

## Corporate Sustainability Assessment and Risk Perception: Empirical Evidences from Standard & Poor's Index

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### Abstract

*Over last years, responsibility and sustainability issues have become a corporate asset able to enhance firms' market value and, at the same time, meeting stakeholders' needs. The additional information in regards to corporate social and environmental commitment has been disclosed on listed markets, implying a lower asymmetry between investors and firms. As a consequence, investments uncertainty has been decreasing through this non financial information which has made investors' capital allocation more responsible. This paper investigates the impact of corporate social responsibility and sustainability on investors' risk perception according to Environmental, Social, and Governance (ESG) paradigm. We focused on a double risk measurement - systematic and idiosyncratic - developing an empirical study on 77 companies listed on Standard & Poor's index and belonging to "Consumer Discretionary" industry cluster. Empirical findings highlight that an overall ESG assessment affects positively investors' risk perception, although - in some cases - this effect is partially balanced by the single assessments Environmental, Social, and Governance.*

**Keywords:** Corporate Risk; Corporate Social Responsibility; Sustainability; Standard & Poor's; Environmental, Social and Governance; ESG rating.

**JEL Classification:** G11 D81 M14

### 1. Introduction

Historically, social commitment of companies has been argued as economic responsibility to investors and consumers, ethical responsibility to society, legal responsibility to governments and discretionary responsibility to the community (Carroll, 1979). This research topic deals with Management Science, Corporate Finance and Risk Management, investigating how corporate sustainability within the Environmental, Social, and Governance dimensions (ESG from here forward) may affect investors' risk perception on stock exchange markets. Over last decade, investors' behavior in asset allocation has been addressing to social and environmental externalities on communities, focusing on more responsible securities. These not typical issues in asset management have denoted a growing interest in getting non financial information, especially in regards to ESG paradigm.

Investors' responsiveness on one hand and companies' social and environmental commitment on the other hand, led some organizations to issue new forms of assessments meant to disclose corporate sustainability performance. The lower information asymmetry between investors and firms due to ESG rating and related to additional information implies as a consequence a better corporate risk performance from investors' perspective. Hence, the purpose of this study consists in exploring the relationship between firms' ESG assessments and their risk exposures, aiming at identifying whether the investors' risk perception could be improved by corporate sustainability on listed market.

We found that an overall ESG assessment is able to improve investors' risk perception, both systematic and idiosyncratic, and could be a reliable leverage to manage high market uncertainty. Therefore, corporate risk exposure could be affected by only one ESG component rather than another one, considering that companies have endogenous characteristics and operate in different market conditions. In attempting to highlight the ESG single components' impact on asset allocation, we tested separately Environmental, Social and Governance ratings on risk perception, in order to understand which factor prevails over the others and how ESG components - standing alone - diverge from the overall ESG effect on corporate risk measurements. Our findings pointed out that the positive impact of an ESG full rating could be weakly balanced by the effect of the single assessments, implying a biased investors' perception whether they pay attention to a partial sustainability assessment of a listed company.

## 2. Prior literature

### 2.1 Corporate Social Responsibility and risk

The external social pressure and the increasing influence of the media and activist groups in modern societies led organizations to see non-market strategies as *founding stones* of their behavior. As a consequence, companies should focus on the different ways they can affect the society, undertaking additional investment in Corporate Social Responsibility (CSR) (Carroll & Shabana, 2010).

Accordingly, several studies highlighted that moral managers exploit CSR activities to improve transparency and to reduce firm's risk (e.g. Jensen & Meckling, 1976; Alejandro, Garcia & Sàenz, 2013); often companies adopted CSR practices to increase their legitimacy towards the related stakeholders, seeking to influence their behavior and creating a positive corporate image (Brown & Dacin, 1997). Therefore, companies might consider CSR engagement as a strategic investment tool (Carroll, 1998; Porter & Kramer, 2006; Cai, Jo & Pan, 2012). Indeed, the benefits deriving from CSR activities could embrace stakeholders satisfaction, risk management, market appeal to customers, better transparency and an easier access to financial markets (Jo & Na, 2012). Firstly, firms involved in CSR engagement are more encouraged to disclose their ethical activities since they can become more transparent towards the related stakeholders (Dhaliwal et al., 2011). Consequently, a deeper degree of transparency tends to reduce the informational asymmetries between the company and investors thus lowering the perceived firm's risk (Alejandro, Garcia & Sàenz, 2013; DeBoskey & Gillett, 2013; Cheng et al., 2014; Orlitzky & Benjamin, 2001). In addition, firms commitment in CSR activities allows an easier access to capitals and improves employees productivity (McGuire et al., 1988; Moskowitz, 1972).

Other authors suggested a negative relation between risk and CSR activities (Spicer, 1978; McGuire et al., 1988; Sharfman & Fernando, 2008; Hong & Kacperczyk, 2009; Jo & Na, 2012; Boutin-Dufresne & Savaria, 2004; Czerwińska & Kaźmierkiewicz, 2015). For example, Spicer (1978) argued that firms commitment in pollution controls enhances a higher profitability and a lower systematic risk than ones with less pollution checks. In fact, the absence of socially responsible activities led firms to increase risk exposure. Likewise, Salama et al. (2011) focused on the relationship between firms environmental responsibility and perceived risk, demonstrating that the environmental performance is inversely related to firm systematic risk. In addition, Bansal & Clelland (2004) argued that an environmentally responsible behavior can be associated with low unsystematic risk since firms with high level of institutional legitimacy access to funds more easily than non-legitimized ones.

Accordingly, investors interested in financial impacts could also look at risk reduction. On this ground, some evidences showed that less ethical companies have a lower economic performance and a higher risk than ones with a stronger social responsibility commitment (Ullman, 1985; Graves & Waddock, 1994; Margolis & Walsh, 2001; Orlitzky, Schmidt & Rynes, 2003). Particularly, Jo & Na (2012) explored the negative association between firm risk and CSR engagement, finding that risk reduction in controversial companies through CSR engagement is more significant than those acting in non-controversial sectors. Bassen et al. (2009) suggested that a complete lack of CSR engagement exposes a company to a high risk, while companies with good CSR performance reduced risk exposure.

Boutin-Dufresne & Savaria (2004) argued that also the ethical codes adoption may reduce the overall business risk thus improving the risk-adjusted stock performance of ethical firm portfolios in the long run. Lee & Faff (2009) suggested that firms showing a socially responsible behavior exhibit lower idiosyncratic risk and it might be priced by the broader global equity markets.

Although the growing consensus about the risk-mitigation view (Goss & Roberts, 2011), several authors considered investments in CSR as value-destroying from a shareholder perspective (Friedman, 1970; Aupperle et al., 1985; Tribó et al., 2009); indeed, the higher the costs to satisfy stakeholders needs the greater the complexity and the volatility of earnings (Alexander & Buchholz, 1978; Frooman et al., 2008).

Moreover, Bassen et al. (2006) argued that high levels of CSR performance seem to reduce company's financial risk, although a clear relationship between CSR and financial performance was not found. Finally, Trotman & Bradley (1981) analyzed the impact of social disclosure on firm's systematic risk without finding any significant association between these two phenomena.

## **2.2 ESG Rating and risk perception**

Several studies suggested that investors take into account the expected rate of return and the investment risk degree in decision-making process. Accordingly, they might consider not only economic and financial factors but also non-financial parameters (Hockerts & Moir, 2004; Margolis, Elfenbein & Walsh, 2007; Rennebog, Ter Horst & Zhang, 2008; Dobson, 1997; Sauer, 1997; Boatright, 2013). Therefore, the investors look to the companies commitment in the environmental dimension as well as in the social and governance ones, according to the ESG (Environmental, Social, Governance) paradigm. Hence, the level of information available to investors and its completeness and reliability affect the degree of information asymmetry of the capital market (Czerwinska & Kazmierkiewicz, 2013).

To date, the interest in Socially Responsible Investing (SRI) increased around the world. Such ethical investing considers the integration of ESG factors into the investment selection process. On this ground, the ESG ratings provided by specialized agencies play a critical role in the investors decision-making since they take into account social responsibility issues as well as financial ones. Several studies examined the relationship between the social ratings and the financial performance (e.g. Bauer, Koedijk & Otten, 2005; Bello, 2005; Kreander et al., 2005; Statman, 2006; Schroder, 2007) giving important implications for managers and investors.

For instance, some researchers highlighted that the adoption of ESG criteria to build up an investment portfolio tends to reduce investors information asymmetry, allowing them to achieve returns above the average (Kekäläinen, 2004; Kempf & Osthoff, 2007). On this ground, the ESG paradigm affects positively the investment portfolio effectiveness since socially responsible companies reach better long-term economic and financial results. However, researchers showed not-agreeing empirical evidences about this relationship. Indeed, some studies found that a more socially responsible behavior is related to a worse corporate performance (Wright & Ferris, 1997), while others suggested it can help in creating a better reputation increasing the financial performance in the long run (Ullman, 1985; Graves & Waddock, 1994; Margolis & Walsh, 2001; Orlitzky, Schmidt & Rynes, 2003). In addition, different authors (Goldreyer & Diltz, 1999; Sauer, 1997; McWilliams & Siegel, 2000; Schroder, 2007) argued there is no significant relationships between the two phenomena.

Likewise, the empirical evidences showed conflicting results also in terms of financial risk. Indeed, Oikonomou et al. (2012) found a negative but non-significant association between ESG practices and systematic risk, while a socially irresponsible behavior is positively linked to the systematic risk with respect to S&P 500 companies. Instead, Bouslah et al. (2013) analyzed a set of US firms from 1991 to 2007 founding that a corporate sustainable approach is able to impact positively on idiosyncratic risk. Moreover, Humphrey et al. (2012) suggested that companies with high ESG scores do not overcome those with low scores in terms of their systematic risk and performance.

## **2.3 Research hypotheses development**

As shown in the previous literature, the relationship between CSR and investors risk perception inspired a lot of scholars over the years with mixed empirical results. Prior research suggested that fitting ESG performance within the specific context of an industry may explain such differences in this relationship (Griffin & Mahon, 1997; Brammer & Pavelin, 2006). For instance, in a high-environmental impact industry, the perceived investor risk is slightly affected by the corporate environmental performance (Hart, 1995; Darnall et al., 2007; Burnett & Hansen, 2008; Darnall et al., 2009). Furthermore, the benefits deriving from a socially responsible behavior might be context-driven and dependent on the external environment (Flammer, 2013; Jiraporn et al., 2014).

Therefore, our study aimed to fill this gap in the prior literature introducing a contingency approach to the typical relationship between ESG performance and investor risk perception. Particularly, we considered the external context and the intrinsic industries factors able to influence the overall investors risk assessment (Foster et al., 2011).

In doing so, this work analyzed whether Environmental, Social and Governance components – considered separately and jointly – affect investors risk perception both from a systemic and idiosyncratic market perspective. Hence, we formulated the first three research hypotheses in regards to the single impact of ESG components, as follows:

HP1: A Corporate Environmental Assessment affects investors' risk perception.

HP2: A Corporate Social Assessment affects investors' risk perception.

HP3: A Governance Assessment affects investors' risk perception.

The last hypothesis aims at exploring how the ESG components - jointly into an overall rating - may influence financial risk:

HP4: An overall Corporate Sustainability Assessment affects investors' risk perception.

### **3. Methodology**

#### **3.1 Sample and data**

We applied a cross-sectional study to our research design using an Ordinary Least squares (OLS) approach in order to test how independent variables affect firms' risk exposure, through four regression models including the three single impacts of ESG components as well as the impact of an overall ESG assessment (Table. 1). In our study we considered the 500 large-cap companies belonging to the S&P 500 stock market index, given that it lists 505 common stocks which represent about the 80 percent of the securities traded on U.S. stock exchange market. This index is featured by free-float market capitalization. We also filtered our sample basing our data collection on the Global Industry Classification Standard (GICS), an industry taxonomy applied for the first time in 1999 by MSCI and Standard & Poor's (S&P) that ranks all companies into 11 industrial sectors, coming to a sample of 77 entities. In doing so, we focused on those companies included into the "Consumer Discretionary Sector", that is a well-diversified cluster of companies known and recognizable by both investors and consumers, and as a consequence their performance should be also affected by the consumers' perception about company's CSR commitment. We worked on these companies to point out whether Environmental, Social, Governance – analyzed separately and wholly – affect investors risk perception both from a systemic and conjunctural market perspective.

For testing our hypotheses, we collected ESG data from three global providers engaged in financial and non-financial disclosure: 1) Sustainalytics, a rating agency which since 1992 has been applying the ESG framework (Environmental, Social, Governance) to sustainability assessment; 2) Yahoo Finance and Morningstar, investment research and financial management organizations; 3) Global Reporting Initiative, an international independent standards organization which supports firms in disclosing their impacts in regards to sustainability issue. In particular, Sustainalytics formulates assessments meant to understand how each company is compliant to the environmental, social and governance issues, aiming to mitigate the risk exposure coming from stakeholders adverse behavior once they are involved in products, services and business activities. Moreover, the Global Reporting Initiative identifies a widely set of corporate socially responsible practices, disclosing related activities (Brown, De Jong & Lessidrenska, 2009) and the information each company states in its ethical codes (Clarkson, 1995). This in turn helps in managing the relationships with some specific stakeholders (Auger et al., 2008).

#### **3.2 Variables**

In order to provide a comprehensive view of companies risk measurements aligned to previous studies in prior literature, we used ratio and ordinal scales measures for both dependent and independent variables, including ESG components and controls (Table. 1). Moreover, to take into consideration a wider perspective of risk performance, we followed a double approach: on one side we focused on the systematic risk exposure of S&P companies for considering giving a market view; on the other side we dealt with a volatility risk measure for giving an investor perception.

##### **3.2.1 Dependent variables**

We measured companies' risk according to a double analysis model: a) a systematic risk through 5 year monthly beta risk estimation, whose values were collected from Thomson Reuters database; b) an investment-based risk through a 5 year standard deviation of companies' daily adjusted close prices, basing on Yahoo Finance and Thomson Reuters analyses. The first measure (Beta Risk) is a ratio which explains the undiversifiable investment risk over our timeframe. We considered this systematic risk performance on a monthly base for reducing the effect of outlier values that we often found in firms beta risk values, ranging from one year to another one. The second risk measure (Standard Deviation) looks at idiosyncratic risk of an investment portfolio as well as market microstructure phenomena, through an overview of prices formation process and estimating its daily volatility by standard deviation.

Two different approaches to quantify risk exposure take into account how the investors can handle their stock-picking aiming to lower investment risk through ESG paradigm.

##### **3.2.2 Independent variables**

In assessing the impact of ESG components on companies risk measures, we considered – standing alone – environmental rating, social rating, and governance rating as well as the overall ESG assessment issued on annual basis by Sustainalytics agency. First, we identified how each pillar of corporate sustainability affects firms' risk, in order to

highlight which component plays a driving-role in investment risk analysis. Accordingly, we verified the relationship between the full ESG evaluation and corporate risk exposure, pointing out where a reliable synthesis of the three components – issued by the same agency – can steer more easily investors towards a sustainable investment portfolio. We adopted the evaluation scale of Sustainalytics which ranges from 1 to 100, both in single ESG components and overall ESG rating, computing a yearly average over a five-year timeframe (from 2014 to 2018).

Our research interest in testing the impact of all sustainability measures, from a single perspective to an overall evaluation, can explain the main factors underlying a socially responsible investment and whether investors pay attention to a deeper information of each ESG components rather than a gross sustainability assessment. Moreover, a five year average is aligned with risk measurement timeframe and reflects the buy and hold approach of a socially responsible investor, besides all the potential up/downgrade of the investment portfolio.

### 3.2.3 Control variables

In order to improve the reliability of our analysis, we employed three control factors for explaining the variability related to risk exposures. In doing so, each control provides a different corporate perspective, such as a market-based measure using the multiple price/earning regarding financial statements disclosed in 2018; an accounting-based measure expressed by Total Asset of companies; and an organizational-based measure reporting the number of employees which proxies a firm's dimension. Hence, we selected those factors which can reasonably influence the variability of our two analysis models, whose definitions are reported below:

*Total Asset.* A measurement regarding the asset size of the entity being monitored.

*Price/Earning ratio.* It measures company's current share price relative to its earnings per-share, allowing analysts to make a forecast on company's shares valuation or comparing firms' performances over time.

*Employment.* Number of employees working at companies' headquarter or branches within 2018 fiscal year.

*Social disclosure.* This variable identifies whether a company discloses its social commitment through reports according to GRI standards. We used this condition for measuring if a company is deploying a CSR practice.

**Table 1. Variables**

Variables	Description	Measure	Source
<i>Dependent Variables</i>			
BETA	5 year monthly Systematic Risk estimation	Ratio	Thomson Reuters©
VOLATILITY	5 year standard deviation on daily stock adjusted prices	Standard Deviation	Yahoo Finance
<i>Independent Variables</i>			
ENV (Hp1)	5 year average on annual basis of environmental assessment	0-100 scale	Sustainalytics©
SOC (Hp2)	5 year average on annual basis of social assessment	0-100 scale	Sustainalytics©
GOV (Hp3)	5 year average on annual basis of governance assessment	0-100 scale	Sustainalytics©
FULL (Hp4)	5 year average on annual basis of the overall ESG assessment	0-100 scale	Sustainalytics©
<i>Control variables</i>			
TA	Total amount of assets owned by the companies	Value	Morningstar©
PE	Company's current share price relative to its per-share earnings	Ratio	Morningstar©
EMP	Full-time employees working at companies' headquarter or branches within 2018 fiscal year	Value	Yahoo Finance
SR	Presence/absence of social reports according to GRI Standards	0,1	GRI database

**Table 2. Descriptive Statistics**

<b>Variables</b>	<b>N. Obs.</b>	<b>Mean</b>	<b>Standard Dev.</b>	<b>Min</b>	<b>Max</b>
<i>Dependent Variables</i>					
BETA	77	1.06	0.43	-0.44	1.91
VOLATILITY	76	28.51	2.38	1.35	488.69
<i>Independent Variables</i>					
ENV	77	54.14	10.38	37.50	79.25
SOC	77	53.89	8.15	40.75	73.25
GOV	77	63.77	5.92	47.75	74.25
FULL	77	56.34	7.05	43.25	70.00
<i>Control variables</i>					
TA	77	27458555.61	46146432.24	2045692	257808000
PE	74	26.03	49.77	3.74	430.00
EMP	76	84370.71	102696.11	3281	566000
SR	77	0.57	0.50	0.00	1.00

#### 4. Analysis and results

We developed a cross-section study running two regression models for each dependent variable. In order to check the interaction among ESG components, we tested their correlation coefficients (Table. 3). What clearly results from our empirical analyses is that the goodness and significance of the models increase when we tested all ESG impact factors through a backward stepwise regression approach. These evidences – regarding single and overall assessments – mostly support the literature, although apparently not-agreeing on environmental and social sides.

Looking at the impact of ESG components on beta risk measure as shown in Table. 4, they don't affect significantly a systematic risk exposure, except for environmental issue which has a slight positive and significant effect on the first risk dependent variable ( $p < 0.05$ ). We found that the overall ESG rating affects negatively investors' systematic risk, which in turn means that the higher is the ESG rating the lower is the market risk perception. Conversely, environmental component estimation partially balances the overall ESG effect ( $p < 0.05$ ), being strongly correlated to the full assessment (Table. 3).

On the other riskiness versant (Table. 5), i.e. prices volatility, our model highlights here too a negative and significant effect of the full ESG assessment on firms' risk exposure ( $p < 0.01$ ). This is aligned with our empirical findings on beta risk measurement. Unlike systematic risk, in this model the overall ESG rating is partially balanced by social component, because of the outstanding high correlation between these two assessments (Table. 3).

**Table 3. Pairwise Correlation Matrix**

	ENV	SOC	GOV	FULL	TA	PE	EMP	SR
ENV	1							
SOC	0.71 ***	1						
GOV	0.26 **	0.37 ***	1					
FULL	0.90 ***	0.91 ***	0.52 ***	1				
TA	0.05	0.19 *	0.00	0.10	1			
PE	0.03	0.10	-0.08	0.05	-0.03	1		
EMP	0.34 ***	0.26 **	0.07	0.32 ***	0.45 ***	0.08	1	
SR	0.35 ***	0.29 ***	0.17	0.34 ***	0.16	-0.17	0.12	1

Refer to Table. 1 for the description of the variables. \* P < 0.1; \*\* P < 0.05; \*\*\* P < 0.01

**Table 4. OLS Regression Model (Backward Stepwise approach) - Dependent variable: BETA**

	MODEL A <sup>1</sup> Dependent variable BETA	MODEL B <sup>2</sup> Dependent variable BETA	MODEL C <sup>3</sup> Dependent variable BETA
<i>Independent variables</i>			
ENV (Hp1)	0.0744610	0.0266674**	0.0275858***
SOC (Hp2)	0.0545182	-	-
GOV (Hp3)	0.0363693	0.00294071	-
FULL (Hp4)	-0.176562	-0.0431901*	-0.0434710***
<i>Control variables</i>			
TA	2.18786e-09*	2.37440e-09**	2.49869e-09***
PE	-0.00168235*	-0.00158341	-
EMP	-1.35868e-07	-	-
SR	-0.0553467	-	-
$R^2$	0.185265	0.165828	0.151306
$R^2_{Adj}$	0.083423	0.103576	0.116428
Model F	1.819142*	2.663833**	4.338177***

Refer to Table 1. for the description of the variables. \* P < 0.1; \*\* P < 0.05; \*\*\* P < 0.01

1 - Model A refers to the full model

2 - Model B refers to the refined model

3 - Model C refers to the model limited to the only significant variables

**Table 5. OLS Regression Model (Backward Stepwise approach) - Dependent variable: VOLATILITY**

	<b>MODEL A<sup>1</sup></b> <b>Dependent variable</b> <b>VOLATILITY</b>	<b>MODEL B<sup>2</sup></b> <b>Dependent variable</b> <b>VOLATILITY</b>	<b>MODEL C<sup>3</sup></b> <b>Dependent variable</b> <b>VOLATILITY</b>
<i>Independent variables</i>			
ENV (Hp1)	0.386093	-	-
SOC (Hp2)	3.80877	3.91810**	3.99230**
GOV (Hp3)	-1.29010	-	-
FULL (Hp4)	-7.49493	-7.65255***	-7.71123***
<i>Control variables</i>			
TA	-7.37134e-08	-	-
PE	0.0442744	-	-
EMP	0.000366676***	0.000365740***	0.000369147***
SR	-24.5533	-25.2137*	-23.5861*
$R^2$	0.406286	0.391335	0.389635
$R^2_{Adj}$	0.330894	0.354997	0.354757
<i>Model F</i>	5.388968***	10.76926***	11.17138***

Refer to Table 1. for the description of the variables. \* P < 0.1; \*\* P < 0.05; \*\*\* P <

0.01

1 - Model A refers to the full model

2 - Model B refers to the refined model

3 - Model C refers to the model limited to the only significant variables

### 5. Limits and further researches

Concerning with the limits of our research study, we sampled companies belonging to only one of eleven industries identified by GICS. Moreover, in our analysis we used the ESG and sustainability assessments issued by one ESG rating agency. Therefore, a lot of agencies could apply divergent ESG methodologies in social rating issuance, implying different empirical evidences on the same firms cluster.

Instead, we could forward our study to the other ten GICS's industry sectors within S&P index, in order to explore where ESG commitment implies different investors' risk perception.

In addition, we could develop for future research works a risk-return analysis on a firms' sample filtered according to ESG paradigm, aiming at studying whether corporate sustainability commitment could increase on one side the firms' returns and on the other side could lower risk exposure.

### 6. Conclusions

This research work fits in risk analysis research field, investigating how additional and non financial disclosure in regards to sustainability issue decreases information asymmetries on stock exchange markets, once assessed by an external agency. As a consequence, further information available for investors can imply a lower risk perception whether it is easily accessible on the market.

On this ground, we can frame our conclusions through three perspectives:

*Market perspective.* In regards to market risk perception, corporate sustainability and ESG paradigm should be not considered as a risk reduction tools but as a reliable leverage to keep risk exposure under control over high market volatility periods. Accordingly, an investor would be able to handle the risk portfolio through an ESG stock-picking diversification whether its investment covers a multi-yearly time frame.

*Investors' perspective.* Although the effect of overall ESG assessment is partially balanced by the environmental component for beta measures and by the social component in idiosyncratic risk, investors pay attention to a full rating aiming to manage their investment risk. Moreover, an ESG assessment could decrease investors' risk perception, once the lower transaction costs in getting additional information allow an investor to undertake a socially responsible investment in a short timeframe. In practice, an overall ESG rating is helpful for socially responsible investors in terms of saving time in asset allocation on sustainable blue chips securities.

*Firms' perspective.* Considering the lower beta values due to a positive full ESG valuation, our findings could advise, at some levels, that a corporate sustainability management is able to decrease the cost of capital. In fact, basing on asset pricing theory, the beta risk is a component of cost of capital estimation (Treynor, 1962), hence an ESG rating could be a corporate leverage in market fundraising.



Besides, the separated ESG assessments according to the single components suggest where investors perceive a higher or lower corporate risk, regardless of the full rating. This could depend on the industry sector; the customer base; the stakeholders involved in the value chain; the core business or the geographical areas of production, highlighting which ESG factors have to be managed in order to avoid an opposite effect to the overall assessment.

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