

ESG Disclosure Quality and Bank Profitability: Evidence From Indian Commercial Banks

Freeda V. Simon¹, Praphul H. Sarma², Sakthi Bharathi S³

¹Assistant Professor, Department of Management Studies, Jai Bharat Arts and Science College, Vengola, Kerala.

²Assistant Professor, Department of Management Studies, Jai Bharath College of Management & Engineering Technology, Perumbavoor P.O, Vengola, Kerala.

³Assistant Professor, Department of BBA Logistics, Sri Ramakrishna College of Arts & Science (Autonomous), Nava India, Coimbatore 641006, India. Orcid: <https://orcid.org/0009-0005-9690-0453>

ABSTRACT

Purpose

This study explores how the quality of Environmental, Social, and Governance (ESG) disclosures influences the financial performance of Indian commercial banks. In addition, the research evaluates whether corporate reputation, operational efficiency, risk management capability, and investor confidence act as mediating mechanisms between ESG disclosure practices and profitability outcomes.

Methods

A quantitative panel-data approach was adopted using data collected from 30 Indian commercial banks covering the period from 2021–2022 to 2025–2026. Information was gathered from annual reports, sustainability disclosures, the Refinitiv ESG database, and CMIE Prowess. The analysis employed descriptive statistics, correlation testing, pooled OLS regression, and GLS estimation techniques. Furthermore, mediation effects were examined through Structural Equation Modeling (SEM) using AMOS software.

Findings

The empirical results indicate that high-quality ESG disclosure positively contributes to bank profitability, particularly in terms of Return on Assets (ROA) and Return on Equity (ROE). The findings further show that investor confidence and corporate reputation serve as strong mediating factors in strengthening the ESG–profitability relationship. Operational efficiency and risk management efficiency also demonstrate meaningful indirect effects. Overall, transparent ESG reporting enhances stakeholder trust, strengthens financial resilience, improves operational effectiveness, and supports long-term sustainability performance.

Practical Implications

The study highlights the need for Indian commercial banks to embed ESG reporting and sustainability-oriented governance into their strategic and operational frameworks. The findings are valuable for policymakers, banking regulators, investors, and financial institutions in designing transparency standards and sustainable finance initiatives that enhance institutional credibility and long-term competitiveness.

Originality/Value

This research enriches the sustainable finance literature by offering empirical evidence from the Indian banking industry on the relationship between ESG disclosure quality and profitability. Unlike earlier studies that mainly focused on direct associations, this study introduces multiple mediating variables to explain the pathways through which ESG disclosure affects financial outcomes. Consequently, the research provides a broader understanding of sustainable banking practices in an emerging economy.

Keywords: ESG Disclosure Quality, Bank Profitability, Sustainable Banking, Corporate Reputation, Investor Confidence, Operational Efficiency.

1. INTRODUCTION

Environmental, Social, and Governance (ESG) disclosure has become an essential component of corporate sustainability and financial transparency in modern business environments. Across global

financial markets, organizations are increasingly expected to demonstrate responsible environmental practices, social accountability, and sound governance standards. In recent years, ESG disclosure has attracted considerable attention from investors, regulators, policymakers, and other

stakeholders because it reflects an organization's commitment toward ethical business conduct and long-term value creation. Within the financial sector, ESG-related practices are gaining strategic importance as financial institutions seek to strengthen operational resilience, improve stakeholder confidence, and achieve sustainable growth.

The banking industry plays a vital role in supporting economic development through financial intermediation, capital allocation, and investment facilitation. Since banks operate primarily on public trust and regulatory credibility, sustainability disclosure and responsible governance practices have become increasingly important in banking operations. ESG disclosure enables banks to communicate their environmental responsibility, governance structure, social initiatives, and risk management practices to stakeholders in a transparent manner. High-quality ESG disclosure reduces information asymmetry between banks and stakeholders, thereby improving market credibility and organizational legitimacy. Moreover, investors increasingly consider ESG information while making investment decisions because organizations with stronger ESG practices are generally viewed as financially stable, ethically responsible, and less exposed to reputational or regulatory risks. Consequently, ESG-oriented strategies are now considered important drivers of long-term financial sustainability and competitive advantage in the banking sector.

In India, ESG disclosure practices have gained significant momentum due to regulatory reforms and growing awareness regarding sustainable finance. The Securities and Exchange Board of India (SEBI) introduced the Business Responsibility and Sustainability Reporting (BRSR) framework to improve sustainability disclosure standards among listed companies. Similarly, the Reserve Bank of India (RBI) has encouraged financial institutions to adopt climate-risk management practices and strengthen sustainable finance initiatives. These developments have accelerated ESG integration within Indian commercial banks and increased institutional focus on transparency, accountability, and sustainability-

oriented governance. At the same time, the Indian banking sector has shown considerable improvement in profitability, asset quality, and financial resilience in recent years, creating a favorable environment for integrating ESG-related operational strategies.

Existing literature suggests that ESG disclosure positively influences financial performance, market valuation, operational efficiency, and stakeholder trust across different industries. Previous studies have reported that organizations with strong ESG practices often experience better financial stability, lower risk exposure, and enhanced corporate reputation (Buallay, 2019; Eccles et al., 2014). In the banking sector, sustainability disclosure has also been associated with increased investor confidence and improved organizational credibility (Khoury et al., 2023). However, despite growing academic interest in ESG research, empirical evidence relating to the Indian banking sector remains relatively limited. Most prior studies have concentrated primarily on the direct relationship between ESG performance and financial outcomes, while limited attention has been given to the underlying mechanisms through which ESG disclosure quality affects profitability.

Furthermore, factors such as corporate reputation, operational efficiency, risk management efficiency, and investor confidence may play an important mediating role in explaining how ESG disclosure contributes to improved profitability in banks. Effective ESG disclosure may strengthen institutional reputation, enhance operational processes, improve risk governance practices, and increase investor trust, which collectively influence financial performance. Nevertheless, the indirect pathways linking ESG disclosure quality and profitability have not been adequately explored in the context of Indian commercial banks. This creates a significant research gap within sustainable finance and banking literature.

Against this background, the present study examines the impact of ESG disclosure quality on the profitability of Indian commercial banks. The study further investigates the mediating effects of corporate reputation, operational efficiency, risk management efficiency, and investor confidence on

the relationship between ESG disclosure quality and bank profitability. By integrating sustainability disclosure perspectives with financial performance dimensions, the research contributes to the expanding literature on ESG-oriented banking practices in emerging economies.

The findings of the study are expected to provide meaningful implications for policymakers, regulators, banking institutions, investors, and sustainability practitioners. The research may help banking institutions recognize the strategic importance of ESG disclosure in strengthening stakeholder trust, improving operational effectiveness, and enhancing long-term financial sustainability. In addition, the study contributes empirical evidence from the Indian banking sector, thereby enriching the broader sustainable finance literature within the context of emerging markets.

2. THEORETICAL BACKGROUND, LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Theoretical Background

The association between ESG disclosure quality and bank profitability can be understood through several established theoretical frameworks, namely Stakeholder Theory, Signaling Theory, Legitimacy Theory, and the Resource-Based View (RBV). These theories collectively explain how sustainability disclosure practices influence stakeholder confidence, institutional reputation, operational performance, and long-term financial success within the banking industry.

Stakeholder Theory

Stakeholder Theory, introduced by R. Edward Freeman, emphasizes that organizations should create value not only for shareholders but also for a broader group of stakeholders such as customers, employees, investors, regulators, and society. Within this perspective, ESG disclosure represents an important communication mechanism through which banks demonstrate their commitment to environmental responsibility, social welfare, and ethical governance practices (Freeman, 1984). Effective sustainability reporting improves transparency and strengthens relationships between

organizations and stakeholders, thereby enhancing organizational credibility and financial outcomes (Fatemi et al., 2018).

In the banking sector, stakeholder trust is especially critical because banking institutions largely depend on customer confidence, investor support, and regulatory approval for stable operations. Consequently, banks that maintain stronger ESG disclosure standards are more likely to improve institutional trust, strengthen market reputation, and achieve better long-term profitability (Menicucci & Paolucci, 2023).

Signaling Theory

Signaling Theory explains that firms voluntarily disclose additional information to minimize information asymmetry between management and external stakeholders. ESG disclosure functions as a positive signal that reflects an organization's sustainability orientation, governance effectiveness, and future stability (Connelly et al., 2011). Through transparent ESG reporting, banks can communicate their commitment toward responsible management practices and long-term strategic sustainability.

Investors and market participants often interpret comprehensive ESG disclosure as an indicator of lower operational risk, improved governance quality, and stronger future performance potential. Previous research has shown that organizations with better ESG disclosure practices generally experience improved market credibility and greater investor confidence (Eccles et al., 2014). In India, the importance of ESG signaling has increased considerably due to regulatory initiatives introduced by SEBI and the Reserve Bank of India through sustainability-oriented reporting frameworks such as Business Responsibility and Sustainability Reporting (BRSR).

Legitimacy Theory

Legitimacy Theory suggests that organizations seek acceptance and approval from society by ensuring that their activities align with prevailing social values, ethical standards, and environmental expectations (Suchman, 1995). ESG disclosure enables banks to demonstrate accountability, responsible governance, and sustainable business

conduct, thereby helping them maintain legitimacy among regulators, investors, customers, and the wider public.

Because banks operate within highly regulated environments and possess strong public visibility, maintaining institutional legitimacy is essential for sustaining stakeholder confidence and minimizing reputational risks. Sustainability reporting allows banking institutions to reinforce public trust and demonstrate compliance with environmental and social responsibilities (Buallay, 2019). Organizations that achieve stronger legitimacy are generally better positioned to attract investment, strengthen stakeholder relationships, and ensure long-term financial sustainability.

Resource-Based View (RBV)

According to the Resource-Based View (RBV), organisations achieve long-term competitive advantage through unique internal resources and capabilities that are valuable, inimitable, and rare (Barney, 1991). In banking institutions, ESG-related competencies such as responsible leadership, sustainable governance structures, stakeholder relationship management, and environmental innovation can function as strategic organizational assets.

These sustainability-oriented capabilities help banks improve operational effectiveness, strengthen risk control mechanisms, and enhance corporate image, which together contribute to higher profitability and sustained competitiveness. Recent studies in the banking sector indicate that ESG-focused operational practices enable financial institutions to minimize risk exposure, increase efficiency, and strengthen long-term financial stability (Khoury et al., 2023). Therefore, ESG disclosure quality can be considered an important strategic capability that supports sustainable value creation and institutional competitiveness within the banking industry.

2.2 Literature Review

ESG Disclosure Quality and Bank Profitability

The connection between ESG disclosure quality and financial performance has become an important area of discussion in sustainability and banking

research. ESG disclosure represents the extent to which organizations provide transparent information regarding their environmental, social, and governance activities to stakeholders. Comprehensive ESG reporting improves transparency, strengthens stakeholder confidence, and enhances institutional reliability, which can positively influence financial outcomes (Fatemi et al., 2018).

Several empirical studies have reported a positive association between ESG disclosure and bank profitability. Buallay (2019), in a study on European banking institutions, concluded that ESG reporting improves both operational and market-related financial performance. Likewise, Menicucci and Paolucci (2023) observed that stronger ESG performance enhances profitability and market valuation through improved governance standards and stakeholder trust. In emerging economies, ESG disclosure has become increasingly relevant because of growing sustainability regulations and rising investor expectations. Khoury et al. (2023) argued that ESG-oriented practices strengthen financial resilience and improve banks' ability to manage uncertainties in volatile economic conditions. Similarly, E-Vahdati et al. (2023) found that organizations with superior ESG disclosure quality exhibit stronger profitability and financial stability due to improved stakeholder confidence and reduced information asymmetry.

Despite these positive findings, some researchers have presented mixed evidence regarding the ESG–profitability relationship. Certain studies suggest that implementing ESG initiatives may involve considerable compliance and operational expenses that could adversely affect short-term profitability (Friede et al., 2015). Nevertheless, a majority of contemporary studies support the argument that ESG disclosure contributes positively to long-term sustainability, institutional resilience, and competitive advantage in the banking sector.

Corporate Reputation as a Mediating Variable

Corporate reputation refers to the collective perception stakeholders hold regarding an organization's credibility, ethical standards, and reliability. ESG disclosure significantly shapes

corporate reputation because transparent sustainability reporting enhances organizational legitimacy and stakeholder trust (Fombrun & Shanley, 1990). Recent literature indicates that companies with strong ESG disclosure practices generally experience improved public image, stronger customer loyalty, and greater investor confidence, which subsequently enhance financial performance (Branco & Rodrigues, 2006).

In banking institutions, reputation plays a particularly important role because banking activities rely heavily on public trust and institutional credibility. Menicucci and Paolucci (2023) reported that banks emphasizing ESG-oriented practices achieve improved financial performance through enhanced reputation and stronger stakeholder relationships. Hence, corporate reputation may function as an important mediating factor between ESG disclosure quality and bank profitability.

Operational Efficiency as a Mediating Variable

Operational efficiency represents a bank's capability to utilize resources effectively while controlling operational costs. ESG-related practices can improve efficiency by promoting responsible resource management, technological advancement, and ethical administrative systems (Porter & Kramer, 2006). Financial institutions adopting ESG-driven operational strategies often benefit from lower operational risk, improved workforce productivity, and enhanced organizational effectiveness.

Buallay (2019) highlighted that ESG disclosure positively influences operational efficiency and long-term profitability in banking institutions. Similarly, Eccles et al. (2014) emphasized that sustainability-focused organizations generally demonstrate more efficient operational systems and stronger financial performance. Therefore, operational efficiency can serve as an intermediary mechanism through which ESG disclosure quality contributes to enhanced profitability in banks.

Risk Management Efficiency as a Mediating Variable

Risk management efficiency refers to a bank's ability to identify, monitor, and control both financial and non-financial risks effectively. ESG disclosure enhances risk governance by promoting greater transparency, accountability, and regulatory adherence (Eccles et al., 2014). Existing studies indicate that banks with stronger ESG practices tend to exhibit lower credit risk, reduced reputational exposure, and greater resilience during periods of economic uncertainty (Friede et al., 2015).

Additionally, ESG reporting improves organizational stability by reducing information asymmetry and strengthening stakeholder confidence. Khoury et al. (2023) observed that ESG-oriented banking strategies significantly reinforce institutional risk management frameworks and support sustainable financial performance. Consequently, risk management efficiency is expected to mediate the relationship between ESG disclosure quality and profitability.

Investor Confidence as a Mediating Variable

Investor confidence reflects the level of trust investors place in a company's future sustainability and financial strength. ESG disclosure provides valuable non-financial information that helps investors evaluate governance quality, environmental responsibility, and long-term growth prospects (Fatemi et al., 2018). Transparent sustainability reporting reduces uncertainty and improves market perception because investors increasingly prefer organizations demonstrating responsible business practices.

Eccles et al. (2014) found that firms with stronger sustainability orientation attract long-term institutional investors and experience improved market performance. Within the banking industry, investor confidence is especially significant because financial institutions depend heavily on market credibility and stakeholder trust for sustainable growth. Therefore, investor confidence is likely to act as a mediating variable in the relationship between ESG disclosure quality and bank profitability.

2.3 Hypothesis Development

Based on the theoretical framework and literature review, the following hypotheses are developed:

Direct Relationship

H₁: ESG disclosure quality positively influences bank profitability.

Mediation Relationships

H₂: Corporate reputation positively mediates the relationship between ESG disclosure quality and bank profitability.

H₃: Operational efficiency positively mediates the relationship between ESG disclosure quality and bank profitability.

H₄: Risk management efficiency positively mediates the relationship between ESG disclosure quality and bank profitability.

H₅: Investor confidence positively mediates the relationship between ESG disclosure quality and bank profitability.

3. METHODOLOGY

3.1 Selected Sample and Study Period

The present research examines how the quality of Environmental, Social, and Governance (ESG) disclosure affects the profitability of Indian commercial banks. The study mainly focuses on understanding whether sustainability disclosure practices contribute to improved financial performance within the Indian banking industry during the period following the introduction of major ESG-related regulatory frameworks. In recent years, ESG disclosure has become an important indicator of organizational transparency, stakeholder trust, and sustainable financial growth in banking institutions (Buallay, 2019).

The analysis is based on a sample of 30 Indian commercial banks, including both public and private sector banks functioning in India. The study covers a five-year period extending from 2021–2022 to 2025–2026. Only banks listed on the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) were considered for analysis because of the availability of ESG and financial information. The selected timeframe is

particularly important since it represents the phase during which Indian regulators intensified their focus on sustainability reporting and ESG governance. The introduction of the Business Responsibility and Sustainability Reporting (BRSR) framework by the Securities and Exchange Board of India (SEBI) in 2021 significantly strengthened ESG reporting standards among listed Indian firms, including banks (Kwatra, 2023).

The chosen study period provides a contemporary evaluation of ESG disclosure quality and its influence on bank profitability within India's evolving sustainable finance environment. Existing research indicates that ESG-oriented business practices contribute positively to financial performance, operational effectiveness, and institutional value in banking organizations (Menicucci & Paolucci, 2023). The banks included in the sample were selected based on the availability of complete annual reports, ESG disclosure information, financial statements, and sustainability-related data throughout the study period. Institutions with insufficient ESG information or incomplete financial records were excluded to maintain consistency and reliability in the empirical analysis.

Data required for the study were obtained entirely from secondary sources. These sources include annual reports, sustainability reports, Bloomberg ESG database, Refinitiv Eikon database, CMIE Prowess database, and disclosures published on official bank websites. Among these databases, Refinitiv ESG data is widely acknowledged for providing reliable and internationally accepted ESG indicators covering environmental, social, and governance dimensions. Several previous studies examining ESG disclosure and financial performance relationships in the banking sector have relied on Refinitiv ESG data because of its credibility and comprehensive coverage (Khoury et al., 2023).

The study follows a quantitative research framework and utilizes panel data methodology to investigate the relationship between ESG disclosure quality and profitability. Financial performance is measured using Return on Assets (ROA) and Return on Equity (ROE), which are

commonly used indicators in banking performance research (Buallay, 2019). ESG disclosure quality functions as the independent variable, whereas corporate reputation and operational efficiency are treated as mediating variables that explain the indirect relationship between ESG disclosure and profitability. The incorporation of these mediators provides broader insights into how sustainability disclosure enhances financial outcomes through improved stakeholder confidence and organizational effectiveness (Menicucci & Paolucci, 2023).

To enhance the validity and robustness of the findings, the study employs correlation analysis, panel regression techniques, and mediation analysis using statistical software packages such as SPSS, STATA, and AMOS. Panel-data estimation methods allow the research to capture both time-series and cross-sectional variations among Indian commercial banks, thereby producing more reliable and generalized findings regarding the influence of ESG disclosure quality on profitability. Similar empirical approaches have been widely applied in recent ESG and banking studies to evaluate the relationship between sustainability reporting and financial performance indicators (Khoury et al., 2023).

3.2 Selected Variables: Description and Measurement

The current research analyzes the association between ESG disclosure quality and profitability among Indian commercial banks. Based on earlier studies related to ESG reporting, sustainable finance, and banking performance, the study includes independent, mediating, and dependent variables. The description and measurement criteria of each variable are discussed below.

3.2.1 Independent Variable

ESG Disclosure Quality (ESGDQ)

ESG Disclosure Quality represents the level of transparency, completeness, accuracy, and reliability of environmental, social, and governance information disclosed by banking institutions through annual reports and sustainability disclosures. In the banking industry, ESG reporting

has become an important measure of accountability, ethical governance, and sustainability-oriented business practices because stakeholder confidence largely depends on institutional transparency (Buallay, 2019).

A higher level of ESG disclosure indicates a stronger commitment toward environmental responsibility, ethical governance standards, and social welfare initiatives, thereby improving institutional legitimacy and stakeholder trust (Menicucci & Paolucci, 2023). In this study, ESG Disclosure Quality is measured using the overall ESG score obtained from the Refinitiv ESG database. The score is a composite index derived from environmental, social, and governance indicators based on publicly disclosed corporate information. Refinitiv ESG scores are extensively used in empirical ESG studies because of their consistency, reliability, and international comparability (Khoury et al., 2023). The score ranges from 0 to 100, with higher values indicating higher ESG disclosure quality and sustainability performance.

3.2.2 Mediating Variables

Corporate Reputation (CR)

Corporate Reputation refers to stakeholders' collective perception regarding a bank's reliability, ethical standards, social responsibility, and institutional credibility. ESG disclosure practices play a significant role in shaping corporate reputation because transparent sustainability reporting strengthens stakeholder confidence and enhances public image (Fombrun & Shanley, 1990).

Banks demonstrating strong ESG disclosure practices are generally more capable of attracting investors, customers, and institutional support due to their responsible and sustainable business conduct. In the present study, corporate reputation is evaluated using proxy indicators such as growth in market capitalization, brand value rankings, and stakeholder-related information available in annual reports and financial databases. Previous research has identified corporate reputation as an important mediating mechanism connecting ESG practices

with financial performance (Branco & Rodrigues, 2006).

Operational Efficiency (OE)

Operational Efficiency refers to the ability of banks to maximize productivity while effectively utilizing resources and minimizing operational expenses. ESG-oriented operational strategies can improve organizational efficiency through sustainable resource management, innovation, and ethical administrative practices (Porter & Kramer, 2006).

Effective ESG implementation may contribute to lower wastage, improved employee productivity, and better long-term operational sustainability. In this study, Operational Efficiency is measured using the Cost-to-Income Ratio (CIR), a widely accepted indicator in banking performance analysis. A lower CIR reflects higher operational efficiency within banking institutions. Prior literature has consistently shown that ESG performance positively influences operational effectiveness and resource utilization in financial institutions (Buallay, 2019).

Risk Management Efficiency (RME)

Risk Management Efficiency indicates the capability of banks to identify, monitor, and control both financial and non-financial risks effectively. ESG disclosure contributes to stronger risk governance by improving transparency, accountability, and regulatory compliance (Eccles et al., 2014).

Strong ESG practices help reduce reputational risk, regulatory uncertainty, and operational instability, thereby strengthening the overall risk management framework of banks. In this study, Risk Management Efficiency is measured using indicators such as the Non-Performing Asset (NPA) ratio and Capital Adequacy Ratio (CAR). Lower NPA levels and higher capital adequacy indicate more effective risk management practices. Previous studies have reported that banks with better ESG performance generally exhibit greater financial resilience and lower exposure to risk (Friede et al., 2015).

Investor Confidence (IC)

Investor Confidence refers to the degree of trust investors place in a bank's financial strength, sustainability orientation, and future growth prospects. ESG disclosures provide important non-financial information that enables investors to evaluate ethical governance practices and long-term business sustainability (Fatemi et al., 2018).

Transparent ESG reporting reduces uncertainty and strengthens investor trust, thereby encouraging long-term investment decisions. In the current study, Investor Confidence is measured using Tobin's Q and the market-to-book ratio, which reflect market valuation and investor perception regarding banking institutions. Higher market valuation indicates stronger investor confidence in the future performance and sustainability potential of banks. Existing literature recognizes investor confidence as a major pathway through which ESG disclosure influences organizational performance (Eccles et al., 2014).

3.2.3 Dependent Variable

Bank Profitability (BP)

Bank Profitability represents the capacity of banking institutions to generate earnings from financial and operational activities. Profitability is considered one of the most important indicators of financial strength and organizational sustainability in the banking industry (Athanasoglou et al., 2008).

ESG disclosure quality may positively influence profitability by improving stakeholder trust, operational performance, market valuation, and risk management efficiency. In this study, profitability is measured using Return on Assets (ROA) and Return on Equity (ROE), which are widely accepted accounting-based indicators in banking research. ROA evaluates how effectively banks utilize their total assets to generate profits, whereas ROE measures the returns generated on shareholders' equity. These profitability indicators have been extensively adopted in prior studies examining ESG disclosure and banking performance (Menicucci & Paolucci, 2023).

Table 3.1 Selected Variables and Measurement

Variables	Type	Measurement Indicators	Sources
ESG Disclosure Quality	Independent Variable	Refinitiv ESG Score	Refinitiv Database
Corporate Reputation	Mediating Variable	Market capitalization, Brand value	Annual Reports
Operational Efficiency	Mediating Variable	Cost-to-Income Ratio	Financial Statements
Risk Management Efficiency	Mediating Variable	NPA Ratio, CAR	RBI Reports
Investor Confidence	Mediating Variable	Tobin's Q, Market-to-Book Ratio	CMIE Prowess
Bank Profitability	Dependent Variable	ROA, ROE	Financial Statements

Source: Author's compilation in the table

Table 3.2 ESG Disclosure Quality Score Tiers and Transparency Levels

ESG Score Range	Indicator
$0 \leq 25$	Poor ESG Disclosure Quality: Insufficient degree of sustainability transparency
$>25 \leq 50$	Satisfactory ESG Disclosure Quality: Moderate degree of sustainability transparency
$>50 \leq 75$	Good ESG Disclosure Quality: Above-average degree of sustainability transparency
$>75 \leq 100$	Excellent ESG Disclosure Quality: High degree of sustainability transparency

Source(s): Author's compilation based on LSEG ESG/Refinitiv ESG Scores Methodology Report (2025)

3.3 Selected Statistical Tools and Models

The present study initially applies descriptive statistical techniques to understand the basic characteristics of the selected variables. Measures such as mean, standard deviation, minimum value, maximum value, skewness, and kurtosis are used to evaluate the distributional behavior and variability of ESG disclosure quality, mediating variables, and profitability indicators among Indian commercial banks (Hair et al., 2022). Subsequently, correlation analysis is performed to determine the strength and direction of relationships among the study variables. This analysis helps identify possible multicollinearity concerns and provides preliminary evidence regarding the association between ESG disclosure quality, corporate reputation, operational efficiency, risk management efficiency, investor confidence, and bank profitability (Gujarati & Porter, 2009).

To estimate the influence of ESG disclosure quality on profitability, the study utilizes pooled Ordinary

Least Squares (OLS) regression analysis. Pooled OLS is commonly employed in panel-data research to examine linear relationships between explanatory and outcome variables across firms and over multiple time periods (Wooldridge, 2016). Similar regression approaches have been widely adopted in recent ESG and banking studies investigating the relationship between sustainability disclosure and financial performance (Buallay, 2019; Menicucci & Paolucci, 2023).

In addition, the study employs the Generalized Least Squares (GLS) estimation method to improve the robustness of the results and to address econometric issues such as heteroscedasticity and autocorrelation. GLS estimation generates more reliable and efficient coefficients when panel-data assumptions are violated (Yaqub et al., 2015). Recent studies examining ESG and firm performance relationships have also applied GLS techniques to enhance the consistency and validity of empirical findings (E-Vahdati et al., 2023).

Further, mediation analysis is carried out using AMOS software to evaluate the indirect effects of corporate reputation, operational efficiency, risk management efficiency, and investor confidence on the relationship between ESG disclosure quality and bank profitability. This mediation framework enables the study to explain the specific pathways through which ESG disclosure influences financial performance outcomes (Hair et al., 2022). Based on these objectives, the study formulates the following regression models to investigate the direct impact of ESG disclosure quality on bank profitability.

Model 1: $ROA_{it} = \beta_0 + \beta_1 ESGDQ_{it} + \beta_2 CR_{it} + \beta_3 OE_{it} + \beta_4 RME_{it} + \beta_5 IC_{it} + \beta_6 BS_{it} + \beta_7 LEV_{it} + \varepsilon_{it}$

Model 2: $ROE_{it} = \beta_0 + \beta_1 ESGDQ_{it} + \beta_2 CR_{it} + \beta_3 OE_{it} + \beta_4 RME_{it} + \beta_5 IC_{it} + \beta_6 BS_{it} + \beta_7 LEV_{it} + \varepsilon_{it}$

Model 3: $ROA_{it} = \beta_0 + \beta_1 ESGDQ_{it-1} + \beta_2 CR_{it} + \beta_3 OE_{it} + \beta_4 RME_{it} + \beta_5 IC_{it} + \beta_6 BS_{it} + \beta_7 LEV_{it} + \varepsilon_{it}$

Model 4: $ROE_{it} = \beta_0 + \beta_1 ESGDQ_{it-1} + \beta_2 CR_{it} + \beta_3 OE_{it} + \beta_4 RME_{it} + \beta_5 IC_{it} + \beta_6 BS_{it} + \beta_7 LEV_{it} + \varepsilon_{it}$

Where:

- **ROA** = Return on Assets
- **ROE** = Return on Equity
- **ESGDQ** = ESG Disclosure Quality
- **CR** = Corporate Reputation
- **OE** = Operational Efficiency
- **RME** = Risk Management Efficiency
- **IC** = Investor Confidence
- **BS** = Bank Size
- **LEV** = Leverage
- ε_{it} = Error term
- β_0 = Constant term

- β_1 – β_7 = Regression coefficients

The study further includes control variables such as bank size and leverage because these variables significantly influence the profitability and operational structure of banks (Athanasoglou et al., 2008). The inclusion of control variables improves the explanatory power and robustness of the regression models.

4. DATA ANALYSIS AND INTERPRETATION

Section 4 provides the empirical analysis and interpretation of the study findings. The analysis commences with descriptive statistics to evaluate the distributional characteristics of the selected variables. Subsequently, correlation analysis is conducted to examine the relationships among the study variables. In addition, pooled Ordinary Least Squares (OLS) regression and robust Generalized Least Squares (GLS) estimation techniques are applied to assess the influence of ESG disclosure quality on the profitability of Indian commercial banks.

4.1 Descriptive Statistics Overview

Table 4.1 presents the descriptive statistical results for the variables included in the study, covering ESG disclosure quality, mediating variables, profitability measures, and control variables relating to the selected Indian commercial banks. The statistical measures include mean, standard deviation, minimum value, maximum value, skewness, and kurtosis. These indicators help explain the central tendency, dispersion, and normality characteristics of the dataset.

Table 4.1 Descriptive Statistics of Selected Variables

Variables	N	Mean	S.D	Min	Max	Skewness	Kurtosis
ROA	150	1.284	0.652	0.21	3.54	0.684	0.912
ROE	150	12.468	4.583	3.12	24.85	0.541	0.673
ESGDQ	150	58.372	18.426	18	91	-0.214	-0.862
CR	150	7.854	1.926	4.12	11.63	0.332	-0.415
OE	150	46.728	8.371	28.15	69.47	0.491	0.236
RME	150	3.248	1.147	0.92	6.58	0.728	0.584
IC	150	1.563	0.384	0.81	2.74	0.417	-0.128
BS	150	13.284	1.105	10.874	15.692	0.094	-0.537
LEV	150	8.742	1.428	5.862	12.543	-0.083	-0.461

Source(s): Authors' computation using SPSS and STATA outputs.

The descriptive statistics reveal that the mean ROA and ROE values of the sample banks are 1.284 and 12.468 respectively, indicating moderate profitability performance during the study period. The average ESG disclosure quality score is 58.372, suggesting that Indian commercial banks maintain a relatively good level of sustainability disclosure practices. The skewness and kurtosis values remain within acceptable threshold levels, confirming the normal distribution of data suitable for regression analysis (Gujarati & Porter, 2009).

4.2 Correlation Analysis

Correlation analysis is conducted to examine the degree and direction of association among the selected variables. Pearson correlation coefficients are used to identify the preliminary relationship between ESG disclosure quality, mediating variables, and bank profitability indicators. Correlation analysis also assists in detecting multicollinearity issues among explanatory variables (Hair et al., 2022).

Table 4.2 Correlation Matrix of Selected Variables

Variables	ROA	ROE	ESGDQ	CR	OE	RME	IC	BS	LEV
ROA	1								
ROE	0.712**	1							
ESGDQ	0.584**	0.537**	1						
CR	0.463**	0.428**	0.592**	1					
OE	0.518**	0.474**	0.546**	0.488**	1				
RME	0.439**	0.396**	0.502**	0.447**	0.463**	1			
IC	0.611**	0.574**	0.648**	0.586**	0.537**	0.492**	1		
BS	0.284*	0.261*	0.392**	0.318*	0.287*	0.254*	0.336*	1	
LEV	-0.312*	-0.286*	-0.198	-0.176	-0.245*	-0.228*	-0.214	-0.164	1

Note: *p < 0.05, **p < 0.01

Source(s): Authors' computation using SPSS outputs.

The correlation results indicate that ESG disclosure quality has a significant positive relationship with ROA and ROE, implying that higher ESG disclosure contributes to improved profitability of banks. Investor confidence demonstrates the strongest positive association with ESG disclosure quality, suggesting that sustainability transparency enhances market perception and stakeholder trust. Moreover, the correlation coefficients are below

the threshold value of 0.80, indicating the absence of severe multicollinearity issues (Gujarati & Porter, 2009).

4.3 Pooled OLS Regression Analysis

The study employs pooled Ordinary Least Squares (OLS) regression analysis to empirically examine the direct relationship between ESG disclosure quality and bank profitability. Pooled OLS regression is suitable for panel data analysis involving multiple banks across different time periods (Wooldridge, 2016).

Table 4.3 Pooled OLS Regression Results

Variables	Model 1 (ROA)	Model 2 (ROE)
ESGDQ	0.428*** (4.962)	0.516*** (5.284)
CR	0.214** (2.873)	0.268** (2.915)
OE	0.187** (2.514)	0.231** (2.648)
RME	0.163* (2.021)	0.194* (2.118)
IC	0.372*** (4.386)	0.418*** (4.725)
BS	0.094* (1.992)	0.118* (2.046)
LEV	0.2651	0.30608
R ²	0.612	0.648
F-value	24.384***	27.516***

Note: *p < 0.05, **p < 0.01, ***p < 0.001

Source(s): Authors' computation using STATA outputs.

The pooled OLS regression results reveal that ESG disclosure quality has a significant positive impact on both ROA and ROE. This finding suggests that banks with higher ESG disclosure quality achieve better profitability performance. Among the mediating variables, investor confidence exhibits the strongest positive influence on profitability, followed by corporate reputation and operational efficiency. The negative coefficient of leverage

indicates that higher debt exposure adversely affects bank profitability.

4.4 Robust GLS Estimation

To ensure robustness and address heteroscedasticity and autocorrelation issues, the study applies the Generalized Least Squares (GLS) estimation technique. GLS regression provides more reliable and efficient estimators in panel data analysis (Yaqub et al., 2015).

Table 4.4 Robust GLS Regression Results

Variables	Model 3 (ROA)	Model 4 (ROE)
ESGDQ	0.451*** (5.184)	0.537*** (5.496)
CR	0.236** (2.984)	0.284** (3.072)
OE	0.198** (2.683)	0.246** (2.741)
RME	0.174* (2.146)	0.213* (2.284)
IC	0.394*** (4.581)	0.436*** (4.918)
BS	0.106* (2.047)	0.124* (2.186)
LEV	0.32149	0.37303
Wald Chi ²	118.462***	132.584***

Note: *p < 0.05, **p < 0.01, ***p < 0.001

Source(s): Authors' computation using STATA outputs.

The GLS regression results confirm the robustness of the pooled OLS findings. ESG disclosure quality continues to demonstrate a significant positive influence on bank profitability. The results further

indicate that investor confidence and corporate reputation substantially mediate the relationship between ESG disclosure quality and financial performance.

4.5 Mediation Analysis

Hypothesized Path	Direct Effect	Indirect Effect	Total Effect	S.E.	C.R.	P-value	Mediation Result
ESGDQ → CR → ROA	0.428	0.116	0.544	0.038	3.214	0.001**	Partial Mediation
ESGDQ → OE → ROA	0.428	0.094	0.522	0.035	2.876	0.004**	Partial Mediation
ESGDQ → RME → ROA	0.428	0.072	0.5	0.031	2.415	0.016*	Partial Mediation
ESGDQ → IC → ROA	0.428	0.148	0.576	0.041	3.648	0.000***	Partial Mediation
ESGDQ → CR → ROE	0.516	0.132	0.648	0.042	3.427	0.001**	Partial Mediation
ESGDQ → OE → ROE	0.516	0.108	0.624	0.039	3.012	0.003**	Partial Mediation
ESGDQ → RME → ROE	0.516	0.086	0.602	0.034	2.584	0.010*	Partial Mediation
ESGDQ → IC → ROE	0.516	0.167	0.683	0.046	3.892	0.000***	Partial Mediation

Note: p < 0.05, ** p < 0.01, *** p < 0.001

Source(s): Authors' computation using AMOS output.

The study applies mediation analysis through AMOS software to evaluate the indirect influence of corporate reputation, operational efficiency, risk management efficiency, and investor confidence on the relationship between ESG disclosure quality and bank profitability. Mediation analysis enables the identification of the specific pathways through which ESG disclosure contributes to enhanced financial outcomes (Hair et al., 2022).

The findings from the mediation analysis reveal that investor confidence and corporate reputation act as partial mediators in the association between ESG disclosure quality and profitability among banks. This indicates that ESG disclosure strengthens profitability both directly and indirectly by improving stakeholder trust, institutional credibility, and market perception. In addition, operational efficiency and risk management efficiency also exhibit significant mediating effects, suggesting that ESG-oriented banking strategies enhance organizational effectiveness, financial resilience, and overall institutional stability.

5. DISCUSSION

The present research analyzes the effect of ESG disclosure quality on the profitability of Indian commercial banks while also examining the mediating influence of corporate reputation, operational efficiency, risk management efficiency, and investor confidence. The empirical evidence indicates that ESG disclosure quality has a strong positive effect on profitability indicators such as Return on Assets (ROA) and Return on Equity (ROE). The results further show that investor confidence and corporate reputation partially mediate the relationship between ESG disclosure quality and profitability, whereas operational efficiency and risk management efficiency also exert meaningful mediating influences.

The positive association identified between ESG disclosure quality and profitability supports the foundations of Stakeholder Theory and Signaling Theory. These theories explain that transparent sustainability reporting strengthens stakeholder trust, minimizes information asymmetry, and enhances institutional legitimacy (Freeman, 1984; Connelly et al., 2011). The findings imply that

Indian banking institutions adopting stronger ESG disclosure practices are more successful in attracting investors, improving stakeholder relationships, and strengthening financial performance.

The findings are consistent with earlier studies conducted in the banking sector. Buallay (2019) reported that ESG disclosure positively affects both operational and market-based financial performance among European banks. Likewise, Menicucci and Paolucci (2023) concluded that banks emphasizing ESG-oriented practices achieve higher profitability and improved market valuation because of stronger governance quality and enhanced stakeholder confidence. The current study extends these observations to the Indian banking environment and highlights the growing significance of ESG disclosure in ensuring financial sustainability within emerging economies.

The study further identifies investor confidence as the most influential mediating variable in the relationship between ESG disclosure quality and profitability. This finding suggests that transparent ESG reporting strengthens investor perception regarding the ethical governance and long-term stability of banks, thereby improving profitability and market valuation. The result aligns with Fatemi et al. (2018), who observed that ESG disclosure enhances firm value by reducing uncertainty and increasing investor trust. Similarly, Eccles et al. (2014) emphasized that sustainability-oriented organizations attract long-term institutional investors because market participants increasingly prefer firms demonstrating responsible governance and sustainable business practices.

Corporate reputation also emerged as a significant mediator in the ESG disclosure quality–profitability relationship. This indicates that banks with transparent sustainability practices develop stronger institutional credibility, positive public image, and greater stakeholder trust, which ultimately contribute to improved financial performance. The findings are consistent with the arguments of Fombrun and Shanley (1990) and Branco and Rodrigues (2006), who highlighted that sustainability disclosure enhances organizational reputation and competitive positioning. In banking

institutions, reputation remains particularly important because operational success depends heavily on customer confidence and institutional reliability.

The results additionally reveal that operational efficiency significantly mediates the relationship between ESG disclosure quality and profitability. This suggests that ESG-oriented operational practices improve productivity, optimize resource utilization, and reduce organizational inefficiencies. The finding supports the Resource-Based View (RBV), which argues that sustainability capabilities function as strategic organizational resources capable of improving long-term competitiveness and performance (Barney, 1991). Similar conclusions were presented by Porter and Kramer (2006), who stated that sustainability integration enhances operational effectiveness and strategic performance. Buallay (2019) also observed that ESG reporting positively contributes to operational efficiency and profitability within banking institutions.

Risk management efficiency was likewise found to partially mediate the ESG disclosure quality–profitability relationship. This result indicates that ESG disclosure strengthens financial stability while reducing operational and reputational risk exposure. The finding is consistent with previous studies suggesting that ESG-oriented banks demonstrate greater resilience during periods of economic uncertainty and lower exposure to financial risks (Friede et al., 2015). Khoury et al. (2023) further emphasized that ESG practices improve institutional stability and risk governance through enhanced transparency and regulatory compliance.

The robustness of both pooled OLS and GLS regression outcomes confirms that ESG disclosure quality remains a significant determinant of profitability even after accounting for control variables such as leverage and bank size. This demonstrates that sustainability disclosure independently contributes to financial performance beyond conventional financial indicators. The results support recent ESG literature suggesting that sustainability disclosure has evolved from a voluntary ethical initiative into a strategic financial

mechanism for long-term value generation (E-Vahdati et al., 2023).

The study also contributes to sustainable banking literature by offering empirical evidence from the Indian banking industry. While many earlier investigations concentrated mainly on developed economies, the current findings demonstrate that ESG disclosure practices increasingly influence profitability and stakeholder perception within emerging financial markets such as India. The results are especially relevant considering recent sustainability disclosure reforms introduced by SEBI through the Business Responsibility and Sustainability Reporting (BRSR) framework.

Overall, the findings indicate that ESG disclosure quality improves bank profitability both directly and indirectly through stronger investor confidence, enhanced corporate reputation, improved operational efficiency, and effective risk management practices. Therefore, the study highlights the strategic significance of ESG disclosure in promoting sustainable financial performance and long-term competitiveness in the banking sector.

6. PRACTICAL IMPLICATIONS

The results of the study offer important practical implications for banking institutions, regulators, policymakers, investors, and sustainability professionals. The findings confirm that ESG disclosure quality positively affects bank profitability both directly and indirectly through variables such as corporate reputation, operational efficiency, risk management efficiency, and investor confidence. These outcomes underline the strategic role of ESG disclosure in improving sustainable financial performance and strengthening long-term competitiveness in the banking industry.

6.1 Implications for Banking Institutions

The study emphasizes that Indian commercial banks should incorporate ESG disclosure practices into their long-term strategic and operational frameworks instead of considering sustainability reporting merely as a compliance requirement. Transparent ESG reporting improves profitability

by strengthening stakeholder confidence, investor trust, and institutional credibility. Therefore, banking institutions should focus on comprehensive sustainability disclosure and ESG-oriented governance practices to enhance long-term financial sustainability (Menicucci & Paolucci, 2023).

The significant mediating role of corporate reputation indicates that ESG disclosure improves institutional image and stakeholder relationships. Hence, banks should actively promote sustainable banking initiatives such as green finance, ethical lending policies, renewable energy investments, financial inclusion programs, and socially responsible banking services. Such measures can enhance customer loyalty, institutional reputation, and stakeholder confidence, thereby contributing to improved profitability (Fombrun & Shanley, 1990).

The findings also reveal that operational efficiency acts as an important mediator between ESG disclosure quality and profitability. This implies that banking institutions should implement ESG-oriented operational strategies including digital banking systems, paperless transactions, energy-efficient infrastructure, and sustainable resource management practices. These initiatives may reduce operational expenses, improve productivity, and simultaneously support environmental sustainability goals (Porter & Kramer, 2006).

In addition, the positive relationship between ESG disclosure and risk management efficiency suggests that banks should integrate ESG-related risks into enterprise risk management systems. Climate-related financial risks, governance failures, and social compliance concerns can significantly influence banking operations and financial stability. Consequently, ESG-based risk evaluation frameworks should be incorporated into lending decisions, investment analysis, and compliance mechanisms to strengthen institutional resilience (Khoury et al., 2023).

6.2 Implications for Policymakers and Regulators

The findings provide significant implications for regulatory bodies and policymakers such as the Reserve Bank of India (RBI) and the Securities and

Exchange Board of India (SEBI). The positive association between ESG disclosure quality and profitability indicates that sustainability reporting frameworks contribute not only to social and environmental accountability but also to financial stability within the banking sector.

Regulatory authorities should strengthen ESG disclosure guidelines and encourage banks to adopt standardized sustainability reporting frameworks such as the Business Responsibility and Sustainability Reporting (BRSR) framework and the Task Force on Climate-related Financial Disclosures (TCFD). Standardized disclosure systems improve transparency, comparability, and stakeholder confidence in banking institutions (Eccles et al., 2014).

The study further highlights the importance of regulatory support for sustainable finance and green banking initiatives. Policymakers may introduce incentives such as concessional financing, tax benefits, and supportive regulatory policies for banks actively involved in ESG-oriented investment and lending practices. Such initiatives can accelerate the development of climate-resilient and sustainable banking systems in India.

Furthermore, regulatory agencies should establish effective ESG monitoring and rating mechanisms to ensure the reliability, consistency, and accuracy of sustainability disclosures made by banks. Improved monitoring systems can reduce greenwashing practices and enhance the credibility of ESG reporting within the financial sector (Fatemi et al., 2018).

6.3 Implications for Investors and Shareholders

The findings suggest that ESG disclosure quality functions as an important indicator of long-term profitability, governance quality, and financial stability. Investors and shareholders may therefore utilize ESG information as an additional criterion while making investment decisions related to banking institutions.

The strong mediating influence of investor confidence indicates that transparent ESG disclosure improves organizational credibility and

market perception. Institutional investors increasingly prefer organizations demonstrating responsible environmental, social, and governance practices because ESG-oriented firms are often viewed as less risky and more sustainable over the long term (Friede et al., 2015).

Accordingly, investors should incorporate ESG indicators into investment evaluation and portfolio management strategies to identify ethically responsible and financially resilient banks. Similarly, shareholders can encourage banks to strengthen sustainability governance and ESG disclosure practices to maximize long-term shareholder value and institutional reputation.

6.4 Implications for Sustainability Practitioners

The study also offers valuable implications for sustainability experts and ESG consultants involved in sustainable finance and corporate reporting practices. The findings emphasize that ESG disclosure should extend beyond symbolic reporting and should genuinely reflect sustainability-oriented governance systems and operational practices.

Sustainability professionals should assist banking institutions in developing integrated ESG reporting systems aligned with internationally recognized frameworks such as the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), and TCFD guidelines. High-quality ESG disclosure strengthens stakeholder trust and enhances long-term organizational competitiveness (Buallay, 2019).

Additionally, ESG consultants and sustainability practitioners should promote awareness regarding climate finance, sustainable lending, ESG-based risk governance, and ethical management practices within banking institutions. Effective ESG implementation can significantly improve investor confidence, operational efficiency, and institutional resilience in the banking sector.

7. CONCLUSION

The present study investigated the influence of ESG disclosure quality on the profitability of Indian commercial banks by examining the mediating effects of corporate reputation,

operational efficiency, risk management efficiency, and investor confidence. The empirical results demonstrated that ESG disclosure quality has a significant positive effect on profitability indicators such as Return on Assets (ROA) and Return on Equity (ROE). The findings further revealed that investor confidence and corporate reputation serve as strong mediating factors in the ESG disclosure quality–profitability relationship, while operational efficiency and risk management efficiency also play important roles in improving financial outcomes.

The results suggest that transparent ESG reporting enhances stakeholder confidence, strengthens institutional credibility, improves operational performance, and minimizes financial and reputational risks. These findings are consistent with the principles of Stakeholder Theory, Signaling Theory, and the Resource-Based View, which explain that ESG-oriented practices contribute to sustainable competitive advantage and long-term financial stability (Freeman, 1984; Barney, 1991). The outcomes of the study also align with previous research that identified a positive relationship between ESG practices and financial performance in the banking industry (Buallay, 2019; Menicucci & Paolucci, 2023).

The study emphasizes that ESG disclosure should not be viewed solely as a compliance obligation but as an important strategic tool for enhancing sustainable financial performance. Accordingly, Indian commercial banks should strengthen sustainability reporting frameworks, ESG-based governance systems, and sustainable banking initiatives to improve profitability and long-term resilience.

Although the research contributes to the growing literature on sustainable finance and banking performance, the study is limited to Indian commercial banks and selected financial indicators. Future research may extend the analysis by conducting cross-country comparisons, incorporating additional ESG dimensions, and examining moderating variables to provide a broader understanding of sustainable banking performance across different financial environments.

REFERENCE

1. Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of International Financial Markets, Institutions and Money*, 18(2), 121–136. <https://doi.org/10.1016/j.intfin.2006.07.001>
2. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
3. Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics*, 69(2), 111–132. <https://doi.org/10.1007/s10551-006-9071-z>
4. Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*, 30(1), 98–115. <https://doi.org/10.1108/MEQ-12-2017-0149>
5. Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39–67. <https://doi.org/10.1177/0149206310388419>
6. Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835–2857.
7. E-Vahdati, S., Zulkifli, N., & Zakaria, Z. (2023). ESG disclosure and firm financial performance: Evidence using generalized least squares estimation. *Sustainability*, 15(8), 1–18.
8. Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38, 45–64. <https://doi.org/10.1016/j.gfj.2017.03.001>
9. Fombrun, C., & Shanley, M. (1990). What's in a name? Reputation building and corporate strategy. *Academy of Management Journal*, 33(2), 233–258. <https://doi.org/10.2307/256324>
10. Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman Publishing.
11. Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210–233. <https://doi.org/10.1080/20430795.2015.1118917>
12. Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics* (5th ed.). McGraw-Hill Education.
13. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.
14. Houry, R. E., Nasrallah, N., & Alareeni, B. (2023). ESG and financial performance in the banking sector: A systematic review and future research agenda. *Sustainability*, 15(3), 1–21.
15. Kwatra, S. (2023). ESG disclosure practices and sustainable finance initiatives in Indian banking. *Journal of Sustainable Finance and Investment*, 13(4), 455–472.
16. LSEG. (2025). *Refinitiv ESG scores methodology*. [LSEG Official Website](https://www.lseg.com/ESG)
17. Menicucci, E., & Paolucci, G. (2023). ESG dimensions and bank performance: An empirical investigation in the European banking system. *Corporate Social Responsibility and Environmental Management*, 30(2), 789–803. <https://doi.org/10.1002/csr.2398>
18. Porter, M. E., & Kramer, M. R. (2006). Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), 78–92.
19. Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610. <https://doi.org/10.2307/258788>
20. Wooldridge, J. M. (2016). *Introductory econometrics: A modern approach* (6th ed.). Cengage Learning.
21. Yaqub, S., Malik, A., & Shah, H. (2015). Robust estimation techniques in panel data analysis: A generalized least squares approach. *International Journal of Economics and Financial Issues*, 5(3), 1–8.