Do Sustainability Practices Improve Share Price of Top Indian Companies? Empirical Evidence Using System GMM

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Abstract: Corporate sustainability has become a major concern of modern businesses. Nowadays, a corporation's performance is not only measured with traditional financial metrics but also from the perspective of sustainability. This study aims to examine how corporate sustainability affects the stock prices of top Indian firms from 2015–16 to 2021–22. Using the non-probability judgmental sampling method, the top one hundred and seventeen Indian companies, as per their market capitalisation, have been chosen as the final sample. It uses the dynamic panel data method for empirical estimation. The findings indicate that the one-year lag of the Composite ESG score, along with Environmental, Social, and Governance scores, has a positive influence on the share prices of the sample companies. Therefore, improvement in sustainable activities can increase the share price of top Indian companies.

1. Introduction

These days, corporate social responsibility is one of the most important concerns for businesses globally (Alshannag & Basah, 2016). Concerns about climate change have raised interest in sustainability and environmental problems. Over the last several decades, policymakers, regulators, investors, business owners, academics, researchers, and several other stakeholders have provided a lot of attention to sustainable development. In 2004, the UNGC introduced the environmental, social, and governance (ESG) concept, a useful framework for advancing sustainable development. Traditionally, ESG is a non-financial evaluation technique. Businesses have been aggressively integrating ESG concepts into their operations in order to address global issues regarding sustainable development. India's prime minister said during the COP 26 conference that the nation will meet its goals to have half of its energy derived from renewable sources within 2030, as well as to reach net zero carbon emissions within 2070. Corporate enterprises in India are crucial to achieve these goals. Additionally, Indian companies are coordinating their sustainability initiatives with both the nation's sustainable development agenda and international trends. Because businesses with good governance, social, and environmental standards are attracting more and more investors (Bhattacharya & Sharma, 2019). Though, there is a common belief that CSR initiatives are expensive and may conflict with the objective of generating profits for shareholders (Odeh et al., 2019), but around the world, top companies focus on investing in CSR initiatives to improve their reputation, firm value, minimise cost of capital, etc. Conceptually, the term 'sustainability' and 'CSR' are quite different. According to Hopkins (2017) CSR is recognised as an umbrella concept that encourages responsible processes those must be followed by businesses. Whereas, sustainability refers to some goals that should be followed by firms. However, in various literature these terms have been used interchangeably.

On the other hand, the financial performance of a business is considered as the main criteria to make prudent investment decisions. But recently, apart from financial indicators, some non-financial factors, such as ESG activities or sustainability practices of businesses, are also being considered by the investors and fund managers. Many studies support the link of corporate sustainability

performance with company's long-term growth. As a result, the majority of investors consider ESG aspects when making investment decisions. As ESG standards have been more widely accepted by businesses and investors, academics from across the globe have investigated the various aspects of corporate sustainability.

Nowadays, investors' preference towards sustainability is increasing day by day. ESG considerations have grown more significant as investors attempt to combine their financial rewards with environmental and social obligations. Firms are incorporating ESG factors into various elements of their operations to improve their credibility and obtain a competitive advantage in the marketplace. There is evidence that the ESG factors are a source of risk to business, and have the ability to influence the financial returns.

Due to the absence of consistent findings regarding how the corporate financial performance is impacted by sustainable practice, the problem statement of the present study can be stated as "To analyse the influence of corporate sustainability practices on stock prices of top listed companies in India". It will analyse whether firms that emphasise ESG factors have better stock prices in comparison to firms that do not focus on ESG factors.

One of the world's biggest economies and a country that is expanding rapidly, India has specific issues in the areas of government, society, and the environment. Ministry of Corporate Affairs (MCA) under Government of India (GOI) issued National Voluntary Guidelines (NVGs) regarding Social, Environmental and Economic accountabilities for corporate organisations on 2011 as adaptation of sustainable practices among Indian corporates. In May 2021, the Business Responsibility and Sustainability Report (BRSR) was introduced by the Securities and Exchange Board of India (SEBI) to outline sustainability-related reporting obligations for the top thousand listed firms in India as per their market capitalisation. This BRSR replaced the Business Responsibility Report (BRR). The disclosure requirement of BRSR, which came into effect from F.Y. 2022–2023, was seen as a step toward bringing the requirements of sustainability reporting along with traditional financial reporting of Indian companies. Given the growing emphasis on accountability, transparency, and ethical behaviour among Indian companies, it is essential to comprehend the connection between their sustainability practices and financial performance.

The remaining portion of this study is organised as follows: Section II evaluates the associated literature and highlights the research gap. Section III addresses the research objectives and section IV provides hypotheses. Data and methods are discussed in Section V. Section VI addresses empirical evidence and gives additional insights. Finally, the study ends with section VII.

2. Review of Literature

Numerous studies have been carried out to study the association of a firm's corporate sustainability practices with its financial performance. In order to help to identify research gaps and, thus, frame the research objectives and hypotheses of the present study, the next section offers reviews of some of these studies.

2.1. Theoretical Viewpoints

It is still a complex issue today with some arguing for social responsibility while others prioritise maximising shareholder value. Friedman and Freeman debated whether companies should only focus on financial gain or also consider their impact on society. In this regard, two academic theories are much important. One is shareholders theory of Milton Friedman (1970), who proposed that voluntary organisations and taxes should support society rather than businesses. This theory suggests that a firm's primary goal must be to enhance its shareholders' wealth. Another is, stakeholders theory, popularised by Freeman (1984). It said that organisations had to think beyond maximising shareholders' wealth and should consider to maximise the values of all stakeholders.

2.2. Significance of Sustainability Reporting

Currently, like publishing a company's financial performance, its CSR or sustainability disclosures can play a vital part in investment decisions of investors (Hassel et al. 2005; Dhaliwal et al. 2011). If investors possess adequate information on future liabilities, they could demand a greater rate of

earnings for their investment. Managers can use voluntary disclosure to update shareholders on the social and environmental initiatives of the company (Healy & Palepu, 2001).

2.3. Linkage between Share Price and Sustainability

Al-Tuwaijri et al. (2004) studied that companies' environmental performance was positively associated with their annual returns, suggesting that investors considered environmental factors during their investment choices. The stock prices of South African firms were shown to be positively correlated with CSR disclosure as studied by De Klerk and De Villiers (2012). Reverte (2014) revealed that CSR disclosure has an effect on Spanish firms' share prices both directly and indirectly. A study on European banks has shown that the release of sustainability reports has a favourable impact on stock prices (Carnevale & Mazzuca, 2014). Furthermore, De Klerk et al. (2015) studied the link of share price with corporate social responsibility (CSR) disclosure of the largest UK corporations and found that a higher degrees of CSR disclosure related to higher share prices. Therefore, the majority of the research linked to this topic indicated a positive and substantial association. Therefore, most of the studies relating to this area found a positive and significant relationship.

Again, a few studies revealed a negative and inconclusive association. Hassel et al. (2005) discovered that Swedish listed firms with good environmental performance ratings had considerably less market values, indicating that investors did not put a high value on environmental performance. According to Bolton and Kacperczyk (2021), stock returns are often lower for US companies that have high ESG ratings.

Though most of the research demonstrates that improvement in sustainable practices by enterprises enhances their share prices, there is an argument on whether these correlations are constant across various sectors and nations. It offers a fresh door to explore the region more intrinsically. Most of the research is from developed economies, which further advises investigating this link from a developing economy, such as India. Therefore, the current research aims to close these gaps and examine how the various corporate sustainability pillars affect the share price of top Indian firms.

Based on the identified research gap, the objectives are specified as follows:
(i) To examine how the overall corporate sustainability affects the share prices of the top listed companies in India
(ii) To analyse how the separate corporate sustainable activities, namely environmental, social and governance, influence the share prices of top listed companies in India.

The following hypothesis has been generated to respond to the primary research question:
H_1: There is significant impact of corporate sustainability (ESG) score on share price of top Indian companies.
It is further divided into the three parts listed below:
H_{1a}: There is significant influence of Environmental (E) score on share price of top Indian companies.
H_{1b}: There is significant influence of Social (S) score on share price of top Indian companies.
H_{1c}: There is significant influence of Governance (G) score on share price of top Indian companies.

3. Data and Methodology

3.1. Sample and Data

Using non probability based judgmental sampling method, out of India's Top two-hundred companies as per their market capitalisation, one hundred and seventeen companies have been included in the final sample due to accessibility to appropriate data. The study relies on secondary data only. Required financial as well as non-financial data have been retrieved from Capitaline and Bloomberg databases, respectively. ESG performance scores computed by the Bloomberg have been used as proxy for corporate sustainability. The mandatory provisions for CSR came into existence in India from F.Y. 2014-15 and thereafter the societal activities among the Indian corporates have improved. Therefore, the study period has been fixed from 2015-16 to 2021-22, which is beyond the F.Y. 2014-15 to capture the impact of sustainability more accurately.

3.2. Variables and Models

To meet the research objectives, the following dependent, independent and control variables mentioned in Table 1 have been chosen as proxy. The independent variables are measured with 0 to 100 scale. One-year lag of the independent variables has been selected as the current year's sustainability performance may impact the share prices of the next year.

Table 1: Variable Description

Variable Type	Variable Name	Description
Dependent	BSE Market Price of a Share (SP) at the end of a F.Y.	Share Price.
Independent	1-year lag of ESG Score published by Bloomberg (ESG_L1)	Overall corporate sustainable activities.
	1-year lag of Environmental Score published by Bloomberg (E-Score_L1)	Environmental activities.
	1-year lag of Social Score published by Bloomberg (S-Score_L1)	Social activities.
	1-year lag of Governance Score published by Bloomberg (G-Score_L1)	Governance activities.
Control	Return on Assets (ROA): Measured as EBIT ÷ Total Assets	Overall Profitability
	Total Assets (TA): Computed as natural log of the total assets.	Size
	Debt to Assets Ratio (Lev): Measured as Total Debt ÷ Total Assets.	Leverage
	Current Ratio (Liq): Measured as Current Assets ÷ Current Liabilities.	Liquidity

Source: Authors' compilation.

The panel data analysis approach is applied to achieve the research objectives. The benefit of adopting this approach is that it allows for large number of observations, hence help in finding the effects that would be difficult to identify through pure cross-sectional or time series analysis. This approach also contributes to greater efficiency, more degrees of freedom, less collinearity across variables, and more variability. Additionally, panel data assists in adjusting for individual heterogeneity (Baltagi, 2005). The dynamic panel regression method has been used here to handle heterogeneity and endogeneity issues.

To examine how the overall corporate sustainability affects the share prices of top listed companies in India, the following model has been formed:

$$SP_{i,t} = \alpha_0 + \alpha_1 SP_{i,t-1} + \alpha_2 ESG\_L1_{i,t} + \sum \alpha_j ControlVariables_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots (1)$$

Again, the following three models has been employed to gauge the effect of the three pillars of corporate sustainability on the share price:

$$SP_{i,t} = \alpha_0 + \alpha_1 SP_{i,t-1} + \alpha_2 E\text{-}Score\_L1_{i,t} + \sum \alpha_j ControlVariables_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots (2)$$

$$SP_{i,t} = \alpha_0 + \alpha_1 SP_{i,t-1} + \alpha_2 S\text{-}Score\_L1_{i,t} + \sum \alpha_j ControlVariables_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots (3)$$

$$SP_{i,t} = \alpha_0 + \alpha_1 SP_{i,t-1} + \alpha_2 G\text{-}Score\_L1_{i,t} + \sum \alpha_j ControlVariables_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots (4)$$

Here, intercept is α_0, composite error term is $\varepsilon_{i,t}$, whereas, i implies firm, and t refers to year for each model.

System Generalised Method of Moments (GMM) of the dynamic panel regression method is a tool for estimating dynamic panels with lagged levels and lagged initial differences for a system of equations. Additionally, it handles endogeneity and produces better results than OLS. Two diagnostic tests are essential to validate the system GMM – (i) autocorrelation test for error components and (ii) Hansen test (1982) for checking endogeneity (Arellano & Bond, 1991). Table 4 represents the results of one-step system GMM using xtabond2 command (Roodman, 2009).

4. Results and Discussion

The descriptive statistics of the variables are shown in Table 2. The mean ESG score of the sample companies is 41.41%, which indicates more activities are required by Indian companies on ESG front. Again, among the three separate pillars of corporate sustainability, the mean of governance score (79.16%) is the highest followed by the score of social dimensions (27.385%). It implies that adherence to good governance practices is major priority in Indian corporate sector (Mondal & Mitra, 2024). The reason may be the existence of a mandatory regulatory framework for governance-related factors. The poor mean value of social score indicates that Indian firms should be encouraged to practice social disclosures to meet the stakeholders' requirements. Lastly, the average score for the environmental initiatives has come out to be lowest as 23.857%, with highest value of dispersion among sustainability variables; indicating more consistent efforts are required by the Indian corporates to carry out policies and practices on green management.

Table 2: Descriptive Statistics

Variables	Observations	Mean	Standard Deviation	Minimum	Maximum
SP	819	2055.48	6797.761	3.11	82218.701
ESG_L1	702	41.41	11.288	19.274	76.139
E-Score_L1	702	23.857	21.069	0	77.288
S-Score_L1	702	27.385	11.9	0	70.042
G-Score_L1	702	79.16	8.641	27.152	98.615
ROA	819	16.94	13.249	-20.495	77.852
TA	819	9.852	1.501	6.406	13.787
Lev	819	.883	2.415	0	13.205
Liq	819	4.982	8.775	.277	57.728

Source: Authors' compilation.

The correlation between the consolidated ESG score and its constituent parts has been shown to be more than 0.5; that is, the values between the environmental, social, and governance scores and ESG are 0.879, 0.876, and 0.556, respectively. Therefore, several regression models have been conducted in order to prevent multicollinearity among independent variables.

Table 3: Pairwise correlations

Variables	1	2	3	4	5	6	7	8	9
(1) SP	1								
(2) ESG_L1	-0.088*	1							
	(0.019)								
(3) E-Score_L1	-0.068	0.879*	1						
	(0.073)	(0.000)							
(4) S-Score_L1	-0.132*	0.786*	0.699*	1					
	(0.000)	(0.000)	(0.000)						
(5) G-Score_L1	0.003	0.556*	0.394*	0.293*	1				
	(0.928)	(0.000)	(0.000)	(0.000)					
(6) ROA	0.030	-0.106*	-0.093*	-0.028	-0.191*	1			
	(0.397)	(0.005)	(0.014)	(0.456)	(0.000)				
(7) TA	-0.127*	0.247*	0.249*	0.203*	-0.023	-0.096*	1		
	(0.000)	(0.000)	(0.000)	(0.000)	(0.536)	(0.006)			
(8) Lev	-0.084*	-0.044	-0.036	0.068	-0.269*	0.544*	0.308*	1	
	(0.016)	(0.243)	(0.341)	(0.074)	(0.000)	(0.000)	(0.000)		
(9) Liq	-0.069*	-0.175*	-0.208*	-0.069	-0.204*	0.361*	0.318*	0.686*	1
	(0.047)	(0.000)	(0.000)	(0.070)	(0.000)	(0.000)	(0.000)	(0.000)	

Source: Authors' compilation.
*Note: * shows significance at p < 0.05*

Table 4 displays the outcomes of the one-step System GMM. The result shows that the regression coefficient of SP to ESG_L1 is 13.473 that is significant at 1% level. Therefore, the outcome validates hypothesis H1, which states that the share prices of the Indian companies are positively and significantly impacted by overall corporate sustainability. Further, the

regression coefficients of SP to E-Score_L1, S-Score_L1 and G-Score_L1 are 4.999, 5.564 and 0.478, respectively, significant at 1% level. Consequently, the share price of the Indian firms is positively impacted by Environmental, Social, and Governance initiatives in a statistically significant way. Out of the four control variables profitability, firm size and liquidity have positive and leverage has negative impact on share price and all these are also significant at 1% level. Hansen test and autocorrelation i.e. AR (2) test imply the absence of endogeneity and autocorrelation issues respectively in the model, as both of them accept the research hypothesis.

Though to identifying the reasons behind the results is beyond the scope of this study, but previous literature has provided some insight regarding it. Overall, the findings show that firms with strong ESG performance tend to have higher share prices than those with poor ESG performance. In fine, the findings suggest that companies with strong ESG performance tend to have higher share prices compared to those with weak ESG performance. However, this influence of ESG considerations on share prices might vary by industry to industry and country to country.

Table 4: Regression Results

Variables	(1)	(2)	(3)	(4)
SP_L1	0.879***	0.892***	0.888***	0.890***
	(0.000)	(0.000)	(0.000)	(0.000)
ESG_L1	13.473***			
	(0.000)			
E-Score_L1		4.999***		
		(0.000)		
S-Score_L1			5.564***	
			(0.000)	
G-Score_L1				0.478***
				(0.027)
ROA	6.432***	5.527***	5.433***	3.898***
	(0.000)	(0.000)	(0.000)	(0.000)
TA	50.346***	40.064***	18.767***	54.525***
	(0.000)	(0.000)	(0.000)	(0.000)
Lev	-82.557***	-71.934***	-70.969***	-71.821***
	(0.000)	(0.000)	(0.000)	(0.000)
Liq	8.462***	7.149***	7.143***	9.229***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-1033.63***	-502.64***	-318.736***	-546.818***
	(0.000)	(0.000)	(0.000)	(0.000)
Hansen test	10.130	14.890	18.870	11.890
Prob> chi2	(1.000)	(0.986)	(0.925)	(0.998)
AR (2) *P value*	0.242	0.244	0.243	0.244
Number of obs	702	702	702	702

*Note: *** p<0.01, ** p<0.05, * p<0.10*
Source: Authors' compilation.

5. Conclusion

Corporate sustainability has become a major concern of modern businesses. Nowadays, a corporation's performance is not only measured with traditional financial matrices but also from the perspective of sustainability. Keeping this in mind, the major purpose the study has been established for evaluating the effect of corporate sustainability on share prices of top Indian corporations throughout the period from 2015-16 to 2021-22. It uses ESG scores provided by Bloomberg as the proxy of corporate sustainability performance of the sample companies whereas, their year-end share prices in BSE were considered as the dependent variable. In addition, four control variables have been used to measure the profitability, size, leverage, and liquidity of the companies. The empirical tests revealed that one-year lag of composite ESG score and individual Environmental, Social, and Governance scores have positive and statistically significant impact on share price. It is in line with the studies of Al-Tuwaijri et al. (2004), De Klerkand and De Villiers (2012), Carnevale and Mazzuca

(2014), De Klerk et al. (2015), and thus supports the stakeholders theory. Therefore, this study reveals that top Indian firms with superior sustainability policies in the present year may attain a higher share price in the coming year.

The study has substantial implications or suggestions for various stakeholders. Firstly, investors may utilise ESG scores for investment decisions. Secondly, the policymakers and regulators can use initiatives to encourage firms to adopt sustainable practices. Thirdly, adopting ESG principles may also help companies as a result of improved market capitalisation and share price with favourable sustainable performance. Lastly, the results will add to the existing body of knowledge in the area of impact assessment of ESG in India and have useful ramifications for Indian investors, legislators, and business leaders.

It is necessary to recognise the several drawbacks that this research may have. Firstly, the sample size examined is quite small. The findings may change if a bigger sample is used, and the results may not be as broadly applicable to other nations due to sample selection criteria. Second, the research could not have taken into consideration all the variables that influence share price, such investor attitude or macroeconomic circumstances. Again, not all factors from prior research could be included. Third, the findings may be affected by the economic downturn since the data used spans the years 2020–2022, which includes a time of worldwide lockdown forced on by the COVID-19 pandemic. Fourth, Bloomberg's ESG data is the only source of information used in this research. Scores are calculated using a variety of criteria by the main ESG rating agencies. As a consequence, accessing data from a different organisation might result in different analytical outcomes. Moreover, as per SEBI's new regulations for ESG rating providers (ERPs) w.e.f. 12th July, 2023 (SEBI, 2023), the Bloomberg is still not registered itself in SEBI as an ERP. Therefore, the ESG data beyond 2021-22 could not be considered in this study due to its inaccessibility. Additional research that addresses these constraints may provide more reliable findings.

References

Alshannag, F. M., & Basah, M. Y. A. (2016). The Level of Corporate Social Responsibility Disclosure in Jordan. International Journal of Accounting Research, 2(12), 50–64. https://doi.org/10.12816/0033283

Al-Tuwaijri, S. A., Christensen, T. E., & Hughes, K. (2004). The relations among environmental disclosure, environmental performance, and economic performance: a simultaneous equations approach. https://doi.org/10.1016/s0361-3682(03)00032-1

Arellano, M., & Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. The Review of Economic Studies, 58(2), 277. https://doi.org/10.2307/2297968

Bhattacharya, S., & Sharma, D. (2019). Do environment, social and governance performance impact credit ratings: a study from India. International Journal of Ethics and Systems, 35(3), 466–484. https://doi.org/10.1108/ijoes-09-2018-0130

Bolton, P., & Kacperczyk, M. (2021). Do investors care about carbon risk? Journal of Financial Economics, 142(2), 517–549. https://doi.org/10.1016/j.jfineco.2021.05.008

Carnevale, C., & Mazzuca, M. (2013). Sustainability report and bank valuation: evidence from European stock markets. Business Ethics, 23(1), 69–90. https://doi.org/10.1111/beer.12038

De Klerk, M., & De Villiers, C. (2012). The value relevance of corporate responsibility reporting: South African evidence. Meditari Accountancy Research, 20(1), 21–38. https://doi.org/10.1108/10222521211234200

De Klerk, M., De Villiers, C., & Van Staden, C. (2015). The influence of corporate social responsibility disclosure on share prices. Pacific Accounting Review, 27(2), 208–228. https://doi.org/10.1108/par-05-2013-0047

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Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. The Accounting Review,86(1),59–100. https://doi.org/10.2308/accr.00000005

Friedman, M. (1970). A Friedman doctrine - The Social Responsibility Of Business Is to Increase Its Profits. The New York Times. https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social- responsibility-of-business-is-to.html

Freeman, R. E. (1984). Strategic Management. Boston : Pitman. http://books.google.ie/books?id=4PUJAQAAMAAJ&q=Friedman+and+Freeman+(1984)&dq=Friedman+and+Freeman+(1984)&hl=&cd=3&source=gbs_api

Hansen, L. P. (1982). Large Sample Properties of Generalised Method of Moments Estimators. Econometrica, 50(4), 1029. https://doi.org/10.2307/1912775

Hassel, L., Nilsson, H., & Nyquist, S. (2005). The value relevance of environmental performance. European Accounting Review, 14(1), 41–61. https://doi.org/10.1080/0963818042000279722

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. Journal of Accounting & Economics/Journal of Accounting and Economics, 31(1–3), 405–440. https://doi.org/10.1016/s0165-4101(01)00018-0

Hopkins, M. (2017). CSR and Sustainability. Routledge.

MCA. (2011). National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business. https://www.mca.gov.in/Ministry/latestnews/National_Voluntary_Guidelines_2011_12jul2011.pdf

Mondal, S., & Mitra, S. (2024). Corporate Sustainability Score: A Sectoral and Trend Analysis of BSE 100 Companies. Indian Journal Of Accounting (Ija), Volume 56, Issue (1). PP. 70-77 June, 2024.

Odeh, M., Scullin, C., Fleming, G., Scott, M. G., Horne, R., & McElnay, J. C. (2019). Ensuring continuity of patient care across the healthcare interface: Telephone follow-up post-hospitalisation. British Journal of Clinical Pharmacology, 85(3), 616–625. https://doi.org/10.1111/bcp.13839

PIB. (2022). India's Stand at COP-26. Retrieved July 10, 2024. https://pib.gov.in/PressReleasePage.aspx?PRID=1795071

Reverte, C. (2014). Corporate social responsibility disclosure and market valuation: evidence from Spanish listed firms. Review of Managerial Science, 10(2), 411–435. https://doi.org/10.1007/s11846-014-0151-7

Roodman, D. (2009). How to do Xtabond2: An Introduction to Difference and System GMM in Stata. The Stata Journal, 9(1), 86–136. https://doi.org/10.1177/1536867x0900900106

SEBI. (2021). Business responsibility and sustainability reporting by listed entities. Retrieved July 8, 2024.https://www.sebi.gov.in/legal/circulars/may-2021/business-responsibility-and-sustainability-reporting-by-listed-entities_50096.html

SEBI. (2023, July12). SEBI Master Circular for ESG Rating Providers (ERPs). https://www.sebi.gov.in/legal/master-circulars/jul-2023/master-circular-for-esg-rating-providers-erps-73856.html