

Effect of Environmental, Social and Governance Performance on Firm Valuation: A Study

¹Saurabh, ²Yashika Aneja, ³Rahul Singh, ⁴Dr. Rohit Bansal

¹²³ MBA Student , Lovely Professional University

⁴Associate Professor, Lovely Professional University

email: saurabhsinha655@gmail.com

ABSTRACT

The integration of ESG criteria into corporate strategy and investment frameworks has intensified global scrutiny over whether responsible business conduct genuinely enhances firm value or merely imposes cost without commensurate return. This study investigates that question within the Indian pharmaceutical sector an industry uniquely positioned at the crossroads of commercial enterprise and public health obligation, yet largely overlooked in sector-specific ESG scholarship. Using secondary data from listed Indian pharmaceutical companies and firm value proxies of Tobin's Q and the market-to-book ratio, the study disaggregates composite ESG scores into their environmental, social, and governance components to examine each pillar's independent effect, while controlling for firm size and leverage. The pharmaceutical industry's exposure to chemical effluents, drug-safety obligations, clinical-trial governance, and multi-jurisdictional regulatory oversight makes it a setting where ESG shortfalls carry irreversible reputational and financial consequences, lending particular weight to this inquiry. India's structural characteristics concentrated ownership, evolving regulatory enforcement, and an emerging capital market diverge sufficiently from developed-economy contexts to render existing findings non-transferable without empirical verification.

Keywords: ESG performance, firm value, pharmaceutical industry, Tobin's Q, market-to-book ratio, emerging markets, India, sustainable finance, corporate governance,

INTRODUCTION

The global business landscape has undergone a fundamental transformation over the past two decades. Corporations are no longer evaluated solely through the lens of profitability and shareholder returns; rather, a broader set of expectations now governs how organisations are perceived by investors, regulators, customers, and civil society at large. This shift reflects a growing recognition that businesses are deeply embedded within social and ecological systems, and that their long-term viability is inextricably linked to the health of those systems. Against this backdrop, Environmental, Social, and Governance (ESG) criteria have emerged as a comprehensive and widely accepted framework for assessing the non-financial dimensions of corporate conduct. Originally conceived as a tool for socially responsible investing, ESG has gradually evolved into a mainstream analytical lens employed by institutional investors, credit rating agencies, stock exchanges, and regulatory bodies across the world.

At its core, the ESG framework is structured around three interrelated pillars, each capturing a distinct dimension of responsible corporate behaviour. The environmental pillar encompasses a firm's relationship with the natural world, including its carbon footprint, energy consumption patterns, water usage, waste generation, and overall ecological stewardship. As climate change and resource scarcity have moved from peripheral concerns to central business risks, investors and stakeholders increasingly demand that companies demonstrate a credible commitment to environmental sustainability. The social pillar, on the other hand, focuses on how firms manage relationships with their human stakeholders employees, customers, suppliers, local communities, and society more broadly. This includes dimensions such as occupational health and safety, diversity and inclusion, fair labour practices, product quality, and community engagement. Finally, the governance pillar examines the internal mechanisms through which a company is directed and controlled, including board composition, executive accountability, audit integrity, anti-corruption measures, and the

transparency of financial and non-financial disclosures. Together, these three pillars provide a multidimensional portrait of a firm's sustainability profile and its capacity to generate durable value over time.

The growing salience of ESG among investors is underpinned by compelling theoretical reasoning and an expanding body of empirical evidence. From the perspective of stakeholder theory, advanced by Freeman (1984), firms that proactively address the concerns of a broad set of stakeholders—beyond shareholders alone are better positioned to cultivate trust, mitigate conflicts, and sustain cooperative relationships that are essential for competitive advantage. Legitimacy theory further complements this view by arguing that organisations must continuously demonstrate alignment with the norms and expectations of the society in which they operate, failing which they risk losing the social license that underpins their continued existence. In financial terms, strong ESG performance is increasingly linked to lower cost of capital, enhanced risk-adjusted returns, and superior long-run stock performance. Metrics such as Tobin's Q and the market-to-book ratio are commonly employed in empirical research to assess whether ESG activities translate into tangible improvements in firm value. The underlying logic is that responsible environmental and social practices reduce regulatory, reputational, and operational risks, while robust governance structures minimise agency costs and improve the quality of strategic decision-making.

Notwithstanding the broad consensus around the strategic importance of ESG, the empirical literature reveals a nuanced and at times contradictory picture. Several studies conducted across developed markets report a positive and statistically significant association between ESG ratings and firm-level financial performance, suggesting that sustainability-oriented strategies contribute to value creation. However, a parallel strand of research cautions that ESG activities entail substantial upfront costs including investments in cleaner technologies, workforce development programmes and compliance infrastructure which may suppress short-term earnings without guaranteeing commensurate long-run benefits. The relationship is further complicated by industry-specific characteristics, firm size, managerial discretion, and the quality of ESG disclosures, all of which introduce considerable heterogeneity into the observed outcomes. This ambiguity underscores the importance of moving beyond generalized assessments toward sector-specific analyses that account for the unique structural and institutional features of individual industries.

The pharmaceutical industry occupies a particularly significant position within the ESG discourse, for reasons that are both intrinsic to its operations and rooted in its broader social mandate. Unlike many other sectors, pharmaceutical firms operate at the intersection of commerce and public health, rendering their social and ethical responsibilities especially acute. On the environmental front, pharmaceutical manufacturing is characterised by complex chemical synthesis processes, intensive water usage and the generation of hazardous by-products. The improper disposal of pharmaceutical effluents poses well-documented risks to aquatic ecosystems and human health, making environmental stewardship a pressing operational and reputational concern. Socially, pharmaceutical companies bear an obligation to ensure the accessibility and affordability of essential medicines, uphold rigorous standards of product safety and clinical integrity, and engage transparently with patients, healthcare providers and the communities in which they are embedded. These expectations are heightened by the fact that pharmaceutical products can have life-altering or life-saving consequences, placing a moral premium on social responsibility that few other industries face to the same degree. From a governance standpoint, the sector is characterised by its exposure to stringent regulatory oversight across multiple jurisdictions, intense intellectual property litigation, and persistent scrutiny over pricing strategies, clinical trial transparency, and post-market surveillance practices.

This study seeks to address the identified gap in the literature by undertaking a systematic empirical analysis of how ESG performance influences the financial performance of listed Indian pharmaceutical companies. Specifically, the study examines the individual effects of the environmental, social, and governance pillars on firm value, as proxied by Tobin's Q and the market-to-book ratio, while controlling for relevant firm-level characteristics. By disaggregating the composite ESG score, the study aims to provide a more granular and actionable understanding of which sustainability dimensions matter most in the context of an emerging economy's pharmaceutical sector. This approach not only enriches the theoretical debate around ESG and value creation but also yields practical insights for corporate managers seeking to prioritise sustainability investments, for institutional investors engaged in ESG-integrated portfolio construction, and for policymakers designing disclosure frameworks and incentive structures that promote responsible business conduct.

REVIEW OF LITERATURE

Tahmid et al. (2022) investigated whether the adoption of ESG strategies translated into superior firm value and overall performance among European businesses. Using a 12-year balanced panel dataset comprising 180 listed companies from 2008 to 2020, the study employed panel regression models including fixed effects specifications with ESG scores sourced from Thomson Reuters as the primary independent variable and firm value and performance indices as outcome measures. The findings revealed that a higher degree of ESG initiative adoption was significantly associated with enhanced firm value and stronger business performance, thereby substantiating the argument that comprehensive sustainability engagement yields measurable and beneficial financial outcomes for firms operating in developed European markets.

Behl et al. (2022) examined the causal and dynamic relationship between ESG scores and firm value specifically within Indian energy sector companies. The study applied cross-lagged panel structural equation modelling to four-wave panel data, enabling an assessment of autoregressive effects and bidirectional causality between ESG disclosures and firm valuation over time. The results were notably nuanced: the ESG–firm value relationship was not found to be generally bidirectional. Instead, the study documented a negative association at early time lags alongside a positive association at later lags, with stable autoregressive effects throughout. This temporal pattern implied that ESG performance does not simultaneously influence and respond to firm value, but rather that its positive influence on firm value materializes gradually a finding with relevance for emerging market settings where ESG integration is still evolving.

Falzon and Micallef (2022) investigated the financial consequences of ESG performance for U.S. listed companies, focusing on three distinct outcome dimensions: stock returns, operating performance, and firm value. The study drew on data from 1,371 businesses over the period 2010 to 2016, employing the Fama–French portfolio methodology to compare returns across high- and low-ESG portfolios, and panel regressions of Tobin's Q (as a firm value measure) and ROA (as an operating performance measure) on ESG scores. The analysis found that ESG scores were positively associated with firm value as measured by Tobin's Q and were linked to less severe negative stock return periods. The relationship with operating performance, however, was more complex and mixed in direction, leading the authors to conclude that ESG's financial effects are broadly positive for market valuation but operate through different and more nuanced mechanisms at the level of accounting-based profitability.

Chairani and Siregar (2022) examined whether ESG performance moderated the relationship between enterprise risk management (ERM) and both financial performance and firm value among ASEAN-5 enterprises. The study employed fixed-effect panel regression on a dataset spanning 680 firm-year observations from 2014 to 2018, using financial and ESG data drawn from Thomson Reuters and corporate annual reports. The findings established that ERM exerted a significant positive impact on both financial performance and firm value. More importantly, ESG performance was found to substantially amplify the beneficial effect of ERM on firm value, particularly in sectors characterised by elevated sensitivity to environmental, social, and governance concerns. These results position ESG not merely as a standalone value driver but as a reinforcing governance mechanism that multiplies the firm value gains generated by formal risk management frameworks.

Chang et al. (2022) undertook a comprehensive review of the sustainable finance literature to assess how CSR and ESG activities collectively affected investment returns and corporate value. Synthesising empirical findings from a broad body of prior research and applying a discounted cash-flow valuation framework, the study concluded that ESG and CSR initiatives generally increased firm value through several channels: motivating and retaining employees, strengthening relationships with stakeholders, lowering the cost of external financing, and supporting longer-horizon growth strategies. Notably, however, the analysis found that these sustainability practices did not consistently generate higher long-run stock returns, suggesting that ESG's value creation is more robustly captured in fundamental firm value metrics than in traded return performance an important distinction for both equity investors and corporate managers assessing the financial case for sustainability commitment.

Carnini Pulino et al. (2022) examined the extent to which ESG disclosure influenced firm performance against the backdrop of intensifying stakeholder scrutiny of corporate sustainability practices. Using statistical regression models applied to business performance data integrated with ESG disclosure metrics, the study evaluated the relationship between transparency in environmental, social, and governance reporting and tangible financial outcomes. The results demonstrated a positive correlation between higher levels of ESG disclosure and stronger firm performance, indicating

that organisations that proactively and transparently communicated their sustainability practices were better positioned to attract investor capital, build credibility with a broad stakeholder base, and achieve improved operational and financial results. The findings reinforced disclosure quality as an independently significant determinant of financial value creation beyond the ESG activities themselves.

Tandon and Bansal (2022) investigated the impact of ESG activities on stock prices and firm value, motivated by the fundamental question of whether equity market valuations adequately reflect sustainable corporate behaviour. Drawing on prior empirical research and direct market observations, the study analysed both actual financial data and the theoretical linkages connecting ESG performance, CSR engagement, and financial metrics including stock returns and market capitalisation. The findings indicated that stronger ESG engagement was consistently associated with more favourable investor perceptions, and that this investor sentiment translated into support for higher stock prices and elevated firm value. The study reinforced the proposition that ESG practices yield financial benefits that extend well beyond their sustainability objectives, functioning as a market signal that enhances the perceived quality and stability of the firm in the eyes of capital market participants.

Aras and Hacıoglu Kazak (2022) investigated the relationship between ESG performance and firm value and financial performance, with a specific focus on the long-term corporate benefits attributable to sustainable business practices among banking sector firms in OECD countries. Using regression-based econometric models applied to panel data from listed companies — with ESG scores and firm-level financial indicators as the primary inputs — the study examined how each ESG dimension separately and collectively related to firm value outcomes. Findings consistently revealed that stronger ESG performance was linked to higher company valuations and improved financial results. The study concluded that firms actively committed to sustainable standards were better positioned to strengthen investor confidence, reduce perceived risk, and generate sustained long-term value development, with the banking sector context amplifying the institutional and regulatory significance of the ESG–value relationship.

Nekhili et al. (2022) explored how corporate sustainability policies influenced both organisational outcomes and the attitudes and behaviour of employees, with a particular interest in the moderating role of employee representation at the board level. Merging longitudinal firm-level data with employee survey information and conducting regression analysis across the combined dataset, the study found that strong sustainability policies generated increased employee loyalty, trust and engagement. These enhanced workforce attitudes, in turn, produced measurable improvements in organizational performance and market value. The research contributed an important internal perspective to the ESG–firm value debate, establishing that sustainability commitment functions as an internal value creation mechanism building human capital and institutional cohesion rather than acting solely as an outward-facing reputational or investor relations instrument.

Suretno, Adrianto, and Alfarisi (2022) investigated whether ESG performance affected the market valuation of publicly listed companies, motivated by the need to understand how sustainability practices shaped investor perceptions and market pricing. Using multiple regression analysis on secondary data encompassing both financial performance metrics and ESG indicators drawn from publicly traded companies, the study examined the directional and magnitude of the ESG–firm value relationship. The results confirmed that stronger ESG performance was associated with increased firm value, indicating that businesses that actively embedded sustainable practices into their operations were viewed more favorably by investors and that this positive perception was reflected in measurable valuation premiums. The study added to the growing body of evidence linking sustainability disclosure to market-based financial outcomes.

Busru et al. (2022) examined the impact of corporate social responsibility (CSR) disclosure on business performance, with particular emphasis on whether the transparency of social and environmental reporting generated observable financial improvements. Using panel data from publicly traded businesses alongside CSR disclosure indices and financial performance metrics and applying regression analysis to assess the strength and direction of the relationship, the study found that higher levels of CSR disclosure were positively correlated with improved firm performance outcomes. The evidence indicated that open and credible CSR reporting practices assisted firms in building and sustaining stakeholder trust, which in turn translated into stronger overall financial performance. The emerging market setting of the study provided additional contextual insight, suggesting that transparency-driven ESG benefits are not confined to markets with mature disclosure infrastructure.

Irawan and Okimoto (2022) examined the financial significance of ESG performance for stock returns and firm value in the Japanese market, using econometric regression models and firm-level panel data from Japanese listed companies.

The study found that while the measured effect of ESG performance on stock returns was relatively modest in magnitude, stronger ESG performance was nonetheless generally associated with higher firm value and reduced downside risk exposure. These findings positioned ESG as a long-term stabilising force for market valuation rather than a short-run return enhancement mechanism, and the study further highlighted that investor awareness of ESG practices played a meaningful amplifying role — firms with better ESG profiles experienced stronger valuation benefits in environments where ESG considerations were more prominently integrated into investor decision-making frameworks.

NEED OF STUDY

The growing integration of ESG criteria into investment and regulatory frameworks has intensified pressure on firms to demonstrate responsible operations alongside financial returns, yet whether superior ESG performance translates into higher firm value remains empirically unresolved. This ambiguity is especially significant in the pharmaceutical sector, where drug safety lapses, environmental violations, opaque governance, and pricing controversies have each caused measurable and often irreversible damage to market valuations making ESG not a peripheral reporting exercise but a core strategic concern. Despite this, dedicated sector-level research is scarce, and the gap widens further when the focus shifts to India, a country that anchors global generic-drug supply, yet whose pharmaceutical firms remain underrepresented in ESG scholarship. Given that emerging-market conditions concentrated ownership structures, evolving regulatory enforcement, and distinct investor expectations differ fundamentally from the developed-market settings that dominate existing literature, findings from those contexts cannot be applied without risk of misinterpretation. This study is therefore designed to examine, within a coherent methodological framework, how ESG performance shapes firm value among listed Indian pharmaceutical companies, generating evidence that is directly actionable for investors, corporate managers, regulators, and researchers.

RESEARCH GAP

- Most existing studies either span multiple industries or focus on developed markets, leaving a clear gap in sector-specific research on ESG and firm value within the pharmaceutical industry a sector that is uniquely regulated and socially accountable.
- Prior literature presents inconsistent findings due to varying methodologies, timeframes, and inadequate control for firm-level factors such as size and leverage, reinforcing the need for a more focused and contextually grounded study.

OBJECTIVE

- To examine the impact of environment, social and governance (ESG) on firm value using Tobin's Q.

RESEARCH METHODOLOGY

This study adopts a quantitative and explanatory research design to examine how ESG performance influences firm value in the pharmaceutical sector. It relies on secondary data collected for 20 pharmaceutical companies listed on recognized stock exchanges, covering a five-year period from 2021 to 2025. This timeframe captures the post-pandemic phase, during which ESG disclosures and responsible investment practices gained considerable momentum. The dataset forms a balanced panel of 100 firm-year observations, which is adequate for drawing statistically reliable inferences. Two dependent variables are used Tobin's Q, representing market-based firm value, and Return on Equity (ROE), capturing actual profitability to provide a dual perspective on how ESG affects both investor expectations and financial outcomes. The ESG score, ranging from 0 to 100 and encompassing environmental, social, and governance dimensions, serves as the primary independent variable. Three control variables firm size (natural log of total assets), leverage (total debt to total assets), and firm age (years since incorporation) are included to isolate the effect of ESG and account for structural differences across firms.

Given that the data spans multiple companies over several years, a panel data regression approach is employed using Python's linear modeling tools. Specifically, the Fixed Effects model is applied, as it controls for unobserved, time-invariant firm-specific characteristics that could otherwise distort results. This is achieved through within-transformation, where each variable is demeaned at the firm level, ensuring that only changes occurring within a firm over time drive the estimates. This approach is particularly appropriate for this study since pharmaceutical companies

differ considerably in their history, scale, and market positioning — factors that remain largely stable but can significantly influence valuation. By combining a robust sample structure with a theoretically grounded regression framework, this methodology ensures that the findings are both credible and relevant for academic and practical applications.

Model Framework

→ **Model 1:** Tobin’s Q – measures market value and investor expectations.

Model Specification and Regression Equations

Fixed Effects Model

$$Y_{it} = \alpha_i + \beta_1 ESG_{it} + \beta_2 Age_{it} + \beta_3 Lev_{it} + \beta_4 Size_{it} + \epsilon_{it}$$

where:

- Y_{it} : dependent variable for firm i in year t
- α_i : firm-specific fixed effect (time-invariant intercept for firm i)
- $\beta_1 \dots \beta_4$: slope coefficients to be estimated
- $ESG_{it}, Age_{it}, Lev_{it}, Size_{it}$: time-varying regressors for firm i in year t
- ϵ_{it} : idiosyncratic error term

Model 1: Tobin's Q Equation

$$Tobin's Q_{it} = \alpha_i + \beta_1 ESG_{it} + \beta_2 Age_{it} + \beta_3 Lev_{it} + \beta_4 Size_{it} + \epsilon_{it}$$

DATA ANALYSIS AND INTERPRETATION

Relationship between Tobin’s Q and ESG

Variable	N	Mean	Std Dev	Min	Median	Max
Tobin’s Q	100	5.411	5.911	0.117	3.343	32.344
ESG	100	50.060	18.376	0.000	55.500	69.000
Age	100	41.500	21.090	10.000	39.000	90.000
Leverage	100	0.306	0.146	0.086	0.286	0.655
Size	100	8.635	1.230	6.023	8.469	10.978

Model Equation

$$TobinQ_{it} = \alpha_i + \lambda_t + \beta_1 \cdot ESG_{it} + \beta_2 \cdot Age_{it} + \beta_3 \cdot Leverage_{it} + \beta_4 \cdot Size_{it} + \epsilon_{it}$$

Where,

i = firm index

t = year index

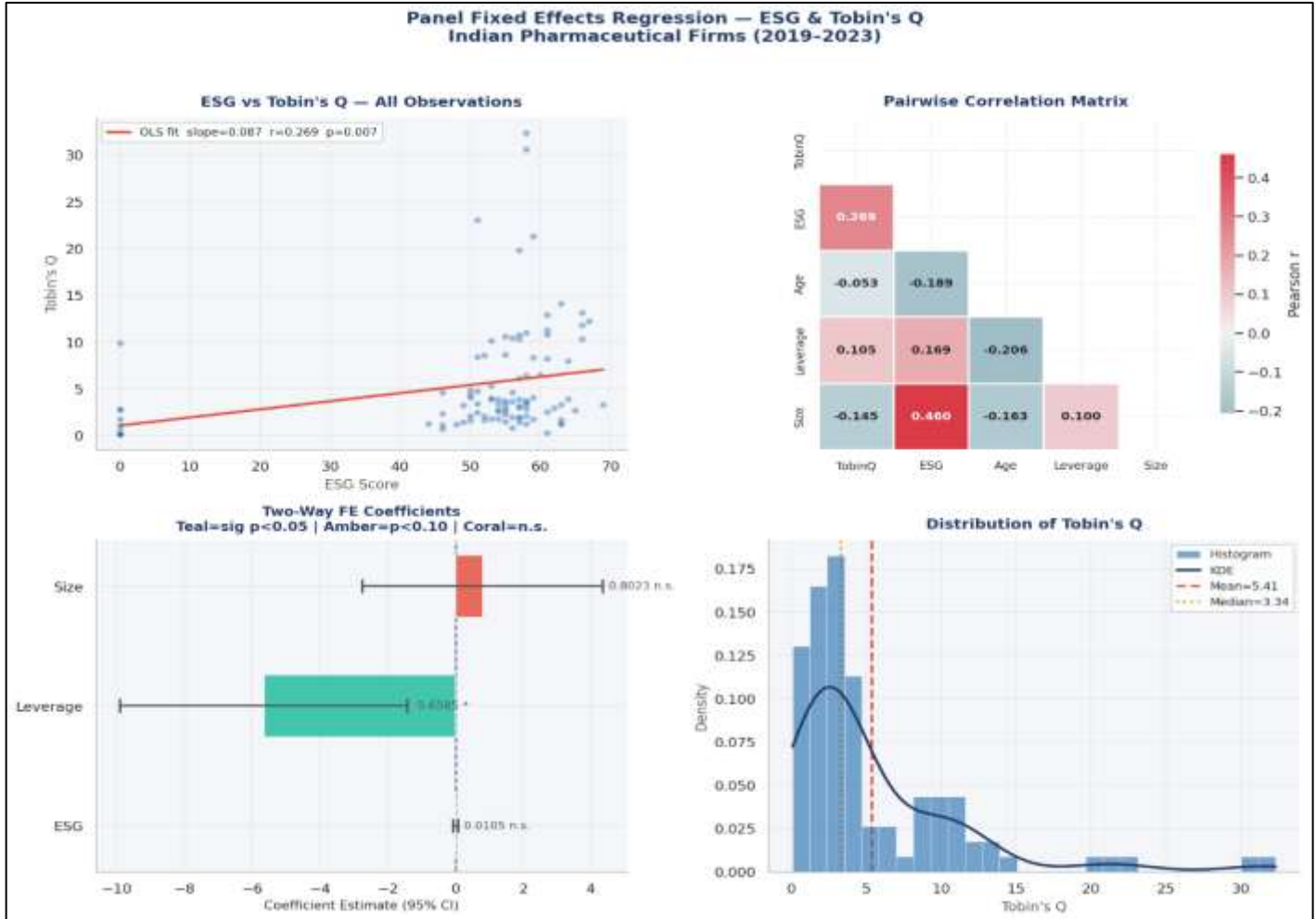
α_i = entity fixed effects

λ_t = year fixed effects

ϵ_{it} = idiosyncratic error

Overview Charts

Figure provides a four-panel overview. The scatter plot confirms the raw positive association between ESG and Tobin's Q (slope = 0.087 from bivariate OLS, $r = 0.269$). The correlation heatmap highlights the ESG–Size collinearity ($r = 0.46$) and the modest raw ESG–TobinQ correlation. The coefficient forest plot shows the Two-Way FE point estimates: only Leverage's confidence interval fully excludes zero. The Tobin's Q distribution demonstrates the right-skew driven by a small number of high-valuation outliers.



FINDINGS

The bivariate scatter plot establishes a modest but statistically meaningful positive association between ESG scores and Tobin's Q (slope = 0.087, $r = 0.269$, $p = 0.007$), indicating that firms with stronger ESG standing tend to carry higher market valuations in the raw data. However, once firm and year fixed effects are introduced, this relationship loses statistical significance (coefficient = 0.0105, n.s.), suggesting that the bivariate signal is partly driven by unobserved firm heterogeneity rather than ESG performance alone. Leverage emerges as the only variable whose confidence interval fully excludes zero in the two-way fixed effects model (coefficient = -5.6585 , $p < 0.05$), confirming that higher debt burdens exert a strong and robust downward pressure on firm value. Firm size, while carrying a positive point estimate (0.8023), does not reach conventional significance thresholds. The correlation matrix further reveals a notable ESG–Size collinearity ($r = 0.46$), implying that larger firms systematically report higher ESG scores — a structural pattern that partially explains why ESG appears value-relevant in simpler models but weakens under stricter controls.

CONCLUSION

The results collectively suggest that ESG performance, as currently measured and disclosed by Indian pharmaceutical firms, does not independently drive market valuation once firm-specific heterogeneity and capital structure are accounted for. The dominant value-relevant factor within this sample is financial leverage, whose negative and significant effect points to the market's sensitivity toward debt-related risk in a sector already burdened by high

regulatory compliance costs. The ESG–Size collinearity raises a substantive concern: what appears to be an ESG premium may, in a number of cases, be nothing more than a size premium wearing ESG's clothes. This does not render ESG inconsequential the raw positive association is real but it does indicate that the pathway from ESG investment to firm value creation in the Indian pharmaceutical context is neither direct nor linear, and likely depends on the quality, credibility, and comparability of sustainability disclosures rather than scores alone.

LIMITATIONS

The study's findings should be interpreted in light of several constraints. The sample is confined to listed Indian pharmaceutical companies over a five-year window (2019–2023), limiting both the cross-sectional breadth and the temporal depth required to detect long-run ESG effects with greater precision. ESG scores sourced from a single data provider carry inherent measurement subjectivity, and inter-provider score divergence is well-documented in the literature, meaning that results may shift under an alternative scoring methodology. The right-skewed distribution of Tobin's Q, with a mean of 5.41 pulled well above the median of 3.34 by a small cluster of high-valuation outliers, introduces distributional concerns that fixed effects alone may not fully resolve. Finally, the composite ESG score used here aggregates environmental, social, and governance sub-scores into a single index, which obscures the distinct and potentially divergent effects of each pillar a disaggregation that future research should prioritise to generate more actionable insights.

REFERENCE

- Aras, G., & Hacıoglu Kazak, H. (2022). Enhancing firm value through the lens of ESG materiality: Evidence from the banking sector in OECD countries. *Sustainability*, 14(22), 15302.
- Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG performance on firm value and profitability. *Borsa Istanbul Review*, 22(S2), S119–S127.
- 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.
- Busru, S. A., Shanmugasundaram, G., & Bhatt, P. R. (2022). CSR disclosure and firm performance: Evidence from an emerging market. *Corporate Governance: The International Journal of Business in Society*, 21(4), 553–568.
- Carnini Pulino, S., Ciaburri, M., Magnanelli, B. S., & Nasta, L. (2022). Does ESG disclosure influence firm performance? *Sustainability*, 14(13), 7595.
- Chairani, C., & Siregar, S. V. (2022). The effect of enterprise risk management on financial performance and firm value: The role of ESG performance. *Meditari Accountancy Research*, 29(3), 647–670.
- Chang, K., Kim, I., & Li, Y. (2022). Sustainable finance: ESG/CSR, firm value, and investment returns. *Asia-Pacific Journal of Financial Studies*, 51(3), 325–348.
- Falzon, J., & Micallef, C. (2022). ESG factors: How are stock returns, operating performance, and firm value impacted? *Journal of Finance and Accounting*, 10(4), 55–76.
- Irawan, D., & Okimoto, T. (2022). How do ESG performance and awareness affect firm value and corporate overinvestment? *Finance Research Letters*, 47, 102519.
- Kong, Y., Agyemang, A., Alessa, N., & Kongkuah, M. (2023). The moderating role of technological innovation on environment, social, and governance (ESG) performance and firm value: Evidence from developing and least-developed countries. *Sustainability*, 15(19), 14240.
- Nekhili, M., Boukadhaba, A., Nagati, H., & Chtioui, T. (2022). ESG performance and market value: The moderating role of employee board representation. *The International Journal of Human Resource Management*, 32(14), 3026–3054.
- Suretno, S., Adrianto, F., & Alfarisi, S. (2022). Effect of environment, social and governance disclosure on firm value. *Jurnal Bisnis Terapan*, 6(1), 1–12.
- Tahmid, T., Hoque, M. N., Said, J., Saona, P., & Azad, M. A. K. (2022). Does ESG initiatives yield greater firm

value and performance? New evidence from European firms. *Cogent Business & Management*, 9(1), 2144098.

- Tandon, D., & Bansal, S. (2022). ESG, stock prices, and firm value. In D. Tandon (Ed.), *Research Anthology on Measuring and Achieving Sustainable Development Goals*. IGI Global.
- Wu, S., Li, X., Du, X., & Li, Z. (2022). The impact of ESG performance on firm value: The moderating role of ownership structure. *Sustainability*, 14(21), 14507.