

Analysing Bank Sustainability: A Comparative Study of Banks in Oman and India

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Abstract: This research utilises panel data regression analysis to examine a period of ten years relating to the sustainability of Omani and Indian banks, thereby investigating financial metrics including return on assets, return on equity, adequate capital ratio, and loan loss provisions, ESG scores, and CSR initiatives. The document uses Stata software to assess models, such as Fixed Effects and Random Effects Models. The Hausman test was also utilized to select the most appropriate model. Findings reveal that financial performance and sustainability practices vary significantly among banks in both countries. ESG practices have minimal association with financial success; however, LLP is beneficially correlated with ESG performance. The study provides on the complex interrelationships among financial metrics, ESG, and CSR in banking, offering insights into sustainability, profitability, and risk management. For long-term bank stability and performance, it underscores the importance of solid management as well as sustainability integration, with significant implications for consumers and investors.

Keywords: Bank Sustainability, Return on Assets (ROA), Return on Equity (ROE), ESG scores, Corporate Social Responsibility (CSR)

1. Introduction

The financial industry includes retail banking institutions, insurance firms, nonbanking institutions, cooperatives, mutual funds, and other financial businesses. The Indian banking system is well-established post-independence to address the financial requirements of the Indian populace and economy. The financial industry remains mostly influenced by the banking sector, which serves as its foundational pillar. Commercial banks are financial entities that provide cash to industry and households as intermediary resources. The depositor and lender engage for their mutual benefit, with stable prices and high employment levels. The needs of individuals and the micro and macroeconomic activities of the economy predominantly depend on the banking domain. It is contended to have a substantial impact in stimulating economic growth. Typically, the banking industry is categorized into three sectors: public sector, private sector, and foreign sector banks (Mariappan, 2024). Financial services are essential for growth and project success in both advanced and emerging nations. Banks provide a crucial function in delivering superior services and are an integral part of any economy, creating money and serving as a vital source of finance for businesses. The banking industry in Oman is particularly important, as its profitability and soundness contribute to the country's financial system. An inadequate banking sector may undermine economic sustainability and precipitate financial crises. Enhancing financial performance relies on three fundamental principles: organisational scale, handling the assets and operational effectiveness of the bank. Sixteen commercial banks in Oman are authorised by the Central Bank of Oman

(CBO), which regulates the financial and economic sectors, especially the banking industry (Mhadhbi et al., 2020). The CBO's monetary policies protect the currency stability and facilitate credit flow into the economy. Being the smallest of the Gulf nations, local banks encounter escalating rivalry within the banking industry. The research suggests assessing financial success by evaluating factors such as asset utilisation, bank size, and operational efficiency (Khan & Al Maktoumi, 2021).

Sustainability in business refers to an organization's strategy aimed at minimizing the environmental effect of its market activities. ESG (Environmental, Social, and Governance) metrics evaluate an organization's sustainability practices. Given the irrevocable alterations occurring in the environment and Earth's systems, it is both imprudent and perilous to disregard the danger posed by climate change. The growing awareness of ESGs is due to global concerns with climate change, societal inequality, and corporate governance failures. The need for this more sustainable finance approach has surfaced. Sustainable finance has arisen as the principal enabler of these changes, covering investment techniques delivering positive ecological and societal repercussions simultaneously with financial return. Sustainable banking is referred to as ethical banking or green banking. The definition of ESG principles integration into financial Making decisions processes of banks is basically about the process that advances sustainable development through analysing long-term banking impacts on the surroundings, society, and economics. Responsible lending, ethical investment, climate risk management, and the promotion of financial inclusion are incorporated in sustainable banking (Sharma et al., 2024). Incorporating sustainability into corporate strategy is essential for global firms, since it emphasises results that benefit society and the environment as well as the economy. Businesses face significant pressure to tackle sustainability challenges and adopt a triple bottom line framework. The banking sector is important for fostering sustainable growth and inclusive economic growth in India. Financial institutions are transcending conventional banking by incorporating the incorporation of ESG concepts into their core strategy for sustainable practices. Over the last twenty years, several sustainability codes of conduct have emerged, including the Global Reporting Initiative (GRI), UNEP FI, United Nations Global Compact (UNGC) principles, ISO 14001-26000, and the Equator Principles. Nevertheless, there is a paucity of literature on sustainable banking in impoverished countries, particularly in the Indian context. Most studies focus on the adoption of green banking for internal environmental management and CSR activities of banks in India (Mitra & Schmidpeter, 2017). The adoption of sustainable banking practices by the Indian banking sector has been slow, with the majority of green initiatives confined to paper-free banking, internet banking, ATMs, and solar panel installations. Recommendations from the RBI may significantly foster the expansion of sustainable banking in India. This study aims to address this research gap by developing a general framework for assessing sustainable banking and examining the sustainable banking performance of public sector banks (PSBs) and private sector banks operating in India (Kumar & Prakash, 2019).

1.1 Initiatives to promote corporate sustainability in India

There have been a few noteworthy measures launched by the Government of India (GOI) in order to encourage increased engagement from corporations in order to contribute to sustainable growth. The objective of these programs is to instill a culture of responsibility in corporate activity and to create a better sense of responsibility. Corporate sustainability in order

to guarantee that economic progress and sustainable development are in agreement with one another. In July, the National Voluntary Guidelines (NVGs) In 2011, an evaluation of corporate social responsibility including social, environmental, and economic obligations of firms was presented to the public. procedures and to encourage responsible company activity that is on pace with worldwide norms on sustainability (like the Worldwide Reporting Initiative, the United Nations Global Compact, and so on). This was then followed by guidelines issued by the Securities and Exchange Board of India (SEBI) for the required disclosure of corporate social responsibility (CSR) activities by the top 100 businesses listed on the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE), as well as the adherence to the National Verification Guidelines (NVGs) via the business responsibility report (Roy, 2017). Financial institutions are frequently viewed as vital to the economy due to their facilitate all socioeconomic activity and serve as middlemen in the flow of the whole economy. Even though it doesn't immediately create actual wealth for the economy, the banking sector makes a substantial contribution to its long-term growth because of its unique operating features. It has an effect both internally, via its own operations, and externally, through the provision of different goods and services. The bank promotes environmentally aware businesses and employs credit practices that entail lending money to them in order to support sustainable business growth. Additionally, by providing services like investment advice, the bank produces favorable results. In order to support the achievement of sustainable development, financial institutions may provide resources and knowledge (Li & Galvani, 2018). Increasingly, banks in Vietnam are looking for methods to increase their beneficial impact on the environment and society. By providing financial solutions that encourage ecologically friendly operations and behaviors in all facets of the economy, they hope to achieve this. Putting industry sustainability standards into practice, including guidelines intended to help banks deal with social and environmental issues, may improve banks' capacity to assess and manage the social and environmental risks related to their projects. This, in turn, makes it possible for banks to avoid projects that could have negative environmental effects. The banking industry also promotes financial inclusion, which aids in sustainable development. Giving all people and organizations access to appropriate and practical financial services, with an emphasis on those with low incomes or who are vulnerable, is known as financial inclusion. In the end, the objective is to promote economic development by improving access to financial possibilities, fostering livelihoods, and enabling the circulation of money saved and invested capital across society. As a result, the banking field has a unique role in putting the SDGs' goals for sustainable growth into practice. The responsibilities assigned to the inclusion of the banking sector in the National Action Plan for the application of the 2030 Agenda for Sustainable Growth serve as proof of this. Augment the capabilities within the local banking sector to advance and broaden accessibility to banking and insurance products. greater availability of financial services, particularly for small and medium-sized businesses, including reasonably priced credit services; and heightened involvement of businesses in value chains and marketplaces.

1.2 The Growing importance of ESG in the Banking sector

Banks have always faced criticism over their influence on economic and environmental systems. As global challenges include warming temperatures and economic disparity corporate governance failures get more scrutiny, and financial institutions are urged to exhibit their

dedication to ESG principles. The incorporation of ESG considerations in bank valuations has evolved from a mere fad to a need that influences prolonged fiscal stability.

The rise of ESG investing: Investors have redirected their attention beyond only financial returns to include environmental sustainability, social equity, and corporate management. The change is driven by many factors:

Regulatory pressure: Governments and authorities worldwide are enacting more stringent ESG-related mandates. The European Union's Sustainable Finance Disclosure Regulation (SFDR) wants those financial institutions to report the sustainability risks linked to their investments.

Consumer demand: Customers and stakeholders are progressively focused on the ESG performance of banks, compelling institutions to implement more transparent and sustainable policies.

Risk management: ESG concerns, particularly environmental hazards associated with climate change, may affect the financial stability of banks. Banks engaged with businesses that pose significant environmental hazards, like as fossil fuel firms, have regulatory and reputational challenges.

Long-term performance: Research indicates that banks incorporating ESG factors are seen as more robust against external disruptions and future uncertainty.

ESG factors impact on Bank valuations: Bank values are often assessed based on a confluence of criteria, including market capitalization, asset quality, income production, and risk profile. ESG considerations affect conventional valuation criteria by presenting new risks and possibilities.

Environmental factors: Environmental considerations pertain to the extent to which banks and their portfolios either exacerbate or alleviate environmental hazards, including climate change, pollution, and resource depletion. The growing focus on climate risk has led to significant alterations in the valuation of banks.

Climate-related risks: Physical risks include asset destruction from climate-related incidents, whereas transition risks comprise legislative alterations and movements toward a low-carbon economy. Large loan portfolios held by banks in fossil fuel-dependent businesses are subject to increased risk in the wake of the global trend toward decarbonisation. The risk may raise default loan rates, reduce asset values, and increase regulatory expenses.

Green financing: On the contrary, banks involved in green funding, that is, renewable energies and sustainable infrastructures, should have lower risks and higher market values. The greening of bonds and sustainable investment markets provides tremendous opportunities for engaged banks.

Carbon disclosure: Transparency about carbon emissions and climate-related risks has become a requirement in ESG compliance. Regulators are increasingly asking for stringent disclosures about climate risks, and the banks that act proactively on this front can have better values because of the increased trust and reduced regulatory scrutiny.

Social factors: Social consideration in banking pertains usually to how banks relate to its stakeholders that involve workers, customers, and communities. Diversity and inclusion, community participation, and customer happiness may significantly affect the worth of a bank.

Customer trust and satisfaction: Maintaining client trust is critical for the bank. Socially responsible banks, such as those with ethical lending policies, community investment, or

exemplary customer service, are more likely to retain and grow their client base. Strong consumer trust can lead to increased deposits, higher sales, and ultimately, higher values.

Diversity and inclusion: Investors and regulators increasingly question a bank's diversity and inclusion policies. Banks that speak up for diversity and promote welcoming work environments are considered better managed and more effective at talent attraction-for example, higher productivity and profitability may be associated with such banks.

Human rights and labour practices: The compliance of banks with strict human rights and labor norms may reduce reputational risk and legal liability. Investors are paying more attention to the social policies of financial institutions. Those with lower scores on social measures may experience a reduction in value due to possible risks associated with labor conflicts, customer reactions, or regulatory sanctions.

Governance factors: Any company requires effective governance to be sustained over time. The worth of a bank is assessed according to board independence, CEO remuneration, and regulatory compliance among other governance aspects.

Regulatory compliance and transparency: Financial institutions that maintain high corporate governance standards and comply with regulatory requirements are less likely to incur fines, penalties, or litigation. Failure to comply with ESG-related requirements may culminate in substantial penalties and a forfeiture of market confidence, which negatively impacts values.

Risk management: Financial institutions having effective risk management structures are much more capable of addressing ESG-related risks within the framework of environmental and social issues. Robust governance standards, including openness in decision-making and accountability processes, enhance banks' appeal to investors and favorably influence values.

Executive compensation and ethics: Linking executive remuneration to ESG performance is more prevalent. When bank executives are motivated to prioritize long-term sustainability and governance enhancements, it often bolsters shareholder confidence and elevates the bank's worth.

2. Literature review

Miah et al. (2021) examined the environmental status of commercial banks in Oman, focusing on initiatives to reduce carbon footprints. Interviews with 22 individuals reveal that most banks focus on recycling and reducing paper and energy consumption. However, the opportunity for eco-projects remains untapped. The research aims to inform policymakers on environmental regulatory policies for Oman. Sharma & Choubey (2022) explored the impact of green banking initiatives on brand image and trust. It uses semi-structured Interviews with mid- to senior-level executives from twelve Indian banks. The results indicate that 63% of participants see their bank as creating green banking products and services, 53% integrate green internal processes into everyday operations, and 78% engage in green corporate social obligation efforts. More than 60% assert that these measures positively contribute to rebuilding client confidence via the enhancement of the eco-friendly brand image. The study contributes to the body of knowledge on green banking in India and lays the groundwork for future research in sustainable development.

Jayaraman et al. (2021) analyzed the impact of key financial variables on the net profit of selected commercial banks in Oman from 2007 to 2019 and found a positive correlation matrix

with net profit, assets, deposits, loans, and interest income. However, A negative correlation was identified between net profit and the ratio of net loans to overall deposits. The research identified net loans as the primary independent variable affecting the profit of banks, as their revenue source comes from lending operations. The study suggests that focusing on lending operations with a sound credit portfolio can improve profitability. Iqbal et al., (2025) The research examines the effects of CSR investment on the demonstration of Indian firms and assesses whether beyond the statutory spending threshold yields advantages to companies that outperform. A dynamic model was used to analyze 191 firms from 2016 to 2022. Results show that mandatory CSR spending doesn't yield any payoff, and companies should differentiate their CSR spending and reporting to gain a competitive advantage.

Dalal & Thaker (2019) investigated the impact of Environmental, Social, and Governance (ESG) elements on the performance of publicly traded companies in India. It used data from 65 firms in the NSE 100 ESG Index between 2015 and 2017. The results showed that robust corporate ESG work improves financial performance as shown by both accounting and market-driven criteria. The study emphasized the role of sustainability reporting in sustainable business activities and shareholder wealth. Chaturvedi et al. (2021) India mandated that businesses provide 2% of their net profits for CSR, which is a strategic approach that strongly impacts economic growth. Public and private Indian commercial banks are pivotal to this growth. This study examined how CSR impacts the financial performance of these banks using the CAMEL Model, as well as the impact of Environmental, Social, and Governance factors on Indian publicly traded firms. Al-Jalahma et al. (2020) It sought to investigate how ESG reporting has influenced the efficacy of financial institutions in the GCC nations. This was analyzed for 26 public banks spanning the period 2016-2019 utilising return on equity and return on assets. The performance of banks, it found, is adversely affected by sustainability reporting, calling for better transparency and accountability in this sector (Galdeano et al., 2019). Relationship between Corporate Social Responsibility (CSR) and organizational involvement in the financial sector: The case of managerial employees from seven retail banks in Bahrain. The results show that CSR has a significant impact on financial performance, organizational involvement has a strong relationship with financial performance, and the relationship between CSR and financial performance is moderated by organizational involvement.

Sain & Kashiramka (2024) reflect the impact that corporate governance mechanisms and ESG disclosure scores create on bank performance and financial stability in 41 Indian banks spanning from 2008 to 2020. Results show that board meeting frequency negatively impacts bank performance, while Gender diversity exhibited both linear and non-linear connections. Public sector banks experience negative effects due to board size and promoters' ownership. Sharma & Sathish (2022) examines the relationship between Corporate Social Responsibility (CSR) and economic development in India, emphasizing the sustainability aspects of the growing economy. It examined the CSR expenditures of 21 commercial banks across nine development sectors, the human development index, and GDP growth rates from 2014-2015 through 2017-2018. It showed that CSR initiatives are frequently a façade in developing countries. Khémiri et al. (2024) relationship between financial inclusion and the stability of Islamic banking in 27 GCC nations from 2012 to 2020. The findings demonstrated an inverted U-shaped correlation between financial inclusion and the stability of Islamic banking. The research proposed a tactical financial inclusion approach that weighs advantages such as

fairness and financial equity against possible drawbacks like high leverage risks, mitigating default risks, and enhancing the stability of Islamic banking. Jawad & Abdulla (2022) Islamic banks and sustainability in MENA nations. It examined 41 traditional and Islamic banks from 2012 to 2021 utilizing ESG scores. Findings indicated that traditional banks exhibited superior sustainability practices compared to Islamic banks, reflected in elevated ESG scores. The research discredits the notion that Islamic banks enhance corporate social responsibility through Sharia principles, indicating a negative correlation between Islamic finance and sustainability.

3. Research gap

Despite comprehensive studies on bank performance, green banking, corporate social responsibility (CSR), and sustainability practices in several settings, significant gaps persist in comprehending the comparative dynamics of these elements between Oman and India. Current research mostly examines discrete factors such as ESG reporting, CSR spending, and financial inclusion, neglecting to investigate how these components jointly affect the profitability and sustainability of banks in these two areas. Moreover, while research emphasizes the significance of green initiatives and governance frameworks, the incorporation of sustainability into fundamental banking strategies, especially regarding lending operations and credit portfolios, remains inadequately examined. This necessitates a thorough comparative investigation on the correlation between financial stability, environmental practices, and long-term profitability in Omani and Indian banks, focusing on how sustainability might work as a strategic lever to improve overall bank performance.

4. Research methodology

4.1 Research design

The current study uses panel data regression analysis and utilizes secondary time series data to assess the association between sustainability in Oman and India. The major performance metrics studied are the Capital Adequacy Ratio (CAR), Return on Equity (ROE), Return on Assets (ROA), and Loan Loss Provisions (LLP). The paper explores ways by which improvements in sustainability activities through ESG scores and corporate social responsibility alter bank performances. The essay considers how societal economic and institutional regulatory factors have contributed to variations between two countries relating their sustainability engagements with financial implications to banks of such countries. Through this method, one shall acquire a real clear understanding regarding sustainability's long-term consequences on the banking institution's overall performance.

Hypothesis

H0: There is no significant impact of ESG Score on ROA, ROE, Capital Adequacy Ratio, and Loan Loss Provision in Oman and Indian banks.

H1: There is a significant impact of ESG Score on ROA, ROE, Capital Adequacy Ratio, and Loan Loss Provision in Oman and Indian banks.

H0: There is no significant impact of Corporate Social Responsibility on ROA, ROE, Capital Adequacy Ratio, and Loan Loss Provision in Oman and Indian banks.

H2: There is a significant impact of Corporate Social Responsibility on ROA, ROE, Capital Adequacy Ratio, and Loan Loss Provision in Oman and Indian banks.

Data collection

The research employs secondary time series data for a decade and takes into consideration both India and Oman with the aim of collecting data on the key performance metrics of financial metrics like ROE, ROA, CAR, and LLP. Data on the CSR initiatives and ESG ratings were also collected on the sustainability practices of the banking sector. It was done in order to investigate the link between these financial indicators and sustainability efforts, keeping track of how ESG scores and CSR initiatives affect the banks' performance and long-term stability in both countries.

Model specification

Developing a regression model that includes the ROA, ROE, LLP, CAR, CSR, ESG.

Model estimation

Estimating the regression model using different techniques such as Fixed Effects Model (FEM), and Random Effects Model (REM).

Model selection

Executing a Hausman test to determine the suitability of the FEM or the REM for the data.

4.2 Tools and techniques for Data analysis**Tools**

In this study, the Stata tool is utilized

Techniques**Regression analysis**

Regression analysis is a statistical strategy utilized to investigate the connection between a dependent variable and one or more independent variables. This succinctly delineates the fluctuations in the independent variables corresponding to the variation in the dependent variable. It basically describes which mathematical model can best fit in the data described for the relation. The most frequently used form is linear regression. It uses a straight line for approximating a relationship. Regression analysis is highly popular, and its use spreads across various fields such as economics, biology, and social sciences. This assists researchers in the prediction and understanding of patterns and the strength and nature of relationships within a dataset. The analysis results in a regression equation from which one can approximate the value of the dependent variable utilising the values for the independent variables. Regression yields an equation that estimates the value of the dependent variable regarding the independent variable's information.

The strength and mode of relationships are demonstrated by the coefficients in the regression equation. A positive coefficient denotes a positive link, while an adverse coefficient implies a negative correlation. Regression tools are used by researchers to statistically measure the strength of correlations to decide whether the observed trends are reliable instead of coincidental. Regression analysis is a very effective strategy for modelling and understanding complex relationships within the information.

Model specification

Identify the variables: The dependent variable (Y) signifies the expected or predicted result. The independent variables are depicted as $X_1, X_2, \dots, X_n$. The predictors are sometimes referred to as explanatory variables. Protocols for doing regression analysis. Presumptions and evaluative testing.

Panel Data Analysis

Panel data, alternatively referred to as cross-section time-series data, consists of Observations about various things or units, such as individuals, organisations, or nations, throughout various time periods. This data facilitates the consideration of variables that fluctuate across several units while being stable over time or variables that evolve with time but stay uniform across multiple units. FEM and REM.

Fixed Effects Model (FEM)

The FEM constitutes the temporal uniformity characteristics of the entities, so addressing any enduring distinctions among them, including cultural features and geographical location. This is achieved by incorporating entity-specific captures into the regression model.

Random Effects Model (REM)

The REM asserts that the consequences peculiar to the entity are random and not connected to the independent factors. This model is more efficient than the FEM, and presents the conditions that are satisfied, attributable to the inclusion of fewer parameters.

Hausman test

The Hausman test is employed for model selection. The Hausman test is utilised to contrast the FEM with the REM to determine the best suitable option. The objective of the assessment is to appraise the null hypothesis about the prevalence of REM.

Conceptual framework

It can be described with the help of Figure 1.

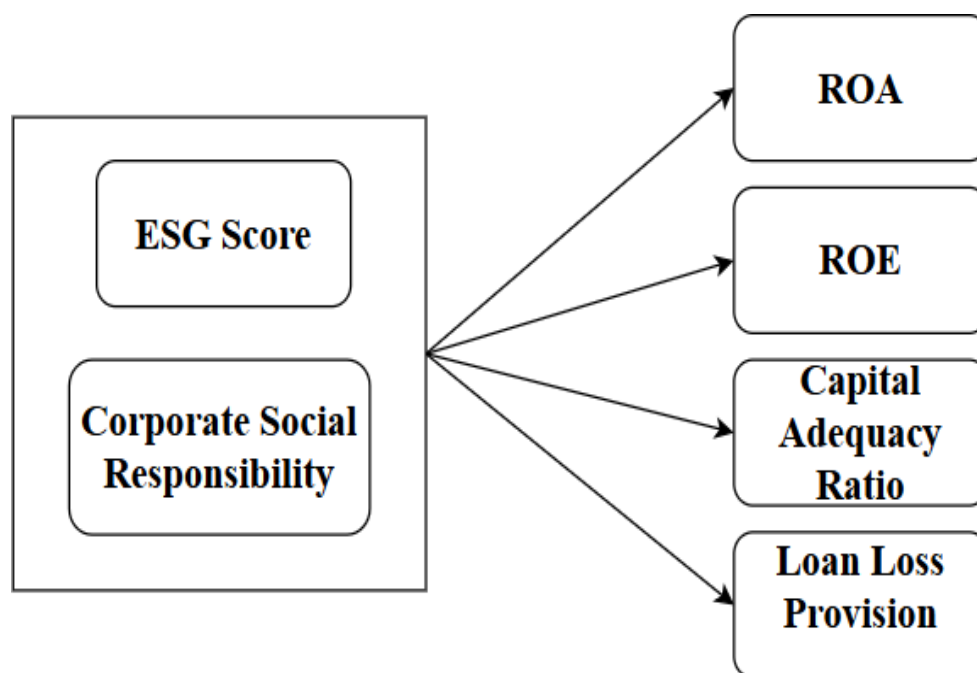


Figure 1: Conceptual framework

5. Result

This study aims to analyze the sustainability of banks in Oman and India by evaluating some of the most essential financial performance metrics, including Return on Assets (ROA), Return on Equity (ROE), Capital Adequacy Ratio (CAR), and Loan Loss Provisions (LLP). These factors provide a basis for understanding the financial well-being and stability of banks in both

nations. The study encompasses ESG scores as well as CSR practices to assess the impact of sustainability initiatives on the bottom lines of these banks. ESG scores provide a comprehensive assessment of a bank's commitment to sustainable practices, while CSR initiatives are the bank's involvement in community welfare. The study aims to explore the relationship between these sustainability factors and the financial performance of banks, in order to find out whether improved ESG ratings and effective CSR strategies result in increased profitability, risk management, and long-term sustainability in the banking industry of Oman and India.

Table 1: Descriptive

Variable	Mean	Std. Dev.	Min	Max
ROA	7.824667	5.136386	-11.57	16.71
ROE	0.850333	0.592658	-0.7	1.87
Capital Adequacy Ratio	15.06683	3.26109	0.12	21.3
LOAN LOSS PROVISION	1069751	2069483	374	9682688
ESG Score	28.41667	18.05199	0	51
Corporate Social Responsibility	1877761	5249142	7	2.42E+07

Table 1 shows core financial and performance indicators for the sample data. ROA averages at 7.82 with a standard deviation of 5.14, with a variation between -11.57 to 16.71. This suggests that firms realize little return in terms of their total assets, though some show negative returns. Return on Equity (ROE) varies from -0.70 to 1.87, with an average of 0.85 and a standard deviation of 0.59. This suggests that different businesses have different investor profits, with some making losses and others making significant profits.

The Capital Adequacy Ratio, an essential indicator of financial stability, has an average of 15.07, a standard deviation of 3.26, and spans from 0.12 to 21.30. While some businesses may have liquidity issues, most have sizable capital reserves. Loan Loss Provisions, indicating credit loss reserves, range from 374 to 9,682,688, averaging 1,069,751, and exhibit a significant standard deviation of 2,069,483. This variation illustrates the risk exposure of the business and the provisioning methods used. The Environmental, Social, and Governance (ESG) Score varies from 0 to 51, having an average of 28.42 and a standard deviation of 18.05. This implies that different companies have different sustainability programs, with some succeeding while others fail.

Spending on Corporate Social Responsibility (CSR) is highly uneven, with an average of 1,877,761 and a range between 7 and 24,200,000. This range indicates significant variations in CSR activities among companies. The data shows that different organizations have different performance, stability, and sustainability characteristics.

H0: There is no significant impact of ESG Score on ROA, ROE, Capital Adequacy Ratio, and Loan Loss Provision in Oman and Indian banks.

H1: There is a significant impact of ESG Score on ROA, ROE, Capital Adequacy Ratio, and Loan Loss Provision in Oman and Indian banks.

The Environmental, Social, and Governance (ESG) Score's effects on ROA, ROE, the CA Ratio, and loan loss provision are examined in this research and presented in Table 2. The objective is to determine the degree to which differences in ESG ratings may be explained by these individual characteristics. The model's R-squared value is 0.2135, meaning that 21.35%

of the variance in the ESG score can be attributed to independent factors. Given the number of predictors, the adjusted R-squared value of 0.1563 indicates an acceptable match. With an F-statistic of 3.73 and a p-value of 0.0093, the model rejects the null hypothesis, which states that all coefficients equal zero at the 1% significance level.

Table 2: Regression

Source	SS	df	MS	Number of obs=60		
Model	4105.537	4	1026.3842	F(4, 55)=3.73		
Residual	15121.05	55	274.92812	Prob > F=0.0093		
Total	19226.58	59	325.87429	R-squared= 0.2135		
				Adj R-squared=0.1563		
				Root MSE=16.581		
ESG Score	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
ROA	0.924955	0.805528	0.256	0.256	-0.6894	2.53927
ROE	-14.4512	8.307933	0.088	0.088	-31.101	2.19824
Capital Adequacy Ratio	1.460836	0.890397	0.107	0.107	-0.3236	3.24523
Loan Loss Provision	3.07E-06	1.22E-06	0.015	0.015	6.15E-07	5.52E-06
_cons	8.174506	13.20584	0.62	0.538	-18.291	34.6396

With a p-value of 0.256 and a coefficient of 0.924955 for each predictor, ROA and ESG ratings have a positive but negligible association. Despite this, ROE has a p-value of 0.088 and a negative coefficient of -14.4512. The impact is not strong enough to establish a negative relationship between ROE and ESG ratings. ESG evaluations are positively impacted by the Capital Adequacy Ratio, while this effect is statistically negligible (coefficient = 1.460836, p-value = 0.107). At the 5% significance level, Loan Loss Provision has a strong positive association with a p-value of 0.015 and a coefficient of 3.07E-06. This suggests that loan loss provisions improve ESG ratings. ESG ratings are greatly impacted by loan loss provision, although ROA, ROE, and the impact of the capital adequacy ratio is minimal. The information emphasizes the significance of financial measures in attaining ESG performance and partly supports the alternative hypothesis.

The ESG Score and financial performance metrics are compared between two groups using 60 data sets and a fixed-effects regression model and presented in Table 3. According to the model, group-specific features account for 22.65% of the variation in the ESG Score across time, with a within R-squared value of 0.2265. The model only explains just a small portion of the variation in the ESG Score across all groups, as the R-squared value of 0.1021 shows. The model's F-statistic of 3.66 and p-value of 0.0109 demonstrate statistical significance. The ESG Score is positively impacted by Return on Assets (ROA), as seen by the correlation of 2.08 (p = 0.046). The impact is statistically significant: ESG Score is improved by higher ROA. ROE and the ESG Score are negatively correlated (-34.33, p = 0.005). This suggests that profitable companies might underperform on environmental, social, and governance standards because of increased ROE and decreased ESG Scores.

The Capital Adequacy Ratio (CAR) and the ESG Score have a positive association of 1.24 (p = 0.084). The finding suggests that a greater capital adequacy ratio might raise the ESG Score,

although it is not statistically significant at 5%. The impact of Loan Loss Provision (LLP) on the ESG Score is negligible and statistically insignificant ($-2.61\text{E-}07$, $p = 0.886$). Finally, the constant term ($_cons$) is 22.88 ($p = 0.073$), implying that unmeasured factors might have an effect on the ESG Score.

Table 3: Fixed effect model

Fixed-effects (within) regression	Number of obs= 60					
Group variable: id	Number of groups=6					
R-sq:	Obs per group:					
within = 0.2265	min=10					
between =0.0552	avg=10					
overall = 0.1021	max=10					
corr(u_i, Xb) = -0.3575	F(4,50)=3.66					
	Prob > F=0.0109					
ESG Score	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
ROA	2.08E+00	1.01E+00	2.05	0.046	4.30E-02	4.12E+00
ROE	-34.3255	11.77412	-2.92	0.005	-57.9745	-10.6764
Capital Adequacy Ratio	1.242916	0.704127	1.77	0.084	-0.17137	2.657197
LOAN LOSS PROVISION	-2.61E-07	1.81E-06	-0.14	0.886	-3.90E-06	3.37E-06
$_cons$	22.88028	12.51528	1.83	0.073	-2.25741	48.01796

Table 4: Random Effect Model

Random-effects GLS regression	Number of obs=60					
Group variable: id	Number of groups=6					
R-sq:	Obs per group:					
within = 0.2203	min=10					
between = 0.0857	avg=10					
overall = 0.1299	max=10					
corr(u_i, X) = 0 (assumed)	Wald chi2(4)=13.72					
	Prob > chi2= 0.0082					
ESG Score	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
ROA	1.787311	0.827476	2.16	0.031	0.165488	3.409134
ROE	-28.9262	9.415256	-3.07	0.002	-47.3798	-10.4726
Capital Adequacy Ratio	1.416012	0.696662	2.03	0.042	0.050581	2.781444
Loan Loss Provision	3.61E-07	1.56E-06	0.23	0.817	-2.70E-06	3.42E-06
$_cons$	17.30796	12.92348	1.34	0.18	-8.02159	42.63751

ESG score factors are shown using the Random-Effects GLS regression model (Table 4) using 60 data points from 6 groups. Variations within the group account for 22.03% of the variance in ESG ratings, according to a within-group R-squared of 0.2203. The model's overall R-squared of 0.1299 and between-group R-squared of 0.0857 shows that it has a limited capacity to explain both population and group variables. A p-value of 0.031 and a coefficient of 1.7873 show that an increase in ROA improves ESG scores. The link between ESG ratings and the

Return on Equity (ROE) is negative (-28.9262, p-value 0.002). Higher ROE and poorer ESG scores are correlated, suggesting an interaction between sustainability and financial benefits. A p-value of 0.042 and a positive correlation of 1.4160 indicate that higher Capital Adequacy Ratios (CARs) improve ESG rankings. Loan Loss Provision (LLP) had no discernible impact on ESG ratings, as shown by the p-value of 0.817 and the coefficient of 3.61E-07. The constant term (_cons) is 17.30796 when all other variables are zero, but it is not statistically significant ($p = 0.18$), suggesting that there is no baseline ESG score. The model's p-value of 0.0082 and Wald chi-square value of 13.72 demonstrate its statistical significance. Certain financial performance criteria have a major influence on ESG ratings, but not others.

Table 5: Hausman Test

	(b)	(B)	(b-B)	$\sqrt{\text{diag}(V_bV_B)}$	Chi-square
	fixed	random	Difference	S.E.	0
ROA	1.79E+00	1.79E+00	0	0	
ROE	-28.9262	-28.9262	0	0	
Capital Adequacy Ratio	1.416012	1.416012	0	0	
Loan Loss Provision	3.61E-07	3.61E-07	0	0	

The Hausman test findings (Table 5) for fixed effects vs random effects models in terms of financial indicators are shown in the table. Crucial elements are the loan loss provision, ROA, ROE, and CA ratio. Because the coefficients for the fixed and random effects models are the same for each variable, there is a zero difference between all measurements. For each variable, chi-square and S.E. figures are also shown (Figures 2-7). In both the fixed and random models, the coefficients for ROA, ROE, capital adequacy ratio, and loan loss provision are the same. For these variables, the standard errors are null, meaning that there is no difference between the fixed and random effects models. The models' calculated coefficients are identical for the specified financial measures.

Chi-square values for all variables are zero, indicating that there is no statistical difference between the fixed and random effects models. The fixed effects model is indicated by the Hausman test because there is no correlation between the independent variables and unobserved individual effects. The fixed effects approach is more suited for examining these financial indicators as it takes individual-specific effects into consideration. These financial measures are best analyzed using the fixed effects model because all variables have similar coefficients and Chi-square values of zero. By taking individual-specific impacts into consideration, this method produces estimates that are more reliable and dependable.

The results of a dynamic panel data model (Table 6) used to look into factors affecting the ESG score are shown in the regression table. The 48 observations in the dataset are split up into six groups, with an average of 8 observations per group. With a Wald chi-squared score of 55.19, the model seems to be reliable and statistically significant. The ESG score's first lag (L1) reveals a statistically significant result ($p < 0.01$), suggesting that the present ESG score is considerably and favorably impacted by previous ESG scores. With a value of -0.13, the second lag (L2) shows that the impact of ESG scores from two earlier periods on the present score is minimal and not statistically significant.

Table 6: System dynamic panel data

System dynamic panel data				Number of obs = 48		
Group variable: id				Number of groups = 6		
Time variable: year				Obs per group:		
Number of instruments =42				min = 8		
				avg = 8		
				max = 8		
				Wald chi2(6) =55.19		
				Prob > chi2=0		
ESG Score	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
ESG Score						
L1.	0.831568	0.135432	6.14	0	0.566127	1.097009
L2.	-0.13442	0.102161	-1.32	0.188	-0.33465	0.065815
ROA	0.223581	0.712796	0.31	0.754	-1.17347	1.620635
ROE	-2.61451	7.614484	-0.34	0.731	-17.5386	12.30961
Capital Adequacy Ratio	-0.23569	0.623761	-0.38	0.706	-1.45824	0.986856
Loan Loss Provision	2.87E-07	1.33E-06	0.22	0.829	-2.31E-06	2.89E-06
_cons	13.8061	11.23438	1.23	0.219	-8.21289	35.82508
sargan test	chi2(35) = 18.62695					
	Prob > chi2 = 0.9894					
Abond test	p<0.05					
	0.1278					

The return on assets (ROA) coefficient is 0.22, with a z-value of 0.31 and a standard error of 0.71. With a z-score of -0.34 and a standard error of 7.61, the return on equity (ROE) coefficient is -2.61. The ESG score and the capital adequacy ratio do not seem to be significantly correlated, as shown by the capital adequacy ratio's coefficient of -0.24 and p-value of 0.706. In addition to a z-value of 1.23 and a standard error of 11.23, the constant term has a coefficient of 13.81. The Sargan test results, which are 18.63, demonstrate the validity of the instruments used in the model. The model's dependability is further supported by the Abond test results, which show 0.1278, which suggests that the residuals show no indications of autocorrelation.

H2: There is no significant impact of Corporate Social Responsibility on ROA, ROE, Capital Adequacy Ratio, and Loan Loss Provision in Oman and Indian banks.

H3: There is a significant impact of Corporate Social Responsibility on ROA, ROE, Capital Adequacy Ratio, and Loan Loss Provision in Oman and Indian banks.

The effects of ROA, ROE, CAR, and LLP on corporate social responsibility are investigated in this research (Table 7). to compare the alternative hypothesis (H2) that these factors have a substantial impact on CSR with the null hypothesis (H0) that they do not. The R-squared value of 0.2116 shows that the independent factors explain 21.16% of the variance in CSR. The model is statistically significant at the 1% level, as shown by the F-statistic of 3.69 and the p-value of 0.0099, which rejects the null hypothesis and demonstrates that independent factors affect CSR.

Table 7: Regression

Source	SS	df	MS	Number of obs=60		
Model	3.44E+14	4	8.60E+13	F(4, 55)=3.69		
Residual	1.28E+15	55	2.33E+13	Prob > F=0.0099		
Total	1.63E+15	59	2.76E+13	R-squared= 0.2116		
				Adj R-squared=0.1542		
				Root MSE= 4.8e+06		
Corporate Social Responsibility	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
ROA	-100515.8	234525.3	-0.43	0.67	-570514.9	369483.4
ROE	-3995061	2418811	-1.65	0.104	-8842466	852343.4
Capital Adequacy Ratio	279743.9	259234.4	1.08	0.285	-239773.4	799261.1
Loan Loss Provision	-0.9974035	0.3564361	-2.8	0.007	-1.711717	-0.28309
_cons	2913517	3844811	0.76	0.452	-4791657	1.06E+07

There is no statistically significant effect of ROA on CSR, as shown by its coefficient of -100,515.8, t-value of -0.43, and p-value of 0.67. Its influence is not statistically significant at normal levels, according to the ROE coefficient of -3,995,061, the t-value of -1.65, and the p-value of 0.104. The Capital Adequacy Ratio, on the other hand, has a weak correlation with CSR, with a coefficient of 279,743.9, a t-value of 1.08, and a p-value of 0.285. With a coefficient of -0.9974, a t-value of -2.8, and a p-value of 0.007, Loan Loss Provision, however, indicates a 1% negative impact on CSR. This suggests that higher loan loss provisions result in lower CSR. With a p-value of 0.452, the constant (_cons) coefficient of 2,913,517 is not statistically significant, suggesting that it is not possible to estimate the original CSR value without these variables. According to the results, Loan Loss Provision has a major impact on CSR whereas other elements do not.

Table 8: Fixed effect model

Fixed-effects (within) regression	Number of obs= 60					
Group variable: id	Number of groups=6					
R-sq:	Obs per group:					
within =0.2216	min=10					
between =0.0742	avg=10					
overall = 0.1252	max=10					
corr(u_i, Xb) = -0.5446	F(4,50)=3.56					
	Prob > F=0.0125					
Corporate Social Responsibility	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
ROA	173120.6	385731.7	0.45	0.656	-601644.4	947885.6
ROE	-8457152	4477852	-1.89	0.065	-1.75E+07	536878.6
Capital Adequacy Ratio	81860.5	267788.6	0.31	0.761	-456008.8	619729.8
Loan Loss Provision	-0.8764438	0.6881849	-1.27	0.209	-2.258704	0.505816
_cons	7418747	4759724	1.56	0.125	-2141440	1.70E+07

The fixed-effects regression model uses 60 data points from 6 distinct groups to examine the link between CSR and many important financial KPIs of banks (Table 8). 22% of the variations in CSR over time may be attributed to bank-specific variables, according to the internal R-squared value of 0.2216. Since the model's R-squared is 0.1252, it only explains a tiny portion of variability. The model is statistically significant, as shown by the F-test statistic of 3.56 and the p-value of 0.0125, which strengthens confidence in the findings. The effect of each predictor on CSR is shown by the regression coefficients. Although ROA's coefficient is 173120.6, its p-value of 0.656 indicates that it is not statistically significant, suggesting that ROA does not seem to have an impact on CSR in this model. The ROE coefficient, which is -8457152, and the p-value, which is 0.065, show a marginally negative correlation with CSR. Despite not being statistically significant at 0.05, this suggests a reversal of the connection that needs further research.

With a p-value of 0.761 and a Capital Adequacy Ratio (CAR) coefficient of 81860.5, the data is not statistically significant. This implies that CAR has little bearing on CSR. Furthermore, Loan Loss Provision (LLP) has no discernible impact on CSR, as shown by its coefficient of -0.8764438 and p-value of 0.209. Given that the constant term (_cons) is 7418747 and has a p-value of 0.125, CSR may be impacted by unexplained causes. In conclusion, the model suggests that although some variables may have little or insignificant effects on CSR, this approach likely ignores other important determinants.

Table 9: Random Effect Model

Random-effects GLS regression	Number of obs=60					
Group variable: id	Number of groups=6					
R-sq:	Obs per group:					
within = 0.2152	min=10					
between = 0.1841	avg=10					
overall = 0.1848	max=10					
corr(u_i, X) = 0 (assumed)	Wald chi2(4)=14.51					
	Prob > chi2= 0.0058					
Corporate Social Responsibility	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
ROA	-26252.56	294408.7	-0.09	0.929	-603282.9	550777.8
ROE	-5812666	3339500	-1.74	0.082	-1.24E+07	732632.5
Capital Adequacy Ratio	146048.1	252578.9	0.58	0.563	-348997.4	641093.7
Loan Loss Provision	-1.041904	0.5560528	-1.87	0.061	-2.131747	0.04794
_cons	5939978	4614678	1.29	0.198	-3104624	1.50E+07

This study uses 60 data points from 6 groups, each with 10 observations, to examine the effect of corporate social responsibility (CSR) on financial performance measures using the Random Effects Model (Table 9). Group factors explain 21.5% of the variation in CSR, based on the within-group R-squared value of 0.2152. Population differences are not taken into consideration by the model, as seen by the overall R-squared of 0.1848 and the between-group R-squared of 0.1841. ROA has a p-value of 0.929 and a coefficient of -26252.56, which suggests that it has no effect on CSR. Return on Equity (ROE) has a coefficient of -5812666 and a p-value of 0.082, which indicates a weakly negative correlation between ROE and CSR

since it falls short of the traditional significance level ($p < 0.05$). The Capital Adequacy Ratio shows a positive coefficient of 146048.1, however, it has no effect on CSR, according to the p-value of 0.563.

Increased loan loss provisions seem to marginally lower CSR, according to the coefficient for loan loss provisions, which is -1.041904 with a p-value of 0.061. The constant term ($_cons$) is 5939978 and the p-value is 0.198 when all other parameters are held constant, indicating the absence of a baseline effect. With a p-value of 0.0058 and a Wald chi-square statistic of 14.51, the model seems to generally capture the relationship between CSR and the selected financial indicators, even if some of the components are not significant.

Table 10: Hausman Test

	(b)	(B)	(b-B)	$\sqrt{\text{diag}(V_bV_B)}$	Chi-square
	fixed	random	Difference	S.E.	0
ROA	-2.63E+04	-2.63E+04	0.00E+00	0.00E+00	
ROE	-5812666	-5812666	0	0	
Capital Adequacy Ratio	146048.1	146048.1	0	0	
Loan Loss Provision	-1.04E+00	-1.04E+00	0	0	

Table 10 shows the results of a Hausman test to determine whether a fixed effects or random effects model is more suitable for analyzing the data. According to the results, there seems to be no significant difference in the way the variables ROA, ROE, Capital Adequacy Ratio, and Loan Loss Provision are evaluated between fixed and random effects models. The fact that the standard errors are also zero indicates that the coefficient estimations are not variable. Since the examination's chi-square value is zero, it is apparent that the null hypothesis which holds that the random effects model is appropriate cannot be rejected. Given that the two models' coefficient estimations do not significantly differ from one another, the random effects model would be appropriate in this case. However, when the differences between the fixed and random effects models are negligible, the results suggest that either model might be appropriate, even though random effects are usually preferred due to their greater effectiveness. Since both models' coefficients are identical, the random effects model is a good choice for data analysis.

The results of a system dynamic panel data model examining the impact of various components on Corporate Social Responsibility (CSR) are shown in Table 11. With an average of eight observations per group, the dataset has 48 observations distributed among six groups. The model is highly significant, as shown by the Wald chi-squared value of 56.47, which suggests that the factors included in the model have a considerable overall impact on CSR. The statistically significant coefficients for the first and second lags of CSR (L1 and L2, respectively) demonstrate that CSR from the previous period has a positive and significant impact on current CSR. However, the Return on Equity (ROE) and Return on Assets (ROA) coefficients are negative, indicating that these financial metrics have no bearing on CSR in this model.

While decreasing CSR is significantly correlated with increasing loan loss provisions, the Capital Adequacy Ratio (CAR) has little impact on CSR. If all other variables stay the same,

the constant term has a positive baseline value. According to the Abond test (p-value 0.1278) and Sargan test (chi-squared value 38.77), the residuals show no signs of autocorrelation.

Table 11: System dynamic panel data

System dynamic panel data			Number of obs =48			
Group variable: id			Number of groups =6			
Time variable: year			Obs per group:			
Number of instruments =45			min =8			
			avg =8			
			max =8			
			Wald chi2(6) =56.47			
			Prob > chi2=0			
Corporate Social Responsibility	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
L1.	0.4457405	0.124516	3.58	0	0.2016937	0.689787
L2.	-0.2758378	0.1691317	-1.63	0.103	-0.6073299	0.055654
ROA	-418259.7	439376.8	-0.95	0.341	-1279422	442903
ROE	-4574802	4205823	-1.09	0.277	-1.28E+07	3668460
Capital Adequacy Ratio	-76765.5	310714	-0.25	0.805	-685753.8	532222.8
Loan Loss Provision	-2.586138	0.8760452	-2.95	0.003	-4.303155	-0.869121
_cons	1.23E+07	5555745	2.22	0.026	1451874	2.32E+07
sargan test	chi2(38) = 38.77307					
	Prob > chi2 = 0.4347					
Abond test	p<0.05					
	0.1278					

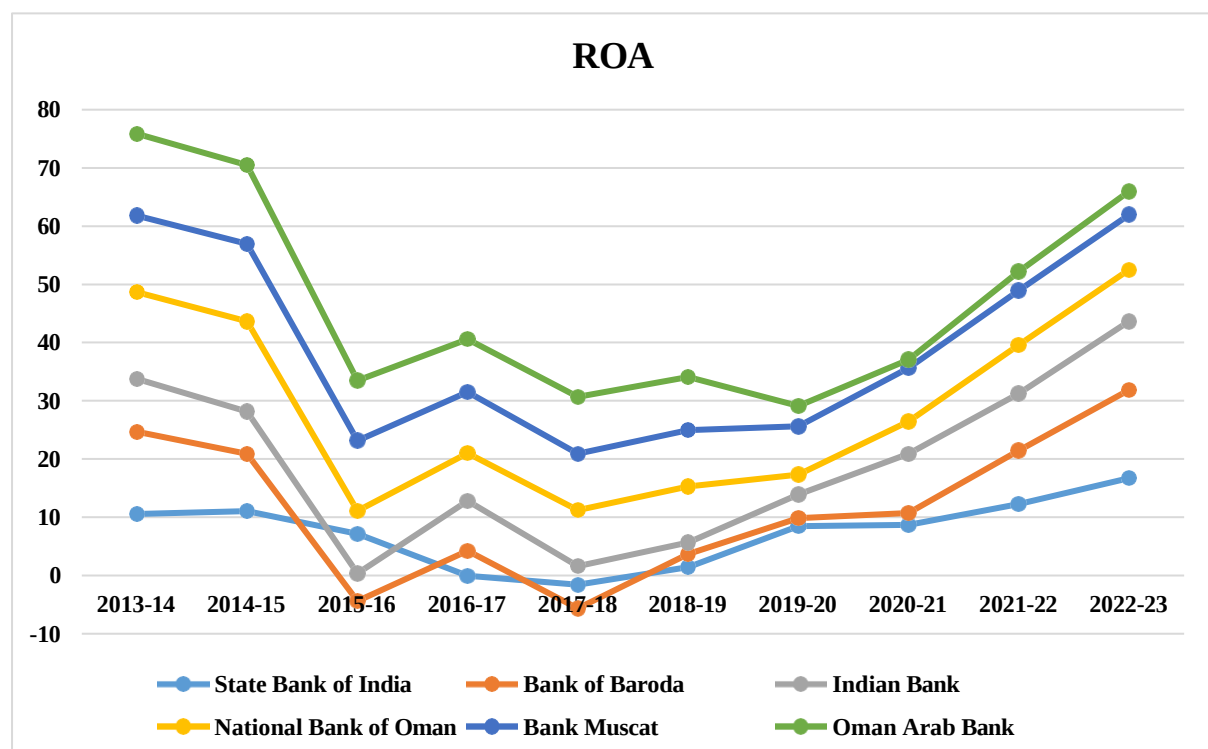


Figure 2: ROA

5.1 Comparison plots

5.1.1 ROA

The Return on Assets (ROA) data for banks in Oman and India from 2013–14 to 2022–23 is shown in (Figure 2). The performance of the State Bank of India varied, peaking in 2022–2023 at 16.71%. Significant swings were seen by the Bank of Baroda, which fell to -11.57% in 2015–16 before gradually recovering to reach a ROA of 15.15% in 2022–2023. In 2022–2023, Indian Bank had a more consistent performance, attaining 11.79%. The ROA of Omani banks, such as the National Bank of Oman, Bank Muscat, and Oman Arab Bank, was comparatively steady. The National Bank of Oman performed well, while Bank Muscat was continuously above 9%. Oman Arab Bank saw a significant decline, dropping to 4.06% by 2022–2023.

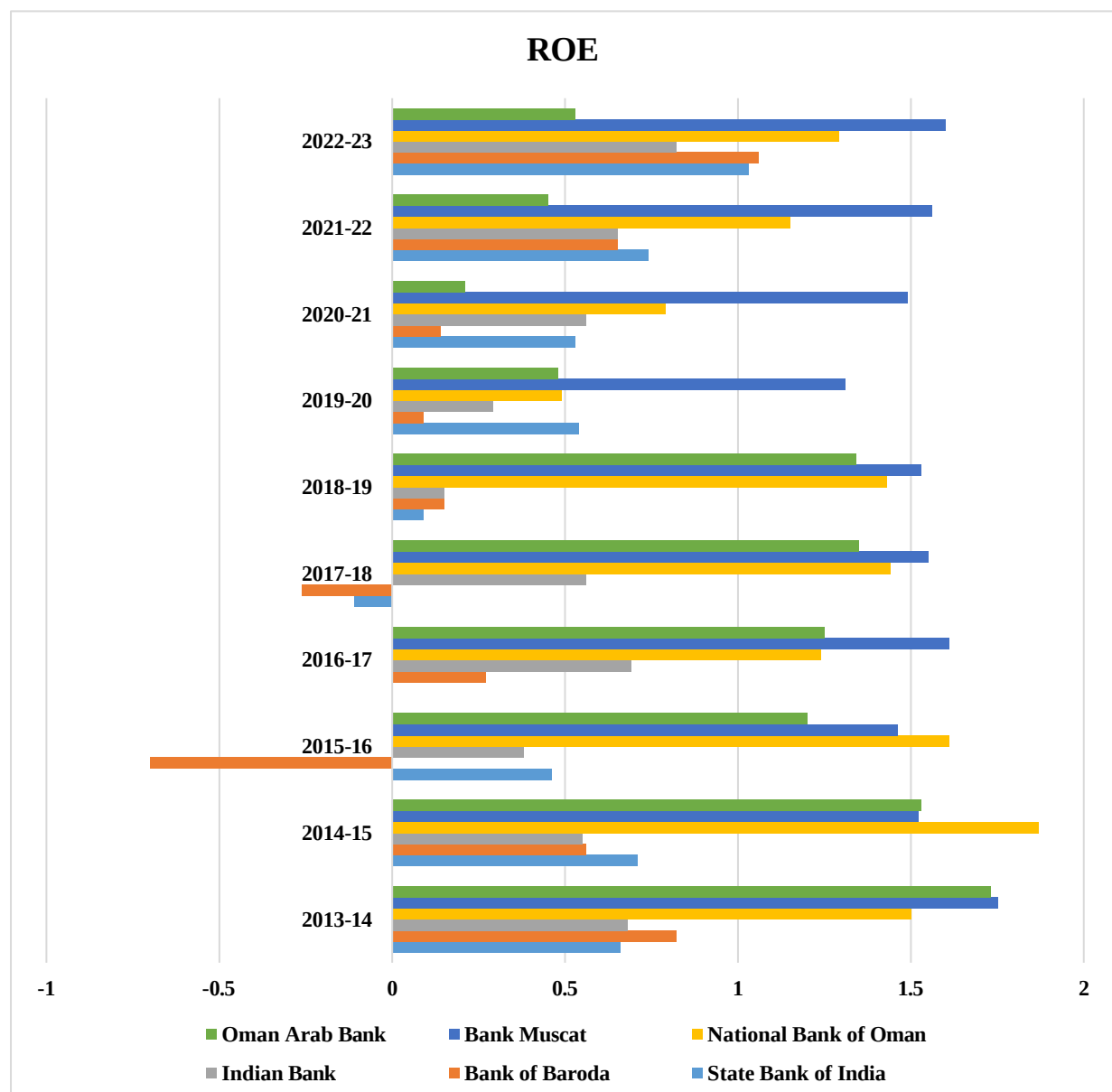


Figure 3: ROE

5.1.2 ROE

The Return on Equity (ROE) numbers for six Indian banks from 2013–14 to 2022–23 is shown in the graphic in Figure 3. In 2015–16 and 2017–18, the State Bank of India had a significant

drop in ROE, while the Bank of Baroda experienced a negative ROE. Indian Bank had a steady return on equity (ROE), peaking at 0.69 in 2016–17 and ending at 0.82 in 2022–2023. Oman's banks, particularly the National Bank of Oman, Bank Muscat, and Oman Arab Bank, have continuously shown high ROE; in 2022–2023, Bank Muscat's ROE was 1.6. According to the data, Omani banks are stable and more profitable, while Indian banks are unstable. Conclusion The data indicates that Omani banks are steadier and more profitable over time while Indian banks exhibit greater volatility.

5.1.3 Capital Adequacy Ratio

From 2013–14 to 2022–23, the Capital Adequacy Ratio (CAR) graph (Figure 4) shows the CARs of six banks. The CAR for the State Bank of India is steady, ranging from 12% to 14%, with a notable increase to 14.68% in 2022–2023. Throughout 2022–2023, the Bank of Baroda saw a high of 16.24%. With steady development, Indian Bank's CAR increased from 9.97% in 2013–14 to 16.28% in 2022–23. The greatest CAR is consistently shown by Bank Muscat, which increased from 15.92% in 2013–14 to 21.22% in 2022–23. The National Bank of Oman maintains a relatively steady CAR at around 16%. In conclusion, Bank Muscat has the highest level of capital adequacy, whilst Bank of Baroda shows notable volatility.

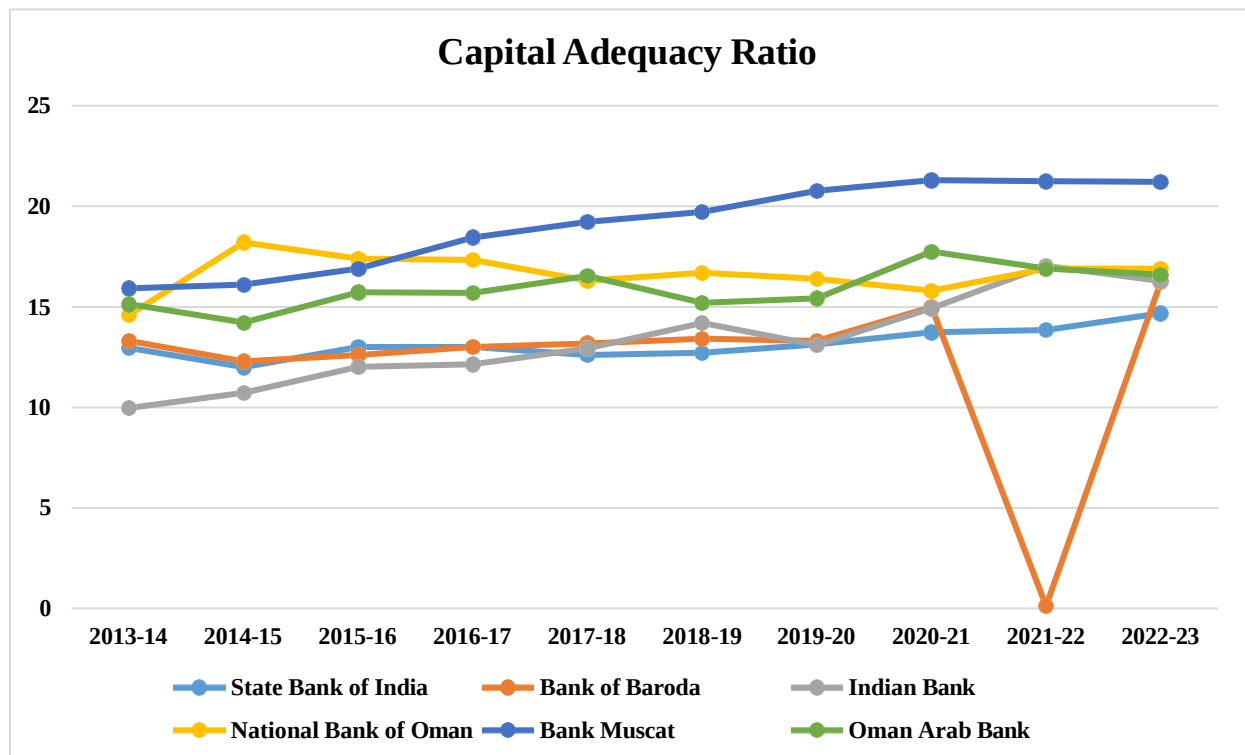


Figure 4: Capital Adequacy Ratio

5.1.4 Loan Loss Provision

Loan Loss Provision (LLP) data for six Indian and Omani banks from 2013–14 to 2022–23 is shown in the chart (Figure 5). Up until 2017–18, the State Bank of India had a rising trend, peaking at ₹96,82,688, before experiencing a sharp decline. Similar patterns were seen by the Bank of Baroda, which had a significant rise until 2017–18 and then a steady fall. Indian Bank's LLP increased gradually, peaking at ₹9,512.67 in 2021–2022. The National Bank of Oman fluctuated a lot in Oman, rising significantly until 2019–20 and then down to ₹40,471 in 2022–2023. The value of Bank Muscat's LLP continued to rise, peaking in 2018–19. Overall, the data

shows a variety of patterns in LLP among the institutions, some showing steady declines and others showing fluctuations.

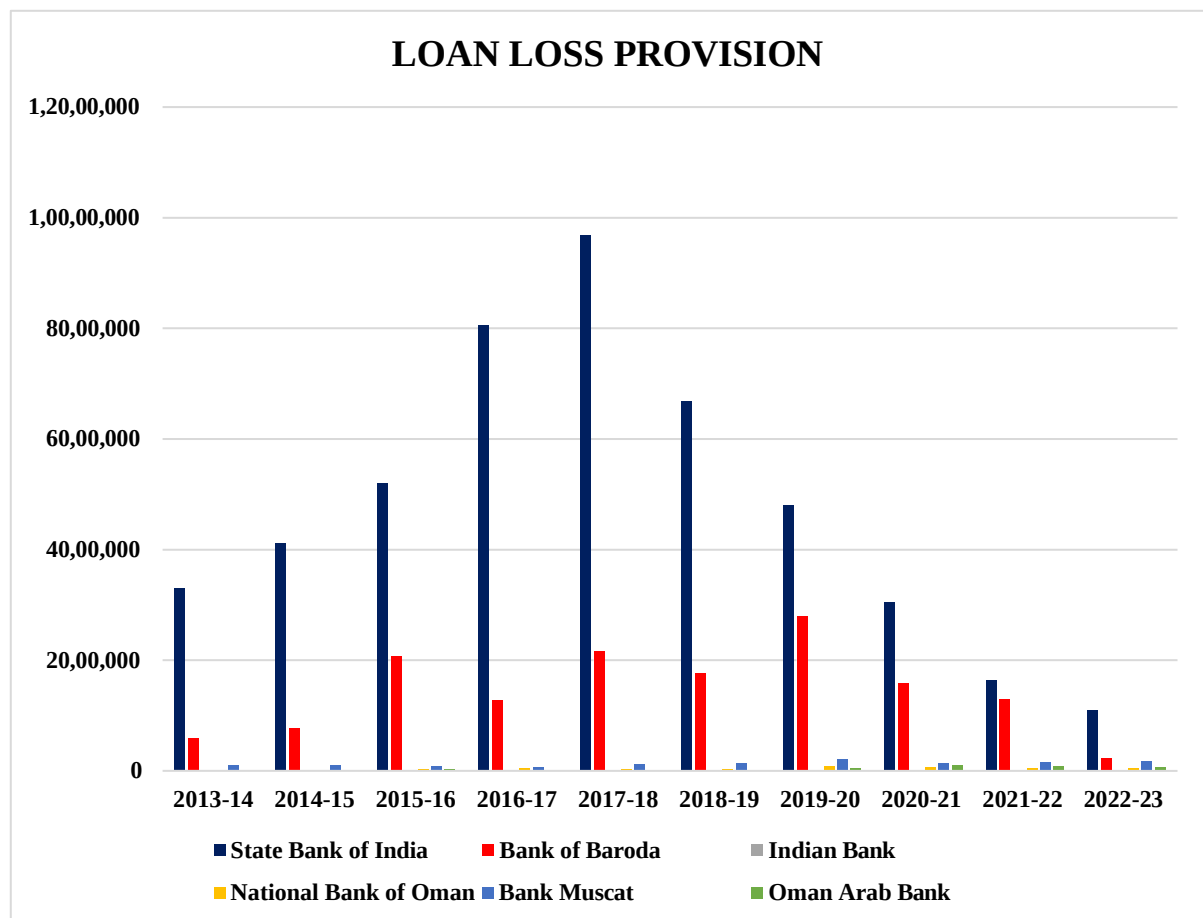


Figure 5: Loan Loss Provision

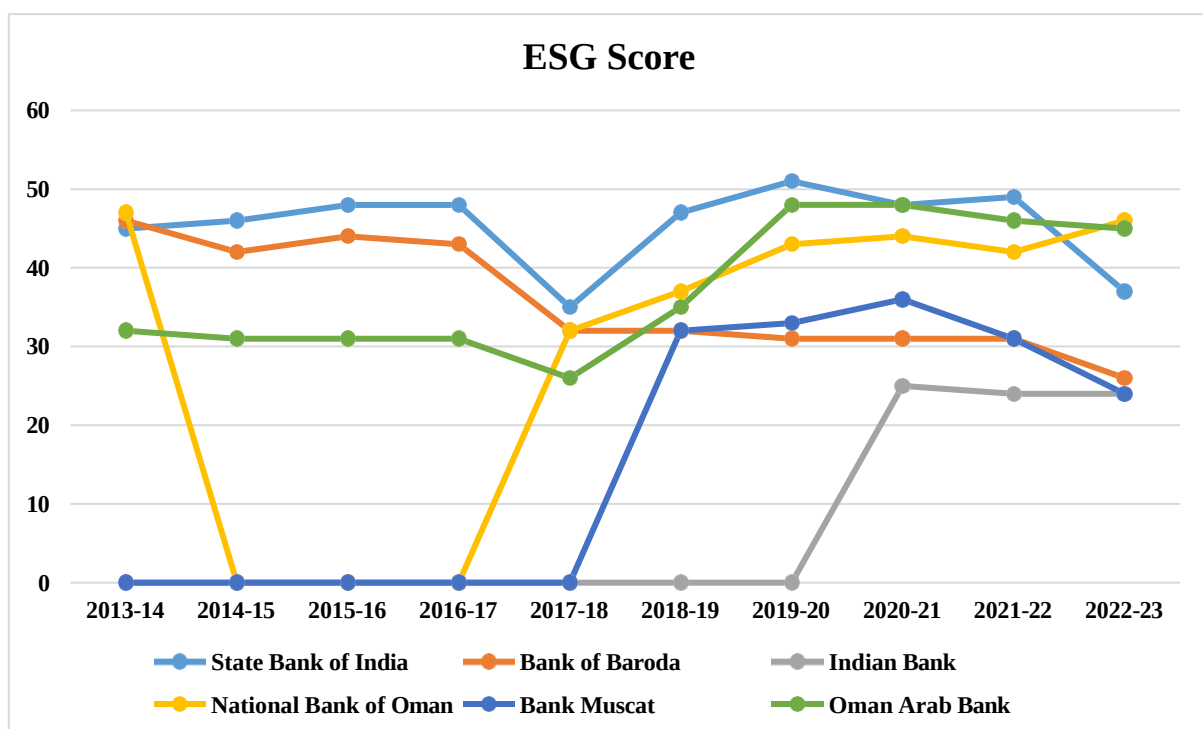


Figure 6: ESG Score

5.1.5 ESG Score

The chart (Figure 6) displays the ESG ratings of six banks from India and Oman between 2013–14 and 2022–23. Following a consistent climb to a high of 51 in 2019–20, the State Bank of India dropped to 37 in 2022–2023. The ratings for Bank of Baroda dropped notably to 26 in 2022–2023, following a peak of 46 in 2013–14. Although the rating of the National Bank of Oman stayed relatively low, reaching 46 in 2022–2023, that of the Indian Bank increased to 25 in 2020–21. Before their decline, Bank Muscat had no ratings from 2018 to 2019. They subsequently rose to 36 in 2020–21. Beginning with a score of 32 in 2013–14, Oman Arab Bank saw its rating rise to 48 in 2020–21, before dropping to 45 in 2022–23.

5.1.6 Corporate Social Responsibility

The Corporate Social Responsibility (CSR) spending of Indian and Omani banks from 2013–14 to 2022–23 is shown in Figure 7. While the Bank of Baroda's CSR expenditure peaked in 2014–15 and then had a sharp fall in 2019–20, the State Bank of India suffered significant cuts in this area. Indian Bank's CSR spending increased in 2017–18, although it varied greatly in the years that followed. Consistently investing in CSR, the National Bank of Oman reached a height of ₹6,392 crore in 2015–16. While Oman Arab Bank's CSR spending fluctuated significantly, Bank Muscat's spending increased in 2015–16. Overall, these banks' CSR expenditure exhibits erratic trends, with Omani banks often investing greater sums with less variation and Indian banks showing more swings.

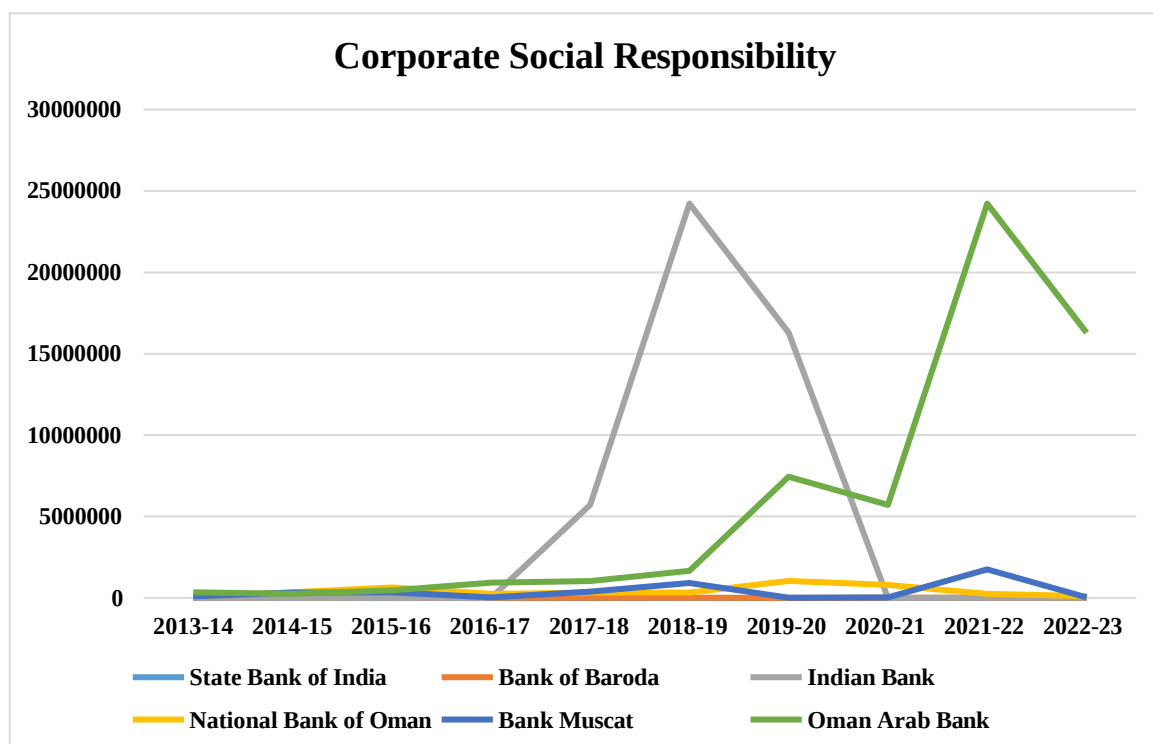


Figure 7: Corporate Social Responsibility

6. Discussion

As organizations that invest in sustainable initiatives, banks are prioritizing ESG concerns. BRICS ESG performance varies, as seen in this research. Brazilian banks engage most in ESG, yet their environmental and social rankings differ. Environmentally, banks perform, but social and governance concerns are problematic (Arun et al., 2022). Due to worldwide climate

measures, BRICS banks are more sustainable than Western banks despite lower ESG ratings. Global standards like GRI and UN Global Compact encourage large firms to strengthen ESG. ESG laws like India's 2013 Companies Act and China's 2008 CSR disclosure rules boost sustainability efforts. Market bank sustainability depends on mandated ESG reporting and international regulations, especially after COVID-19.

Sustainable banking performance in Oman using ECSR and GTM. ECSR directly affects sustainable performance and GTM, supporting earlier research on CSR and sustainability. Additionally, green hard and soft TM improve workers' IWB and GP. A more creative and ecologically sustainable workplace may increase corporate performance (Umair et al., 2024). While transformational leadership has no impact on GP, it seems to greatly affect green hard TM and IWB. These findings underscore the need for enterprises to promote eco-friendly practices, innovation, and sustainable environmental management. This research shows that Oman needs more government assistance for ECSR and GTM to attract environmentally concerned talent.

Examining bank sustainability in Oman and India, concentrating on essential indicators like Return on Assets (ROA), Return on Equity (ROE), Capital Adequacy Ratio (CAR), and Loan Loss Provisions (LLP) offers an important understanding of the connection between sustainability initiatives and financial results. ESG ratings reflect the overall commitment of a bank toward sustainability, incorporating its environmental, social, and governance activities. There is a growing connection between ESG ratings and financial performance. Improved risk management, a better reputation, and continued investor confidence can improve profitability and capital stability for banks with higher ESG ratings. Further, CSR initiatives represent the extent of a bank's involvement in initiatives that contribute positively to community wellbeing; these can impact financial performance directly. Well-crafted CSR can enhance brand value, increase loyalty from customers and boost employee morale, all leading to better bank financial performance since it will benefit in securing higher market share positions and reduce potential operational risks. The link between these sustainability factors and the financial stability of banks in Oman and India underscores the growing emphasis on incorporating sustainability into core business operations, which could enhance both financial performance and sustainability for these banks. The research focuses on ESG ratings, CSR efforts, and financial outcomes to illustrate the growth of sustainability in the banking sector. Our study connects ROA, ROE, CAR, and LLP with ESG scores and CSR initiatives to illustrate their ability to enhance profitability and sustain long-term stability. Additional research investigates ESG performance among BRICS countries and the ways ECSR and GTM enhance sustainable outcomes, particularly in Oman. Our study connects sustainability to the financial well-being of banks in Oman and India, as both encourage environmentally friendly practices and leadership.

7. Conclusion

The research explores the significance of financial traits on bank performance in Oman and India, with an emphasis on sustainability. This study analyses Bank ROA, ROE, Capital Adequacy Ratio, Loan Loss Provisions, and ESG Scores. These financial elements differ significantly among banks in each country, reflecting inconsistencies in financial stability,

profitability, and risk management. Research indicates that ESG ratings reflect different sustainability commitments.

Regression studies indicate that ESG practices have a restricted connection to financial success. Additional elements such as Loan Loss Provisions showed a positive correlation with ESG performance, whereas ROA did not. It indicates that credit loss reserves are positively linked to enhanced ESG practices, suggesting increased financial and environmental governance duties.

Moreover, a fixed-effects model indicates that the attributes of banks significantly affect the relationship between financial performance and sustainability efforts. While a number of financial metrics significantly impacted ESG ratings, Loan Loss Provisions emerged as the primary sustainability element.

The Hausman test shows that the fixed-effects model is appropriate for financial metrics. Based on the dynamic panel data model employing the Wald Test, Lagged ESG Scores have a significant positive influence on current ESG scores, indicating persistence in these behaviors. System dynamics models suggest that financial indicators such as ROA, ROE, and LLP have no impact on ESG rankings.

This research additionally explores the impact of financial metrics on CSR. The research indicates that Loan Loss Provisions negatively impact CSR activities, while ROA, ROE, and Capital Adequacy Ratio do not. Consequently, banks that have larger credit loss reserves are not expected to engage in proactive CSR.

In general, the study sheds light on the banking practices and sustainability of Oman and India. While banks carry out financial activities, numerous relationships for financial indicators, as proposed and backed by mediating ESG and CSR factors, are complex. These findings indicate that bank stability, risk management, and ESG practices during assessment impact the long-term sustainability of banks in both countries.

References:

1. Al-Jalahma, A., Al-Fadhel, H., Al-Muhanadi, M., & Al-Zaimoor, N. (2020). Environmental, Social, and Governance (ESG) disclosure and firm performance: Evidence from GCC Banking sector. *2020 International Conference on Decision Aid Sciences and Application (DASA)*, 54–58. <https://doi.org/10.1109/DASA51403.2020.9317210>
2. Arun, T., Girardone, C., & Piserà, S. (2022). ESG issues in emerging markets and the role of banks. In *Handbook of banking and finance in emerging markets*. Edward Elgar Publishing, 321–344. <https://doi.org/10.4337/9781800880900.00025>
3. Chaturvedi, K., Akhtar, S., Azhar, N., & Shamshad, M. (2021). Impact of corporate social responsibility on financial performance of selected banks in india: based on camel model. *Studies in Economics and Business Relations*, 2, 17-31.
4. Dalal, K. K., & Thaker, N. (2019). ESG and corporate financial performance: A panel study of Indian companies. *IUP Journal of Corporate Governance*, 18, 44-59.
5. Galdeano, D. M., Fati, M., Ahmed, U., Rehan, R., & Ahmed, A. (2019). Financial performance and corporate social responsibility in the banking sector of Bahrain: Can engagement moderate?. *Management Science Letters*, 9, 1529–1542. <https://doi.org/10.5267/j.msl.2019.5.032>
6. Iqbal, U. P., Mathew Jose, S., & Daniel, T. M. (2025). Levels of mandatory CSR compliance and the payoff: evidence from India. *Social Responsibility Journal*, 21, 378-390. <https://doi.org/10.1108/SRJ-03-2024-0142>

7. Jawad, A., & Abdulla, Y. (2022). ESG scores in MENA banks. *2022 International Conference on Sustainable Islamic Business and Finance (SIBF)*, 69–73. <https://doi.org/10.1109/SIBF56821.2022.9939932>
8. Jayaraman, G., Azad, I., & Ahmed, H. S. (2021). The impact of financial variables on firm profitability: an empirical study of commercial banks in Oman. *Journal of Asian Finance, Economics and Business*, 8, 885–896. <https://doi.org/10.13106/jafeb.2021.vol8.no5.0885>
9. Khan, F., & Al Maktoumi, I. (2021). Performance Evaluation of Commercial Banks in Oman Using Ratio Analyses. *International Journal of Research in Entrepreneurship & Business Studies*, 2, 10–21. <https://doi.org/10.47259/ijrebs.212>
10. Khémiri, W., Chafai, A., Attia, E. F., Tobar, R., & Farid Fouad, H. (2024). Trade-off between financial inclusion and Islamic bank stability in five GCC countries: the moderating effect of CSR. *Cogent Business and Management*, 11, 2300524. <https://doi.org/10.1080/23311975.2023.2300524>
11. Kumar, K., & Prakash, A. (2019). Developing a framework for assessing sustainable banking performance of the Indian banking sector. *Social Responsibility Journal*, 15, 689–709. <https://doi.org/10.1108/SRJ-07-2018-0162>
12. Li, L., & Galvani, V. (2018). Market states, sentiment, and momentum in the corporate bond market. *Journal of Banking & Finance*, 89, 249–265. <https://doi.org/10.1016/j.jbankfin.2018.02.007>
13. Mariappan, R. (2024). A Comparative Analysis of Profit Performance of Banking Sector in India: a Three Stage Approach. *Journal of South Asian Research*, 2, 103–121.
14. Mhadhbi, K., Terzi, C., & Bouchrika, A. (2020). Banking sector development and economic growth in developing countries: a bootstrap panel Granger causality analysis. *Empirical Economics*, 58, 2817–2836. <https://doi.org/10.1007/s00181-019-01670-z>
15. Miah, M. D., Rahman, S. M., & Mamoon, M. (2021). Green banking: the case of commercial banking sector in Oman. *Environment, Development and Sustainability*, 23, 2681–2697. <https://doi.org/10.1007/s10668-020-00695-0>
16. Mitra, N., & Schmidpeter, R. (2017). The why, what and how of the CSR mandate: The India story. In: Mitra, N., Schmidpeter, R. (eds) *Corporate Social Responsibility in India: Cases and Developments after the Legal Mandate*, 1–8. https://doi.org/10.1007/978-3-319-41781-3_1
17. Roy, A. (2017, February 8). RBI working on green finance framework. *Business Standard*. https://www.business-standard.com/article/economy-policy/rbi-working-on-green-finance-framework-117020800036_1.html
18. Sain, A., & Kashiramka, S. (2024). Do corporate governance mechanisms and ESG disclosures improve bank performance and stability in an emerging economy?. *Journal of Advances in Management Research*, 21, 530–555. <https://doi.org/10.1108/JAMR-12-2022-0253>
19. Sharma, E., & Sathish, M. (2022). “CSR leads to economic growth or not”: an evidence-based study to link corporate social responsibility (CSR) activities of the Indian banking sector with economic growth of India. *Asian Journal of Business Ethics*, 11, 67–103. <https://doi.org/10.1007/s13520-022-00142-5>
20. Sharma, M., & Choubey, A. (2022). Green banking initiatives: a qualitative study on Indian banking sector. *Environment, Development and Sustainability*, 24, 293–319. <https://doi.org/10.1007/s10668-021-01426-9>
21. Sharma, S., Gupta, C., Khanna Malhotra, R., & Upreti, H. (2024). Sustainable Banking Practices: Impact, challenges and opportunities. *E3S Web of Conferences*, 556, 01031. <https://doi.org/10.1051/e3sconf/202455601031>
22. Umair, S., Waqas, U., Mrugalska, B., & Al Shamsi, I. R. (2024). Correction: Umair et al. Environmental Corporate Social Responsibility, Green Talent Management, and Organization’s Sustainable Performance in the Banking Sector of Oman: The Role of Innovative Work Behavior

and Green Performance. Sustainability 2023, 15, 14303. Sustainability, 16, 947.
<https://doi.org/10.3390/su16030947>

Other Sources:

www.capitaliq.spglobal.com
https://www.moneycontrol.com/stocks/company_info/print_main.php
<https://www.moneycontrol.com/financials/statebankindia/balance-sheetvi/sbi>
<https://www.moneycontrol.com/financials/bankofbaroda/balance-sheetVI/BOB#BOB>
<https://www.moneycontrol.com/financials/bankindia/balance-sheetVI/BOI>
<https://www.nbo.om/en/Pages/IR/Results-and-Reports.aspx>
<https://www.oman-arabbank.com/home/about-us/investor-relations/>
<https://www.bankmuscat.com/en/investorrelations/pages/reports.aspx>
<https://www.arabbank.com/mainmenu/home/sustainability/sustainability-reports>
<https://www.bankmuscat.com/en/about/csr/pages/sustainabilityreport.aspx>
<https://sbi.co.in/web/sbi-green/esg/sustainability>
<https://www.bankofbaroda.in/shareholders-corner/sustainability-disclosures>
<https://sbi.co.in/web/corporate-governance/annual-report->
<https://www.moneycontrol.com/financials/indianbank/results/yearly/ib04>
<https://www.bankmuscat.com/en/about/csr/pages/sustainabilityreport.aspx>
<https://www.indianbank.in/departments/annual-reports-ib/>
<https://www.sustainalytics.com/esg-rating/state-bank-of-india/1008752733>
chrome-
extension://efaidnbmnnnibpcajpcglclefindmkaj/https://sbi.co.in/corporate/AR1314/pdf/english/BUSI
NESS%20RESPONSIBILITY%20REPORT.pdf
[https://www.researchgate.net/publication/371575894_Corporate_Social_Responsibility_-
A_Study_on_State_Bank_of_India](https://www.researchgate.net/publication/371575894_Corporate_Social_Responsibility_-_A_Study_on_State_Bank_of_India)