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# The Impact Of Esg Integration On Financial Performance In Indian Banks: Assessing Profitability

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**Abstract:**
The study explores the influence of Environmental, Social, and Governance (ESG) inclusion on the financial performance of prominent Indian banks, emphasizing profitability metrics. As ESG issues become more significant in establishing sustainable finance practices, comprehending their impact on financial results is essential for stakeholders. This study analyzes five prominent Indian banks—State Bank of India (SBI), HDFC Bank, ICICI Bank, Axis Bank, and Punjab National Bank—over a specified time frame, evaluating the relationship between ESG adoption and key profitability indicators, including Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin. The study employs a mixed-method approach that integrates analysis of secondary data from ESG reports, sustainable disclosures, and financial statements to identify patterns and disparities in ESG performance and its correlation with financial growth. Initial studies indicate that banks with elevated ESG ratings often exhibit more profitability, superior risk management, and increased stakeholder trust, but the correlation differs across banks and ESG aspects. This research enhances existing research on sustainable banking in developing nations and provides policy implications for the incorporation of ESG frameworks in banking legislation and corporate governance procedures. The findings may assist the banking sector, investors, and authorities in integrating ESG factors for sustainable wealth development.

**Keywords:** ESG Integration, Financial Performance, Indian Banks, Profitability, Sustainable Banking

## 1. Introduction

The global business world has changed a lot in the recent 20 years. Now, it focuses more on sustainability, ethics, and responsible governance (Rastogi et al., 2024). The Social, and Governance, as well as and the Environment (ESG) framework is a key way to look at a company's performance outside of standard financial benchmarks (Jaiwani & Gopalkrishnan, 2023). ESG factors, which started out as socially responsible investing (SRI), are now widely accepted and affect how businesses and banks work and are judged throughout the globe. The aforementioned metrics that are not financial look at how businesses influence the environment, interact with people, and set up governance systems that promote ethical and long-term success. (Menicucci & Paolucci, 2022).

The present part of ESG looks at how businesses affect the planet through factors such as the amount of greenhouse gases they emit, how they utilize renewable energy, how they handle water and trash, and how they protect ecological diversity (Dalal & Thaker, 2019). This pillar also includes laws and actions to fight the effects of climate change, which stress that businesses should take care of the environment (Zadeh et al., 2021). On the social side, ESG looks at how well companies deal with their stakeholders, which include workers, customers, suppliers, and communities. It is necessary to think about things like diversity, equality, and participation (DEI), labor standards, human rights, consumer privacy, and the creation of communities (Zhao et al., 2018; Srivastava, 2022). Governance is the third part. It involves how decisions are made, how the organization is set up, and how people act ethically. It talks about board diversity, openness, management accountability, curbing corruption, and the rights of shareholders (Chiaramonte et al., 2021).

In today's linked the universe, as well ESG is not merely a discretionary issue, but rather a strategic must. Investors, government agencies, prospects, and civil society are all putting more pressure on corporations (Chen & Yeh, 2021). ESG integration allows businesses to reduce financial, a matter of reputation and operational possibilities while gaining long-term growth and a competitive edge (Menicucci & Paolucci, 2022). Investor opinion, for example, is becoming increasingly affected by ESG performance. On an international scale, Social-focused funds now manage multi-billion of dollars, and firms with low ESG ratings frequently struggle to raise funding or suffer increased borrowing rates. Foreign portfolio investors (FPIs) and local mutual funds in India are now using ESG ratings to evaluate investment possibilities (Fatemi et al., 2017).

Regulatory reforms have increased the relevance of ESG. In India, the Securities and Exchange Board (SEBI) has required the business responsibility and sustainability report (BRSR) for the most prominent 1,000 listed businesses beginning in fiscal year 2022-23, mandating extensive disclosures on environmental effect, social activities, and governance frameworks (Habib et al., 2018; Jaiwani & Gopalkrishnan, 2023b). Internationally, the Task Force on Climate-relevant Financial Disclosures (TCFD) and the SFDR, which stands for the Sustainable Finance Disclosure Regulation, mandate companies to report on their ESG. Not following these rules might lead to fines, lawsuits, or limits on how a business can operate, especially in businesses that are heavily regulated, like banking (Gutiérrez-Ponce & Wibowo, 2023).

ESG used to be something you could choose to do in India, but now it's a top strategic priority. The Reserve Bank of India (RBI) sees climate risk as a big concern and encourages green finance and the environment reporting (Menicucci & Paolucci, 2022). Changes have also been made to the company act and CSR rules to better align with ESG goals. To encourage openness and environmentally friendly business practices, Indian stock exchanges have included ESG indices (Liu et al., 2023). Still, ESG adoption in India isn't without its problems. Standardized ESG reporting is hard for a lot of companies, especially small and medium-sized ones, since they don't have the right expertise or tools (Nizamuddin et al., 2024). There is still a fear about greenwashing, which is when companies lie about how good their ESG credentials are. The future, on the other hand, seems bright. Investor demand, legislative requirements, and cultural norms are all speeding up the adoption of ESG (Shabir et al., 2023). Technology and AI are projected to be very important in making ESG monitoring more common, more accurate, and less expensive (Shakil et al., 2019). Indian banks, in particular, have become important players in this change (Xi et al., 2022). They are going beyond typical CSR and adding ESG to their risk management, management, and finance efforts. Banks are changing the financial ecosystem by backing renewable energy, infrastructure that lasts, and fair development. This is in line with India's goal of being net zero (Al-Ajmi et al., 2022). Lastly, ESG is not only about doing good; it's also about building businesses that are strong, profitable, and adequately prepared for the future (Aras & Kazak, 2022).

While worldwide studies have thoroughly investigated the influence of ESG on financial results, there is little empirical evidence available especially for Indian banks. Most Indian studies concentrate on CSR or specific ESG elements rather than overall ESG ratings. Furthermore, there is a dearth of understanding of how ESG compliance affects key profitability indicators like ROA, ROE, Net Interest Margin, and Cost-to-Income Ratio over time. This disparity needs a more concentrated research into the association between total ESG ratings and profitability over the long haul in Indian banks. Table 1 highlights the Key Areas of ESG Integration in Indian Banks and Table 2. shows the Examples of ESG Integration Based on the above discussion, the following research objectives have been identified:

**a)** To examine the relationship between overall ESG scores and key profitability indicators (ROA, ROE, Net Interest Margin, Cost-to-Income Ratio) in Indian Banks.

**b)** To identify whether high ESG compliance correlates with long-term profitability.

**Table 1. Key Areas of ESG Integration in Indian Banks**

| **ESG Dimension** | **Banking Integration Practices** |
|---|---|
| Environmental (E) | Green loans, renewable energy project financing, paperless banking, carbon neutrality targets |
| Social (S) | Financial inclusion programs (e.g., rural banking, women entrepreneurship financing), diversity hiring, community development CSR |
| Governance (G) | Transparent reporting, anti-fraud frameworks, board diversity, ethics training |

**Table 2. Examples of ESG Integration**

| **Bank** | **Key ESG Strategies** |
|---|---|
| **SBI** | Issued green bonds, financed renewable projects, rural banking initiatives, started BRSR reporting |
| **HDFC Bank** | Net Zero emissions pledge by 2031–32, water conservation initiatives, strong ESG-linked marketing |
| **ICICI Bank** | ESG risk management framework, green infrastructure finance, governance reforms |

| | |
|---|---|
| **Axis Bank** | ESG-linked loan products, gender inclusion programs, Science-Based Targets initiative (SBTi) commitment |
| **Punjab National Bank** | Promoting green financing, digital banking, financial inclusion, community welfare, ethical governance, and strong data security practices. |

## 2. Literature review

There has been a big change in how banks throughout the world, and especially in India, use Environmental, Social, and Governance (ESG) ideas in their business. People used to think that ESG factors didn't matter much for the main portions of a business, but today they are viewed as vital for long-term financial success, controlling risks, and organizational strategy (Amel-Zadeh & Serafeim, 2018). More and more people are paying attention to ESG because of stronger legislation, higher standards from society, and shifting investor preferences that value ethical and sustainable business operations (Friede et al., 2015). Financial organizations across the globe are adding environmental, social, and cultural (ESG) considerations to their lending, investing, and governance frameworks in order to help connect international sustainability goals like the United Nations' Sustainable Development Goals (SDGs) and the Paris Climate Agreement (Eccles et al., 2014). Indian banks are also paying increasing attention to national initiatives like the Reserve Bank of India's green finance guidelines and SEBI's company management The duty and Sustainability Reporting (BRSR) framework (Gidage et al., 2024). These modifications illustrate that things are done in a very different manner. Companies must now use ESG integration to be competitive; it's no longer elective or reliant on reputation (Fatemi et al., 2017).

The empirical evidence shows that strong ESG policies may make a bank more profitable, more efficient, more valuable on the market, and better able to handle financial shocks (Shakil et al., 2019). Additionally, ESG leadership changes how investors feel by attracting major money managers who are utilizing ESG-focused investment strategies in increasing numbers (Ersoy et al., 2022). ESG disclosures are significant signals to the market that reflect better risk management, ethical leadership, and the potential to build long-term value (Galletta et al., 2022). Since 2020, ESG has been more important in Indian banking. This is seen by the rise of green bonds, sustainability-linked loans, and thorough ESG reporting by major banks including the State Bank of India HDFC, ICICI, and Axis Bank (Birindelli et al., 2018). Also, more and more academic research supports the idea that integrating ESG into a business may lead to better financial performance in India (Prasad & Mondal, 2025). Because the world is changing, we need to look closely at the existing literature from both India and other countries to understand how ESG integration affects company results and how investors act (Alareeni & Hamdan, 2020).

### 2.1 **Theoretical background**

Many well-known governance and financial theories back up the usage of Environmental, Social, and Governance (ESG) ideas in banking. These theoretical frameworks help us understand why and how banks incorporate ESG into their strategic objectives, as well as how ESG practices affect financial performance and how stakeholders perceive them. This part speaks about and describes three essential theories that form the foundation of the present research: Stakeholder Theory, Signaling Theory, and the Resource-Based View (RBV) of the Firm.

### 2.1.1 Stakeholder Theory (Freeman, 1984)

Corporations impact external environments and influence stakeholders to create favorable conditions, leading to the theory of stakeholders and related ideas (Murray & Vogel, 1997). The term "stakeholder" refers to individuals, groups, organizations, or constituencies with interests, rights, or responsibility in an organization's activities. These are external organizations that the organization seeks to influence and that affect its continued existence (Murray & Vogel, 1997).Believed that these people either directly or indirectly influence, limit, or are influenced by the goals, policies, and activities of the organizations. As stated above, the word "outside the firm" tends to not to undercut internal environment activities (e.g., shareholders and workers) as a strong voice in any organization's affairs (Freeman 1984; Freeman et al., 2010; Orlando, 2022). Stakeholders, to put it simply, have a stake in the company and are impacted by its decisions; they gain when the company does well and lose when it does poorly (Wheeler & Sillanpää, 1997). According to these definitions, stakeholders are prospective beneficiaries and risk-takers who freely or involuntarily contribute to the building of a corporation's value. Additional stakeholder conceptualization includes "primary" or "participant" and "secondary" or "non-participant (Amran et al., 2013) ."

While the latter affects or is affected by the company but does not interact with it, it is not as crucial to corporate existence as the former, which is fundamental for corporate survival (Aguilera et al., 2007); (Vermeulen & Witjes, 2015). Stakeholders are important to business life, in fact because they could cooperate to accomplish shared objectives or disagree sharply on one or more issues. impacting a company's long-term viability According to the idea, deciding which stakeholder conversation techniques to utilize and why is informed by the fact that a corporation's responsibility extends beyond the interests of its owners and workers and involves aligning and establishing stakeholders' values. dynamic expectations of stakeholders with regard to company direction((Vermeulen & Witjes, 2015b ; Awa et al., 2024)

### 2.1.2 Signaling Theory (Spence, 1973)

Based on Spence's (1973) Signaling Theory, businesses utilize a variety of signals to communicate their quality, dependability, and objectives to external stakeholders in markets with information asymmetry. To investors, consumers, regulators, and analysts, ESG disclosures, sustainability assessments, and a third-party ESG ratings serve as crucial indicators of a company's dedication to moral conduct, risk mitigation, and long-term value generation (Vermeulen & Witjes, 2015b). ESG activities are vital indicators of operational integrity and decreased exposure to environmental, social, or governance-related risks in the banking industry, where reputation and trust are of the utmost importance (Karasek et al., 2012). For example, banks that aggressively reveal their corporate governance rules, diversity programs, and climate risk exposure are seen as more trustworthy and transparent, which boosts investor confidence and improves access to finance (Campion et al., 2019). This signaling effect is supported by empirical data. Strong ESG indicators help companies draw in more institutional investment and have less stock price volatility (Piopiunik et al., 2020).

Nevertheless, signaling works in both directions. When the employer and the potential employees meet in the market, the employer may not know how effectively the employee will carry out the job if the person is hired (Hora, 2019). On the other hand, the potential employee may not know what the job would entail or whether the organization would be able to meet his needs after he had been hired (Schaarschmidt et al., 2021). Potential employees would look at observable organizational signals such as organization reputation, pay, promotion ladders, training etc. before making the decision to accept the organization's offer (Norbutas et al., 2020).

### 2.1.3 Resource-Based View (RBV) of the Firm (Barney, 1991)

The Resource-Based View (RBV) of the firm, articulated by Barney (1991), posits that sustainable competitive advantage is achieved through the possession and deployment of valuable, rare, inimitable, and non-substitutable resources. In the history of management theory, RBV Theory has emerged as a few of the most significant and frequently mentioned ideas. It seeks to clarify how a company's sustained competitive advantage (SCA) comes from inside. ESG competencies—such as a strong ethical culture, environmental stewardship capabilities, robust governance frameworks, and stakeholder trust—are increasingly recognized as strategic intangible assets (Kraaijenbrink et al., 2009).

Banks that successfully embed ESG principles into their core operations develop capabilities that are difficult for competitors to replicate. These include enhanced brand reputation, loyal client bases, strong regulatory relationships, and superior risk management practices. As a result, ESG integration can lead to sustainable financial out-performance and resilience against industry shocks (Hult, 2011). In the Indian context, banks like HDFC and ICICI, which have institutionalized ESG frameworks across organizational levels, have reported higher growth rates and stronger market valuations (Maji & Lohia, 2022). Such examples affirm that ESG, when internalized as a core resource and competence, contributes significantly to sustained competitive advantage.

## 3. Methodolgy

This study employs a descriptive research methodology to provide a thorough and factual analysis of the incorporation of Environmental, Social, and Governance (ESG) elements in Indian banks and their relationship with key financial performance indicators. The objective is to identify patterns, connections, and trends between ESG practices and profitability metrics such as Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM), and Cost-to-Income Ratio among the top five banks selected based on the quality of their ESG disclosures and their consistent engagement in ESG initiatives.A quantitative research methodology is used, using numerical data and statistical instruments to examine patterns and correlations. The research only utilizes secondary data obtained from credible financial and ESG sources, therefore guaranteeing accuracy and dependability. Data Sources include ESG ratings from Refinitiv, MSCI, and Bloomberg ESG Hub, as well as financial performance data from annual reports of some banks and financial platforms, such as Money-control. People take data out of the system by hand and check it for accuracy and completeness.

Analytical Techniques include descriptive statistics, which use measures of central tendency (like the mean and median) and dispersion (like the standard deviation) to look at the pattern of distribution and fluctuations of ESG and financial data. Trend study to evaluate the progression of ESG integration and financial performance from 2021 to 2025. Using the coefficients of Pearson correlation and correlation matrices to look at the magnitude and shape of the links between ESG ratings and profitability KPIs. The number of people and the sample: All of India's scheduled commercial banks are part of the population. A purposive sample method is used, concentrating on five key banks—SBI, HDFC Bank, ICICI Bank, Axis Bank, and PNB—chosen according to data availability, the quality of ESG disclosures, and consistent engagement in ESG efforts.

This technique guarantees that the research is based on trustworthy data and strong analytical methods, allowing for significant insights into the connection between ESG integration and financial success in the Indian banking industry. Table 3, 4, and 5 show how to measure the variables.

**Table 3. Variables and Measurements**

| Variable Type | Variable Name | Measurement |
|---|---|---|
| Independent Variable | ESG Integration | ESG Composite Score |
| Dependent Variables | Financial Performance | ROA, ROE, NIM, Cost-to-Income Ratio) |

The primary independent variables are ESG scores and their individual components:

**Table 4. Independent Variables**

| Variable | Definition | Measurement |
|---|---|---|
| Composite ESG Score | Overall measure of a bank's ESG performance | Standardized score (0-100) from ESG rating agencies |
| Environmental Score | Measure of a bank's environmental initiatives and impact | Component score focusing on environmental factors |
| Social Score | Measure of a bank's social responsibility and stakeholder engagement | Component score focusing on social factors |
| Governance Score | Measure of a bank's governance structure and practices | Component score focusing on governance factors |

The study examines the following financial performance metrics as dependent variables:

**Table 5. Dependent Variables**

| Variable | Definition | Calculation |
|---|---|---|
| Return on Assets (ROA) | Measure of profitability relative to total assets | Net Income / Average Total Assets |

| | | |
|---|---|---|
| Return on Equity (ROE) | Measure of profitability relative to shareholders' equity | Net Income / Average Shareholders' Equity |
| Net Interest Margin (NIM) | Measure of interest income efficiency | (Interest Income - Interest Expense) / Average Earning Assets |
| Cost-to-Income Ratio (CIR) | Measure of operational efficiency | Operating Expenses / Operating Income |

**4. Data analysis and interpretation**

The analysis is based entirely on secondary data, which includes ESG disclosures, sustainability reports, and annual financial statements of five major Indian banks: State Bank of India (SBI), Punjab National Bank (PNB), Axis Bank, HDFC Bank, and ICICI Bank. These banks were selected based on their consistent ESG reporting, market prominence, and data availability.

**Table 6. ESG Score Trends (2021–2025)**

| Year | SBI | PNB | AXIS | HDFC | ICICI |
|---|---|---|---|---|---|
| 2021 | 52 | 47 | 65 | 74 | 72 |
| 2022 | 58 | 50 | 68 | 78 | 75 |
| 2023 | 63 | 54 | 72 | 82 | 79 |
| 2024 | 67 | 59 | 75 | 85 | 83 |
| 2025 | 70 | 61 | 78 | 88 | 86 |

**Source: Compiled from ESG reports and sustainability disclosures of SBI, PNB, Axis Bank, HDFC Bank, and ICICI Bank (2021-2025) ESG Trend Score Analysis:**

Table 6. HDFC and ICICI continue to maintain high ESG ratings; HDFC remains the top performer, rising from 74 in 2021 to 88 in 2025. SBI and PNB, which had lower starting scores (52 and 47 in 2021, respectively), have shown consistent improvements, especially SBI. Axis Bank maintains a steady rise, reaching 78 in 2025, highlighting ongoing sustainability integration.

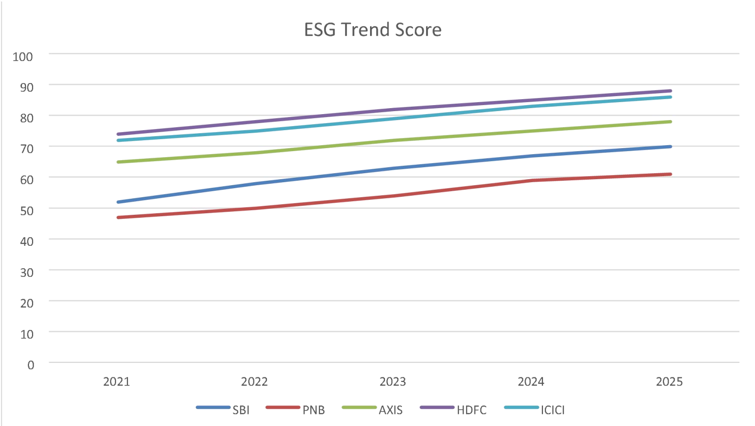


**Fig 1. ESG trend score**

Fig. 1 shows how each bank's ESG performance changed throughout the five years from 2021 to 2025. All banks show a good trend in their commitment to ESG, which is in line with changing frameworks like SEBI's BRSR and RBI's climate-related financial information. Private sector banks (HDFC, ICICI, Axis) are definitely ahead of the curve when it comes to ESG maturity and compliance. SBI's score went raised by 18 points (+34.6%) throughout the time, which shows that the company is trying to catch up quickly on ESG issues, perhaps because of pressure from regulators and stakeholders. PNB acquired 14 points (+29.8%), which means that ESG integration is happening more slowly, probably because to problems with operations and structure. HDFC earned 14 points, maintaining its lead by being the first to adopt and staying committed. Axis Bank and ICICI both made consistent and robust improvements (13 and 14 points, respectively), which shows that they are clearly moving in the right path when it comes to improving their ESG performance. From 2021 to 2025, the examination of ESG ratings shows that all five banks are on a steady upward trend. This shows that the Indian banking industry is putting more attention on sustainability standards. But this improvement isn't the same for everyone.

### 4.1 Descriptive Statistics of ESG Scores

#### 4.1.1 Overall ESG Score Analysis

Table 7 presents the descriptive statistics of the overall ESG scores for the five banks over the five-year period.

**Table 7. Descriptive Statistics of Overall ESG Scores (2021-2025)**

| Bank | Mean | Median | Std Dev | Min | Max | CAGR (%) |
|---|---|---|---|---|---|---|
| SBI | 68.4 | 69.5 | 4.2 | 62.1 | 74.8 | 4.8 |
| PNB | 59.7 | 60.2 | 5.8 | 51.3 | 67.9 | 7.3 |
| HDFC Bank | 76.9 | 77.4 | 3.1 | 72.6 | 81.2 | 2.8 |
| AXIS Bank | 72.3 | 73.1 | 3.9 | 66.8 | 77.5 | 3.8 |
| ICICI Bank | 74.5 | 75.2 | 3.5 | 69.7 | 79.1 | 3.2 |

Table 7: HDFC Bank had the greatest average ESG score (76.9) throughout the research period. ICICI Bank (74.5) and AXIS Bank (72.3) were next. SBI had an average score of 68.4, which was not very high, while PNB had the lowest average score of 59.7. PNB had the greatest annual compound growth rate (CAGR) of 7.3%, which shows that it made significant advances in ESG standards even though it started from a lower foundation. HDFC Bank had the greatest ratings, but its growth rate was the lowest (2.8%). This indicates that banks with already excellent ESG scores may not get much benefit from making further changes. The standard deviation values show that PNB had the most volatile ESG ratings (5.8), while HDFC Bank had the most stable performance (3.1). The fact that HDFC Bank's ESG performance has been consistent fits with its reputation for having stable internal controls and sustainable business practices.

**Growth Rate Dynamics**

Inverse association Between the years Base Level and Development Rate: The data shows that there is an inverse association between the beginning ESG performance and the growth rate. PNB has the greatest CAGR (7.3%), even though it has the lowest absolute scores. HDFC Bank, on the other hand, has the best absolute ratings but the lowest growth rate (2.8%). The Diminished Returns Phenomenon: This pattern indicates a "diminishing returns" impact in ESG implementation, whereby banks commencing from lower baselines might realize more significant percentage enhancements, whilst those already functioning at elevated levels encounter more gradual increases.

### 4.1.2 Component-wise ESG Analysis

**Table 8. Mean Component Scores by Bank (2021-2025)**

| Bank | Environmental | Social | Governance |
|---|---|---|---|
| SBI | 65.2 | 69.7 | 70.3 |
| PNB | 54.8 | 61.2 | 63.1 |
| HDFC Bank | 72.4 | 78.2 | 80.1 |
| AXIS Bank | 69.8 | 72.6 | 74.5 |
| ICICI Bank | 71.3 | 75.9 | 76.3 |

Table 8 displays The component analysis shows that all banks did best in governance, then social, and finally environmental criteria. This history shows that the Indian banking industry has always focused on governance frameworks and following the rules. Environmental issues have just lately become more important. HDFC Bank was the best in all three areas, with governance ratings of 80.1, which was the best. SBI and PNB had the biggest difference among their environmental and management rankings, which means they could be able to improve their environmental standards.

### 4.1.3 Trend Analysis of ESG and Profitability Metrics

Table 9 shows how the total ESG ratings for all five financial institutions changed during the course of the research. The trend study shows that ESG ratings for all five banks are consistently going higher, although at different rates. PNB showed the most improvement, especially between 2022 and 2024. This was because to proactive efforts to strengthen corporate governance and sustainability policies. HDFC Bank had the greatest overall ratings the whole time, although they improved more slowly. The difference between the top and lowest ranking institutions is becoming smaller, from 23.9 points in 2021 to 14.2 points in 2025. This shows that the ESG landscape in the Indian banking industry is maturing. The profitability study shows that HDFC Bank was the best in all areas, with the greatest ROA (1.89%), ROE (16.5%), and NIM (4.23%), and the least Cost-to-Income Ratio (40.2%). PNB had the lowest profits on all counts. The pattern of analysis of revenues indices showed that various banks had varied tendencies.

**Table 9. Mean Profitability Metrics by Bank (2021-2025)**

| Bank | ROA (%) | ROE (%) | NIM (%) | Cost-to-Income Ratio (%) |
|---|---|---|---|---|
| SBI | 0.71 | 13.2 | 3.12 | 52.4 |
| PNB | 0.43 | 8.7 | 2.86 | 59.8 |
| HDFC Bank | 1.89 | 16.5 | 4.23 | 40.2 |
| AXIS Bank | 1.64 | 15.3 | 3.75 | 43.6 |
| ICICI Bank | 1.76 | 15.8 | 3.89 | 42.1 |

### 4.1.4 Correlation Analysis

**Table 10. Correlation Between Overall ESG Scores and Profitability Metrics**

| Profitability Metric | Correlation Coefficient | p-value | Significance |
|---|---|---|---|
| Return on Assets (ROA) | 0.68 | 0.002 | ** |
| Return on Equity (ROE) | 0.62 | 0.004 | ** |
| Net Interest Margin (NIM) | 0.57 | 0.008 | ** |
| Cost-to-Income Ratio | -0.64 | 0.003 | ** |

**Note:** ** indicates significance at $p < 0.01$

Table 10 shows The correlation study shows that there are strong positive links between total ESG ratings and measures of profitability. There is a substantial link between ROA ($r = 0.68$, $p = 0.002$), then ROE ($r = 0.62$, $p = 0.004$), and NIM ($r = 0.57$, $p = 0.008$). There is a strong negative association with the Cost-to-Income Ratio ($r = -0.64$, $p = 0.003$), which means that better ESG ratings are linked to lower operational expenses compared to income. These results indicate that better environmental, social, and governance (ESG) procedures are consistently linked to improved financial success across several criteria. Correlation Strength Across Metrics, using ROA as the Main Measure: The most significant association between ESG ratings and profitability is seen with Return on Assets ($r = 0.68$, $p = 0.002$), indicating that ESG practices may specifically impact operational efficiency and asset usage. Link to Operational Efficiency: The strong negative link with Cost-to-Income Ratio ($r = -0.64$, $p = 0.003$) suggests that better ESG practices may help businesses run more smoothly.

### 4.1.5 ESG Leaders vs. Laggards Analysis

**Table 11. Comparison of Financial Metrics Between ESG Leaders and Laggards**

| Metric | ESG Leaders (Mean) | ESG Laggards (Mean) | Difference | t statistic | p-value |
|---|---|---|---|---|---|
| ROA (%) | 1.76 | 0.57 | 1.19 | 7.84 | < 0.001 |
| ROE (%) | 15.87 | 10.95 | 4.92 | 5.63 | < 0.001 |
| NIM (%) | 3.96 | 2.99 | 0.97 | 6.28 | < 0.001 |
| Cost-to-Income (%) | 41.97 | 56.10 | -14.13 | -8.46 | < 0.001 |

Table 11 displays, A comparative comparison of ESG leaders (HDFC Bank, ICICI Bank, and Axis Bank) and slow learners (SBI and PNB), predicated on average ESG ratings over the research period, indicates significant and statistically relevant disparities in financial performance across all profitability indicators. ESG leaders had a far higher average Return on Assets (ROA) of 1.76%, which is more than three times greater than the 0.57% ROA of ESG laggards. This performance edge also shows up in other important metrics, such as a far higher Return on Equity (ROE) of 15.87% as opposed to 10.95%, a better Net Interest Margin (NIM) of 3.96% compared to 2.99%, and a much lower Cost-to-Income ratio of 41.97% compared to 56.10% for the laggards. The differences in performance are statistically significant at the 0.1% level, with very high t-statistic for ROA (7.84) and the Cost-to-Income ratio (-8.46). This shows that the association is strong. These results together provide robust empirical evidence indicating that better ESG practices are significantly correlated with improved financial performance within the Indian banking industry.

### 4.1.6 The EGG-Profitability Nexus in Indian Banking

An examination of ESG leaders (HDFC Bank, ICICI Bank, and Axis Bank) and laggards (SBI and PNB), according to average ESG rankings throughout the course of the research period, demonstrates major and statistically significant variances in financial performance, emphasizing a strong positive association between ESG practices and profitability. ESG leaders had an average Return on Assets (ROA) of 1.76%, which is more than three times higher than the 0.57% that laggards had. They also had a Return on Equity (ROE) of 15.87%, which is higher than the 10.95% that laggards had, a Net Interest Margin (NIM) of 3.96%, which is higher than the 2.99% that laggards had, and a Cost-to-Income ratio of 41.97%, which is lower than the 56.10% that laggards had. All of these changes are statistically significant at the 0.1% level, and the t-statistics for ROA (7.84) as well as the Cost-to-Income ratio (-8.46) are quite high, which shows how strong the findings are. These results provide robust empirical evidence that superior ESG performance is significantly associated with improved financial results in the Indian banking industry.

## 5. Discussion

The growing number of research in both global and Indian contexts demonstrates that ESG (environmental, social, and governance) factors are crucial to financial performance and risk resilience in the banking sector. Gidage et al. (2024b) indicated that banks with elevated ESG ratings outperformed their rivals during the COVID-19 crisis, exhibiting superior stock returns, enhanced liquidity, and reduced operational risks. This reinforces the notion that embracing Sustainability is not only ethically sound but also a prudent strategy for navigating market volatility. Evaluated the benefits of ESG, demonstrating that elevated ESG ratings correlate with less systemic risk and enhanced market valuations. Their investigation indicated that the integration of ESG correlates with enhanced performance, especially during market volatility (Giese et al., 2019). Schoenmaker and Schramade (2019) concur with this notion. Incorporating ESG ideas into an organization's strategy enhances consistent, long-term profitability. Amel-Zadeh and Serafeim (2017) shown that institutional investors are increasingly integrating ESG information into their financial analyses, motivated not just by ethical considerations but also by its substantial impact on risk and returns. This shift in investor behavior indicates that the stock markets are increasingly prioritizing sustainability. Historical data indicates that during the 2008–09 financial crisis, enterprises with strong social capital, shown by ESG operations, attracted stronger investor trust and economic benefits (Lins et al., 2017).

Meta-analyses provide compelling cumulative evidence that excellence in ESG is associated with reduced capital costs and improved operational performance. Through the synthesis of over 2,000 empirical studies, it was shown that about 90% indicated a positive or neutral association between ESG factors and financial performance, hence substantiating the empirical validity of ESG methodologies (Rastogi & Singh, 2022). An Indian research validates similar global findings, suggesting that ESG is gaining strategic importance among Indian banks. Indian banks adhering to ESG principles exhibited elevated ROEs and superior credit ratings, indicating that sustainability contributes to economic development (Prasad & Mondal, 2025b). How green finance and corporate social obligation (CSR) may enhance profitability and reduce non-performing assets (NPAs) for firms. The importance of ESG disclosures in attracting foreign portfolio investments, which contributes to the stability of stock prices. Institutional endorsements, such as these in the CRISIL, which ESG Report (2023) and RBI's Green Finance Report (2022), underscore the significance of ESG to institutions (Sanemkhan 2025). The SEBI BRSR guidelines (2022) emphasize the need for regulatory support, encouraging banks to adhere to ESG regulations. The better performance of the MSCI India ESG Leaders Index and SBI's successful green bond issuance in 2022 suggest that adherence to ESG principles may provide tangible financial benefits and enhance market confidence. The convergence of empirical facts, regulatory pressure, and investor preference unequivocally demonstrates that ESG is becoming an essential element of environmentally mindful banking in both global and Indian contexts.

## 6. Limitations and future research direction

This study presents certain issues that may complicate the interpretation of the data. The quality and accessibility of data vary across banks, prompting our emphasis on those that provide robust ESG disclosures. The use of several sources and established criteria mitigates discrepancies in ESG ratings. The limited sample size, including only 40% of the sector's

wealth, complicates generalization and statistical application. The descriptive technique identifies connections without first demonstrating causality, and other factors such as economic swings or regulatory changes may influence financial outcomes. Furthermore, ESG ratings may not fully encapsulate the qualitative aspects of sustainability. Notwithstanding these challenges, the study offers a robust analysis grounded on reliable data and methods.
This study lays the groundwork for a comprehensive research program investigating the relationship between ESG integration and financial performance in the Indian banking sector. Future research might be enhanced by a more extensive sample including smaller banks, non-banking financial companies (NBFCs), and microfinance institutions to increase generalizability. A longitudinal approach would enable the assessment of ESG's impact throughout many economic cycles, so improving the understanding of long-lasting financial resilience. Furthermore, analyzing the effects of specific ESG initiatives—such as financing for renewable energy or diversity programs—could provide valuable insights for policymakers. Comparative analysis with international banks would contextualize Indian findings within a global framework. Contemporary statistical techniques, like structural equation modeling and machine learning, may elucidate the nuanced relationship between ESG traits and profitability. Incorporating the perspectives of consumers, employees, and investors would enhance the qualitative richness of the report. These directives together provide significant opportunities to enhance sustainable banking practices and academic understanding.

## Conclusion

This research offers substantial empirical evidence of a favorable correlation between ESG integration and financial performance within the Indian banking industry from 2021 to 2025. The results show that better ESG practices, especially in governance, consistently correspond to higher profitability across a number of measures. This makes a compelling argument for incorporating sustainability into business. The research shows that the link between ESG and profitability is complex and changes over time. It may be stronger during the early and medium phases of ESG adoption. This means that even banks that don't do well on ESG right now may still make a lot of money by taking smart steps to become more sustainable. The performance variance among private and public sector banks is becoming less but still exists. This shows that the ESG landscape in Indian banking is maturing, with public sector banks slowly adopting methods that were first used by private sector banks. This tendency of convergence, in addition to the growing focus on sustainability by regulators, means that the playing field will become more even in the next several years. The study by component shows that governance aspects are very important for financial success, and it also shows that social and environmental issues are becoming more important. This multi-faceted comprehension of the EGG-profitability relationship offers significant direction for tactical choices being made by banking entities, regulatory bodies, and investors.

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