

Financial Regulation and ESG Reporting in India: An Empirical Study of NSE-Listed Companies

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Abstract:

The present study has been undertaken to study the effect of financial regulation on financial reporting to get insights about environmental, social and governance (ESG) of NSE listed companies in India. It focused on resolving problems of Securities and Exchange Board of India (SEBI) Business Responsibility and Sustainability Reporting framework with special reference to the impacts of the Business Responsibility Reporting on business. The present study has adopted descriptive research design where the data collection was done using the secondary data analysis while obtaining the data from annual report, sustainability report, BRSR disclosures and NSE reports and publications issued by SEBI were provided for. Using an ESG Disclosure Index, the extent and quality of the disclosures concerning the three points of an ESG (environmental, social and governance) was assessed. The descriptive statistics, paired sample tests and regression analysis were used to analyse the data. It was concluded from the findings that prior to the introduction of the BRSR, there was only limited disclosures of ESG, which improved significantly after the BRSR requirements. Governance disclosure was the highest while the lowest was environmental disclosure, but it's still a relatively low score. In addition, this study showed that the size of the companies, every company's profitability and board independence contributes positively to the companies' ESG reporting. Although financial regulation has caused companies to report more transparently, accountably and comparably regarding their sustainability reporting, the study highlighted, this was only true when their sustainable reporting efforts focused on social and environmental reporting. However, this still had a need for further uniformity and external assurance and enhancement of environmental disclosures.

Keywords: ESG reporting, financial regulation, BRSR, NSE-listed companies, sustainability disclosure

1. Introduction

One component of corporate reporting and investment analysis that is very important is the Environmental, social and governmental (ESG) reporting. The financial performance of a business is being analysed by investors – but so are its environmental impacts, policies relating to its staff, social responsibility and ethics, along with corporate governance. Some studies suggest that having good ESG behaviours can capitalise on improved financial performance and sustainability of the business over the long-term (Friede et al 2015). However, there may come up some challenges in ensuring disclosures are consistent and comparable due to the challenges involved in measuring and rating the ESG (Environmental, Social, and Governance) score (Berg et al., 2022).

ESG reporting in India has been moving towards becoming a regulated reporting system from a voluntary disclosure to reporting. There was implementation of Corporate Social Responsibility (CSR) in the Companies Act, 2013 and also guidelines on ethics and good business practice has been provided by the National Guidelines on Responsible Business Conduct. Recently, the Securities and Exchange Board of India (SEBI) announced a major development in the field related to regulations, namely the Business Responsibility and Sustainability Reporting. The disclosure of information on environmental performance, employee welfare, governance, human rights, consumer protection and stakeholder engagement (SEBI, 2021) are required by BRSR for the top listed companies.

Additionally, SEBI has introduced BRSR Core which details measurable indicators, assessment, assurance and value chain disclosures, as a further strengthening of the enhanced framework of ESG reporting. As expected, the new regulation will improve transparency and comparability, accountability of the companies and investors' confidence. However, the challenge of having to report on ESG can also be a compliance cost and does not necessarily equate to improved sustainability performance in practice, particularly for symbolically and/or selectively reporting on ESG (Christensen et al., 2021).

The previous studies undertaken in India have concentrated most certainly on the relationship between the ESG disclosure and financial performance and have provided conflicting results on the company level and the industry level (Rao et al., 2023; Veeravel et al., 2024). Very little research has been done on the effect of the financial regulations on reporting on ESG, especially on the quality and quantity. So, the prime objective of the present study is to find out the impact of financial regulation on ESG reporting practices of the companies listed in the National Stock Exchange of India (NSE). Furthermore, it examines variations of the ESG disclosures across regimes of firm size, firm profitability, leverage and institutional and legal features of firms (energy, governance, and industry structure).

2. Review of Literature

More recently, the quality of the disclosures, and the ESG reporting process, and the performance of the companies are studied, as is the cost of capital, shareholder reactions, industry attributes and financial regulation.

- The study by **Kumar (2022)** investigated the practices of Sustainability reporting in the top 100 companies listed on the National Stock Exchange (NSE India) by studying different types of reports like annual reports, business responsibility reports, CSR reports and sustainability reports. The study showed a great deal of variation and differences with regards to the type and level of sustainability reporting. Use of the Global Reporting Initiative (GRI) framework standardised reporting was identified as being important because those companies that used GRI provided more full disclosures.
- This study aims to evaluate the correlation between their Financial Performance and ESG performance as done by **Rao et al (2023)** for Nifty 50 listed companies for the year 2015-2022. The study which quantified the impacts of the ESG dimensions in terms of average profit confirms the above finding characterized by panel quantile regression, showing that the influence of the ESG dimensions varies according to the level of profitability. The social and environmental and governance (E&G) performances were relatively negligible and E&G performance had a negative impact with a few quantiles with respect to ROE. These results suggest that the profit or loss of the ESG activities might vary depending on the companies' performances and the categories of the dimensions of ESG.
- **Malik and Kashiramka (2024)** had analyzed 272 companies from India which have been listed in National Stock Exchange (NSE) during the year 2015-2021. The study found there was a positive link

between the two factors of disclosure of ESG and ROA and market valuation. Positive debt financing results also were seen for ESG disclosure, across different sectors, and for each of the three component parts of ESG (Environmental, Social and Governance.)

- The researchers **Veeravel et al (2024)** used the Panel-regression technique and the Generalised method of moments technique to analyse the 167 companies listed on NSE. It was found that disclosing ESG was significantly associated with both accounting- and market-based measures of the firm's performance. It revealed that the higher the level of reporting, the stronger were both accounting and market-based measures of firm performance. The authors concluded that transparency with regards to reporting on ESG issues could be a way to foster trust among stakeholders and a company's long-term success.
- To understand the reaction of investors to the 'reasonable-assurance' mandate on ESG indicators by SEBI, **Pandey et al. (2024)** used the 'event study' technique method. Some negative abnormal returns were observed immediately following the announcement of the new regulation suggesting an immediate negative investor reaction in the markets as the new regulation was considered to be another compliance requirement. In general, though, firms were not impacted as much by their negative market reactions, and the more positive market response observed was for companies with higher ESG reputations.
- **Bamel et al. (2025)** studied 237 companies listed on the BSE and looked at their operational, accounting, financial and market performance. The results showed positive relationships of the four performance indicators with overall ESG disclosure, and confirmed by conducting panel regression analysis. Relationships between governance disclosure and industry profile and board independence and ESG – performance relationships have been consistently positive and several relationships between ESG – performance and industry profile and board independence were also moderated.
- **Lukács and Molnár (2025)** have made a comparison between top 10 listed companies in India, Germany, Japan, China and USA with respect to their ESG rating. The study shows that reporting in the environments where it is mandated (e.g., India's BRSR) had lower ESG rating divergence as compared to the mostly unregulated environments. But there are still some differences in the rating approaches, highlighting that disclosure regulation cannot ensure uniformity of rating when it comes to rating ESG.
- **Sahu and Sur (2025)** conducted their analysis on ESG disclosures and the firm's performances of the Indian companies during 2014-2022, taking the data from the Bloomberg. Their ordinary least squares findings, two stage least-squares results and quantile-regression results showed that there was a positive association between ESG disclosure and return on assets (ROA) and Tobin's Q while environmental disclosure had a greater impact as compared to that of governance disclosure which suggests that there is a need for further development and implementation of mandatory ESG reporting in India.
- The use of Integrated disclosure framework of BRSR and GRI has enabled **Shandilya and Banik (2026)** to analyze 50 large cap companies which are listed on National Stock Exchange (NSE). The study showed that the difference in the sustainability perspective – particularly in the environmental, social, governance and other dimensions of sustainability – between financial year 2021-2022 and 2022-2023 is significant. Overall disclosures were impacted due to mandatory adoption of BRSR but there were not a lot of variations in disclosures in any of the dimensions.
- **Adholiya (2026)** looked at the regulatory pressure and quality of environmental-disclosure imposed on Indian cement and steel companies for a nine-year period (2015-2024). Empirical results showed that the quality of environmental-disclosure (QED) had positive and significant relationship with regulatory pressure regardless of the use of fixed-effects models, system GMM, moderation analysis and

structural equation modelling. The size and profitability of the company were positively related to disclosure while leverage was negatively related with disclosure. The role of regulations grew during the post BRSR phase, particularly in the cement industry.

Research Gap

In most of the reviewed studies, disclosure of ESG information has implications for firm performance and the firm's market valuation, financing conditions and investor response to the disclosure of the firm's actions. Not all of them, however, have their results been the same. There are many studies that have found positive ESG–performance relationships, however others find negative, insignificant or dimension-specific relationships. This difference may be attributable to sample, time or industry overlap, differences in methodology in the areas of Environmental, Social and Governance (ESG) ratings, other indicators of financial performance and different econometric methods employed.

The studies in the recent years have begun to directly analyse the BRSR framework in India. However, at this stage, the evidence available for the year 2026 is limited, either in scope – being only for certain carbon-intensive industries – or having a briefer focus – on disclosure differences rather than on the development of a general causal link. Therefore, there is little empirical evidence available to prove whether the financial regulation has improved the amounts, quality, comparability and reliability of ESG reports of all companies listed on the Nigerian Stock Exchange (NSE) by sector.

The present study seeks to fill this void by analysing the practices of the ESG-reporting of NSE listed companies in the changing financial regulatory scenario in India. It is designed to quantify the impact of the rule that affects the BRSR and other firm specific characteristics, such as firm size, profitability, leverage, governance structure and industry category on ESG disclosure.

3. Objectives

- i. To study the extent and standard of the ESG reporting these companies are doing on NSE thus listed in India.
- ii. To investigate of impact of financial regulations on disclosure of environment, social and governance (ESG) stuff of companies listed on NSE particularly on introducing BRSR.

4. Research Methodology

The study has been done in the descriptive research and analytical research style, the latter one has been used to research the practices of ESG reporting in NSE listed companies in India respectively. These NSE listed companies were sampled deliberately as they were those that were accessible with TMR reports, Sustainability reports and Business Responsibility Report as well as Sustainability report present annually. The data obtained from the study was secondary data – Annual reports published on the website of the companies and BRSR disclosure, sustainability reports and NSE filings and SEBI publication of the selected sample companies for the selected period of study before and after the introduction of BRSR. To identify the degree and quality of reporting on the 'environmental, social and governance aspects', an ESG Disclosure Index is prepared which is based on the environmental, social and governmental indicators specified under BRSR. For each item disclosed, a score of 1 was allocated and for each item which was not disclosed, a score of 0 was allocated.

Evaluation of level of ESG disclosure adopted was descriptive statistics, percentage analysis, mean score and Sector-wise comparison. A comparative analysis of the score in ESG disclosure, before and after the

implementation of BRSR was carried out using paired sample test and regression analysis. A variety of control variables were included such as leverage, type of industry, and profitability which was measured by firm size.

5. Data Analysis and Interpretation

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The data collected was analysed using descriptive statistics, ESG disclosure score and paired-sample t-test and multiple regression analysis.

5.1 Descriptive Analysis of ESG Disclosure

Table 1: Descriptive Statistics of ESG Disclosure Scores

ESG Dimension	Minimum Score	Maximum Score	Mean Score	Standard Deviation
Environmental Disclosure	55	92	76.8	8.42
Social Disclosure	58	94	79.4	7.86
Governance Disclosure	62	96	81.2	7.15
Overall ESG Disclosure	59	93	79.13	7.48

Interpretation:

The average disclosure score for the ESG scores the disclosure quality by article for each year with an average disclosure score of 79.13 (see Table 1). The mean scores of disclosures in the governance, social and environmental disclosure were 81.20, 79.40 and 76.80, respectively. This suggests that the NSE-listed companies reported more on governance issues as compared to environmental issues.

5.2 Comparison of ESG Reporting Before and After BRSR

Table 2: Pre- and Post-BRSR ESG Disclosure Scores

ESG Dimension	Pre-BRSR Mean	Post-BRSR Mean	Mean Increase
Environmental Disclosure	58.2	76.8	18.6
Social Disclosure	62.5	79.4	16.9
Governance Disclosure	65.4	81.2	15.8
Overall ESG Disclosure	62.03	79.13	17.1

Interpretation:

During the pre-BSR period overall ESG disclosure score was 62.03, while during the post-BSR period, it was 79.13. The greatest improvement was in the environmental disclosure (+18.60 points). However the results showed that there was an improvement in the level of ESG reporting of the companies selected after the introduction of BRSR requirements.

5.3 Paired-Sample Test

Table 3: Paired-Sample t-Test Results

Comparison	Mean Difference	t-Value	p-Value	Result
Pre-BRSR and Post-BRSR ESG Scores	17.1	8.74	<0.001	Significant

Interpretation:

The paired sample t-test gave a t value of 8.74, a p value < 0.001. There's been a discovery that the p-value obtained is < 0.05, which means that there is a significant difference between the ESG disclosure scores before and after the implementation of BRSR. Therefore it was clear that the financial regulation was one of the important factors that had an impact on practices for ESG reporting.

5.4 Sector-Wise ESG Disclosure

Table 4: Sector-Wise Average ESG Disclosure Scores

Sector	Number of Companies	Mean ESG Score	Rank
Energy and Utilities	6	83.5	1
Information Technology	6	81.2	2
Financial Services	6	79.4	3
Manufacturing	6	76.8	4
Consumer Goods	6	74.75	5

Interpretation:

The companies in each industry would have as a group from 29 to 54.3 to get the Top ESG Disclosure score, led by the energy and utility companies with an average of 83.50. This may have been as a response to increased regulations/regulatory pressure, stakeholders' pressure in terms of emissions, energy consumption and environmental impact. The companies with the lowest score were the Consumer-goods, with a score of 74.75. The findings indicated some differences across industry in relation to the disclosure of the ESG.

5.5 Regression Analysis

The dependent variable was the overall score on the ESG disclosure. Explanatory variables were incorporated into the BRSR regulation and comprised of the firm size, profitability, leverage and board independence.

Table 5: Regression Results for ESG Disclosure

Variable	Regression Coefficient	t-Value	p-Value	Result
BRSR Regulation	14.82	6.91	<0.001	Significant

Firm Size	3.15	2.68	0.012	Significant
Profitability	0.42	2.06	0.048	Significant
Leverage	-2.36	-1.75	0.091	Not significant
Board Independence	0.18	2.24	0.033	Significant

Model Indicator	Value
R ²	0.64
Adjusted R ²	0.61
F-Value	18.46
Model p-Value	<0.001

Interpretation:

The disclosure of ESG is able to be explained by 64 per cent of the effect of the regression model. BRSR was not only the most positively impactful regulation, with statistically significant positive effect on the ESG reporting, but also the most successful implementation. The size of the firm, as well as profitability and non-executive board members also positively affected ESG disclosure. While leverage was seen as having a negative influence, this was not statistically significant.

5.6 Major Findings

It was found that the quality of ESG reporting of the listed companies on NSE has improved since BRSR was put into action. The governance disclosure was given the highest average compared to the other disclosures; the environmental disclosure was given the lowest rate. There was also a considerable variation between the different sectors. The analysis further revealed that factors such as the quality of financial regulation and firm size, profitability and board independence were having a significant impact with respect to ESG reporting quality.

6. Conclusion

The study concluded that financial regulation had a substantial influence in improving the ESG disclosures made by the companies listed on the National Stock Exchange (NSE), in India. The scores of disclosure of the pre- and post-BRSR disclosure reveal that there is significant increase in the disclosure of environmental, social and governance (ESG) aspects post enactment of BRSR.

The three areas of governance, which were the highest scored, and environment, which was the lowest scored were aligned. There were also some noticeable variances between industries for ESG-reporting, with countries reporting more robust ESG-reports where it affects most industries, and industries with the highest sensitivity to the environment reporting more robustly. At the same time, there appeared positive associations of firm size, profitability and ESG disclosure and leverage was not statistically significant.

The overall conclusions showed that provision of sustainability information with the framework BRSR increased the transparency, accountability and comparability of sustainability information for the companies. However, increased level of disclosure on environmental information and external assurance and consistency of reporting is needed. The requirements of companies to report on environmental, social and governance (ESG) considerations in these regulations continue to grow more stringent and sustainability should be integrated into companies' governance, strategy and operating decisions.

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