"ESG factors in M&A in India: Performance and market insights from 2010 to 2023"

AUTHORS	Manoj Panda Pankaj Sharma Vasa László Manohar Kapse Vinod Sharma Yogesh Mahajan

ARTICLE INFO	Manoj Panda, Pankaj Sharma, Vasa László, Manohar Kapse, Vinod Sharma and Yogesh Mahajan (2024). ESG factors in M&A in India: Performance and market insights from 2010 to 2023. *Investment Management and Financial Innovations*, *21*(2), 310-322. doi:10.21511/imfi.21(2).2024.25
DOI	http://dx.doi.org/10.21511/imfi.21(2).2024.25
RELEASED ON	Tuesday, 28 May 2024
RECEIVED ON	Wednesday, 25 October 2023
ACCEPTED ON	Thursday, 07 March 2024
LICENSE	This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Investment Management and Financial Innovations"
ISSN PRINT	1810-4967
ISSN ONLINE	1812-9358
PUBLISHER	LLC "Consulting Publishing Company "Business Perspectives"
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
63	0	6

BUSINESS PERSPECTIVES

LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Manoj Panda (India), **Pankaj Sharma** (India), **Vasa Laszlo** (Hungary), **Manohar Kapse** (India), **Vinod Sharma** (India), **Yogesh Mahajan** (India)

ESG FACTORS IN M&A IN INDIA: PERFORMANCE AND MARKET INSIGHTS FROM 2010 TO 2023

Received on: 25th of October, 2023
Accepted on: 7th of March, 2024
Published on: 28th of May, 2024

Manoj Panda, Ph.D., Associate Professor, Symbiosis Centre for Management and Human Resource Development, Symbiosis International University, India.

Pankaj Sharma, Ph.D., Associate Professor, Symbiosis Centre for Management and Human Resource Development, Symbiosis International University, India.

Vasa Laszlo, Professor, Széchenyi István University, Hungary.

Manohar Kapse, Ph.D., Assistant Professor, Symbiosis Centre for Management and Human Resource Development, Symbiosis International University, India.

Vinod Sharma, Ph.D., Associate Professor, Symbiosis Centre for Management and Human Resource Development, Symbiosis International University, India. (Corresponding author)

Yogesh Mahajan, Ph.D., Assistant Professor, Symbiosis Centre for Management and Human Resource Development, Symbiosis International University, India.

Conflict of interest statement:
Author(s) reported no conflict of interest

Abstract

This study assesses the impact of mergers and acquisitions on Environmental, Social, and Governance (ESG) performance and market value of acquiring companies operating in India. Data were collected and analyzed from 69 M&A announcements from January 2010 to June 2023, sourced from the Bloomberg database. The analysis reveals a positive correlation between the post-merger market value of acquiring firms and their ESG performance, indicating that an improvement in ESG factors is associated with increased market value after mergers. Additionally, a positive correlation was identified between acquiring companies' post-merger ESG performance and their target firms' pre-merger ESG performance. This finding suggests that when acquiring a target firm with high ESG performance, the acquirer is likely to experience an improvement in its own post-merger ESG performance. Moreover, both the post-merger market value and ESG performance of the acquirer are likely to improve with the profitability and size of firms but will have a negative impact based on the leverage components of the acquiring firms.

Keywords mergers and acquisitions, environmental, social, and governance performance, socially responsible investment, market value

JEL Classification O16, Q56, M48, N25

INTRODUCTION

The growing importance of ESG factors in the global arena has encouraged both corporations and governments to enhance their practices in accordance with the principles of sustainability. In the same vein, the Indian capital market is quickly evolving in terms of ESG and sustainability. Recently, the Security Exchange Board of India (SEBI) has advised the top 1,000 listed companies based on market capitalization to disclose their ESG data in line with Business Responsibility and Sustainability Reporting (BRSR) Core 2023 (Joshi & Joshi, 2024; Nial & Parashar, 2024; Singhania & Saini, 2023; Firmansyah et al., 2023). The increased prominence assigned to ESG issues is highlighted by managers' increasing preference for incorporating ESG elements into their investment processes (Rahman & Wu, 2023; Zhou et al., 2022; Tampakoudis & Anagnostopoulou, 2020). As a crucial corporate endeavor, mergers and acquisitions (M&A) prompt various pertinent discussions in the financial and management spheres (Rahman & Wu, 2023). Thus, this study endeavors to explore how M&A affects ESG performance and market value of acquiring firms in India.

Mergers and Acquisitions in India have experienced remarkable growth and transformation in recent years, with sustainability considerations taking center stage for investors and corporations. A successful M&A transactions, companies, especially acquirers go through a

http://dx.doi.org/10.21511/imfi.21(2).2024.25

variety of changes in different ways (Zhou et al., 2022; Tampakoudis & Anagnostopoulou, 2020). Post M&A, the acquirer frequently sees notable improvements in their financial and economic position. These improvements typically take the form of increased market share, reduced operating expenses, and successful counteraction of competitive threats in the industry (Nial & Parashar, 2024). Furthermore, these transformation processes go beyond the financial measures to include changes in ESG performance and variations in market values (Christensen et al., 2022; Tampakoudis & Anagnostopoulou, 2020). Similarly, in the context of Indian businesses, successful M&A agreements help to create value and improve the overall performance of the corporations. Consequently, this research meticulously investigates if the acquirer's ESG score has improved after the M&A agreement has been completed.

According to Cellier and Chollet, (2016), Tampakoudis and Anagnostopoulou (2020), and Chen and Xie, (2022), the rapid growth in socially responsible investment (SRI) has led to the integration of ESG factors in mainstream asset management. As of 2016, the Global Sustainable Investment Alliance reported a global total of $30.7 trillion dedicated to SRI strategies (Global Sustainable Investment Alliance, 2018; Tampakoudis & Anagnostopoulou, 2020). Among these funds, $19.77 trillion was overseen following an assessment process for unfavorable ESG-related issues, while $17.54 trillion integrated ESG factors into the financial analysis (Tampakoudis & Anagnostopoulou, 2020). Global ESG-related assets under management (AUM) size increased to a projected $41 trillion in 2022, according to a January 2022 analysis by Bloomberg Intelligence (Julot, 2023). Further, according to Bloomberg projections, by 2025, ESG assets could be worth over $50 trillion, or one-third of all AUM worldwide (Julot, 2023). Hence, various research in recent times focused on finding if M&A decisions have any relation to the ESG compliance of the target firms (Nial & Parashar, 2024; Singhania & Saini, 2023; Rahman & Wu, 2023; Firmansyah et al., 2023; Tampakoudis & Anagnostopoulou, 2020).

Stakeholder theory provides a comprehensive framework for understanding the relationship between corporate social responsibility (CSR), company value, and corporate performance (Rahman & Wu, 2023; Tampakoudis & Anagnostopoulou, 2020). It serves as the theoretical bedrock for understanding how companies should consider and engage with various stakeholders, not solely focused on shareholders, but also encompassing employees, communities, customers, and the environment. It also emphasizes the idea that a company's success is intricately linked to its ability to balance the interests of all stakeholders, influencing thereby its overall value and performance in the long run (Tampakoudis & Anagnostopoulou, 2020; Porter & Kramer, 2006; Freeman, 1984). Moreover, stakeholder theory supports both SRI and the adoption of ESG-related corporate policies, and hence, this study employed stakeholder theory.

Overall, the present study sheds light on the evolving landscape of corporate responsibility and governance in India, with a focus on the role of ESG factors in shaping M&A outcomes, within the context of the Stakeholder theory. The study examines the impact of ESG parameters on M&As in India, for which, only 69 M&A cases were considered from 2010 to 2023, where both acquiring and target companies are listed firms. This is because ESG has emerged as a compliance factor within Indian corporations only in recent times, owing to this, many firms do not disclose ESG data. The data were taken from the Bloomberg database and analyzed using Pearson's Correlations and Multiple Regression Analysis.

1. LITERATURE REVIEW

The literature review explores the interplay between M&A, ESG factors, and corporate performance. It integrates finance, corporate governance, and sustainability theories, illustrating the multifaceted dynamics at play (Capelle-Blancard & Petit, 2017; Widyawati, 2020). While some studies highlighted the generally positive relationship between ESG activities and financial performance (Firmansyah et al., 2023; Al-Shaer & Zaman, 2019; Muñoz-Torres et al., 2018), others revealed nuanced findings, such as negative associations between ESG scores and financial outcomes in specific contexts (Duque-Grisales & Aguilera-Caracuel, 2021). The research underscores the significance of CSR and the potential for improved financial performance and reduced risk for firms with better CSR practices (Porter & Kramer, 2019; Xie et al., 2019; El Ghoul et al., 2011). Moreover, studies indicated a positive relationship between SRI practices and stock market performance (Gangi & Varrone, 2018; Aktas et al., 2011). Investigations into post-merger ESG performance and market value revealed compelling insights, suggesting that acquiring firms benefit from integrating high-performing ESG targets (Tampakoudis & Anagnostopoulou, 2020; Rahman & Wu, 2023). This aligns with market-based theories and underscores the growing influence of ESG factors in investor decision-making (Kotsantonis & Serafeim, 2019). Additionally, the review underscores the role of regulatory frameworks, such as SEBI's guidelines, in incentivizing ESG disclosure and performance (Thomson Reuters, 2022). Overall, the literature resonates with sustainable finance principles, highlighting the increasing importance of ESG considerations in the business landscape and the potential for enhanced financial returns through positive screening in sustainable investing (Yadav et al., 2017).

1.1. ESG and M&A impacts: Influence on performance and shareholder value

ESG encompasses three key categories that enable organizations to measure their actions' sustainability (Escrig-Olmedo et al., 2017) as well as societal impact, including cost, quality, and resource use; these mitigate adverse effects both on society and the environment (Thomson Reuters, 2022). ESG assessment indicators may be more valuable for obtaining a comprehensive view of a firm's CSR (Utz, 2019). Therefore, social performance plays a substantial role in influencing the overall performance of M&A transactions while underscoring the potential impact of social responsibility and sustainability on shareholder value creation, specifically in corporate takeovers (Piperni, 2021). Besides, a target company's ESG score has a differentiated impact on acquirer performance, influenced by the acquirer's pre-merger ESG level; interestingly, it does not significantly affect stock price changes in M&A deals (Feng, 2021). Corporate managers are thereby believed to consider environmental reputations when making acquisition decisions. Firms with toxic environmental reputations are less likely to be involved in acquisitions, while acquirers tend to favor similar companies with environmental reputations. This consideration may be driven by the potential risks and spillover effects of target companies' environmental practices (Boone & Uysal, 2020).

Further, acquirers tend to pay a higher acquisition premium when acquiring a target firm with a strong CSR profile (Qiao & Wu, 2019). Arouri et al. (2019) underscore the relevance of the acquirers' CSR practices in influencing uncertainty surrounding M&A transactions. The study revealed that higher CSR scores are associated with reduced completion uncertainty, indicating the importance of CSR in shaping market perceptions and assessments of M&A outcomes on a global scale. Interestingly, Fatemi et al. (2017) did not observe any significant improvements in the longer-term effects of mergers on an acquiring firm's ESG performance. The relationship between CSR, risk reduction, and firm value underscores the favorable effects of CSR. It emphasizes the potential for even more substantial impacts on companies with high levels of product differentiation (Dyck et al., 2019).

1.2. A comprehensive analysis of Indian firms and sectors

A comprehensive understanding of ESG dynamics in Indian firms and sectors involves engaging stakeholders, integrating ESG into business strategies, implementing reporting systems, and prioritizing long-term value creation. A long-term positive association between ESG disclosure and share price was established, suggesting ESG scores as emerging indicators for future financial performance and risk management strategies, with implications for policy and stakeholder decision-making in India's evolving economy (Ray & Goel, 2023). A link between ESG and financial performance in India was revealed by the research, shifting focus to a company-centric perspective and emphasizing ESG's role in enhancing shareholder value and the imperative of integrating ESG considerations into corporate strategies (Vidhi, 2023). Behl et al.(2022) observed a correlation between

http://dx.doi.org/10.21511/imfi.21(2).2024.25

ESG factors and corporate financial performance (CFP) in the Indian energy sector in their research. Investors, fund managers, policymakers, and energy company managers are assisted in navigating ESG investment strategies and identifying optimal lag periods to maximize the advantages of enhancing firm value. Further, in the Indian context, improved CFP is contributed by enhanced ESG disclosures, bolstering the company's image and credibility, and fostering ethical corporate practices (Kumar & Firoz, 2022; Ray & Goel, 2023).

Empirical investigations in the past confirmed that the evolution of the SRI market has led to an increased emphasis on ESG reporting and the expansion of widely accepted metrics to quantify ESG performance. ESG metrics serve as substitutions for gauging sustainability performance and are viewed as codified indicators of CSR and sustainability. Studies suggest that stakeholders place a higher value on a company's ESG performance when it is reported, and companies publishing ESG reports tend to have higher stock market returns. However, the boundaries between CSR, sustainability, and ESG performance remain relatively vague. Researchers have tried to explore the relationship between ESG performance and the financial performance of organizations and their findings highlight the significance of ESG considerations in corporate decision-making. Similarly, the literature on M&A emphasizes value creation through increased corporate efficiency and access to resources as key drivers for business consolidations. Past studies have identified a positive relationship between enhanced ESG performance with improved corporate performance of acquirer firms, potentially serving as a value-creation factor. Thus, this study investigates the impact of M&A activities on corporate ESG performance, leveraging the strategic management literature to explore value creation, capability transfers, and the potential for acquirers to enhance their ESG performance through acquisitions. The following hypotheses summarize the assumptions of the proposed relationship between ESG and the market value of acquiring firms.

H1: The acquiring firm's ESG performance will improve post-merger when it acquires a company with a stronger ESG performance.

H2: The acquiring firm's market value will improve post-merger when it acquires a company with a stronger ESG performance.

H3: The acquirer's post-merger market value will improve when post-merger ESG performance outperforms pre-merger performance.

2. METHODOLOGY

2.1. Data description

However, before testing the above hypotheses, it was necessary to define the research variables and data. These defined variables are reflected in Table 1.

Using the detailed data framework as presented in Table 1, a series of crucial relative variables for empirical analysis was calculated. Subsequently, the same was substantiated with the hypotheses under investigation. Table 2 displays the variables utilized in the research, their symbols, explanations, and the formulas employed for calculation.

Table 1. Data and variables

S.N.	Variables	Symbol	Descriptions
1	ESG performance target firm	ESG $Target_{t-1}$	The variable shows the ESG performance of the target firm before the year of the merger. The data is taken from the Bloomberg database
2	ESG performance acquiring firm, pre-merger	ESG $Acquirer_{t-1}$	The variable shows the ESG performance of the acquiring firm prior to the year of the merger. The data is taken from the Bloomberg database
3	ESG performance acquiring firm, post-merger	ESG $Acquirer_{t+1}$	The variable shows the ESG performance of the acquiring firm post the year of the merger. The data is taken from the Bloomberg database
4	Acquirer value pre-merger	Acquirer Tobin's Q $ratio_{t-1}$	The acquirer's market value is defined by Tobin's Q value. Tobin's Q is measured as the ratio of market value divided by the book value. The variable shows the pre-merger market value of the acquiring firm. The value is taken from the Bloomberg database

Table 1 (cont.). Data and variables

S.N.	Variables	Symbol	Descriptions
5.	Acquirer value post-merger	Acquirer Tobin's Q ratio$_{t+1}$	The acquirer's market value is defined by Tobin's Q value. Tobin's Q is measured as the ratio of market value divided by the book value. The variable shows the post-merger market value of the acquiring firm. The value is taken from the Bloomberg database
6.	Acquirer profit pre-merger	Acquirer profit$_{t-1}$	The acquirer's profit is defined by the net profit of the company. The variable shows the pre-merger net profit of the acquiring firm. The value is taken from the Bloomberg database
7.	Acquirer profit post-merger	Acquirer profit$_{t+1}$	The acquirer's profit is defined by the net profit of the company. The variable shows the post-merger net profit of the acquiring firm. The value is taken from the Bloomberg database
8.	Acquirer size pre-merger	Acquirer size$_{t-1}$	The acquirer's size is defined by the book value of the assets of the company. The variable shows the pre-merger book value of the acquiring firm. The value is taken from the Bloomberg database
9.	Acquirer size post-merger	Acquirer size$_{t+1}$	The acquirer's size is defined by the book value of the assets of the company. The variable shows the post-merger book value of the acquiring firm. The value is taken from the Bloomberg database
10	Acquirer leverage pre-merger	Acquirer leverage$_{t-1}$	The acquirer's leverage is defined by the ratio of total debt to total assets. The variable shows the pre-merger leverage ratio value of the acquiring firm. The value is taken from the Bloomberg database
11	Acquirer leverage post-merger	Acquirer leverage$_{t+1}$	The acquirer's leverage is defined by the ratio of total debt to total assets. The variable shows the post-merger leverage ratio value of the acquiring firm. The value is taken from the Bloomberg database

Table 2. Data and variables used for analysis

S.N	Variable	Symbol	Definition	Formulae
1	$\frac{Target}{Acquirer} \cdot ESG\ performance$	$\frac{TAR}{ACQ} ESG$	Relative ESG performance of target companies	$\frac{ESG\,Target_{t-1}}{ESG\,Acquirer_{t-1}}$
2	Acquirer ESG performance	ACQESG	Change in acquirer ESG performance, post-merger vs pre-merger	$\frac{Acq\,ESG_{t+1} - Acq\,ESG_{t-1}}{Acquirer\,ESG_{t-1}}$
3	Acquirer Market value	ACQMV	Change in acquirer market value, post-merger vs pre-merger	$\frac{Acq\,Tobins\,Q\ postmerger - Acq\,Tobins\,Q\ premerger}{Acquirer\,Tobins\,Q\ premerger}$
4	Acquirer profitability	ACQ_Prof	Change in acquirer profitability, post-merger vs pre-merger	$\frac{Acquire\ profit_{t+1} - Acquirer\ profit_{t-1}}{Acquirer\ profit_{t-1}}$
5	Acquirer size	ACQ_Size	Change in acquirer size, post-merger vs pre-merger	$\frac{Acq\,size_{t+1} - Acq\,size_{t-1}}{Acquirer\,size_{t-1}}$
6	Acquirer leverage	ACQ_ Leverage	Change in acquirer leverage, post-merger vs pre-merger	$\frac{(Acq\,leverage t+1 - Acq\,leverage t-1)}{Acq\,leverage t-1}$

2.2. Sample

The sample of acquiring and target firms was selected from the Bloomberg database using predetermined parameters. The study initially looked at all M&A announcements made between January 2010 and June 2023, taking into account both the target and acquiring listed firms. Subsequently, consideration was limited to M&A transactions where the identities of the acquiring and target companies were publicly disclosed. Notably, the sample excluded M&A involving multiple acquirers and target firms, buybacks, exchange offers, unknown and private investors, and other exceptional events like dividend announcements, public share announcements, bonus share announcements, and multiple M&A announcements during the event window.

Furthermore, the analysis was restricted to M&A transactions in which both target and acquiring companies had the ESG data. Most of the sample

http://dx.doi.org/10.21511/imfi.21(2).2024.25

Table 3. Sample selection for the study

Sample selection criteria	Number of firms
Total number of M&As, in India, including investments, announced from Jan 2010 to June 2023, including partial acquisition	26551
Less a number of samples where the acquisition was announced but not completed	6029
Total number of M&As, in India, including investments, announced from Jan 2010 to June 2023, including partial acquisition and completion	20522
Less a number of acquisitions where both the acquiring and target firms are not listed on the Indian Stock Exchange	19867
Total number of M&As, in India, including investments, announced from Jan 2010 to June 2023, including partial acquisition, which are complete and both acquiring firms and target firms are listed	655
Fewer samples were rejected due to multiple acquirers and target firms, buybacks, exchange offers, unknown investors, private investors, etc.	298
Total number of M&A, in India, including investments, announced from Jan 2010 to June 2023, including partial acquisitions, which are complete, and both acquiring firms and target firms are listed	357
Less sample firms for which ESG data were not available	288
The total number of samples considered, which includes all M&A, in India, including investments, announced from Jan 2010 to June 2023, including partial acquisition, which is complete, and both acquiring firms and target firms are listed and ESG data available	69

lacked the ESG scores, so ESG disclosure was utilized as the primary data source. Based on the aforementioned criteria, 69 samples were chosen in total. Table 3 provides a summary of the screening procedure. The 69-sample size covers all M&As for listed target and acquiring companies for the period of January 2010 to June 2023.

3. RESULTS

Table 4 provides the descriptive statistics of the variables used for the analysis.

As seen from Table 4, the target for acquiring firms' pre-merger ESG score was 0.800, which effectively indicates that the bidders tend to acquire target firms with lower ESG scores. It is specifically evident in the context of the Indian market since most Indian acquirers tend to be large firms that acquire lower-size target firms. Additionally, the ACQESG score was calculated to be 0.109, signifying an 11% increase in the ESG performance of the acquirer at the post-merger stage compared to the pre-merger stage. Notably, although there seems to be a marginal increase in the market value of the acquirer at the post-merger stage at 0.8%, the profitability is very high in terms of growth (i.e. over 100%). Moreover, the acquirer size seems to have increased by 40% in the post-merger stage, as compared to the pre-merger stage, while the leverage showed only 10% growth.

Largely, the analysis shows that Indian acquirers do tend to acquire target firms that have lower ESG scores compared to acquiring firms. However, an acquirer's ESG performance does improve in the post-merger stage. The other control factors (i.e. profits, market value, and firm size) seem to have grown in the post-merger stage compared to the pre-merger stage.

3.1. Bivariate analysis

Table 5 shows the bivariate analysis between the dependent, independent, and control variables.

The bivariate analysis shows a high correlation be-

Table 4. Descriptive statistics of all variables

S.N.	Variables	Mean	Median	Standard Deviation	Minimum	Maximum
1	$\frac{TAR}{ACQ}ESG$	0.800	0.720	0.403	0.280	2.430
2	ACQESG	0.109	0.040	0.155	–0.180	0.700
3	ACQMV	0.008	–0.020	0.166	–0.540	0.540
4	ACQ_ Prof	1.166	0.170	9.880	–13.54	79.13
5	ACQ_Size	0.400	0.280	0.511	–0.280	2.230
6	ACQ_ Leverage	0.096	0.040	0.498	–0.490	2.420

Table 5. Correlation matrix

Correlations						
	$\frac{TAR}{ACQ}ESG$	ACQESG	ACQMV	ACQ_Prof	ACQ_Size	ACQ_Leverage
$\frac{TAR}{ACQ}ESG$	1					
ACQESG	0.410**	1				
ACQMV	–0.185	0.137	1			
ACQ_Prof	0.039	0.088	0.240*	1		
ACQ_Size	0.350**	0.095	0.040	0.097	1	
ACQ_Leverage	0.036	–0.255*	–0.370**	–0.056	0.167	1

Note: ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

tween ACQESG and $(TAR/ACQ)ESG$, which indicates that the acquirer's ESG scores improve on the acquisition of target firms with higher ESG scores. The results indicate that at the post post-merger stage, the acquirer's ESG scores show significant improvement, as compared to pre-merger scores, which is majorly affected by the pre-merger ESG scores of the target firm.

A reduction in post-merger acquirer ESG performance and market value is observed with the increases in debt components, as indicated by the negative correlation between ACQ_Leverage with both ACQESG and ACQMV.

The bivariate analysis shows a significant and positive relation between $(TAR/ACQ)ESG\ \&\ ACQ\_Size$ and ACQMV&ACQ_Profitabilty. However, there is also a significant negative correlation between ACQESG & ACQ_Leverage, along with ACQMV and ACQ_Leverage.

Largely, the results indicate that the acquirers' ESG scores improve on the acquisition of target firms with high ESG scores. However, acquiring ESG scores does reduce with the increase in the firms' debts.

3.2. Multiple regression analysis

Multiple regression examined the relationship between $(TAR/ACQ)ESG$ performance, acquirers' ESG performance and market value changes, and acquirers' profit, size, and leverage. Three models (Model A, Model B, and Model C) were utilized to test the hypotheses, with detailed explanations of the variables used in these models.

Table 6 presents each model's regression coefficient and significance level using multiple regressions and adjusted R-squared values. Before applying the models, certain assumptions needed verification. The variance inflation factor (VIF) was employed to identify potential multicollinearity issues, and the test values of VIF were all below 1.5 for each model, indicating the absence of multicollinearity.

Subsequently, the Durbin-Watson method was used to assess potential autocorrelation issues. The test values and falls were within the range of 2 (±0.5), confirming the absence of autocorrelation (Malhotra & Birks, 2007). To examine the heteroscedasticity of the model, the studentized Breusch-Pagan test was applied, and the null hypothesis, indicating homoscedasticity, was accepted in all models.

The normality of residuals was tested using the Shapiro-Wilks test, indicating the normality of the standardized residuals. The adjusted R2 values for the three models, reflecting the predictive ability of the models, are 0.19, 0.19, and 0.141, respectively.

Model A

H1: *The acquiring firm's ESG performance will improve post-merger when it acquires a company with a stronger ESG performance.*

The variables in the study were:

Dependent variable: ACQESG.

Independent variable: $\frac{TAR}{ACQ}ESG$

Control variables: *ACQ_Prof*, *ACQ_Size*, *ACQ_Leverage*.

http://dx.doi.org/10.21511/imfi.21(2).2024.25

The regression equation comes as:

$$ACQESG = Constant + a \cdot \frac{TAR}{ACQ} ESG + b \cdot ACQ\_Prof + c \cdot ACQ\_Size + d \cdot ACQ\_Lev, \quad (1)$$

$$ACQESG = -0.013 + 0.162 \cdot \frac{TAR}{ACQ} ESG + 0.001 \cdot ACQ\_Prof - 0.004 \cdot ACQ\_Size - 0.082 \cdot ACQ\_Lev. \quad (2)$$

From Model A, it may be noted that there is indeed a positive relation between $(TAR / ACQ) ESG$ (β = 0.162) and ACQESG, which is statistically significant at the 1% level. However, ACQ_Leverage negatively relates to ACQESG (β = –0.082). The regression analysis shows that there is a positive relation between post-merger acquirers' ESG in relation to pre-merger target ESG at 0.162, statistically significant at a 1% level. Hence, from the results, it is asserted that the post-merger ESG performance of acquirers is indeed contingent on the pre-merger ESG performance of the target firm. In light of these findings, Hypothesis 1 is accepted.

Model B

H2: The acquiring firm's market value will improve post-merger when it acquires a company with a stronger ESG performance.

The variables in the study were:

Dependent variable: ACQMV.

Independent variable: $\frac{TAR}{ACQ} ESG.$

Control variables: ACQ-Prof, ACQ_Size, ACQ_Leverage.

The regression equation comes as:

$$ACQMV = Constant + a \cdot \frac{TAR}{ACQ} ESG + b \cdot ACQ\_Prof + c \cdot ACQ\_Size + d \cdot ACQ\_Lev, \quad (3)$$

$$ACQMV = 0.072 - 0.098 \cdot \frac{TAR}{ACQ} ESG + 0.04 \cdot ACQ\_Prof + 0.054 \cdot ACQ\_Size - 0.126 \cdot ACQ\_Lev. \quad (4)$$

In Model B, a negative relationship is observed between ACQMV with $(TAR / ACQ) ESG$ (β = –0.098), which is statistically significant at a 5% level of significance. Moreover, the ACQ_Leverage negatively relates with 1% level of significance. The regression analysis shows that there's a negative relation between the post-merger acquirers' market value with relation to pre-merger ESG value of target firms at –0.098, and statistically significant at the 5% level. Based on these results, Hypothesis 2 may be rejected.

Model C

H3: The acquirer's post-merger market value will improve when post-merger ESG performance outperforms pre-merger performance.

The variables in the study were:

Dependent variable: *ACQMV.*

Independent variable: *ACQESG.*

Control variables: *ACQ_Profitabilty*, *ACQ-Size*, *ACQ_Leverage.*

The regression equation comes as:

$$ACQMV = Constant + a \cdot ACQESG + b \cdot ACQ\_Prof + c \cdot ACQ\_Size + d \cdot ACQ\_Leverage, \quad (5)$$

$$ACQMV = 0.003 + 0.018 \cdot ACQESG + 0.004 \cdot ACQ\_Prof. + 0.026 \cdot ACQ\_Size - 0.122 \cdot ACQ\_Leverage. \quad (6)$$

In Model C, a positive relationship is observed between ACQMV and ACQESG (β = 0.018) but is not significant at a 5% level of significance. Also, ACQ_Leverage does have a significant negative relation with ACQMV. The regression analysis shows a positive relation between post-merger acquirers' market value in relation to their ESG

Table 6. Regression coefficients

	Model A		Model B		Model C	
	Regression Coefficient		Regression Coefficient		Regression Coefficient	
(Constant)	–0.013		0.072		0.003	
$\frac{TAR}{ACQ}ESG$	0.162***		–0.098*			
ACQESG					0.018	
ACQ_Prof	0.001		0.004		0.004	
ACQ_Size	–0.004		0.054		0.026	
ACQ_Leverage	–0.082*		–0.126**		–0.122**	
Dependent Variable	**ACQESG**		**ACQMV**		**ACQMV**	
Adjusted R2	0.190		0.194		0.141	
Durban Watson	1.737		1.360		1.324	
Breusch-Pagan test	8.442		0.877		2.634	
Collinearity Statistics	**Tolerance**	**VIF**	**Tolerance**	**VIF**	**Tolerance**	**VIF**
$\frac{TAR}{ACQ}ESG$	0.877	1.140	0.877	1.140		
ACQESG					0.912	1.097
ACQ_Prof	0.985	1.015	0.985	1.015	0.982	1.019
ACQ_Size	0.845	1.183	0.845	1.183	0.943	1.061
ACQ_Leverage	0.966	1.035	0.966	1.035	0.895	1.117
Shapiro Wilks test	0.911**		0.960*		0.961*	

Note: *** Regression is significant at the 0.000 level (2-tailed). ** Regression is significant at the 0.01 level (2-tailed). * Regression is significant at the 0.05 level (2-tailed).

performance. However, within a post-merger scenario, the acquirers' market value does have a negative relation with the debt portion of acquiring firms. Based on these results, Hypothesis 3 is not rejected.

Table 6 shows the results of multiple regression analysis between the dependent variables ACQESG, and ACQMV with the independent and control variables, $(TAR/ACQ)ESG$, along with the acquirers' profitability, size, and leverage.

4. DISCUSSION

This study examined the influence of M&A on ESG performance and market value of acquiring companies operating in India. Based on the findings, it has been now established that acquiring firms significantly improve their ESG performance following a merger when integrating targets with superior pre-merger ESG performance. This suggests a readiness to implement and incorporate ESG principles by firms in their daily operations. These findings support earlier research by demonstrating that acquiring socially conscious targets does enhance the environmental and social performance of acquiring firms through voluntary CSR measures (Firmansyah et al., 2023; Al-Shaer & Zaman, 2019; Muñoz-Torres et al., 2018; Porter & Kramer, 2019; Xie et al., 2019).

Further, this study showed a positive relationship between the two variables, ACQMV and ACQESG, in terms of evidence of enhanced market value for an acquiring company when purchasing a target with superior ESG performance. Therefore, the results are in line with earlier research, which contributes to the conversation about the value-enhancing effects of SRI (Firmansyah et al., 2023; Xie et al., 2019). However, because different CSR dimensions have multifaceted implications, it is difficult to make exact conclusions in terms of the specific aspects of a target firm's ESG performance, and how they affect the acquirers' performance post-acquisition. Given the use of aggregated ESG ratings, this could account for the findings involving target/acquirer ESG performance and market value, which have a moderate level of significance. Future studies may delve deeper into this.

The results show a significant and positive relationship between the acquiring firms' post-

http://dx.doi.org/10.21511/imfi.21(2).2024.25

merger market value changes vis a vis their subsequent ESG performance in India. The study strongly suggests that M&A values significantly increase when there is a significant improvement in the ESG performance of firms. This affirmation supports the idea of CSR as a way to increase value, as suggested by the Stakeholder Theory (Freeman, 1984). The results are in line with recent research conducted by Tampakoudis and Anagnostopoulou (2020) on EU acquirers and Rahman and Wu (2023) on the Chinese market, where they observed that acquiring ESG-aware targets positively impact both the acquirer's ESG performance and its market value.

CONCLUSION

This study examines the effects of M&A announcements on the ESG performance and market value of acquiring companies in India, analyzing 69 M&A announcements spanning from January 2010 to June 2023, where both acquiring and target firms were listed. The data sourced from the Bloomberg database reveal that acquiring firms experience an improvement in ESG performance upon acquiring targets with superior ESG performance. Furthermore, the results show a positive correlation between the post-merger market value of acquiring firms and their ESG performance, which shows the close link between the improvement in ESG factors and an upsurge in the market value of acquiring firms post-mergers. These findings imply that the acquiring firms can bolster their ESG performance and market value by targeting companies with robust ESG performance.

This study provides both theoretical and practical implications. In the context of M&A activity, this study reaffirms the association between corporate value creation and ESG performance. The findings imply that acquiring firms can enhance their ESG performance by acquiring targets with higher ESG performance. This is consistent with the stakeholder theory perspective, which suggests that business measures intended to satisfy different stakeholders' needs – including those pertaining to environmental, social, and governance (ESG) concerns – can result in improved company performance and value generation. The study also emphasizes how crucial it is to take ESG elements into account as strategic assets when making M&A decisions, emphasising how sustainability factors influence business plans and results.

The study's findings are of interest to managers, investors, and policymakers. They equip them with insights to make well-informed decisions in this domain. The study supports that SRI is a strategy to enhance the value of the firm for managers. Therefore, investing in firms with better ESG performance not only positively affects the firm's ESG performance but also improves the firm's market value. Additionally, it is recommended that policymakers encourage companies to disclose information about their ESG performance and support the implementation of ESG practices.

Ultimately, this study contributes to a deeper understanding of the intricate relationship between M&A activities, ESG performance, and market value, paving the way for more informed and sustainable business practices in India's corporate landscape. However, the study confronts a significant constraint due to the limited availability of ESG data, as numerous Indian companies refrain from disclosing ESG-related information publicly. This hampers rating agencies' ability to assign ESG scores, given their heavy reliance on publicly accessible data. Yet, the recent regulatory directives issued by SEBI in July 2023, mandating ESG parameter disclosure under BRSR Core, promise to ameliorate this challenge, facilitating future research on ESG in India. Moreover, the study's reliance on aggregate ESG disclosures instead of individual ESG factors for firms underscores the need for future research exploring the impact of specific ESG parameters on M&A outcomes, offering deeper insights into this realm.

AUTHOR CONTRIBUTIONS

Conceptualization: Manoj Panda, Pankaj Sharma, Vasa Laszlo, Vinod Sharma.
Data curation: Manoj Panda.
Formal analysis: Manohar Kapse.
Funding: Vasa Laszlo, Yogesh Mahajan.
Investigation: Manoj Panda.
Methodology: Manoj Panda, Pankaj Sharma, Manohar Kapse.
Project administration: Pankaj Sharma, Vinod Sharma.
Resources: Vinod Sharma, Yogesh Mahajan.
Software: Manohar Kapse.
Supervision: Manoj Panda, Pankaj Sharma, Vasa Laszlo, Yogesh Mahajan.
Validation: Manoj Panda, Pankaj Sharma, Vinod Sharma.
Visualization: Vinod Sharma.
Writing – original draft: Manoj Panda, Pankaj Sharma.
Writing – review & editing: Vasa Laszlo, Manohar Kapse, Vinod Sharma, Yogesh Mahajan.

REFERENCES

1. Aktas, N., de Bodt, E., & Cousin, J.-G. (2011). Do financial markets care about SRI? Evidence from mergers and acquisitions. *Journal of Banking & Finance, 35*(7), 1753-1761. https://doi.org/10.1016/j.jbankfin.2010.12.006
2. Alduais, F. (2023). Unravelling the intertwined nexus of firm performance, ESG practices, and capital cost in the Chinese business landscape. *Cogent Economics & Finance, 11*(2), 2254589. https://doi.org/10.1080/23322039.2023.2254589
3. Alfalih, A. A. (2023). ESG disclosure practices and financial performance: a general and sector analysis of SP-500 non-financial companies and the moderating effect of economic conditions. *Journal of Sustainable Finance & Investment, 13*(4), 1506-1533. https://doi.org/10.1080/20430795.2022.2150511
4. Al-Shaer, H., & Zaman, M. (2019). CEO Compensation and Sustainability Reporting Assurance: Evidence from the UK. *Journal of Business Ethics, 158*(1), 233–252. https://doi.org/10.1007/s10551-017-3735-8
5. Albuquerque, R., Koskinen, Y., & Zhang, C. (2019). Corporate Social Responsibility and Firm Risk: Theory and Empirical Evidence. *Management Science, 65*(10), 4451-4469. https://doi.org/10.1287/mnsc.2018.3043
6. Ang, J. S., & Cheng, Y. (2006). Direct evidence on the market-driven acquisition theory. *Journal of Financial Research, 29*(2), 199-216. https://doi.org/10.1111/j.1475-6803.2006.00174.x
7. Anita, M., Shveta, S., Yadav Surendra, S., & Arvind, M. (2023). When do ESG controversies reduce firm value in India? *Global Finance Journal, 55,* 100809. https://doi.org/10.1016/j.gfj.2023.100809
8. Arouri, M., Gomes, M., & Pukthuanthong, K. (2019). Corporate social responsibility and M&A uncertainty. *Journal of Corporate Finance, 56,* 176-198. https://doi.org/10.1016/j.jcorpfin.2019.02.002
9. Behl, A., Kumari, P. S. R., Makhija, H., & Sharma, D. (2022). Exploring the relationship of ESG score and firm value using cross-lagged panel analyses: case of the Indian energy sector. *Annals of Operations Research, 313*(1), 231-256. https://doi.org/10.1007/s10479-021-04189-8
10. Bereskin, F., Byun, S. K., Officer, M. S., & Oh, J.-M. (2018). The Effect of Cultural Similarity on Mergers and Acquisitions: Evidence from Corporate Social Responsibility. *Journal of Financial and Quantitative Analysis, 53*(5), 1995-2039. https://doi.org/10.1017/S0022109018000716
11. Boone, A., & Uysal, V. B. (2020). Reputational concerns in the market for corporate control. *Journal of Corporate Finance, 61,* 101399. https://doi.org/10.1016/j.jcorpfin.2018.08.010
12. Busch, T., & Hoffmann, V. H. (2011). How Hot Is Your Bottom Line? Linking Carbon and Financial Performance. *Business & Society, 50*(2), 233-265. https://doi.org/10.1177/0007650311398780
13. Capelle-Blancard, G., & Petit, A. (2017). The Weighting of CSR Dimensions: One Size Does Not Fit All. *Business & Society, 56*(6), 919-943. https://doi.org/10.1177/0007650315620118
14. Cheng, C., & Yang, M. (2017). Enhancing performance of cross-border mergers and acquisitions in developed markets: The role of business ties and technological innovation capability. *Journal of Business Research, 81,* 107-117. https://doi.org/10.1016/j.jbusres.2017.08.019
15. Chen, Z., & Xie, G. (2022). ESG disclosure and financial performance: Moderating role of ESG investors. *International Review of Financial Analysis*, *83*, 102291. https://doi.org/10.1016/j.irfa.2022.102291
16. Christensen, D. M., Serafeim, G., & Sikochi, A. (2022). Why is Corporate Virtue in the Eye of The Beholder? The Case of ESG Ratings. *The Accounting Review*. https://doi.org/10.2308/tar-2019-0506

http://dx.doi.org/10.21511/imfi.21(2).2024.25

17. da Silva Monteiro, S. M., & Aibar-Guzmán, B. (2010). Determinants of environmental disclosure in the annual reports of large companies operating in Portugal. *Corporate Social Responsibility and Environmental Management, 17*(4), 185-204. https://doi.org/10.1002/csr.197
18. Drempetic, S., Klein, C., Klein, C., & Zwergel, B. (2019). The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review. *Journal of Business Ethics.* https://doi.org/10.1007/s10551-019-04164-1
19. Duque-Grisales, E., & Aguilera-Caracuel, J. (2021). Environmental, Social and Governance (ESG) Scores and Financial Performance of Multilatinas: Moderating Effects of Geographic International Diversification and Financial Slack. *Journal of Business Ethics, 168*(2), 315-334. https://doi.org/10.1007/s10551-019-04177-w
20. Dyck, A., Lins, K. V., Roth, L., & Wagner, H. F. (2019). Do institutional investors drive corporate social responsibility? International evidence. *Journal of Financial Economics, 131*(3), 693-714. https://doi.org/10.1016/j.jfineco.2018.08.013
21. El Ghoul, S., Guedhami, O., Kwok, C. C. Y., & Mishra, D. R. (2011). Does corporate social responsibility affect the cost of capital? *Journal of Banking & Finance, 35*(9), 2388-2406. https://doi.org/10.1016/j.jbankfin.2011.02.007
22. Erel, I., Liao, R. C., & Weisbach, M. S. (2012). Determinants of Cross-Border Mergers and Acquisitions. *The Journal of Finance, 67*(3), 1045-1082. https://doi.org/10.1111/j.1540-6261.2012.01741.x
23. Escrig-Olmedo, E., Fernández-Izquierdo, M., Ferrero-Ferrero, I., Rivera-Lirio, J., & Muñoz-Torres, M. (2019). Rating the Raters: Evaluating how ESG Rating Agencies Integrate Sustainability Principles. *Sustainability, 11*(3), 915. https://doi.org/10.3390/su11030915
24. Escrig-Olmedo, E., Muñoz-Torres, M. J., Fernández-Izquierdo, M. Á., & Rivera-Lirio, J. M. (2017). Measuring Corporate Environmental Performance: A Methodology for Sustainable Development. *Business Strategy and the Environment, 26*(2), 142-162. https://doi.org/10.1002/bse.1904
25. Fatemi, A. M., Fooladi, I., & Garehkoolchian, N. (2017). Gains from mergers and acquisitions in Japan. *Global Finance Journal, 32,* 166-178. https://doi.org/10.1016/j.gfj.2017.02.002
26. Feng, X. (2021). The role of ESG in acquirers' performance change after M&A deals. *Green Finance, 3*(3), 287-318. https://doi.org/10.3934/GF.2021015
27. Firmansyah, E. A., Umar, U. H., & Jibril, R. S. (2023). Investigating the effect of ESG disclosure on firm performance: The case of Saudi Arabian listed firms. *Cogent Economics & Finance, 11*(2), 2287923. https://doi.org/10.1080/23322039.2023.2287923
28. Gangi, F., & Varrone, N. (2018). Screening activities by socially responsible funds: A matter of agency? *Journal of Cleaner Production, 197,* 842-855. https://doi.org/10.1016/j.jclepro.2018.06.228
29. Global Sustainable Investment Alliance. (2018). *2018 global sustainable investment review. Global Sustainable Investment Alliance.* Retrieved from https://www.gsi-alliance.org/wp-content/uploads/2019/03/GSIR_Review2018.3.28.pdf
30. Gomes, M., & Marsat, S. (2018). Does CSR impact premiums in M&A transactions? *Finance Research Letters, 26,* 71-80. https://doi.org/10.1016/j.frl.2017.12.005
31. He, F., Du, H., & Yu, B. (2022). Corporate ESG performance and manager misconduct: Evidence from China. *International Review of Financial Analysis, 82,* 102201. https://doi.org/10.1016/j.irfa.2022.102201
32. Jackson, G., Bartosch, J., Avetisyan, E., Kinderman, D. P., & Knudsen, J. S. (2020). Mandatory Non-financial Disclosure and Its Influence on CSR: An International Comparison. *Journal of Business Ethics.* https://doi.org/10.1007/s10551-019-04200-0
33. Jensen, M. C. (2001). Value maximization, stakeholder theory, and the corporate objective function. *Journal of Applied Corporate Finance, 14*(3), 8-21. https://doi.org/10.1111/j.1745-6622.2001.tb00434.x
34. Joshi, B., & Joshi, H. (2024). Financial Determinants of Environmental, Social and Governance Performance: Empirical Evidence from India. *Investment Management and Financial Innovations, 21*(1), 13-24. https://doi.org/10.21511/imfi.21(1).2024.02
35. Julot, M. (2023). *The ABCs of ESG Investing: Non-Financial Measures, Big Financial Implications.* Retrieved from https://comptroller.texas.gov/economy/fiscal-notes/2023/may/esg-investing
36. Kotsantonis, S., & Serafeim, G. (2019). Four Things No One Will Tell You About ESG Data. *Journal of Applied Corporate Finance, 31*(2), 50-58. https://doi.org/10.1111/jacf.12346
37. Koundouri, P., Pittis, N., & Plataniotis, A. (2022). The impact of ESG performance on the financial performance of European area companies: An empirical examination. *Environmental Sciences Proceedings, 15*(1), 13. https://doi.org/10.3390/environsciproc2022015013
38. Kumar, P., & Firoz, M. (2022). Does Accounting-based Financial Performance Value Environmental, Social and Governance (ESG) Disclosures? A detailed note on a corporate sustainability perspective. *Australasian Business, Accounting and Finance Journal, 16*(1), 41-72. https://doi.org/10.14453/aabfj.v16i1.4
39. Kwoka, J., & Pollitt, M. (2010). Do mergers improve efficiency? Evidence from restructuring the US electric power sector. *International Journal of Industrial Organization, 28*(6), 645-656. https://doi.org/10.1016/j.ijindorg.2010.03.001
40. Kwon, O., Lim, S., & Lee, D. H. (2018). Acquiring startups in the energy sector: a study of firm value and environmental policy. *Business Strategy and the Environment, 27*(8), 1376-1384. https://doi.org/10.1002/bse.2187
41. Lokuwaduge, C. S. D. S., & Heenetigala, K. (2017). Integrating Environmental, Social and Governance (ESG) Disclosure for a Sustainable Development: An Australian Study.

Business Strategy and the Environment, 26(4), 438-450. https://doi.org/10.1002/bse.1927

42. Muñoz-Torres, M. J., Fernández-Izquierdo, M. Á., Rivera-Lirio, J. M., Ferrero-Ferrero, I., Escrig-Olmedo, E., Gisbert-Navarro, J. V., Marullo, M. C., & Marullo, M. C. (2018). An Assessment Tool to Integrate Sustainability Principles into the Global Supply Chain. *Sustainability*. https://doi.org/10.3390/su10020535

43. Nakao, Y., Amano, A., Matsumura, K., Genba, K., & Nakano, M. (2007). Relationship between environmental performance and financial performance: an empirical analysis of japanese corporations. *Business Strategy and the Environment, 16*(2), 106-118. https://doi.org/10.1002/bse.476

44. Nial, N., & Parashar, P. (2024). A comparative study on sustainability standards with specific reference to GRI standards and BRSR framework. *International Journal of Quality & Reliability Management, ahead of print*. https://doi.org/10.1108/IJQRM-02-2023-0028

45. Piperni, C. (2021). *Does ESG Affect Shareholder Value Creation? Evidence From The M&A Market*. Luiss University Press. Retrieved from www.luissuniversitypress.it

46. Porter, M. E., & Kramer, M. R. (2019). *Creating Shared Value. In Managing Sustainable Business* (pp. 323-346). Springer, Netherlands. https://doi.org/10.1007/978-94-024-1144-7_16

47. Qiao, L., & Wu, J. (2019). Pay for Being Responsible: The Effect of Target Firm's Corporate Social Responsibility on Cross-Border Acquisition Premiums. *Sustainability, 11*(5), 1291. https://doi.org/10.3390/su11051291

48. Rahman, J., & Wu, J. (2023). M&A activity and ESG performance: evidence from China. Managerial Finance. https://doi.org/10.1108/MF-02-2023-0103

49. Schäfer, H. (2005). Conceptual Outline and Empirical Results. *Journal of Corporate Citizenship, 20*(20), 107-121. Retrieved from https://www.jstor.org/stable/10.2307/jcorpciti.20.107

50. Shvarts, E. A., Pakhalov, A., Pakhalov, A., Knizhnikov, A., Knizhnikov, A. Y., & Ametistova, L. (2018). Environmental rating of oil and gas companies in Russia: How assessment affects environmental transparency and performance. *Business Strategy and The Environment*. https://doi.org/10.1002/bse.2049

51. Singhania, M., & Saini, N. (2023). Institutional framework of ESG disclosures: comparative analysis of developed and developing countries. *Journal of Sustainable Finance & Investment, 13*(1), 516-559. https://doi.org/10.1080/20430795.2021.1964810

52. Sinha Ray, R., & Goel, S. (2023). Impact of ESG score on financial performance of Indian firms: static and dynamic panel regression analyses. *Applied Economics, 55*(15), 1742-1755. https://doi.org/10.1080/00036846.2022.2101611

53. Tampakoudis, I., & Anagnostopoulou, E. (2020). The effect of mergers and acquisitions on environmental, social and governance performance and market value: Evidence from EU acquirers. *Business Strategy and the Environment, 29*(5), 1865-1875. https://doi.org/10.1002/bse.2475

54. Thomson Reuters. (2022). *ESG scores methodology. Environmental, Social, and Governance Scores from REFINITIV* (pp. 1-28). Retrieved from https://www.refinitiv.com/en/sustainable-finance/esg-scores#methodology

55. Utz, S. (2019). Corporate scandals and the reliability of ESG assessments: evidence from an international sample. *Review of Managerial Science, 13*(2), 483-511. https://doi.org/10.1007/s11846-017-0256-x

56. Vidhi, S., & Selvam, J. D. (2023). *Advance in Management Research* (1st ed.). Retrieved from https://www.taylorfrancis.com/chapters/edit/10.4324/9781003366638-10/impact-esg-financial-performance-indian-perspective-vidhi-joseph-durai-selvam

57. Weber, O., Fenchel, M., & Scholz, R. W. (2008). Empirical analysis of the integration of environmental risks into the credit risk management process of European banks. *Business Strategy and the Environment, 17*(3), 149-159. https://doi.org/10.1002/bse.507

58. Widyawati, L. (2020). A systematic literature review of socially responsible investment and environmental social governance metrics. *Business Strategy and the Environment, 29*(2), 619-637. https://doi.org/10.1002/bse.2393

59. Xie, J., Nozawa, W., Yagi, M., Fujii, H., & Managi, S. (2019). Do environmental, social, and governance activities improve corporate financial performance? *Business Strategy and the Environment, 28*(2), 286-300. https://doi.org/10.1002/bse.2224

60. Yadav, P. L., Han, S. H., & Kim, H. (2017). Sustaining Competitive Advantage Through Corporate Environmental Performance. *Business Strategy and the Environment, 26*(3), 345-357. https://doi.org/10.1002/bse.1921

61. Yen, T.-Y., & André, P. (2019). Market reaction to the effect of corporate social responsibility on mergers and acquisitions: Evidence on emerging markets. *The Quarterly Review of Economics and Finance, 71*, 114-131. https://doi.org/10.1016/j.qref.2018.07.003

62. Zheng, S. Y., Chen, R., Liu, H., Li, J., Fahad, S., & Li, B. (2023). Corporate social responsibility initiatives and their role in firms' reputation and green economic recovery through organizational trust. *Environmental Science and Pollution Research*, 1-12. https://doi.org/10.1007/s11356-023-29259-1

63. Zhou, G., Liu, L., & Luo, S. (2022). Sustainable development, ESG performance, and company market value: Mediating effect of financial performance. *Business Strategy and the Environment, 31*(7), 3371-3387. https://doi.org/10.1002/bse.3089

http://dx.doi.org/10.21511/imfi.21(2).2024.25