental and financial issues with a forward-thinking view. In other words, companies have to implement investment strategies by respecting capital budgeting, ensuring at least the financial payback return on the capital investee and taking care to the consequences of their investment decisions towards the surrounding society. Based on these argumentation, we frame our content analysis by describing the connections among ESG sustainability and financial capital structure revealed by the literature.

**Figure 1. Conceptual framework**



Source: Authors

In Figure 1 we provide a theoretical synthesis of the internal-organization structure of companies in which financial, environmental, social and governance objectives should be aligned together in order to go beyond the simple profit maximization and enhance the sustainability of the business itself by including the interests of all stakeholders. On one side, Environmental, Social, Governance (ESG) objectives are nowadays integrated by the companies in their investment process and generally are qualitative information not promptly quantifiable in monetary way. On the other side, the financial capital structure includes the equity financing and the debt financing through which companies are raising money to develop their business. This framework is the baseline of our research methodology because it helps us to outline the relationship between ESG sustainability, equity financing and debt financing by applying a deductive approach discussed in the next section.

### 3. Methodology

#### 3.1. Review design

We conduct a systematic literature review as an analytical method which identifies the core drivers aim at clarifying the linkage between ESG commitments and financial capital structure of companies. As a matter of fact, systematic literature review is employed by researchers when they aim at shedding light on a current issue by identifying, integrating and discussing related findings through highly quality scholarly articles (Baumeister & Leary, 1997; Randolph, 2009). We adopted a deductive approach based on the theoretical argumentations explained in Section 1 and the conceptual framework presented above (Cooper, 1988). Our research procedure consists of two main steps: firstly, we explain how the literature review has been carried out, then we illustrate which kind of data we gathered and how the collected articles were accuracy selected in order to jointly analyze

ESG and capital structure under review. The literature review has been structured using Cooper’s taxonomy as reported in Table 1.

**Table 1. Taxonomy literature review**

Characteristics	Categories	Review design
Focus	Research Methods	Systematic literature review using a deductive approach based on content analysis
	Research Outcomes	Links connecting ESG sustainability, cost of equity and cost of debt
Goals	Identification of the central issue	
	Integration of results and discussion	
Perspective	Neutral Perspective	
Coverage	Exhaustive with selective criteria	
Organization	Conceptual and qualitative synthesis	
Audience	Scholars and practitioners, such as financial institutions and companies	

Source: Adaptation from Cooper (1988)

The focus of this review concerns the theoretical and empirical analysis of the noteworthy links connecting ESG sustainability, cost of equity and cost of debt. As a matter of fact, the overall goal aims at clarifying the linkage between ESG criteria adopted by firms and financial capital structure of firms. By reviewing qualitative and quantitative studies with both financial and accounting-based perspective, we firstly identify the current state of the art around this issue and then integrate and discuss results by adopting a neutral representation of facts (Cooper, 1988). The organization of results has been exploited with qualitative synthesis criteria in order to identify and explain unsolved literature gap (Strike & Posner, 1983). Theoretical and managerial implications discussed in Section 5 will be valuable for both academics and practitioners of the sector, with particular attention to banks, investors and companies.

**3.2. Research setting**

In order to systematically review the literature on ESG sustainability and the financial capital structure, we gather articles that address this research topic on primary research databases: EBSCO Business Source Complete, JSTOR, Science Direct, Scopus, ProQuest and Web of Knowledge. In order to punctually select scholarly studies responding at our research question, we adopted inclusion and exclusion criteria on the topic under-investigation. The search strategy has been conducted in three steps, from January 2017 to April 2017, and has been carried out by considering the search terms grouped into two main issues: ESG sustainability and financial capital structure. The former group includes the following keywords: “ESG”, “ESG sustainability”, “ESG performance”, “ESG disclosure”, “corporate sustainability”, “CRS”, “corporate social responsibility”, whereas the latter takes into consideration “capital structure”, “financial capital structure”, “cost of debt”, “cost of equity”, “cost of capital”. All of that search terms were linked and combined each other through the Boolean search operator “AND” in order to narrow our research and clearly outline the boundaries of the review. We formulate time publishing period screening; specifically, we have taken into consideration scholarly publications from 2000 to nowadays. Moreover, in order to enhance a fully understanding and comprehensiveness of our systematic literature review, we adopted selected filters related to the article types.

**Figure 2. Research setting**

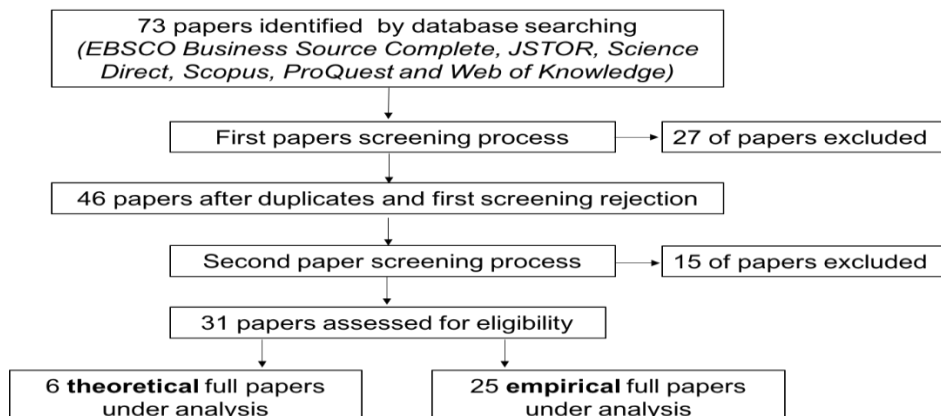


Figure 2 explains the research setting adopted. We focus on all available academics' journal publications which have been selected through a rigorous peer review process. We take into consideration both empirical and theoretical articles. The sample of peer review articles sets at 73, so we carry out the screening process in two stages. Firstly, in order to avoid duplicates, we control for an overrepresentation bias, we scrutiny the title of each papers and we excluded articles that apparently have no relationship with our purpose and topic of review. We then employed a second screening process by analyzing abstracts and related keywords; articles were rejected only if their abstract had no similarity with the two main issues (ESG and financial capital structure) we aim at jointly investigating. The final sample of peer-review articles set at 31 contributions that we analyzed in deep by reading the full paper. As expected, we noticed that more than 80% of the selected papers adopted an empirical methodology, whereas theoretical papers are less than 20%. Taking into consideration the empirical studies, we noticed that 65% investigate on the connection between ESG and equity financing whereas the remained, set at 35%, concerns on the relation between ESG and debt financing. The content analysis presented in the following section draws upon both corporate sustainability and financial concepts.

#### **4. ESG sustainability and financial capital structure**

##### **4.1. ESG sustainability and cost of equity**

Several researches have been investigated the relationship between corporate sustainability performance measures and the cost of equity during the last decade and they have been progressed so far (Ng & Rezaee, 2015). Literature is unanimous on the positive effect that ESG factors have on the cost equity decline, so an increase of ESG activities affects a lowering cost of equity. Results show that the main reasons of its reduction can be ascribed to the asymmetric information decreasing (Ferris, Javakhadze, & Rajkovic, 2017; M.-L. Matthiesen & Salzmann, 2015; Ng & Rezaee, 2015). This argument is moved by the following considerations. From apractitioners' perspective, a survey conducted by PriceWhaterhouseCooper (2014) claims that one of the first positive aspect in adopting ESG criteria is its potential to mitigate risk through the cost of equity reduction. Moreover, a survey conducted to financial directors (Armitage & Marston, 2007) reveals that the more disclosure, as a result of greater transparency, reduces the risk and consequently the cost of equity.

From the academics' point of view, one of the first valuable contribution that used financial-based dependent and independent variables has been carried out by Sharfam & Fernando (2008). They tested whether better environmental risk management is rewarded by the financial markets in terms of a cost of capital decline on a 267 US firms sample. In relation to the cost of equity, findings suggest a negative association between the environmental risk management due to the lower beta as the firm's stock volatility achieved. These results are confirmed by Borghesi, Houston, & Naranjo (2014); Crifo & Forget (2015); Dhaliwal, Li, Tsang, & Yang (2011); El Ghouli, Guedhami, Kwok, & Mishra (2011) and Reverte (2012) that show the negative association between sustainable business practices and the cost of equity, so that an increase of the social responsible actions implies a decrease of the cost of equity. Ng & Rezaee (2015) advance the literature by investigating how each of sustainable approach affects the cost of equity and furthermore adding financial and non-financial (ESG) sustainable performance always in relation to the cost of equity. They confirm previous results, even if social sustainability performance is not enough significant to establish causality on the cost of equity. More recent studies identify in the social capital the way to explain the firms' commitment to corporate social responsibility matters (Ferris et al., 2017; Lins & Servaes, forthcoming). The former addresses this issue in the stressed period of the financial crisis, in which results on concern reveals that social capital, as a proxy of corporate social responsibility intensity, lead to higher level of firm value, higher profitability, growth and sales; the stock return performance pays four percentage points more. The latter of Ferris et al. (2017) focuses on the effects of managerial social capital, as a tool that facilitate information sharing among stakeholders, on a firms' cost of equity financing. More precisely, they estimate the mean value of the implied equity risk premium and they aggregate measure of social connections between managers as a proxy of social capital. Results show an inverse relation between managerial social capital and the excess cost of equity capital. Specifically, cost of equity financing monotonically decreases across social capital, so the difference in the equity risk premium between high and low social capital quartiles has been demonstrated and is statistically significant at one percent level (Ferris et al., 2017). This evidence needs us to claim that social capital reinforces transparency and awareness in the financial decision making process.

Accordingly, Cohen, Holder-Webb, Nath, & Wood (2011) and Cohen, Holder-Webb, Nath, & Wood (2012) demonstrate that social capital enhances the sharing information within a community or network and reduces also the information asymmetry between counterparts. Consequently, inefficiencies in the financial capital markets, such as adverse selection and moral hazard, decline due to the imperfect information reduction. Cuadrado-Ballesteros, Garcia-Sanchez, & Martinez Ferrero (2016) and Hung, Shi, & Wang (2013) confirm that the reduction of asymmetry information plays a crucial role, in sense that social disclosure quality reduces the cost of capital by decreasing of information asymmetry, so firms which promotes ESG disclosure for an information asymmetry reduction objective, achieve lower cost of capital (Botosan, 2006; El Ghouli et al., 2011; Francis, LaFond, Olsson, & Schipper, 2004; Reverte, 2012).

**Table 2. Linkage between ESG and Cost of Equity**

Study	Methodology	Data Collection	Sample	Time period	Findings
(Armitage & Marston, 2007)	Survey Research	16 semi-structured interviews	Finance directors	November 2005 – June 2006	Lower CE
(Borghesi et al., 2014)	Quantitative (Regression, Fixed Effects)	KLD Research & Analytics; CRSP/Compustat database	11,711 US companies	1992 - 2006	Lower CE
(Botosan, 2006)	Qualitative				Lower CE
(Crifo & Forget, 2015)	Qualitative				Lower CE
(Cuadrado-Ballesteros et al., 2016)	Quantitative (multi-regression model)	Thomson One Analytics; I/B/E/S database	1,260 non-financial listed companies	2007 - 2014	Lower CE
(Dhaliwal et al., 2011)	Quantitative (logistic regression model)	KLD STATS, Compustat I/B/E/S database	11,925 CSR Reports	1993 - 2007	Lower CE
(Ferris et al., 2017)	Quantitative (multi-regression model)	DataStream; Worldscope; BoardEx database of Management Diagnostic Limited I/B/E/S	37,712 firms across 52 countries	1999 - 2012	Lower CE
(Hung et al., 2013)	Quantitative (difference-in-differences method with a propensity-score matched procedure)	GTA, China Security Market and Accounting Research (CSMAR) database	3,723 firms	2006 - 2010	Lower information asymmetry
(Lins & Servaes, forthcoming)	Quantitative (difference-in-differences model fixed effect)	Compustat; MSCI ESG Stats Database	3,000 largest U.S. companies	2008 – 2009	Lower cost of capital
(M. L. Matthiesen & Salzmann, 2013)	Quantitative (multi-regression model)	Thomson Reuters ASSET4 database; Institutional Brokers' Estimate System I/B/E/S database; DataStream	3,439 firms in 42 countries	2002 - 2013	Lower cost of capital
(Ng & Rezaee, 2015)	Quantitative (PCA)	KLD database, Compustat; CRSP	3,000 firms	1991 - 2013	Lower cost of capital
(Sharfah & Fernando, 2008)	Quantitative (regression model)	KLD Stat, Compustat; United States EPA TRI data; Bloomberg Financial Dataset	267 U.S. firms	Risk premium over the period 1872 – 2000	Lower cost of capital
(Reverte, 2012)	Quantitative (regression model)	Observatory on Corporate Social Responsibility (OCSR) reports; JCF Quandt database	Spanish listed firms	2003 - 2008	Lower cost of capital
(El Ghouli et al., 2011)	Quantitative (multivariate regression analysis)	KLD STATS; Thompson (I/B/E/S); Compustat	12,915 U.S. firms	1992 - 2007	Lower cost of capital

Source: Authors

In Table 2 we provide a synthesis of the studies under-analysis by highlighting the sample under investigation, the time period of the analysis, the methodology applied and findings sorted out. More precisely, findings are addressed by explaining the positive/negative connection between the variable under analysis, in the sense that an increase of ESG affects higher cost of equity/lower cost of equity.

#### **4.2. ESG sustainability and cost of debt**

We reveal that the literature can be divided into two main streams of research: the former concentrates the analysis on the cost of corporate bond and bond issue (Chen, Kacperczyk, & Ortiz-Molina, 2012; Ge & Lui, 2015; Menz, 2010), while the latter investigates the private debt and loans mainly extended by banks (Anis & Utama, 2016; E. W. Cooper & Uzur, 2015; Goss & Roberts, 2011; Hoepner et al., 2016). Findings show heterogeneous and disparate results leading to no clear-cut boundaries yet. The research of Sharfama & Fernando (2008) is one of the first studies. The study demonstrates that debt markets have contrary risk metrics than equity markets do, because the cost of debt increases at the same time by increasing environmental risk management actions, and this is possible by letting firms to increase their debt financing. Concerning the first stream of research (the one that investigates the links between ESG and the debt markets) a heterogeneous association of them sorts out. In this line, Chen et al., (2012) study the effect of one specific categorize of social concerns, the employees' relationship in U.S. firms, on the corporate debt pricing. Due to the less risky investment policies, protection bondholders' wealth acknowledged by the bond market, a yield reduction is recognized. Similar results are provided by Ge & Lui (2015) because they point out that "a higher CSR strength score is associated with lower yield spreads in new corporate bond issue and better credit ratings", that means an appreciation from bondholders of CSR activities adopted by borrowers. Their analysis covers 4,260 new public bond issues in the U.S. market in the period 1992–2009. On the contrary, Menz (2010) investigates the relationship between CSR and bond spreads in Europe and points out a higher risk premium for firms with higher CSR commitments.

Goss & Roberts (2011) however argue that the corporate bond market is less efficient than the bank loan market due to the specific private information the banks can gather at the beginning of the contract and also during the monitoring process of the borrowers' commitment in giving back the loan. This could be one of the reasons why further studies have progressed by focusing only on the linkage between cost of debt loans and ESG activities employed.

Goss & Roberts (2011) find that banks establish a second order priority regarding social and environmental commitment established by companies, in other words, lenders do not reward the CSR investments of borrowers and do not include them in the spread as a risk mitigation factor. More specifically, they investigate the impact of corporate social responsibility on the cost of bank loan, by finding that "firms with social responsibility concerns pay between 7 and 18 basis point more than firms that are more responsible" (Goss & Roberts, 2011).

Far from this study, the researches of Cooper & Uzur (2015) and Hoepner et al. (2016) posit opposite results because they discover a negative correlation between the two terms in the sense that CSR commitment pays with lower cost of debt on banks loans. Specifically, Cooper & Uzur (2015) suggest that CSR practices are crucial in "determine the cost of debt" as a strategy management perspective by reducing the cost of debt financing, the enhancement of CSR activities is beneficial (Cooper & Uzur, 2015). Similarly, Anis & Utama (2016) suggest that "both lenders and borrowers take advantage from the CSR disclosure", as well as ESG disclosure.

Nandy & Lodh (2012) use 3,000 lending transactions by banks in U.S. and find that companies adopting the ESG metrics can negotiate advantageous loan contracts with banks. Borrowing costs can be lower if social connections among counterparties, especially between banks and borrower, become stronger (Engelberg, Gao, & Parsons; 2012). The study of Hoepner et al. (2016) is highly relevant in its overall structure because they link the cost of loans not only on singular firm level CSR performance measure, but they also extend the investigated objective to a country-level analysis, taking into account each sub-dimensions of environmental, social and governance concerns, enriching the literature as a consequence. They reveal that social and environmental activities statistically impact on the loan financing and the former has less cost reduction in the loan financing than the environmental one. In addition, literature has been also advanced in terms of the construction of sustainability credit scoring; this tool ranks firms in terms of their sustainability commitment through which the bank can assess a higher quantity of information; thus allow them to develop diverse lending strategies focused on local units (Zeidan et al., 2015). We report in Table 3 the results discussed above.

**Table 3. Linkage between ESG and Cost of Debt**

Study	Methodology	Data Collection	Sample	Time period	Findings
(Anis & Utama, 2016)	Quantitative ( <i>OLS and 2SLS with PLS</i> )	Published CSR Disclosure and Corporate Governance disclosure on annual report	Manufacturing Industry (Indonesia Stock Exchange)	2011 – 2014	Indirect positive effect CSR disclosure on cost of debt
(Cooper & Uzur, 2015)	Quantitative ( <i>multi- regression model</i> )	KLD Stat; Bloomberg; Mergent Fixed Income Securities Database;	US companies	2006 – 2013	Lower cost of debt
(Ge & Lui, 2015)	Quantitative ( <i>multi-regression model</i> )	RiskMetrics Group; KLD STATS database; Mergent Fixed Income Securities Database; Compustat	4,260 new bond issues from 2,317 firms.	1992 – 2009	Issue bonds at lower cost
(Goss & Roberts, 2011)	Quantitative ( <i>simultaneous equations, instrumental variable regressions, and a Heckman selection model</i> )	KLD Research and Analytics Inc.; Dealscan	3,996 loans	1991–2006	Higher loan pricing
(Menz, 2010)	Quantitative ( <i>OLS – fixed effect, random effect model</i> )	Merrill Lynch index system	498 bonds	2004 - 2007	Higher Bond Spread
(Nandy & Lodh, 2012)	Quantitative ( <i>OLS; fixed effect; Wald test to confirm</i> )	Kinder, Lydenberg and Domini Research & Analytics, Inc.; Compustat; Dealscan database	3,000 U.S. firms	1991 - 2006	Lower cost of loan negotiation
(Zeidan et al., 2015)	Qualitative				Lower cost of debt; <i>lower default probability expected</i>

Source: Authors

These contradictory results reveal from diverse sample collection that could introduce data-driven or also data-mining bias and thus conduct the research on one stream rather than another. Despite of this, the topic is still an open-debate for scholarly. In the next section we will provide our consideration around this issue by suggesting future researches on this challenging stream of research.

### **5. Discussion: the risk mitigation perspective**

Several studies point out the indirect link between ESG sustainability and firm risk profile due to the direct connection between ESG and the overall financial capital structure in terms of equity and debt financing (Albuquerque, Durnev, & Koskinen, 2014; Cai, Cui, & Jo, 2016; Gramlich & Finster, 2013; Lee & Faff, 2009). In this line, we argue that the enhancement of ESG activities act as a risk mitigation factor that indirectly reduces the overall risk of companies through the mediating role of the financial capital structure. If this is achieved, companies obtain better ESG and financial performance in the long-term. The ESG commitment, which acts as a risk mitigation factor, has relevant implications on the equity market and the bond market. Taking into consideration the equity market side, Boutin-Dufresne & Savaria (2004) study the implication on the equity financing and they sort out that higher CSR scores has impactful result on lower levels of firm idiosyncratic volatility. Consequently, idiosyncratic risk, reflected in the price premium, may be priced in the financial market by investors (Lee & Faff, 2009). Galema, Plantinga, & Scholtens (2008) confirm that by underlining that firms with higher CSR commitment achieve higher market to book-value, lower return and lower idiosyncratic risk. Changing our perspective on the debt financing market, the consequence of this possible direct association between these ESG enhancements and the default probability is noteworthy.



In fact, the implementation of the social, environmental consciousness in the credit scoring evaluation may lead financial institutions to better ranking, more efficiency resources allocation and consequently also companies take advantage from this more objective score evaluation through a win-win solution. These practical considerations are moved by the following theoretical reason. The fundamental concepts of the capitalism are not always well-aligned with environmental and societal good. The famous “tragedy of the commons” demonstrates how entities within a community act independently for their own self-interests which are individually beneficial but collectively unsustainable (Ostrom, 1999). With a very similar perspective, investors, from the market side and lenders from the debt side do not perceive the real consequences from their own investments (Bonini & Emerson, 2005), so encouraging both of them to implement the credit score system and the risk-adjusted performance measures in which ESG scores are included, could foster sustainable development among all stakeholders. One suggestion may be investigating the drivers that guide the relation between ESG sustainability and default probability. If this relation exists and it is relevant with a negative sign, this suggests an increase of ESG concerns lead to a default probability decrease. As a matter of fact, if this is true, banks and lenders in general could include ESG factors in the creditworthiness evaluation process. Furthermore, the market could perceive the adjusted risk profile of firms that also pays the ESG commitments of firms. Finally, companies enhance ESG practices that lead to the well-being of society being and, at the same time, they are correctly repaid. Therefore, the financial decision-making process may be architecture with an ethical perspective that takes into account both the activation of the optimal choice and the fully awareness on investments (Duuren et al., 2016). As Fatemi & Fooladi (2013) assert, in order to create sustainable wealth, what is crucial is to overcome the shareholder wealth maximization and thinking on “the shared value paradigm”, stated by Kramer & Porter (2011). Through this approach, both companies and the overall community could take advantages from the firm’s business and this creates sustainable wealth.

## **6. Conclusion**

The paper advances the current debate among ESG sustainability applied by companies and the composition of the financial capital structure, referring to cost of equity financing and cost of debt financing. A systematic literature review based on content analysis has been carried out in order to disentangle the contradictory results among this issue. This paper is not without limitations that lead us to further researches. Firstly, we adopt a content analysis even if academics papers reviewed have been foremost carried out a quantitative methodology based on econometric models and regressions analysis. Consequently, one of the possible methodology employed could be the meta-analysis, principally based on quantitative reviews. Despite of this, our aim is to frame the current state of the art in qualitative concerns, in order to provide avenues for further researches, so we adopted the content analysis. Further researches may adopted a punctually meta-analysis in which quantitative metrics are gathered. The paper enhances the literature in the following directions. Our findings reveal two diverse directions; specifically, whereas the boundaries among ESG sustainability and equity financing are well delineated, results concerning the relationship between ESG sustainability and debt financing are ambiguous and no clear-cut defined. In this direction, further works could well establish this relation by analyzing the nexus between ESG sustainability and default probability. Ultimately, our results reinforce the literature by underlining the extremely importance to set both ESG performance and ESG disclosure metrics in terms of the quality of qualitative information provided by the companies. In fact, quantitative information is not enough without appropriate qualitative information conjunction; the synergy of both leads to better disclosure and ethical consciousness.

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