

ESG and Financial Performance Nexus: A Study of Selected Indian Public and Private Banks

Lokeshwari DV*, Shruthi MP

School of Commerce and Management Studies, Dayananda Sagar University, Bangalore, Karnataka, India. *Corresponding Author's Email: dvlhokeshwarie@gmail.com

Abstract

This study investigates the effect of Environmental, Social and Governance scores on the financial performance of Indian banks, focusing on the moderating effect of ownership structure. The study examines the link between ESG scores and financial performance using a hierarchical multiple regression analysis of panel data from 224 bank-year observations from selected public and private sector banks in India. Financial performance measures used were Return on Equity and Tobin's Q, while bank-specific control variables are size, leverage, loan to deposit ratio, capital adequacy ratio, non-performing assets and cost to income ratio. The results showed that ESG score had a positive and significant impact on ROE, suggesting that better sustainability practices correlate with higher shareholder returns. Ownership structure was a key moderator of this relationship with public sector banks showing a more positive correlation between ESG and ROE than private sector banks. No statistically significant moderating effect of ownership structure was observed for market-based valuation measures. The study contributes to ESG and banking literature in the Indian context by providing empirical evidence of differential effectiveness of ESG in different ownership structures. The findings have implications for regulators, investors and bank management to enhance the strategic decision-making and sustainable financial performance based on ESG.

Keywords: Banking Sector, ESG Performance, Financial Performance, Indian Banks, Sustainability Disclosure.

Introduction

The banking sector plays a critical role in sustainable economic development through financial intermediation, capital allocation and risk management (1). Environmental, social and governance performance has become an important strategic concern for financial institutions in recent years, driven by increasing societal demand, regulatory initiatives and the growing focus on responsible finance (2–4). The integration of ESG is not just considered a compliance obligation but a strategic process that can enhance the quality of governance, institutional resilience, stakeholder confidence and financial sustainability in the long run (5–7). However, as banks make decisions on investments and economic activities, ESG performance is especially pertinent in the financial space. There is mixed evidence to support the link between ESG and financial performance (8–10). Some studies have reported positive associations, indicating that better ESG scores are linked to higher profitability, efficiency, risk management and investor confidence (11–15). Strong ESG scores can enhance stakeholder legitimacy and

mitigate reputational risk. However, conflicting findings also exist the ESG disclosure practices are inconsistent in emerging economies where institutional frameworks also differ significantly (16–18). ESG practices are often seen as a compliance burden rather than a value creation tool, leading to less predictable financial outcomes. The banking sector is distinct and requires separate analysis since it is affected not only by the efficiency of its management but also by its regulatory norms, governance framework and confidence among stakeholders (19). Improved financial performance may result from sustainable lending practices, good governance and responsible financial management (20). However, sector-specific ESG research in banking remains less comprehensive than broader corporate ESG research. A relevant context to study this relationship is the Indian banking sector (21). Indian institutions face higher disclosure expectations due to regulatory developments such as the Business Responsibility and Sustainability Reporting framework.

This is an Open Access article distributed under the terms of the Creative Commons Attribution CC BY license (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted reuse, distribution and reproduction in any medium, provided the original work is properly cited.

(Received 11th May 2026; Accepted 02nd June 2026; Published 03rd July 2026)

Indian banking also exhibits structural diversity such that public and private sector banks operate under different governance structures, institutional priorities and levels of managerial flexibility. These structural differences may significantly influence how ESG practices are implemented and whether they generate financial benefits (22). Existing evidence in the Indian banking context remains limited. Despite the strategic relevance of banking institutions, most existing studies do not focus specifically on the banking sector. Moreover, most studies focus mainly on the direct link between ESG Scores and financial results and pay little attention to institutional differences. This is a significant gap in research as ownership can have significant implications for ESG implementation and performance (23–25). This is especially important in the context of Indian banking. The policy requirements, developmental mandates and regulatory framework faced by public sector banks could influence the extent of ESG adoption compared to private sector banks. On the other hand, private sector institutions may have more managerial autonomy, strategic flexibility, as well as market driven expectations. The financial performance associated with ESG initiatives can be influenced by these institutional differences. Therefore, ownership structure may act as an important moderating factor in the ESG and financial performance relationship (26). The study period from 2018 to 2025 further enhances the relevance to this investigation, as it covers key events like the COVID-19 pandemic, banking reforms, digital transformation and shifting disclosure expectations on ESG issues. The external factors could also affect the financial performance as well as stakeholder perceptions, highlighting the importance of contemporary analysis. The present study addresses these gaps by focusing on the relationship between ESG scores and financial performance in select public and private banks of India with a special consideration of the moderating effect of ownership structure. The financial performance is measured by ROE and Tobin's Q, which represent accounting based and market-based views respectively. To enhance the

analytical robustness, bank specific control variables such as size, leverage ratio, loan to deposit ratio, cost to income ratio, capital adequacy ratio and non-performing assets are added. This study makes a valuable contribution to the literature for three reasons. It extends the study of ESG and financial performance to the Indian banking industry, where empirical evidence is still scarce. Second, it introduces ownership structure as a moderating institutional variable, which is an important missing element in previous research. Third, accounting-based and market-based financial metrics provide a more holistic view of ESG effectiveness. The study objectives were to analyze the impact of ESG scores on the financial performance of Indian banks, determine the impact of ownership structure on financial performance and test whether ownership structure moderates the relationship between ESG scores and financial performance.

H1: Banks' financial performance is significantly positively affected by the ESG Scores.

H2: Ownership structure of banks has a significant impact on the financial performance of banks.

H3: The nature of the ownership structure has a significant moderating effect on the link between ESG Scores and financial performance.

The conceptual framework is based on the Stakeholder Theory and the Institutional Theory. These theories indicate that the responsible implementation of ESG practices can lead to greater stakeholder trust and improved long-term performance, while governance structures and the regulatory environment can shape organizational performance. Thus, ESG scores is the independent variable, financial performance the dependent variable and ownership structure the moderating variable. Figure 1 presents the conceptual framework guiding the study.

Figure 1 presents the conceptual framework of the study, illustrating the relationship among ESG scores, financial performance and ownership structure. The research is guided by stakeholder theory and institutional theory, which describes the impact of corporate sustainability and institutions on firms' performances.

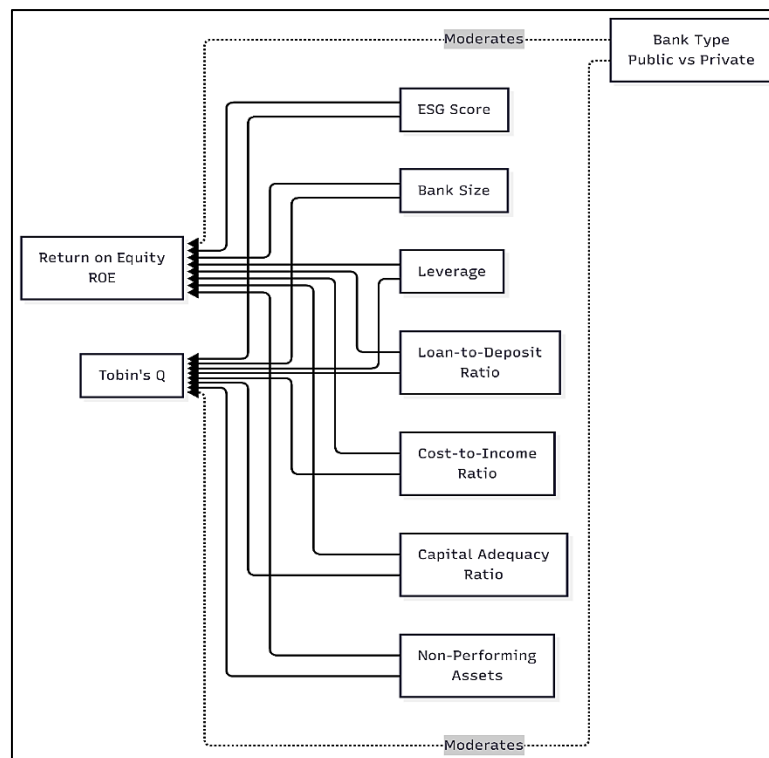


Figure 1: Conceptual Framework of ESG, Ownership Structure and Financial Performance

Methodology

The study uses an explanatory quantitative research design to explore the relationship between ESG scores and financial performance of Indian banks and how this relationship is moderated by ownership structure. A hierarchical multiple regression approach was used to evaluate the incremental explanatory power of ESG scores, ownership structure and their interaction on financial performance outcomes.

This study utilizes secondary data for 224 bank year observations spanning from 2018 to 2025 from selected Indian public and private sector banks. The sample was selected based on three criteria:

- i) Availability of ESG scores from the Refinitiv ESG database,
- ii) Availability of consistent financial performance data from Bloomberg and company financial reports and
- iii) Clear classification of ownership as per publication of the Reserve Bank of India.

To ensure consistency and comparability in regression estimation, banks that did not have observations for ESG or financial indicators were excluded.

This filtering improves data consistency and comparability however; there remains a risk that

institutions with complete disclosures and uniform reporting practices will be overrepresented in the final sample. This limitation has been acknowledged in interpreting the findings.

The study period from 2018 to 2025 was chosen because it encompasses a contemporary period of significant changes in the Indian banking sector, namely the COVID-19 pandemic, banking sector reforms, rapid digitalization and changing disclosure expectations for ESG factors in the sustainability reporting era. These macro-level changes are not modeled as independent variables but should be considered when interpreting the institutional context.

The goal of the study was to test the incremental explanatory power of ESG scores, ownership structure and moderation effects, rather than to estimate dynamic causal panel relationships, as the dataset contains repeated observations across time. Hence, hierarchical multiple regression was adopted, which allowed the step-by-step test of the explanatory power of the models and the moderation analysis. However, the results should be interpreted as associational, as unobserved bank-specific heterogeneity is not explicitly controlled for in hierarchical regression.

Table 1: Variable Definition and Measurement

Variable Category	Variable	Symbol	Measurement
Dependent Variable	Financial Performance	ROE	Return on Equity
	Market Performance	Tobin's Q	Market valuation proxy
Independent Variable	ESG Scores	ESG_Score	Composite ESG score
Moderating Variable	Ownership Structure	Type	Dummy variable (0 = Public Bank, 1 = Private Bank)
Interaction Variable	ESG Moderation	ESG_Interaction	ESG_Score × Type
	Bank Size	SIZE	Natural logarithm of total assets
Control Variable	Leverage	LEV	Debt-to-equity ratio
	Loan-to-Deposit Ratio	LDR	Loans divided by deposits
	Cost-to-Income Ratio	CIR	Operating expenses / operating income
	Capital Adequacy Ratio	CAR	Regulatory capital adequacy ratio
	Non-Performing Assets	NPA	Gross NPA ratio

Note: ROE = Return on Equity, Tobin's Q = Market-based valuation measure, ESG = Environmental, Social and Governance, SIZE = Natural logarithm of total assets, LEV = Leverage ratio, LDR = Loan-to-Deposit Ratio, CIR = Cost-to-Income Ratio, CAR = Capital Adequacy Ratio, NPA = Non-Performing Assets.

Table 1 presents the operational definitions and measurement criteria for all variables included in the regression models. The study incorporates accounting-based and market-based financial

performance indicators, ESG score as the independent variable, ownership structure as moderating variable and bank-specific financial controls to improve model robustness.

Model Specification

The study employed a four-step hierarchical regression consistent with the analytical framework used.

Model 1: Control Variable Model (Equation [1])

$$FP = \beta_0 + \beta_1 SIZE + \beta_2 LEV + \beta_3 LDR + \beta_4 CIR + \beta_5 CAR + \beta_6 NPA + \epsilon \quad [1]$$

Equation [1] presents the baseline model used to evaluate the impact of bank-specific financial characteristics on financial performance.

Model 2: ESG Main Effect Model (Equation [2])

$$FP = \beta_0 + \beta_1 SIZE + \beta_2 LEV + \beta_3 LDR + \beta_4 CIR + \beta_5 CAR + \beta_6 NPA + \beta_7 ESG_{Score} + \epsilon \quad [2]$$

Equation [2] extends the baseline model by incorporating ESG score to examine its direct effect on financial performance.

Model 3: Ownership Structure Model (Equation [3])

$$FP = \beta_0 + \beta_1 SIZE + \beta_2 LEV + \beta_3 LDR + \beta_4 CIR + \beta_5 CAR + \beta_6 NPA + \beta_7 ESG_{Score} + \beta_8 Type + \epsilon \quad [3]$$

Equation [3] introduces ownership structure as an explanatory variable to assess its independent contribution to financial performance.

Model 4: Moderation Model (Equation [4])

$$FP = \beta_0 + \beta_1 SIZE + \beta_2 LEV + \beta_3 LDR + \beta_4 CIR + \beta_5 CAR + \beta_6 NPA + \beta_7 ESG_{Score} + \beta_8 Type + \beta_9 ESG_{Interaction} + \epsilon \quad [4]$$

Equation [4] incorporates the interaction term between ESG score and ownership structure to test the moderating effect of ownership structure.

Analytical Procedure

Hierarchical regression analysis was conducted sequentially to examine incremental improvements in model explanatory power.

The estimation proceeded as follows:

Step 1: Control variables

Step 2: Addition of ESG scores

Step 3: Addition of ownership type

Step 4: Addition of ESG interaction term

Model comparison was assessed using R, R², change in R² and F-statistics.

This approach is appropriate for moderation testing because it enables evaluation of the explanatory contribution of interaction effects.

Multicollinearity was assessed using Variance Inflation Factor (VIF) and tolerance statistics. Table 2 presents the multicollinearity diagnostics, with VIF values reported for each predictor variable. All VIF values are below 5, indicating no significant multicollinearity concerns. This indicates that multicollinearity is not a concern among the independent variables included in the regression models.

Table 2: Diagnostic Testing of Variables

Variable	VIF
ESG_Score	1.98
Ownership Structure	3.89
Bank Size	1.53
Leverage	2.87
Loan to Deposit Ratio	1.96
Cost to Income Ratio	1.23
Capital Adequacy Ratio	1.9
Non-Performing Assets	1.64

Note: VIF = Variance Inflation Factor.

Table 3: Hierarchical Regression Results for ROE

Variables	Model 1	Model 2	Model 3	Model 4
Intercept	-34.890*	-35.074*	-24.496	-29.638
SIZE	1.031	0.938	0.267	0.384
LEV	0.43	0.51	0.012	-0.093
LDR	0.327	-4.189	0.429	-1.976
CIR	-0.213**	-0.224**	-0.248**	-0.220**
CAR	2.182***	2.205***	2.055***	1.993***
NPA	-2.093***	-1.993***	-2.223***	-2.200***
ESG Score	—	0.097	0.158*	0.596***
Type	—	—	—	-8.664
ESG × Type	—	—	—	-0.489**

Note: ROE = Return on Equity, ESG = Environmental, Social and Governance score, SIZE = Bank size, LEV = Leverage ratio, LDR = Loan-to-Deposit Ratio, CIR = Cost-to-Income Ratio, CAR = Capital Adequacy Ratio, NPA = Non-Performing Assets.

*p < 0.05, **p < 0.01, ***p < 0.001.

Table 4: Model Statistics

Measure	Model 1	Model 2	Model 3	Model 4
R ²	0.442	0.447	0.462	0.474
F-statistic	28.7***	25.0***	23.0***	21.5***
ΔR ²	—	0.005	0.014	0.013
ΔF	—	1.990	5.650*	5.240**

Note: R² = Coefficient of determination, ΔR² = Change in coefficient of determination, ΔF = Change in F-statistic.

*p < 0.05, **p < 0.01, ***p < 0.001.

Results

Hierarchical regression estimate for ROE are provided in Tables 3 and 4. Model 1 contains only control variables and accounts for 44.2% of the variation in ROE. Model 2 contributes only marginally to the explanatory power following the inclusion of ESG scores. However, Models 3 and 4 significantly improve model fit, suggesting the presence of moderation effects.

Tables 3 and 4 provide hierarchical regression analysis results for ROE and respective model statistics. The step-by-step analysis in Tables 3 and 4 demonstrates increasing explanatory power with the introduction of ESG scores, ownership structure and interaction effects. Thus, it becomes evident that incorporating interaction variables can improve explanatory capability, highlighting the moderating nature of ownership structure on ESG-profitability association.

Among the control variables, CIR has a negative impact on profitability therefore, higher operational inefficiency reduces profitability. CAR shows a positive association, suggesting that

better-capitalized banks exhibit stronger profitability. NPA has a significant negative effect, indicating poor asset quality reduces profitability. The addition of ESG scores in Model 2 results in only a small increase in the amount of variance explained $\Delta R^2 = 0.005$ and ESG is not statistically significant. Models 3 and 4 provide the most meaningful explanatory insights. The interaction term is also statistically significant and negative $\beta = -0.489$, $p = 0.023$, which shows a significant moderating effect of ownership structure. Additionally, the results indicate a significant direct positive effect of ESG $\beta = 0.596$, $p = 0.004$. This suggests that ESG performance contributes positively to profitability, with the magnitude of the effect depending on the institutional context. The negative interaction suggests that the ESG effect is relatively weaker for the ownership category represented by the interaction term. Finally, the results validate that the institutional structure does matter with respect to the effective performance of ESG in banking.

Table 5: Hierarchical Regression Results for Tobin's Q

Variables	Model 1	Model 2	Model 3	Model 4
Intercept	1.735***	1.722***	1.602***	1.761***
SIZE	-0.015	-0.021	-0.017	-0.019
LEV	0.001	0.006	0.009	0.011
LDR	-0.276	-0.580***	-0.610***	-0.580***
CIR	-0.008***	-0.009***	-0.009***	-0.009***
CAR	0.011	0.012	0.013	0.014*
NPA	-0.002	0.005	0.006	0.006
ESG Score	—	0.007***	0.006***	0.001
Type	—	—	0.051	-0.15
ESG × Type	—	—	—	0.006

Note: ESG = Environmental, Social and Governance score, SIZE = Bank size, LEV = Leverage ratio, LDR = Loan-to-Deposit Ratio, CIR = Cost-to-Income Ratio, CAR = Capital Adequacy Ratio, NPA = Non-Performing Assets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 6: Model Statistics

Measure	Model 1	Model 2	Model 3	Model 4
R^2	0.14	0.214	0.216	0.222
F-statistic	5.90***	8.39***	7.39***	6.78***
ΔR^2	—	0.074	0.002	0.006
ΔF	—	20.235***	0.523	1.675

Note: R^2 = Coefficient of determination, ΔR^2 = Change in coefficient of determination, ΔF = Change in F-statistic. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Tables 5 and 6 illustrate hierarchical regression analysis results for Tobin's Q and corresponding model statistics. Compared with ROE results, these models demonstrate considerably lower levels of explanatory capability; hence, the relationship between ESG score and Tobin's Q appears to be weaker. Even though an initial positive relationship

between ESG and Tobin's Q has been observed, it diminishes when considering the interaction effects of ownership structure.

The hierarchical regression results for Tobin's Q are presented in Tables 5 and 6. The explanatory power of these models is comparatively lower than that of ROE models, meaning that ESG scores are

less strongly associated with the market valuation than with accounting-based profitability measures and the model explains 22.2% of the variance of market valuation. In Model 2, ESG shows a statistically significant positive relationship ($\beta = 0.007$, $p < 0.001$), suggesting that investors may initially respond positively to ESG scores, investors initially respond positively to the ESG scores in the initial stage. However, after including ownership structure and interaction effects the ESG is no longer statistically significant $p = 0.855$ and interaction is not statistically significant $p = 0.197$. This means the explicitly affects market perception in simpler specifications while the latter does not have a significant impact on the market perception of ESG disclosures. The control variable effects remain largely consistent across models and the LDR always shows the negative significant effect – which means aggressive lending practices may impact the market's confidence. CIR remains largely negative, so that the influence of ESG performance across financial performance dimensions is not same in the market. Based on the regression findings, the proposed hypotheses were evaluated accordingly. H1 received partial support, as ESG scores significantly influenced ROE but not Tobin's Q in the fully specified models. H2 was not supported, since ownership structure did not show a statistically significant independent effect on financial performance. H3 received partial support, as ownership structure significantly moderated the ESG–ROE relationship but did not significantly moderate the ESG–Tobin's Q relationship.

Discussion

The results offer valuable insights about the link between ESG performance and financial performance of the Indian banking sector, especially in the presence of ownership structure as a moderating institutional variable. The correlation between ROE and ESG scores in the moderated model is consistent with previous studies that found that better ESG scores are connected to greater long-term financial strength, greater stakeholders confidence, improved operational efficiency and governance quality (4, 9). The results also confirm research suggesting that ESG integration can be a strategic competence that can help create sustainable value, not just a compliance requirement (10, 13). The results do not align with those of other studies, which have

found that the links between ESG and financial performance are either less strong or inconsistent, especially in emerging market economies where the quality of ESG disclosures, institutional development and regulatory enforcement are not uniform (14, 17). This implies that the cost of implementing ESG is context-dependent and various institutional factors, governance and market readiness.

The moderating effect of ownership structure identified in the ROE model indicates that the institutional context plays a crucial role in the successful implementation of ESG measures to achieve financial gains. This is in line with previous research highlighting the importance of governance structures, ownership arrangements and institutional environments on the outcomes of ESG implementation and financial outcomes (20, 24). The more pronounced ESG–profitability linkage in public sector banks could be linked to higher adherence to the regulatory sustainability requirements, integration of sustainability policies and institutional commitment to responsible banking practices. Previous empirical research found that corporate governance features affected the link between sustainability programs and financial performance (6). Public sector institutions, on the other hand, may also be constrained structurally in various ways, such as developmental obligations, bureaucratic decision-making processes and the lack of strategic flexibility, which could temper the rate of return that comes from ESG investments. The results confirm Institutional Theory, which argues that the governance structures, institutional pressures and regulatory expectations influence organizational behaviour and performance.

The results are also consistent with existing banking performance literature about the control variables. Capital Adequacy Ratio showed a positive association with profitability, implying that well-capitalized banks have better financial strength, risk absorption capability, stakeholder confidence and thus better performance in operation (6). Non-Performing Assets showed a strong negative association with profitability, which is in line with the fact that poor asset quality and weak credit risk management have a negative impact on bank performance. Likewise, the negative correlation between the Cost-to-Income Ratio and profitability further strengthens the role

of operational efficiency in shaping the profitability of the banking sector. These results corroborate previous studies on banking institutions, which have concluded that capital strength, asset quality and cost efficiency are important factors in determining the financial performance of banking institutions (8, 16).

The results concerning Tobin's Q suggest a weaker association between ESG performance and market-based firm valuation compared with accounting-based profitability measures. Initially, ESG scores were found to be positively correlated with the market value of companies, but this correlation is no longer statistically significant upon controlling for ownership structure and interaction effects. This partially corroborates previous research that indicates that investors might view ESG information as a positive sign of governance quality, transparency and a long-term sustainability focus (8, 15). The results, however, align with recent literature that suggests the ESG valuation effects are not homogeneous in emerging markets because of information asymmetry, disclosure standardization issues and growing investor awareness of sustainability metrics (8, 16). One possible reason relevant to the Indian banking context is that investors may prefer traditional financial metrics, macroeconomic prospects and market sentiment to ESG disclosures when making valuation decisions. The lack of a strong moderating effect also indicates that the nature of the ownership structure may not play a major role in the way that capital markets view ESG-related disclosures, regardless of any internal profitability differences among them.

Overall, the results indicate that the adoption of ESG in Indian banks offers more robust internal financial performance benefits than immediate valuation benefits in the markets. Such findings also reinforce the view that the benefits of ESG practices could first be operational and governance efficiencies leading to higher earnings, prior to the market's realising the value of these policies (8, 23). The findings also underscore the strategic importance of ESG as an institutional capability for the long term, not just a disclosure exercise. The effectiveness of ESG implementation in emerging markets like India could be influenced by the commitment to sustainability as well as the governance framework, institutional flexibility, regulatory alignment and the maturity of the

markets (9, 10). Thus, the financial implications of ESG adoption should be viewed in a broader institutional and economic context and not taken to mean that there is a uniform impact for all ownership types or for all performance aspects. These findings extend both Stakeholder Theory and Institutional Theory by demonstrating that ESG effectiveness is shaped not only by stakeholder expectations but also by structural organizational characteristics.

Conclusion

This study examined the effect of ESG performance on the financial performance of Indian banks while considering the moderating effect of ownership structure. A hierarchical multiple regression analysis was performed using 224 bank-year observations, using various accounting-based and market-based financial performance measures and including some of the relevant financial characteristics of the banks. The results showed that the effect of ESG scores was not consistent for all aspects of financial performance. The relevance of ESG to accounting-based profitability is greater than that of ESG to market-based valuation. According to the ROE model, the ownership interaction had a significant association, particularly for public sector banks. This suggests that institutional conditions influence the extent to which ESG practices improve profitability. The significant moderating effect of ownership structure suggests that the effectiveness of the ESG efforts varies with the ownership structure. This indicates that institutional characteristics influence how effectively sustainability practices translate into profitability.

This relationship was not statistically significant after ownership structure and interaction effects were introduced into the model, but there is a positive correlation between Tobin's Q and the market valuation initially. It suggests that the internal financial performance of Indian banks may be more responsive to ESG factors than the market valuation.

To conclude, the results have implications for practice. ESG should not be merely as a compliance obligation, but as a strategic lever to improve performance. Integrating sustainability in governance and operations into strategy can be a way to improve stakeholder confidence, resilience and profitability. The moderation findings suggest

that public sector banks may be better positioned to reap more financial benefits through stronger implementation frameworks on ESG issues. In the absence of a uniform regulatory understanding that institutions react to requests for sustainability in the same fashion, ownership-sensitive solutions to the implementation of ESG strategies can be considered. While ESG may provide useful information regarding operational profitability, investors in emerging markets may require stronger ESG disclosure standardization before incorporating sustainability metrics into valuation decisions.

Theoretically, the study contributes to the existing literature by extending Stakeholder and Institutional Theory perspectives. The findings indicate that the correlation between ESG and profitability is positive, suggesting that the ESG criteria could be treated as strategic assets for profitability and it also highlights the moderating effect of ownership structure, reinforcing the importance of the institutional context when assessing the correlation between ESG and effectiveness.

There are some limitations to the study. The study covers only a limited number of banks in the Indian public and private sector, thereby limiting the generalizability of the results to other banks of other sectors. Secondly, the study relies on secondary ESG disclosure data that can be affected by the nature and quality of disclosure, consistency at the disclosure level and coverage of the databases. In some cases, banks with financial or ESG observations that did not meet data availability thresholds may be excluded from the sample, the measure of ownership has been dichotomized. This can create survivorship bias or ESG reporting bias, which might not adequately reflect ownership complexity and institutional diversity and the use of hierarchical regression provides association-based interpretations but is inadequate to address endogeneity and causal relationships.

The approach used in this research can be extended in future studies to include of a wider sample of banking data, inter-country comparisons and in-depth analysis of various financial indicators. More sophisticated econometric techniques (e.g., fixed-effects panel models, generalized methods of moments estimation and/or structural equation modeling) can enhance

causal inference. More elaboration of the individual ESG dimensions and on other moderating factors like governance quality, digital transformation, regulatory intensity and others can give deeper insights into the effectiveness of the ESG strategies for the banking sector.

Abbreviations

CAR: Capital Adequacy Ratio, CIR: Cost-to-Income Ratio, ESG: Environmental, Social and Governance, LDR: Loan-to-Deposit Ratio, NPA: Non-Performing Assets, RBI: Reserve Bank of India, ROE: Return on Equity.

Acknowledgement

None.

Author Contributions

Both the authors were equally responsible for conceptualization, data collection, methodology, analysis, interpretation, writing and final manuscript preparation.

Conflict of Interest

The authors declare no conflict of interest regarding the publication of this manuscript.

Data Availability

The data used in this study were obtained from publicly available secondary sources, including the Refinitiv ESG database, annual reports of selected banks, financial databases and publications of the Reserve Bank of India. Data are available from the corresponding author upon reasonable request, subject to database access restrictions.

Declaration of Artificial Intelligence

(AI) Assistance

Artificial intelligence tools were used solely for language refinement, grammar correction and manuscript editing. The authors take full responsibility for the originality, interpretation and accuracy of the content.

Ethics Approval

This study is based exclusively on secondary data obtained from publicly available sources; therefore, ethics committee approval was not required.

Funding

This research received no external funding.

References

1. Wu L, Sun H, Chen L. The impact of ESG information disclosure on corporate environmental performance: evidence from China's Shanghai and Shenzhen A-share listed companies. *Sustainability*. 2025;17(23):10583. doi:10.3390/su172310583
2. Zheng C, Murod M, Khan MAM, *et al.* ESG performance and bank risk-taking in developed and developing countries: the moderating role of environmental uncertainty. *SAGE Open*. 2026;16(1):21582440261425935. doi:10.1177/21582440261425935
3. Cohen G. The impact of ESG risks on corporate value. *Rev Quant Financ Account*. 2023;60(4):1451-68. doi:10.1007/s11156-023-01135-6
4. Kumar S, Sharma D, Rao S, Lim WM, Mangla SK. Past, present and future of sustainable finance: insights from big data analytics through machine learning of scholarly research. *Ann Oper Res*. 2025;345(2):1061-104. doi:10.1007/s10479-021-04410-8
5. Poornima S, Gopalakrishna BV, Samanta M. Unveiling the nexus between ESG and financial performance: the mediating role of financial constraints—evidence from India. *J Emerg Mark Finance*. 2026;25(2):153-78. doi:10.1177/09726527261416601
6. La Torre M, Leo S, Panetta IC. Banks and environmental, social and governance drivers: follow the market or the authorities? *Corp Soc Responsib Environ Manag*. 2021;28(6):2620-34. doi:10.1002/csr.2132
7. Habib AM, Mourad N. The influence of environmental, social and governance (ESG) practices on US firms' performance: evidence from the coronavirus crisis. *J Knowl Econ*. 2024;15(1):159-80. doi:10.1007/s13132-023-01278-w
8. McBrayer GA. Does persistence explain ESG disclosure decisions? *Corp Soc Responsib Environ Manag*. 2018;25(6):1074-86. doi:10.1002/csr.1521
9. Long H, Feng GF, Gong Q, Chang CP. ESG performance and green innovation: an investigation based on quantile regression. *Bus Strateg Environ*. 2023;32(7): 5102-18. doi:10.1002/bse.3410
10. Zimon G, Arianpoor A, Salehi M. Sustainability reporting and corporate reputation: the moderating effect of CEO opportunistic behavior. *Sustainability*. 2022;14(3):1257. doi:10.3390/su14031257
11. Chininga E, Alhassan AL, Zeka B. ESG ratings and corporate financial performance in South Africa. *J Account Emerg Econ*. 2024;14(3):692-713. doi:10.1108/JAEE-03-2023-0072
12. Sugianto LF, Shu PG, Liou SR. The impact of ESG on business operating performance in Taiwan. *Rev Pac Basin Financ Mark Policies*. 2026;2650017. doi:10.1142/S0219091526500177
13. Agliardi E, Alexopoulos T, Karvelas K. The environmental pillar of ESG and financial performance: a portfolio analysis. *Energy Econ*. 2023;120:106598. doi:10.1016/j.eneco.2023.106598
14. Du X, Jiang K. Promoting enterprise productivity: the role of digital transformation. *Borsa Istanbul Rev*. 2022;22(6):1165-81. doi:10.1016/j.bir.2022.08.005
15. Hazaea SA, Zhu J, Khatib SFA, *et al.* Sustainability assurance practices: a systematic review and future research agenda. *Environ Sci Pollut Res Int*. 2022;29(4):4843-64. doi:10.1007/s11356-021-17359-9
16. Shen H, Lin H, Han W, Wu H. ESG in China: a review of practice and research and future research avenues. *China J Account Res*. 2023;16(4):100325. doi:10.1016/j.cjar.2023.100325
17. Paolone F, Pozzoli M, Chhabra M, Di Vaio A. Cultural and gender diversity for ESG performance towards knowledge sharing: empirical evidence from European banks. *J Knowl Manag*. 2024;28(11):106-31. doi:10.1108/JKM-05-2023-0445
18. Ozili PK, Iorember PT. Financial stability and sustainable development. *Int J Finance Econ*. 2024;29(3): 2620-46. doi:10.1002/ijfe.2803
19. Özyürek H, Kara K, Yalçın GC, Sarıoğlu M, Simic V, Pamucar D. Corporate governance-based financial performance analysis: a decision support system for identification of top-performing industry benchmarks. *J Clean Prod*. 2026;555:148188. doi:10.1016/j.jclepro.2026.148188
20. Doumpos M, Zopounidis C, Gounopoulos D, Platanakis E, Zhang W. Operational research and artificial intelligence methods in banking. *Eur J Oper Res*. 2023;306(1):1-6. doi:10.1016/j.ejor.2022.04.027
21. Kumar K, Prakash A. Examination of sustainability reporting practices in Indian banking sector. *Asian J Sustain Soc Responsib*. 2019;4(1):2. doi:10.1186/s41180-018-0022-2
22. Silva AL, Alves CF. The impact of the single supervisory mechanism on the readability of European banks' annual reports. *J Financ Manag Mark Inst*. 2026;2640002. doi:10.1142/S2282717X26400025
23. Duque-Grisales E, Aguilera-Caracuel J. Environmental, social and governance scores and financial performance of Multilatinas: moderating effects of geographic international diversification

- and financial slack. *J Bus Ethics*. 2021;168(2):315-34.
doi:10.1007/s10551-019-04177-w
24. Lu J, Wang J. Corporate governance, law, culture, environmental performance and CSR disclosure: a global perspective. *J Int Financ Mark Inst Money*. 2021;70:101264.
doi:10.1016/j.intfin.2020.101264
25. Yang Y, Han J. Digital transformation, financing constraints and corporate environmental, social and governance performance. *Corp Soc Responsib Environ Manag*. 2023;30(6): 3189-202.
doi:10.1002/csr.2546
26. Owolabi IA, Erdiaw-Kwasie MO, Tenakwah E, Abunyawah M. Corporate sustainability performance and fraud risk management in Nigeria's extractive sector: the moderating role of ownership structure in an evolving environmental policy landscape. *Corp Soc Responsib Environ Manag*. 2026;33(2):2906-27.
doi:10.1002/csr.70312

How to Cite: Lokeshwari DV, Shruthi MP. ESG and Financial Performance Nexus: A Study of Selected Indian Public and Private Banks. *Int Res J Multidiscip Scope*. 2026;7(3):232-242.
DOI: 10.47857/irjms.2026.v07i03.012276