

Do Bank Characteristics Really Matter for its Environmental Reporting?

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The last few decades have seen an increasing number of researches in the area of environmental reporting. Institutions across the globe have been extensively reporting their environmental initiatives through their annual reports. There is a dearth of research on environmental reporting in the Indian context. Thus, this study comprehensively analyzes the environmental reporting practices of scheduled banks in India. It further attempts to explore the association between environmental reporting and bank characteristics. The secondary data is collected from the annual reports, sustainability reports, and business responsibility reports for the period 2017–2022. The sample consists of ten top-rated commercial banks chosen based on market capitalization during June 2022. The content analysis technique is used to extract information on environmental practices under twelve major categories. This study employs correlation analysis to examine the association between environmental reporting and bank characteristics. The findings of this study reveal that Indian commercial banks are increasingly reporting environmental information in their bank reports and websites. Further, the results of correlation analysis revealed a significant association between environmental reporting and the banks' age, size, and profitability. Further, this study recommends policymakers and concerned professional bodies introduce additional environmental guidelines and widen the scope of reporting in the banking industry.

Keywords: Content analysis, ESG, Legitimacy theory, Sustainability reports, Sustainable banking

Introduction

Lately, institutions around the globe have been acknowledging their role towards the external environment. Although the main motive of a business entity is to earn profits¹, several institutions have been actively addressing sustainability concerns.² The economic crisis of 2008 significantly impacted the global markets. Negative market conditions led to the collapse of business entities. To recover from this catastrophic event, institutions started paying attention to sustainable practices, in order to gain social congruence and legitimize their activities in society.³

The last decade has witnessed an increasing quantum of research in the field of environmental reporting. Institutions around the world have been aggressively publicizing their environmental commitments in their annual reports ever since the financial crisis. Meanwhile, the legal standards of a few developed economies mandate large institutions to report non-financial information along with their financial statements. The enactment of Directive 2014/95/EU of the European Parliament enforces companies to report non-financial information to their

stakeholders⁴, who consider environmental reporting practices as a benchmark to evaluate an institution's environmental performance. To promote these practices, several guidelines on environmental reporting have been formulated.

The focus of the present study is to evaluate the environmental reporting practices of commercial banks in India. Several studies have focused on capturing the environmental reporting practices of institutions in developed countries.⁵ A thorough review of the existing literature revealed that not many studies relating to environmental reporting have been carried out in developing countries.⁶ However, in the Indian context, previous studies have evaluated the environmental reporting practices of certain carbon-sensitive companies.⁷ But, none of the studies have focused on measuring the environmental reporting practices of banks. Thus, the present paper seeks to address this research gap by comprehensively evaluating the environmental reporting practices of scheduled banks, especially in the Indian context. It further explores the association between environmental reporting and bank characteristics.

The results of this study have various research implications for the stakeholders of the banking institutions. The findings of this study will add value

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to the existing state of knowledge, as they will distinctly present the current status of environmental reporting in commercial banks in India. Firstly, the results of the present study will guide the bank executives in identifying the critical gaps in the present reporting regime. The bank executives can distinctly identify the environmental areas which need foremost attention. Secondly, the results have wide implications for policymakers. The findings of this study will help the policymakers in reviewing the current environmental guidelines and laws in context with the present state of reporting. Similarly, the concerned bodies can accordingly make amendments to the same. Lastly, the results of the present study are beneficial for the investors of the banking institutions. The scoring system adopted in the present study helped in evaluating the environmental reporting performance of banks in India and the findings comprehensively reflect the environmental commitments of these institutions. Since potential investors in growing economies consider the environmental initiatives of the institutions⁸, the results of the present study will aid them in making investment decisions.

Literature Survey

Legitimacy Theory

Legitimacy theory forms the foundation of environmental reporting performance. It is predicated on the idea that society and business have reached a social consensus. In this agreement, the business gains various benefits from the society, and hence, the former is morally responsible to give back to society.⁹ Suchman¹⁰ defines legitimacy as the perception of society that think the activities of an institution are acceptable and at par with the social system of values, beliefs, and norms. It describes a point at which a given institution's actions are deemed ethical and appropriate by the society. According to this theory, legitimacy-oriented incentives are major motivational drivers for any institution to act along the lines of sustainable principles and legitimize their behavior towards society.

This theory is categorized into two perspectives namely strategic and institutional.¹⁰ Primarily, the strategic perspective of legitimacy emphasizes an institution's desire to gain social congruence in response to various legitimacy threats. These threats emerge due to the changes in the perceptions of stakeholders, caused by changes in awareness levels, institutional crises, and pressure from regulatory

bodies and green groups.¹¹ However, the institutional legitimacy theory views legitimacy as constitutive beliefs that interpenetrate institutions in every aspect.¹⁰ According to this perspective, an institution that adheres to these beliefs is believed to gain legitimacy in society. Often, institutional managers are affected by the coercive, mimetic, and normative activities of society that pressurize them to adopt the accepted industrial practices. Under these circumstances, institutions adopt the practices of an existing institution or follow processes that are derived from government regulations, or accept institutional patterns to gain legitimacy in society. However, institutions face both strategic threats and institutional pressures that compel them to legitimize their practices to society.

The research on social and environmental reporting frequently employs legitimacy theory to show why institutions adhere to environmental reporting guidelines. As a part of legitimacy, institutions use corporate environmental reporting as a mechanism to influence the perception of stakeholders. It is one of the tools adopted by institutional managers for managing impressions of society regarding the environmental impacts of their business activities. Being an active stimulus, these practices motivate institutions to uphold their image and reputation in society.¹² However, in practice, institutions follow either a substantive or symbolic legitimacy strategy to influence the perception of stakeholders.¹³ They either engage in real reporting activities to gain social acknowledgment and reduce the legitimacy gap or falsely influence the perceptions of the stakeholders, without incorporating real-time changes in their business activities.

Lately, institutions have been reporting their environmental commitments in their annual reports. Nevertheless, banking institutions have also been practicing environmental reporting to gain social congruence and mitigate the legitimacy gap in society.¹⁴ A recent study by Masud *et al.*¹⁵ reported that environmental accounting and reporting practices in banking institutions have been gradually increasing. This reflects the bankers enhanced perception and greater involvement in environmentalism. However, previous studies have used legitimacy theory as a foundation to evaluate the reporting practices of banking institutions.¹⁶ Similarly, in line with previous studies, this study adopts legitimacy theory, more precisely, the strategic perspective of legitimacy to evaluate the

environmental reporting practices of banking institutions.

Corporate Environmental Reporting

Corporate environmental reporting has emerged as a contemporary topic under the traditional accounting system. It is a procedure that goes beyond the financial statement to inform the institution's stakeholders about how company operations affect the environment. Gray *et al.*¹⁷ defines corporate environmental reporting as the process of informing specific interest groups within society as well as society at large on the social and environmental effects of an organization's economic actions. However, Schaltegger and Burritt¹⁸ believes that an institution communicates the environmental impacts of its business activities through its annual reports or environmental reports. It includes reporting information on their environmental activities to stakeholders of the institution. It is a mechanism through which institutions report their socially responsible environmental commitments to the concerned participants through multiple media platforms.

Earlier, environmental reporting was considered irrelevant for performance. A few studies asserted that environmental activities negatively influence the performance of institutions.¹⁹ A study by Deegan and Gordan²⁰ posit that these practices demand extra investment requirements and form an additional cost to the institution. Due to the added financial burden, they negatively affected the financial performance of institutions. However, the financial crisis of 2008 compelled institutional managers to incorporate reporting practices and use them as a benchmark to recover from the financial setback.

An institution enjoys significant advantages by incorporating reporting practices. They are benefitted in the form of improved performance in the long run.²¹ Eventually, these practices positively enhance the reputation of institutions.³ They protect business activities against adverse market conditions by positively influencing the perception of stakeholders.²² Lately, potential investors consider both the financial and non-financial performance of institutions to make their investment decisions.⁸ In times of crisis, environmental reporting practices safeguard the image of the institution. Furthermore, these practices help institutions develop valuable resources that are crucial for gaining a competitive advantage in the business market.²³ Owing to these

advantages, several institutions have been incorporating environmental reporting into their strategic framework to gain legitimacy in society.

Environmental Reporting in India

The Government of India has introduced a few initiatives to robustly contribute to sustainable development. These initiatives promote greater involvement of institutions towards ensuring an ideal balance between economic growth and sustainable development. However, with respect to environmental reporting, several measures have been formulated by the Government of India. In 2011, the Ministry of Corporate Affairs released the "National Voluntary Guidelines on Social, Environmental, and Economic Responsibilities of Business" for corporations in India.²⁴ These voluntary guidelines provided a regulatory framework for reporting environmental information. Further, the Securities Exchange Board of India (SEBI) released mandatory disclosure guidelines in the form of business responsibility reports for the top 100 BSE and NSE-listed institutions in India.²⁵ However, this benchmark was expanded to the top 500 and 1000 listed BSE and NSE-listed institutions in 2015⁽²⁶⁾ and 2021⁽²⁷⁾ respectively. Meanwhile, in 2017, the SEBI also suggested the top 500 listed institutions to publish integrated reports annually.²⁸ However, in 2015, the Indian Government revised the Indian Companies Act 2013, and made it mandatory for corporations operating in India, whose net worth is 5 billion rupees, or net profit is 50 million or more, or turnover of 10 billion and above to spend at least 2 percent of average profits on CSR activities.²⁹ The aforementioned regulations compelled listed banking institutions to report their environmental initiatives and practices in their bank reports. However, within the context of the banking sector, there are no specific guidelines and standards governing environmental reporting practices of banks in India. The data in Table 1 reflects previous studies on environmental reporting that have been carried out in the Indian setting.

Environmental Reporting and Bank Characteristics (Hypothesis)

Bank Age

Based on the underpinnings of the legitimacy theory, it can be posited that an institution's age is an influential factor in determining its environmental reporting activities. The age of an institution reflects its financial strength, stability, and strategic position.

Table 1 — Studies relating to environmental reporting in India

Authors	Sample Size	No. of years	No. of environmental variables	Data source	Basis of Analysis
Pahuja ³⁰	91	3	23	Annual reports	Environmental disclosure index
Sen <i>et al.</i> ³¹	22	1	15	Annual reports	Environmental disclosure score
Chaklader & Gulati ³²	50	4	6	Annual reports	Environmental disclosure index
Kumar <i>et al.</i> ³³	36	1	1	Word count of terms related to 3 dimensions of sustainability	CSR reports
Chen <i>et al.</i> ³⁴	12	1	9	GRI reports and annual reports	Environmental disclosure scale
Laskar & Maji ³⁵	28	6	GRI Reporting by corporations	Annual reports and sustainability reports	Environmental disclosure score
Prasad <i>et al.</i> ⁷	137	2	39	Annual reports	Environmental disclosure score
Chandok & Singh ³⁶	100	1	33	Annual reports and websites	Environmental disclosure score
Jessop <i>et al.</i> ³⁷	12	15	18	Annual reports and sustainability reports	Environmental disclosure score
Sudha ³⁸	224	10	3	PROWESS	Scoring of environmental variables

Liu³⁹ posited that an institution's engagement in non-financial activities like environmental reporting will be entrenched as it gets older. It has been found that older firms comprehensively report environmental initiatives more than other firms.⁴⁰ This is because bigger firms are more worried about their image as they are liable to face the risk of legitimacy from the public. In this context, an institution's age and environmental reporting are positively associated. Kumar *et al.*⁴¹ found a positive significant relationship between environmental reporting and a firm's age. Similarly, Chandok and Singh³⁶ investigated the impact of company variables on corporate environmental disclosure of companies listed on the Bombay Stock Exchange. The results reflect that the age of the company positively impacts its environmental disclosure activities. However, in the context of the banking sector, previous studies⁴² have also reported a positive relationship between environmental reporting and bank age. Based on the above arguments, this study proposes the following hypothesis:

H₁: There is significant association between environmental reporting and bank age.

Bank Size

The legitimacy theory states that large commercial banks are accountable to various stakeholder groups. The visibility of these banks is extensive and they easily come under the scrutiny of the public eye. The

environmental strategy adopted by institutions is largely affected by the size of the firm. Previous literature reflects that larger institutions share more additional environmental information than smaller institutions. Moreover, reporting practices create an avenue for institutions to gain social acceptance in society. The increased appreciation and acceptance will attract potential investors and help institutions build a good image in society. Prior studies reveal a positive relationship between environmental reporting and bank size.⁴³ A study by Iredele⁴⁴ found a significant positive association between corporate environmental reporting and firm size of companies listed on the Nigerian Stock Exchange. Supporting the above findings, Kilic and Kuzey⁴² empirically posited that bank age positively influences corporate environmental reporting. Similarly, a positive association between environmental reporting and the size of Lebanese banks was reported by Khalil and O'Sullivan⁴⁵ in 2017. Therefore, based on the above discussion, this study proposes the following hypothesis:

H₂: There is significant association between environmental reporting and bank size.

Bank Profitability

Previous studies have empirically tested the association between a bank's profitability and its environmental reporting activities.⁴⁶ Firms with higher financial performance are expected to actively

address environmental issues, and report their initiatives to gain legitimacy in society. A study by Kundid and Rogosic⁴⁷ found a positive association between bank's profitability and its environmental reporting activities. Similarly, another study⁴⁵ also found a significant association between the two variables. Nonetheless, a study by Ho and Taylor⁴⁸ reflected a negative association between environmental reporting and firms profitability. However, an insignificant relationship between the two variables were reported by Akhter *et al.*⁴⁹ As there is no clear evidence on the relationship between environmental reporting and bank profitability, we propose the following hypothesis:

H₃: There is significant association between environmental reporting and bank profitability.

Bank's Foreign Presence

An earlier study by Amran and Devi⁵⁰ found an insignificant impact of foreign presence on corporate reporting practices of institutions. However, recent researchers are of the opinion that a firm's presence significantly influences its reporting activities. Mostly, the CSR practices of foreign institutions substantially impact the reporting practices of institutions in developing countries.⁵¹ As higher importance is given to environmental issues in foreign countries, firms having foreign presence also tend to address and report significant environmental issues in their concerned reports. In reference to the above argument, the following hypothesis is proposed:

H₄: There is significant association between environmental reporting and banks foreign presence.

Data and Methods

The prime aim of this research is to evaluate the environmental reporting of scheduled banks in India and to explore its association with banks' characteristics. This study is solely based on information collected from secondary sources. The Annual Reports (ARs), Sustainability Reports, and Business Responsibility Reports (BRRs) of the sample commercial banks were used to extract environmental information. The sample size of the present study is confined to the top five public and private sector commercial banks in India, and is presented in Table 2. The study adopted a judgmental sampling technique and banks were selected based on the highest market valuation during the month of June 2022. There are 12 public and 22 private sector commercial banks operating in India. However, as the

Table 2 — List of sample banks

Public Sector Banks	Private Sector Banks
State Bank of India	HDFC Bank
Punjab National Bank	ICICI Bank
Bank of Baroda	Axis Bank
Indian Overseas Bank	Kotak Mahindra Bank
Canara Bank	IndusInd Bank

minimum acceptable sample size for a descriptive study is 10% of the total population⁵², the sample size of the present study represents 29% of the total population.

Commercial banks in India have carried out several CSR activities and have been reporting on various social and environmental grounds. Section 135 of the Companies Act also mandates the implementation of CSR practices to a certain extent. As a result, these institutions have reached a hallmark position with respect to environmental reporting since 2013. Therefore, the present study uses the bank reports of six consecutive years i.e., from 2016–17 to 2021–22, which is also ideally substantiated by previous study.⁵¹

Content Analysis

Content analysis is a popular tool used in social science research.³⁵ It is a method of gathering data that entails coding pertinent facts and classifying the coded data to determine quantitative scales. Most of the research papers use content analysis⁵³ to evaluate the social and environmental reporting (SER) of institutions. The present study adopts general content analysis technique to examine the contents reported in the bank's annual and sustainability reports. The overall content related to pre-defined areas of environmental reporting was analyzed rather than considering lines, pictures, words, or graphs. The study adopted twelve main categories of environmental reporting from a previous study.¹⁵ The content falling under these major categories was examined to evaluate the environmental reporting performance of banks in India. The chosen categories were coded, and the same is presented in Table 3. The present study only includes information reported from the environmental perspective. The social and financial dimensions of reporting have been excluded from the analysis. Further, the study includes a scoring mechanism to examine the environmental data reported by sample banks. The environmental reporting scoring index was adopted from a previous study⁵⁴, where a value of 1 was assigned to initiatives reported under each category of disclosure and a value of 0, if not reported.

Table 3 — Coding of environmental reporting practices

Sl No.	Environmental reporting categories	Code
1.	Air pollution and control measures	C1
2.	Water contamination and control measures	C2
3.	Waste handling plans and procedures	C3
4.	Investments in renewable energy	C4
5.	Energy efficiency measures	C5
6.	Bank ecological and carbon management measures	C6
7.	Award and certification for environmental management	C7
8.	Distinct division, committee, council for environmental management	C8
9.	Green banking initiatives, policy, and strategy	C9
10.	Afforestation activities	C10
11.	Environmental promotion, awareness, and training measures	C11
12.	Climate change mitigation measures	C12

The present study gives attention to the environmental reporting index, which is used to comprehensively evaluate the nature and intensity of environmental reporting by banking institutions in India. The bank-specific characteristics (size, age, foreign presence, profitability) were collected from their annual reports and websites. In addition to basic statistical analysis, this study employs correlation analysis to explore the association between environmental reporting and bank characteristics.

Results

Environmental Reporting in Selected Categories

The identified twelve categories of environmental reporting by Indian Commercial banks are coded as C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, and C12. The environmental reporting practices of the sample banks under the pre-determined twelve categories.

The data in Table 4 reflects the total environmental reporting of sample banks in each category. The State Bank of India, Punjab National Bank, Bank of Baroda, HDFC Bank, Axis Bank, and IndusInd Bank reported environmental content under all 12 categories. This is followed by ICICI Bank and Kotak Mahindra Bank which reported environmental content under 11 categories. The least environmental information is reported by Canara Bank and Indian Overseas Bank. As compared to the previous study³⁰, the results of the present study are satisfactory in terms of banks' environmental reporting practices.

Table 4 — Total environmental reporting score in each category

Sample Banks	Number of categories	Percentage (%)
State Bank of India	12	100
Punjab National Bank	12	100
Bank of Baroda	12	100
Canara Bank	6	50
Indian Overseas Bank	6	50
HDFC Bank	12	100
ICICI Bank	11	92
Axis Bank	12	100
Kotak Mahindra Bank	11	92
IndusInd Bank	12	100
Average	10.6	88.4

Total Environmental Reporting Score in all Categories

The data in Table 5 shows the total environmental reporting score of sample banks in the twelve categories. The green banking category (C9) scored the highest among all other categories with an average score of 49.1. Indian banking institutions have undertaken various green banking initiatives that include digital transformation services, green infrastructure, green products, and services. This was followed by energy saving category (C5), where several in-house initiatives have been adopted to save energy. These include adoption of energy-efficient equipment's like LED fixtures, motion sensors, power management utility software, etc. The use of these equipments has substantially lowered the energy consumption of banks and progressively reduced its carbon footprint on the environment. Furthermore, banks have been reporting environmental information under the renewable energy category (C4). In response to adverse climate conditions, these institutions have adopted various carbon neutral strategies to promote the consumption of renewable energy. Several banks have installed solar power systems, and wind energy systems to manage their power requirements. These initiatives have fostered the use of eco-friendly energy sources in banking institutions. Subsequently, Indian banks have been investing in renewable energy projects like solar, wind, biomass, and hydro projects to foster the use of renewable energy in the economy.

Alongside, Indian banks have been financing several environmental projects and activities. Some of the common areas of environmental financing include renewable energy projects, ecological and biodiversity restoration projects, climate change mitigation initiatives, afforestation activities, green projects, etc. Meanwhile, these institutions have also

Table 5 — Environmental reporting score in all categories

Sample Banks	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
State Bank of India	2	8	14	23	22	23	9	7	45	11	13	4
Punjab National Bank	3	6	8	23	10	9	9	6	37	6	6	2
Bank of Baroda	8	7	6	25	14	10	5	6	30	3	7	3
Canara Bank	0	10	0	28	17	13	0	7	47	0	0	0
Indian Overseas Bank	0	0	0	18	27	14	0	6	67	2	0	0
HDFC Bank	6	9	15	12	26	29	11	6	47	9	13	17
ICICI Bank	11	21	18	27	32	13	37	0	57	6	2	0
Axis Bank	8	18	28	22	31	21	3	7	60	11	9	7
Kotak Mahindra Bank	5	12	16	7	38	24	4	8	46	0	7	0
IndusInd Bank	17	22	20	38	42	21	34	6	54	12	10	18
Total	60	113	125	223	259	177	112	59	491	60	67	51
Mean Score	6.0	11.3	12.5	22.3	25.9	17.7	11.2	5.9	49.1	6.0	6.7	5.1

Table 6 — Annual environmental reporting scores

Categories	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
C1	8	8	7	8	13	16
C2	14	11	21	26	17	24
C3	15	21	20	22	20	28
C4	28	31	40	40	38	46
C5	40	43	44	38	45	57
C6	32	26	24	27	30	38
C7	14	11	13	19	26	29
C8	6	8	9	11	8	14
C9	79	91	75	76	87	83
C10	8	8	8	9	10	17
C11	11	10	9	13	10	14
C12	2	4	3	6	17	19
Total Disclosure	257	272	273	295	321	385

adopted waste and water management systems, power management software, and energy-efficient instruments to effectively manage their resource consumption. They have also introduced various digital transformative services like digital loans, digital statements, PINs, e-communication channels, internet, mobile banking, etc. to minimize their use of material consumption.

Annual Environmental Reporting Score of Sample Banks

The data in Table 6 delineates the yearly environmental reporting score of banking institutions in India. The total environmental reporting score has gradually increased from 257 in 2016–17 to 385 in 2021–22. From the findings, it is evident that environmental reporting in the banking sector has been progressively improving. The increasing trend in environmental reporting can be attributed to the CSR regulatory measures articulated in The Companies' Act 2013. However, banking institutions in India have been strengthening their environmental practices and reporting the same to legitimize their actions and approaches in society.

Table 7 — Environmental reporting comparison

Year	Mean	Median	Std. Dev	Mode
2016–17	21.41	14	21.43	8
2017–18	22.67	11	24.48	8
2018–19	22.75	16.5	20.93	9
2019–20	24.58	20.5	19.75	0
2020–21	26.75	18.5	22.23	17
2021–22	32.08	26	20.98	14

Comparison of Environmental Reporting Scores

The data in Table 7 shows the comparison of environmental reporting scores of sample banks for the period 2016–17 to 2021–22. The mean score increased to 32.08 in 2021–22 from 21.41 in 2016–17, indicating a gradual increase in the mean reporting score of banking institutions in India. Meanwhile, the mean score of 2017–18, 2018–19, 2019–20, and 2020–21 are 22.67, 22.75, 24.58, and 26.75 respectively. The findings reflect an increasing trend in the mean environmental reporting score of sample banks. This result can be attributed to the legal standards of the country like the SEBI disclosure norms²⁶, that have significantly influenced the environmental reporting practices of banking institutions in India.

Ranking of Banks

Based on the environmental reporting scores, the sample banks have been ranked accordingly, and are presented in Table 8. The IndusInd bank is ranked one for the highest environmental reporting score. They have included several novel strategies to assess and combat the implications of global climate change. The second and the third position are held by Axis Bank and ICICI bank respectively. Being private commercial banks, these banks have implemented various strategies and policies that promote environmentally sustainable practices. On the other hand, Bank of Baroda and Canara Bank have been ranked nine and ten for reporting least environmental information in the bank reports. However, based on the findings, we can posit that private-sector banks in India have been reporting additional environmental

information than public-sector banks. Further to validate the above rankings, major environmental initiatives and practices of sample banks have been identified from the bank reports and websites.

Major Environmental Initiatives of Banks

The data in Table 9 reflects the major environmental initiatives of sample banks in India. All the banks have initiated financing activities related to renewable energy, digital transformation processes, energy-efficient instruments, waste, and water management systems, green projects, etc. Several novel practices and initiatives are being carried out by banking institutions to reduce their carbon footprint on the environment and promote environmental sustainability in the economy. The IndusInd bank has adopted a GHG inventory system to combat the present climate change, while Axis bank has installed smart energy control systems on the bank's premises. The State Bank of India has been financing various renewable projects which include solar energy, wind power; biomass plants, etc. whereas HDFC bank has adopted several climate change mitigation strategies. These environmental practices and initiatives have helped banking institutions progressively contribute to a sustainable growing economy.

Environmental Reporting and Bank Characteristics

The results of descriptive statistics are presented in Table 10. The mean value of the environmental

Table 8 — Ranking of banks on the basis of total reporting scores

Bank Name	Total Disclosures	Rank
IndusInd Bank	294	1
Axis Bank	225	2
ICICI Bank	224	3
HDFC Bank	200	4
State Bank of India	181	5
Kotak Mahindra Bank	167	6
Indian Overseas Bank	134	7
Punjab National Bank	126	8
Bank of Baroda	124	9
Canara Bank	122	10

Table 9 — Major environmental financing activities

Sample Bank	Major environmental financing areas
IndusInd Bank	Renewable energy projects, climate change mitigation initiatives, greenhouse gas (GHG) inventory system, Ecological restoration projects, green technology, water and waste management system, digital innovative activities, A forestation activities, energy-efficient tools, green system, green financing.
Axis Bank	Smart-energy control system, green financing, renewable energy, climate change strategies, procurement of eco-friendly materials, digital transformative initiatives, awareness drives, biodiversity revival projects, waste, and water management system.
ICICI Bank	Watershed management projects, energy-efficient equipment, digital and technological projects, afforestation activities, renewable energy, GHG emission control projects, rejuvenation projects, waste management system, operational control system.
HDFC Bank	Innovative technology, energy star equipment, community-led sanitation programme, energy-efficient real estate projects, renewable energy, waste management system, tree plantation drives, digital products and services, climate change mitigation strategies.
State Bank of India	Green projects, renewable energy, power management software, biodiversity projects, water and waste management systems, digital transformation initiatives, energy-efficient instruments.

Table 10 — Descriptive statistics of bank characteristics

Variables	Mean	Standard deviation	Skewness	Kurtosis	Probability
Environmental Score	29.88	10.92	0.738	2.650	0.039
Bank Age	61.70	41.47	0.366	1.442	0.025
Bank Size	13.17	0.898	0.173	2.925	0.855
Foreign Presence	0.95	0.218	-4.13	18.052	0.000
Bank Profit	1.338	3.181	3.701	19.107	0.000

Table 11 — Results of correlation analysis

Variables	Environmental score	Bank age	Bank size	Foreign presence	Bank profit
Environmental reporting score	1				
Bank age	-0.647 (0.000)	1			
Bank size	-0.250 (0.054)	0.440 (0.000)	1		
Foreign presence	0.132 (0.316)	0.260 (0.044)	0.371 (0.004)	1	
Bank profitability	0.408 (0.001)	-0.273 (0.035)	-0.005 (0.969)	-0.048 (0.715)	1

reporting score is 29.88, while its skewness and kurtosis stand at 0.738 and 2.650. Likewise, the mean scores of bank age and bank size are 61.70 and 13.17 respectively. The bank age has a skewness of 0.366 and a kurtosis of 1.442. In respect of foreign presence, the mean value stands at 0.95. However, its skewness value is -4.13, and kurtosis value is 18.052. Similarly, the bank profit has a mean score of 1.338, with its skewness and kurtosis value being 3.701 and 19.107 respectively.

Correlation Analysis– Testing of Hypotheses

This study uses Pearson correlation coefficient analysis to understand the association between environmental reporting and bank characteristics, and the results are presented in Table 11. The findings indicate a significant negative correlation between environmental reporting and bank age ($\beta = -0.647$, $p = 0.000$). Therefore, hypothesis (H_1) which states that there is a significant relationship between environmental reporting and bank age is accepted. The findings of this study are in line with those of Prasad *et al.*⁷ who reported a significant association between the two variables. In line with the legitimacy theory, age is considered as an important attribute of an institution that significantly influences its environmental engagement. However, the findings of this study demonstrate an inverse relationship between environmental reporting and bank age. This implies that younger banks intend to legitimize their activities in society to establish their reputation. Unlike older banks, which are well-established and have a good reputation in society, the younger banking institutions tend to engage in non-financial activities and actively report on this ground to gain social congruence and earn a good image in society. Likewise, a significant negative correlation is found between environmental reporting and bank size ($\beta = -0.250$, $p = 0.054$). Thus, hypothesis (H_2) is accepted. Contrary to the findings of previous studies⁴⁹, this finding suggest that larger banks seem to pay less attention to environmental issues and carry out the least environmental reporting practices. This finding supports the fact that larger and well-

established institutions do not continue to seek legitimacy in the long run because of their established brand value in society.

However, the results of Pearson correlation analysis reveal a positive significant correlation between environmental reporting and bank profitability ($\beta = 0.408$, $p = 0.001$). Therefore, hypothesis (H_3) is accepted. This finding is in line with Jizi⁵⁵ results, who posited a significant positive relationship between the two variables. The results indicate profitable banking institutions tend to invest additional funds in environmental projects and activities to fulfill their motive of carrying out responsible business activities in the society. Meanwhile, an insignificant relationship is found between environmental reporting and the banks foreign presence. Since the p-value ($\beta = 0.132$, $p = 0.316$) is statistically insignificant at 5% level of significance, hypothesis (H_4) which states that there is significant relationship between environmental reporting and bank's foreign presence is rejected. The above findings is in line with Amran and Devi⁵⁰, who is of the opinion that an institution's internationality will not potentially influence its decision in engaging in other non-financial activities. However, in the context of the Indian banking sector, very few public and private-sector commercial banks have a handful of international branches. Since, most of the sample banks do not have a holding in the international market, an insignificant association is found between the two variables.

Conclusions

The present research evaluated the environmental reporting practices of commercial banks in India from 2017–2022. It further investigated the association between environmental reporting and bank-specific characteristics. The findings of the content analysis reflect a gradual increasing trend in environmental reporting practices. The results are satisfactory as most of the Indian banking institutions are reporting under all the twelve categories, except for Canara Bank and Indian Overseas bank. Further, the results

of correlation analysis revealed a significant association between environmental reporting and the bank's age, size, and profitability. Based on the findings, the study suggests governing bodies formulate environmental reporting standards that will promote uniform mandatory reporting practices in banking institutions. Regulatory institutions like the RBI, SEBI, and Ministry of Corporate Affairs should introduce standardized legal framework for environmental reporting, specifically for banking institutions in India. The findings of this study are bound to certain limitations. As the sample size of the present study is limited to five public and private commercial banks in India, future research can include all the commercial banks operating in India. Future studies can use relevant primary data collection techniques like structured questionnaires, interview methods to empirically validate the results of the present study.

Conflict of Interest

The authors have no conflict of interest to declare relating to the content of this manuscript.

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