An Indian Perspective on the linkage between Environmental, Social and Governance Score and Cost of Capital

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Abstract: There has been an increase in interest in ethical and sustainable business practices in emerging economies, limited research on incorporation of Environmental, Social and Governance (ESG) and its effects has been conducted in the Indian market. This paper aims to address this gap by exploring the relationship between Environmental, Social and Governance Score (ESG) and Cost of Capital (COC) of Indian firms. The research is conducted for 120 business organizations listed on National Stock Exchange (NSE). Our findings indicate that it would be advantageous for business organizations to enhance their ESG performance in order to lower the cost of capital.

1. Introduction

At the beginning of the twenty-first century, the global paradigm has shifted towards sustainable and inclusive growth. Today's sustainability awareness and responsible investing are expanding at such a rapid rate that the business world must immediately accept these changes in society's ethical and moral standards in order to stay competitive. A unique framework has been developed with the purpose of assisting businesses in increasing the transparency of how they operate with sustainability as a result of the worldwide shift to a more sustainable future. This is referred to as the ESG framework and it aids stakeholders, investors, and the government in assessing the performance of the business organization. Numerous international stakeholders and intellectuals anticipate that the businesses will recognize and address important ESG concerns in the wake of the 2008-09 financial crisis. To improve long term sustainability, stakeholders are incorporating ESG parameters into their decision making (Mutezo, 2014), traditional financial reporting is no longer adequate (Cheng, 2014) for stakeholders to make reliable financial decision and non-financial data is gaining weight for measuring the performance on any business organizations (Maas, 2020). Thus, companies need sound environmental, social and governance (ESG) in addition to generating shareholder value as a result of the global financial market's spectacular growth and the rising attention on sustainability. Often finance providers are willing to invest at a lower rate of return for the firms with better or superior ESG performance (Kolbel and Bush, 2017). Previous studies were mainly conducted in developed economies and the results were divergent (Cantino et al., 2017; Limkriangkrai et al., 2017; Atan et al., 2018).

2. Literature Review

Previous studies were mainly conducted in developed economies and the results were divergent (Cantino et al., 2017; Limkriangkrai et al., 2017; Atan et al., 2018). With penetration and increased popularity of ESG framework in emerging economies, limited research is carried out in developing countries related to ESG.

Table 1: Literature Relation Summary

S.No.	Author	Year	Relation
1	El Ghoul *et al.*	2011	Negative
2	Gregory *et al.*	2014	Negative
3	Harjoto and Jo	2015	Negative

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4	Atan *et al.*	2018	Positive
5	Li and Liu	2018	Negative
6	Bhuiyan *et al.*	2020	Negative
7	Dahiya and Singh	2020	Positive
8	Gjergji *et al.*	2021	Positive
9	Nazir *et al.*	2021	Positive
10	Sandra *et al.*	2021	Negative
11	Wang *et al.*	2021	Positive

2.1. Hypothesis

H1: There exits negative linkage between combined ESG score and Cost of Capital of a business organization.

H2: There exits negative linkage between Environmental score and Cost of Capital of a business organization.

H3: There exits negative linkage between Social score and Cost of Capital of a business organization.

H4: There exits negative linkage between Governance score and Cost of Capital of a business organization.

3. Research Methodology

The study is based on secondary data collected from NSE and Thomson Reuters. The study is conducted for the time period of five years on nine Indian industries namely, real estate, industrials, basic materials, communication services, consumer staple, consumer discretionary, energy, healthcare and technology. The research is conducted for 120 business organizations listed on National Stock Exchange, for each industry sector, only stocks of those firms are taken into consideration who participates in ESG disclosure from 2017-2021.

To investigate the linkage of ESG with cost of capital of a business organization, the following model is used:

$$COC,t = ɣ0 + ɣ1 \, (ESG) \, i,t + ɣ2 \, (MC)i,t + ɣ3 \, (L)i,t + ɣ4 \, (RA)i,t + ɣ5 \, (RE)i,t + ɣ6 \, (TR) \, i,t + Ųi,t$$

Here, COC denote the weighted cost of capital of the business organizations i at the end of the year t, ESG score (ESG)i,t of the business organizations i in year t is the independent variables in the study and following are the controlled variables — market capitalisation (MC) i,t, leverage (L) i,t, ROA is denoted as (RA) i,t, ROE is denoted as (RE) i,t and tax rate is denoted as (TR) i,t for the business organizations i at the end of the year t. Ųi,t denotes residual for cost of capital of the business organizations i in year t.

4. Empirical Results

Descriptive statistics for financial and non-financial variables are presented in Table 1. As shown in the table the average ESG score of the firms is 54.77, for environment is 48.56, for social is 59.60 and for governance is 52.39. The Indian firms has a high mean for social parameter of ESG framework followed by governance.

Table 2: Descriptive Statistics

Parameters	N	Mean	SD
Cost of Capital	600	0.0355	0.1533
ESG Score	600	54.7733	18.4835
Environment_Score	600	48.5567	24.7138
Social_Score	600	59.5962	21.7375
Governance_Score	600	52.3900	21.9138

Market Cap (log)	600	5.6745	0.4906
Leverage	600	0.2343	0.2187
Return on Asset	600	0.0812	0.0883
Return on Equity	600	0.1618	0.8685

The regression analysis showed that ESG score is negatively associated with the cost of capital, however the magnitude of its impact is very less. And when individual parameter of ESG framework is studied, then the result shows no significant association between environment score, social score, governance score and cost of capital.

Table 3: Regression Output

Independent Variables	Model A	Model B
ESG Score	-0.001**	
	(.000)	
Environment_Score		-0.000
		(0.000)
Social_Score		0.000
		(0.000)
Governance_Score		-0.000
		(0.000)
Market Cap (log)	0.019	0.228
	(.014)	(.015)
Leverage	-0.345***	-0.310***
	(.034)	(.036)
Return on Asset	-0.157**	-0.128**
	(.091)	(.097)
Return on Equity	0.002	0.002
	(.006)	(.007)
Tax Rate	0.024***	0.024***
	(.005)	(0.005)
Constant	0.097**	0.032**
	(.051)	(0.54)
Adjusted R Square	0.319**	0.318**

Dependent Variable = Cost of Capital

Asterisk represents the significance value (***p<.01; **p<.05)

Coeff. of standard error is specified under the parentheses

5. Conclusion

The paper attempted to study the linkage of ESG score on the cost of capital of Indian business organizations to address the literature gap of understudy in an emerging economy. The results show that the combined ESG score is negatively linked with the business organization's cost of capital. Hence it can be deduced that the Indian stakeholders account for ESG framework while investing or lending money in the business organizations, and therefore business organizations can look for lower cost of capital with improved ESG performance. However, no significant relationship exists among individual ESG scores of the business organization and its cost of capital. Our findings indicate that it would be advantageous for business organizations to enhance their ESG performance in order to lower the cost of capital.

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