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Impact of Corporate Attributes on Sustainability (ESG) Reporting: Evidence from Listed Banks in India

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Abstract

The present study aims to examine the Sustainability (ESG) reporting practices and the impact of some corporate characteristics (age, size, profitability, leverage, and international presence) on the extent of sustainability disclosure of listed banks in India. The sample consisted of all ten banks listed on S&P BSE Bankex representing a large market share of the Indian banking sector. The Sustainability/CSR/Business responsibility reports of the sample companies for the F.Y 2019-20 were examined through the content analysis method using a self-developed Sustainability Reporting Disclosure Index (SRDI) based on the review of literature and standards on sustainability disclosure. The multiple regression technique is used to identify significant corporate attributes affecting Sustainability Reporting (SR). The findings indicate that dimensions like environment, human rights and labour practices are the least reported by selected banks. The regression results show that there is a positive and significant impact of size and leverage on the level of sustainability disclosure whereas age, profitability, and international presence are found to be insignificant. Corporate attributes like size, leverage and international presence are found to be positively and significantly associated with sustainability reporting among the selected banks. However, age and profitability are found to have a negative relationship. The empirical studies on the extent of ESG disclosure and its relationship with firm characteristics especially in the banking sector of developing countries like India are scarce, so this study is an attempt to fill this gap.

Keywords: Content Analysis, Corporate Attributes, Disclosure Index, Indian Banks, Sustainability (ESG) Reporting
JEL classification: M140, L21, G21

1. Introduction and Background of the Study

Due to increasing industrialisation as a result of economic development, several risks in the form of climate change, environmental degradation and depletion of natural resources have been posed and made sustainable development a global concern. Companies can contribute to sustainable development by embracing the triple bottom line approach to CSR which includes environmental, social and economic performance and catering to all stakeholders which are important in the firm's achievement of sustainable development[1]. It has become imperative for business organisations to embed sustainability into their core business strategy by considering social and environmental issues apart from economic performance[2].

In a global survey by KPMG (2020)[3] in 52 countries, it has been found that sustainability or ESG reporting is increasingly recognized as a critical component of corporate reporting by financial stakeholders worldwide. So there has been an increasing demand by various

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stakeholders like shareholders, creditors, investors, market regulators and government on information regarding Economic, Social and Governance (ESG performance) over and above financial information to make more rational and well-informed decisions[4]. Terms like Sustainability Reporting, ESG reporting, and CSR reporting are used as synonyms in academic literature, so we have used them interchangeably here also.

Sustainability or ESG reporting helps companies to achieve their sustainability goals by providing valuable insights on the impact of their business operations in three broad areas: Environment, social and corporate governance. ESG or sustainability performance disclosures in sustainability reports inform investors about the manner in which a business generates sustainable long-term financial returns while mitigating risks. On the other hand, organisations that do not provide these disclosures in reports show a lack of transparency and potential investors may overlook them for making investments.

1.1 ESG Reporting Framework in India and Abroad

While sustainability reporting is still voluntarily for most countries, many countries are adopting global standards to frame regulations regarding corporate ESG data reporting including India. Globally a large number of sustainability reporting standards and guidelines like Global Reporting Initiatives (GRI), OECD guidelines, United Nations Global Compact (UNGC) principles, ISO 14001, ISO 26000, Carbon Disclosure Project (CDP) have been developed by international organisations. But ESG frameworks like United Nations Environment Programme Finance Initiative (UNEP FI), Principles for Responsible investment by United Nations (UNPRI), Task Force on Climate-related Financial Disclosures (TCFD), Sustainability Accounting Standards Board (SASB), GRI Financial service sector supplements (FSSI) and Equator Principles have special reference to finance sector. Overall, GRI is the most dominantly used ESG reporting framework across the globe[3].

During last decade, the government of India and Indian market regulator Securities Exchange Board of India (SEBI) have taken several initiatives for improving the sustainability performance of companies by mandating them to disclose their performance on ESG metrics. The Ministry of Corporate Affairs issued the National Voluntary Guidelines (NVGs) for Social, Environmental and Economic Responsibilities of Business in 2011. Later, SEBI made it mandatory for the top 100 listed companies by market capitalisation to practice these (NVGs) and to uniformly disclose their CSR activities in Business Responsibility Report (BRR) as part of the annual Report (SEBI, 2012). In India, ESG reporting was limited in a way through BRR reporting and Corporate Social Responsibility (CSR) reporting to a large extent.

In May, 2021 SEBI issued a circular (under the guidance of MCA) containing the format of the Business Responsibility and Sustainability Report ("BRSR") replacing the existing BRR format and made BRSR reporting mandatory from FY 2022–23 for the top 1000 listed entities. The BRSR is the most recent and a remarkable step towards ensuring that investors have access to standardized disclosures on ESG parameters (SEBI 2021)[5].

1.2 Rationale for the Study

Due to the lending and investment activities, the banking/financial sector has the potential for major multiplier effects throughout the financial capital value chain (UNEP 2016)[6]. Banks being a key component of finance sector are critical in achieving the sustainable development in an economy as they are provider of capital and significantly impact both economy and society. They act as an intermediary that to channelise capital to different markets, regions, sectors or projects[7,8] we assume that it may affect corporate social responsibility (CSR). Although financial institutions do not have significant direct negative impact on environment through their activities but the projects or business organisations which they finance may have serious impact on environment like mining firms, oil and gas companies etc[9]. Thus, their performance and disclosure on sustainability/ESG issues are an important aspect of transparency which is of vital interest to various stakeholders and policy makers.

In India, most of the earlier empirical research on relationship of corporate attributes was relating to voluntary disclosure by companies[10–12]. In Indian context, the research on SR in banking and finance sector is really scanty as most of the studies focussed on listed firms from non-financial sectors like (manufacturing, IT, cement, food processing and textiles etc.) excluding banking and financial sector[13–18]. In India, the empirical studies on analysing the extent and determinants of sustainability reporting in banking and finance sector are meagre. K.

Kumar *et al.,* (2021)[17] stated that the research on industry-specific sustainability reporting in India is non-existent.

In India, empirical studies are being undertaken on examining the nature, trend and determinants of sustainability/ESG disclosure by either excluding companies in banking and finance sector from the sample or with a very small representation of companies from these sectors (Aggarwal & Singh, 2018; Bhatia & Tuli, 2017; Fahad & Needhesh 2020; K. Kumar *et al.,* 2021; Sharma *et al.,* 2020)[13,17–19,21].Therefore, the present study seeks to fill this gap. To the best of authors' knowledge not a single study has been done on identifying determinants of SR in banking or finance sector so far in India. This is probably the first study in India which is examining the impact of corporate attributes on sustainability reporting exclusively in the banking sector which has been so far neglected in the research on ESG or sustainability reporting. Against this background, it is pertinent to study the impact of corporate attributes like age, size, profitability, leverage and international market presence on sustainability reporting of selected banking companies in India with the outlined objectives as given below:

1.3 Objectives of the Study

- To analyse the nature and extent of sustainability reporting practices of listed banks in India across different dimensions of ESG during F.Y 2019-20.
- To empirically measure the impact of corporate attributes (like age, size, profitability, leverage and international presence) on sustainability disclosure of listed banks.
- To provide policy implications to the management, practitioners and regulators in banking sector based on the findings.

The rest of the research paper has been organised as follows - Section 2 discusses review of literature and hypotheses development, Section 3 provides research methodology used, Section 4 discusses analysis of results and last Section 5 gives conclusion and implications of the study.

2. Literature Review and Hypotheses Development

2.1 Review of Empirical Studies

A brief overview of some empirical studies undertaken around the world on the determinants (corporate attributes) of sustainability/CSR reporting in banks and finance sector is provided in Table 1.

The literature on sustainability reporting in banking and finance sector is lacking in India. The studies analysing the nature and extent of SR in banking sector can be counted on fingers. A study on examining SR practices of the banking sector in India using content analysis found that banks in India are adopting sustainability reporting practices at a slower pace[30]. Most of the commercial banks in India under reported sustainability indicators on environment and the banks in public and private sector significantly differ in their disclosure of environmental

Table 1. Review of Empirical Studies on Determinants of CSR Disclosure/Sustainability Reporting Relating to Banks and Finance Sector

Authors	Sample and Time Period	Research Techniques	Independent Variables	Significant Explanatory Variables
Hamid (2004)[35]	66 Malaysian commercial banks, finance companies and merchant banks	Content analysis and OLS regression	Size, age, financial performance, listing status, company profile	Size, listing status and age of business
Branco and Rodrigues (2008)[23]	23 Listed Portuguese companies including banks, 2003-2004	Content analysis and multiple regression	International experience, size, media exposure, consumer proximity, environmental sensitivity, leverage, profitability	Company size and media exposure
Scholtens (2009)[24]	32 international banks in 15 countries in the regions of North America, Pacific and Europe, 2000-2005	Content analysis and correlation	Balance sheet total, no. of employees (size), BIS tier I capital ratio (financial quality)	BIS tier I capital ratio (financial quality)

Khan *et al.*, (2010)[48]	All private commercial banks in Bangladesh, 2007-2008	Content analysis and multiple regression	Non-executive directors, existence of foreign nationalities and women representation in the board, control variables-size, profitability and gearing	Non-executive directors, existence of foreign nationalities
Andrikopoulos *et al.* (2014)[38]	93 financial institutions listed in the Euronext stock exchange including banks	Content analysis and multiple regression	Profitability, size, financial leverage, cost of equity	Size and financial leverage
Kilic (2016)[25]	25 banks in Turkey, 2015	Content analysis and Kruskal-Wallis test	Size, ownership structure, multiple exchange listing, and the internationalization	Size, ownership structure, and multiple exchange listing
Chakroun *et al.*, (2017)[39]	11 Tunisian listed banks, 2007 to 2012, online disclosure for December 2013	Content analysis, Poisson and binomial regression	Size, age, financial performance, leverage, ownership, foreign shareholding, type of auditor	Bank age, financial performance and state shareholding
S. M. K. Hossain *et al.*, (2018)[26]	27 listed and non-listed banks in Bangladesh;	Content analysis and OLS regression	Size, profitability, age, and ownership structure	Bank size and profitability
Chang *et al.*, (2019)[27]	100 financial institutions in 24 countries during 2016	Content analysis and multiple regression	Country of origin, Islamic and non-Islamic, Territorial extent of the company, Government ownership, Equator principles, Vision and/ or mission, Control variables Profitability Leverage	country of origin, Islamic or non-Islamic status, ownership, and vision and/or mission
Dissanayake *et al.*, (2019)[28]	84 public listed companies in Sri Lanka from 2012 to 2015	Content analysis and Panel data regression model	company ownership, GRI usage, company size and industry sector	Company size and usage of GRI guidelines
H. Z. Khan *et al.*, (2021)[29]	315 banks listed in Bangladesh, 2002-2014 divided into pre-post regulation period	Content analysis and Pooled ordinary least squares (OLS), fixed effects or random effects	Regulations, GRI reporting and social performance, (control variables - age, size, profitability, growth, ownership, financial inclusion)	Sustainability Regulations, GRI reporting and social performance

Source: Authors' compilation

and internal socio-environmental indicators[30,31]. Kumar & Prakash (2020)[23] assessed sustainable banking practices in public and private sector banks in India. The results showed that public sector banks are more involved in disclosing the social dimensions of SR through providing various loan and microfinance schemes to rural poor, community development programme while private sector banks are more inclined in adopting the voluntary international guidelines and framework on sustainable development like GRI, UNGC, UNEP FI, Equator Principles and Carbon Disclosure Project, etc.

2.2 Hypotheses Development

Based on prior empirical research and theoretical framework consisting of agency theory, legitimacy theory, stakeholder theory and signalling theory derived from literature review, we have developed five hypotheses relating to each corporate characteristic of banking companies in our study and its relationship with sustainability reporting as follows:

2.2.1 Age

Firm age is a significant factor in determining the extent of corporate disclosure. Older firms are likely to disclose much more information than younger firms due to their vast experience[32,33]. As per legitimacy theory older firms are likely to disclose much more information on CSR/ sustainability in their reports to legitimise their existence in the society[34–36]. Most of the researchers found a positive relationship between firm age and the level of CSR and sustainability reporting[18–21,35]. Very few studies have found insignificant or negative association between age and level of corporate disclosure[10,12,16]. Thus, following hypothesis is developed:

H1: Age of the bank (years of its existence) positively impact the level of its sustainability reporting.

2.2.2 Size

Many studies based on legitimacy theory and agency theory suggested that larger companies are expected to disclose more sustainability information and have better sustainability practices than smaller companies. Most of the empirical studies around the world on banks and financial institutions found a positive and significant relationship between size and Corporate disclosure for example[23,25,28,35,37,38]. However, few researchers have found a negative association between the size and sustainability disclosure of the firm[39,40]. In line with the above discussion, this study assumed that large banks disclose more information on sustainability reporting. Hence the following hypothesis is framed:

H2: The size of the bank has a positive impact on the level of its sustainability disclosure.

2.2.3 Profitability

The level of profitability of a firm positively impacts its sustainability disclosure. More profitable firms are likely to provide voluntary information on their CSR/ sustainability performance to gain legitimacy in the society[38]. There are mixed results for the relationship between profitability and level of disclosure. A number of studies have found positive relationship between profitability and disclosure[12,26,37] while others have found negative[21] or no significant relationship between the two[28,38]. This study has used ROA as a measure of profitability as used by (Branco & Rodrigues, 2006; Sharma *et al.*, 2020)[19,34]. In view of this discussion, we frame the following hypothesis:

H3: High profitability of a bank has a positive impact on the level of its sustainability disclosure

2.2.4 Leverage

In many earlier studies, leverage has been used as an explanatory variable for determining the level of disclosure. According to[41] as per agency theory, firms with high leverage are supposed to disclose more information voluntarily to reduce pressure from their lenders thereby reducing information asymmetry. The relationship between leverage and corporate disclosure is explained on the basis of agency theory and signalling theory[42]. The results of some studies[12,18,37,40,41] concluded that there is positive association between leverage and sustainability reporting while others supported negative relationship between the two[21,28,38]. So, there are conflicting results in literature but in the present study, we propose positive relationship between financial leverage and SR based on theoretical framework.

H4: Financial leverage of the bank has a positive impact on the level of its sustainability disclosure

2.2.5 International Presence

Both the stakeholder theory and legitimacy theory suggest that companies are required to report more on CSR or sustainability due to existing foreign shareholders and to attract potential investors in foreign countries, the company discloses more societal information[43]. According to Chapple and Moon, (2005)[50] as cited in[21], companies expanding their business operations internationally are expected to report more information and follow higher standards of reporting. As a result, there are a larger number of foreign stakeholders putting firms under pressure to increase their sustainability disclosure. Bhatia & Tuli, (2017)[21] and Branco & Rodrigues (2006)[23] found positive association between international experience or multinational presence and level of CSR/sustainability disclosure. Hence the following hypothesis is proposed:

H5: International presence of a bank has a positive impact on its sustainability disclosure

3. Research Methodology

3.1 Sample and Data Sources

All 10 companies in the banks sector listed on Bombay Stock Exchange of India (S&P BSE Bankex) form the sample of the study. We used this index for our study as it includes some of the largest companies by market capitalisation in Indian banking sector. Secondary data in the form of sustainability report, Business Responsibility Report (BRR), annual report, CSR and ESG reports of the selected banks for the financial year 2019-20 was examined to analyse the sustainability/ESG reporting using the content analysis method. Further secondary data on bank characteristics like age, size, profitability and leverage for selected banks was extracted from Prowess Database, Centre for Monitoring Indian Economy (CMIE). For data analysis, statistical software SPSS 20 version has been used.

3.2 Content Analysis and Sustainability Reporting Disclosure Index (SRDI)

The present study used content analysis method to measure the level of sustainability disclosure across various categories of Sustainability disclosure using binary scale (0-1). This has been consistently and most widely used method to evaluate annual reports or any other document to identify the presence or absence of information in quantitative terms and the extent of the required disclosure in prior empirical studies on CSR/sustainability and environmental reporting across the world[13,19,23,26,30,44–46]. Further, we have developed a comprehensive Sustainability Reporting Disclosure Index (SRDI) on five Dimensions of SR disclosure namely Environment, Social, Governance, Human Rights and Labour Practice and Products and Customer Responsibility Dimension consisting of total 50 indicators based on the review of literature and some national and global standards on SR like NVGs, GRI G4, UNGC and Equator principles as discussed before. (For details of items, see Appendix 1)

3.3 Econometric Model

Several studies have used regression models to analyse the determinants or impact of corporate attributes on voluntary/CSR disclosure and Sustainability/ESG reporting in case of banks[10,25,26,28,35,39,47]. Based on the review of literature, we have used Ordinary Least Squares (OLS) multiple linear regression model adapted from Branco and Rodrigues (2008)[23] and Milad & Bicer (2020)[37] to test the hypothesis of the impact of selected corporate attributes on sustainability reporting or ESG disclosure of selected banks in our study.

$SRDI = \alpha + \beta_1 BAGE + \beta_2 BSIZE + \beta_3 BPROFIT + \beta_4 BLEV + \beta_5 BINT + \varepsilon_i$

Where,

SRDI = Sustainability Reporting Disclosure Index (including ESG disclosure);

α = Intercept;

$\beta 1$ to $\beta 5$ = Slopes of independent variables;

BAGE = Bank Age;

BSIZE = Bank Size;

BPROFIT = Bank Profitability;

BLEV = Bank Financial Leverage;

BINT = Bank Market Presence, (National or International);

ε_i = Error term;

3.4 Variables used

The total sustainability disclosure score obtained by scoring against each item of SRDI depending upon its presence or absence in sustainability/annual/CSR report is used as a dependent variable for this study. SRDI for each bank is multiplied by 100 to get the percentage scores as shown in Figure 1. The independent variables of this

Table 2. Description of Dependent and Independent Variables

Dependent Variable	Acronym	Operationalization	Data Sources
Sustainability Reporting Disclosure Index (SRDI)	SRDI	SRDI is calculated by dividing combined score on all ESG dimensions obtained to the total number of indicators	Authors' own calculation from CSR/ SR/Annual reports
Independent Variables			
Bank Age	BAGE	Natural logarithm of years since incorporation	CMIE Database
Bank Size	BSIZE	Natural Log of total assets	CMIE Database
Bank Profitability	BPROFIT	Ratio of Return on Assets (ROA)	CMIE Database
Leverage	BLEV	Debt-to-Equity Ratio	CMIE Database
Market Presence	BINT	Dummy variable, value of 1 if bank operates in international market, 0 otherwise	Annual Report

Source: Authors' compilation

study are bank's corporate attributes like their age, size, profitability, leverage and international presence. Based on the review of literature, we have operationalised the dependent and independent variables as given in Table 2.

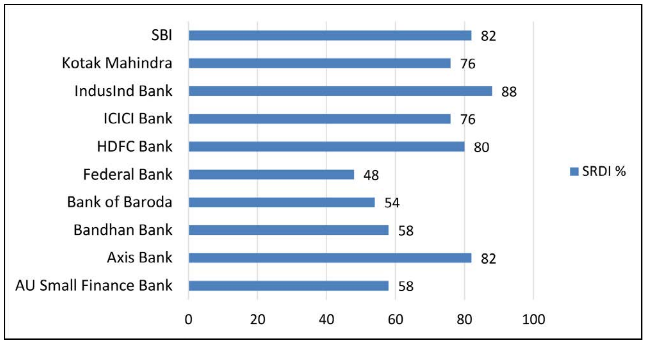
4. Analysis of Results and Discussion

4.1 Assessment of Sustainability/ESG Reporting Practices

The findings of the study indicate that more than half (60%) of the banks in our sample do not publish their standalone Sustainability report as per GRI framework which is the most dominant and widely used ESG framework as stated earlier. Only 30% banks are publishing externally assured sustainability reports by an independent third party. However, it is encouraging to find that 60% of our sample banks are found to have published integrated report as per IIRC framework in line with regulatory step taken by SEBI in 2017 advising top 500 listed companies to prepare IIRC framework based non-financial report. It is not surprising to know that all banks are publishing BRR due to mandatory requirement by SEBI as discussed before. So, we can see that banks are driven by regulatory pressure in their sustainability reporting practices as only a few banks, mostly private banks such as IndusInd bank, HDFC bank and ICICI bank are publishing sustainability report as per GRI guidelines which are voluntary in nature. Here, it is to be noted that SBI is the only public sector bank publishing a sustainability report externally assured by an independent party as per GRI, BRR and integrated report as per IIRC framework.

4.1.1 Level of Sustainability (ESG) Reporting Disclosure

As depicted in Figure 1, on the basis of computation of SRDI (%) for each bank in our sample through content analysis of reports, we can say that IndusInd bank is the leader in SR disclosure among other banks in our sample with a total sustainability reporting disclosure of 88% followed by State Bank of India (SBI) and Axis bank both with 82% SR disclosure. HDFC bank is also performing well in terms of sustaianbility reporting having 80% disclosure while other good performers are Kotak Mahindra Bank and ICICI bank each with SRDI of 76%. Federal bank is the worst performer having lowest SRDI (48%) which signifies the need for improvement in its SR practices. However, second one of the largest public sector bank in our sample i.e. Bank of Baroda is lagging much behind (54%) than its other counterpart SBI in public sector and also with other smaller private sector banks like Bandhan bank and AU Small Finance bank each with 58% score in terms of Sustainability (ESG) disclosure.



Source: Authors' compilation

Figure 1. Sustainability Reporting Disclosure (%).

4.1.2 Nature of SR Disclosure (Dimension wise)

According to the results given in Table 3 showing SR disclosure of banks under various dimensions, 'Governance' is the highest reported dimension in our sample as most of the banks reported it 100% obviously due to strict norms of corporate governance for banks. Whereas, environmental dimension seems to be the least reported with average disclosure rate (62%) in the overall sample and particularly Federal Bank (25%) and Bank of Baroda (40%) have poor disclosure. Another least reported dimension is 'Human rights and labour practices' with about 69% average disclosure as majority of banks reported less under it. Majority of banks disclosed information under 'Social' dimension relating to community development related initiatives, women empowerment, health and education, financial literacy etc. So, this is the second highest reported category with (75.8%) disclosure. 'Product and customer dimension' is also reported fairly (72%) by a large number of banks in our sample except IndusInd bank and Bank of Baroda each having a very small (20%) disclosure rate. Overall results suggest that banks are driven by legitimacy theory in their SR practices.

4.2 Impact of Corporate Attributes on SR Disclosure

4.2.1 Test of Regression Assumptions

In order to test the four classical assumptions of multiple linear regression i.e., normality and linearity, no multicollinearity, homoscedasticity and no autocorrelation, required diagnostic tests have been performed and results showed that all assumptions of OLS regression model are satisfied. The Kolmogorov-Smirnov test has been performed for checking normality of variables under study. Scatter plot of residuals and F test (ANOVA) (see Table 4) have been used for testing linear relationship between independent and dependent variables. Table 4 showing the results of ANOVA with F value (9.368) is significant at 5% level and indicate the fitness of our regression model.

Besides the correlations matrix (see Appendix 2), the assumption of no multicollinearity is tested further using Tolerance value and Variance Inflation Factor (VIF) as given in Table 6, since all VIF values are less than 10 so they are acceptable and there exists no multicollinearity between independent variables in the data. Scatter plot of residuals is used to test the assumption of homoscedasticity (equal error variances of the residuals) of the regression model. The Durbin Watson test is used to detect the problem of autocorrelation. As per table 5, Durbin Watson value (2.97) is close to 3 and values between 1 and 3 are acceptable[49] so the residuals are almost uncorrelated. Now we can proceed for hypothesis testing to examine the effect of explanatory variables on dependent variable of our study.

Table 3. SR disclosure of Selected Banks under Various Dimensions

Name of the bank	Environmental %	Social %	Governance %	Human rights and labour practices %	Product responsibility and Customer %
State Bank of India	75	80	83.3	77.8	100
ICICI Bank	70	80	100.0	66.7	100
HDFC Bank	80	70	100.0	100.0	100
Axis Bank	80	80	100.0	55.6	100
AU Small finance Bank	50	80	100.0	88.9	80
Kotak Mahindra Bank	60	90	83.3	77.8	80
Federal Bank	25	60	100.0	55.6	80
Bandhan Bank	50	70	83.3	55.6	40
IndusInd Bank	90	70	100.0	55.6	20
Bank of Baroda	40	77.8	100	55.6	20
Average disclosure %	62	75.8	95	68.9	72

Source: Authors' computation

Table 4. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig. F
Regression	.167	5	.033	9.386	.025*
Residual	.014	4	.004		

Note: *Significant at 5% level

Table 5. Model Summary and Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.960a	.921	.823	.05964	2.968

Note: a. Dependent Variable: SRDI

b. Predictors: (Constant), BINT, BLEV, BAGE, BSIZE, BPROFIT

4.2.2 Hypotheses Testing

The results of multivariate regression analysis as presented in Table 5 shows the value of R^2 (0.921) which means that 92.1% variation in the model is explained by all independent variables jointly. The adjusted R^2 (0.823) suggest that 82.3% variation in SR disclosure index is explained by variations in explanatory variables. Corporate attributes like size, leverage and international presence are found to be positively and significantly associated with sustainability reporting among the selected banks as shown in correlation matrix (Appendix 2).

The results in Table 6 show that size of a bank has significant and positive impact on sustainability disclosure (SRDI) at 5% significance level (0.032 < .05). Therefore, H2 is accepted. Our results corroborate the explanation given by legitimacy theory which claims that large sized firms are likely to have better disclosure in terms of CSR/SR to build their image due to more visibility[21,23,28,37]. Further, financial leverage of a bank is also found to have significant positive impact on SR disclosure at 5% level with p value (0.029 < .05). Hence H4 is also accepted and our finding is consistent with[14,18,37,40,41]. The agency theory, stakeholder theory and signalling theory support our results. It shows that companies with high financial leverage tend to disclose more information about sustainability to provide greater assurance for creditors that the company can meet its financial liabilities thus increasing the chances of getting good investments from lenders.

Corporate attributes like age, profitability and international presence of a bank are not found to have a significant effect on SRDI as shown in Table 7 as (p > 0.05). Hence H1, H3 and H5 are not supported by our regression results. We find negative and insignificant association between age and the level of SR disclosure in our sample banks which is consistent with some other studies[10,12,26]. While profitability and international presence of a bank has positive and insignificant relationship with SR disclosure at 5% level as shown in Table 6.

5. Conclusion and Implications

This study is unique and examines the nature and extent of SR practices in the Indian banking sector which has been neglected so far in earlier research on SR that too in a developing nation like India. For this purpose, a comprehensive sustainability disclosure Index comprising 50 indicators is developed through a review of literature and on the basis of ESG standards in India and abroad like GRI G4, UNGC principles and NVGs with particular reference to the finance and banking sector. This paper contributes to the scarce academic literature relating to sustainability reporting in the banking sector in an emerging market like India in several ways. Firstly, in-depth content analysis is done through CSR, sustainability reports, and annual reports of BSE Bank Index companies using a comprehensive SR index consisting of 50 indicators in five broad categories- Environmental, Social, Governance, Human Rights & Labour Practices, and Products & Customer Responsibility. Further, the study provides evidence of the significance of corporate attributes in determining sustainability disclosure by using the multiple regression technique in the context of an emerging economy like India.

This study provides valuable insights on SR practices and disclosure of Indian listed banks. Based on content analysis, the findings reveal that the environmental dimension is least reported by banks followed by human

Table 6. Regression Coefficients and Multicollinearity Test

Model Beta		Coefficients	t	Sig.	Collinearity diagnostics
				VIF	
1	(Constant)		-.808	.464	
	BAGE	-.112	-.371	.730	4.635
	BSIZE	.618	3.218	.032*	1.878
	BPROFIT	.094	.271	.799	6.083
	BLEV	.516	3.321	.029*	1.230
	BINT	.271	1.238	.283	2.440

Note: *Significant at 5% level

rights and labour practices leaving scope for improvement in their disclosure. They disclose more about the social dimension in terms of community development initiatives, financial literacy, training and development programs, etc. which are directly related to their operations. The governance dimension is reported highest among our sample banks. The product responsibility and customer dimension is also fairly reported among the banks possibly due to their proximity with the final customer. All these findings suggest that banks are driven by regulatory pressure and legitimacy theory to legitimise their existence by establishing a positive image among customers and society. Overall, we can say that banks need to move from compliance to voluntary disclosure on sustainability in line with global standards to ensure their growth and survival in the long run.

The results of the multivariate analysis using correlation and regression help us conclude that the level of SR disclosure in the reports of Indian listed banks is being explained by their size and leverage. We find that bank size and financial leverage are the only strong determinants in explaining sustainability/ESG disclosure in their ESG/SR/BRR reports. The agency theory, legitimacy theory, and signalling theory together form the basis of our results as found by previous researchers in this area. The other variables like age, profitability, and market presence were found insignificant in impacting the level of SR disclosure.

The study has useful implications for various stakeholders like investors, bank managers, regulators and creditors. The management of banks with weak SR disclosure should strive to improve their overall performance in SR disclosure, particularly in the environmental dimension as they play a vital role in achieving sustainable development. Regulators should encourage banks to publish standalone sustainability reports in a more comprehensive manner as few banks are doing so, especially in the public sector. For investors and creditors, this research is providing evidence of the impact of size and leverage on SR disclosure which further helps to discipline the market.

Despite these contributions, our study has some limitations. Firstly, the use of manual content analysis suffers from subjectivity. Another shortcoming results from the small sample bias as we have considered only ten banks for our study. Lastly, coverage of the time period of study is one year only. These limitations can be addressed in future research by taking a larger sample and a longer time period under study.

6. Statement of Conflict of Interest

There are no competing interests between authors with respect to this research.

7. References

1. Wang MC. The relationship between firm characteristics and the disclosure of sustainability reporting. Sustain. 2017; 9(4):6–14. https://doi.org/10.3390/su9040624
2. Marrewijk M Van. Concepts and definitions of CSR and corporate sustainability: Between agency and communion. Corp Soc Responsib. 2003 May; 44:95–105.
3. KPMG. The time has come. 2020.
4. INTOSAI Working Group on Environmental Auditing (WGEA). Sustainability reporting: Concepts, frameworks and the role of supreme audit institutions [Internet]. 2013. Available from: http://www.environmental-auditing.org/LinkClick.aspx?fileticket=vM4hrHlBd0s%3D&tabid=128&mid=568
5. SEBI. SEBI Circular on "Business Responsibility and Sustainability Reporting by listed entities." 2021.
6. UNEP. UN Environment & Group of Friends of Paragraph 47, Sustainability reporting in the financial sector- A Government Approach. 2016.
7. Scholtens B. Finance as a driver of corporate social responsibility. J Bus Ethics. 2006; 68(1):19–33. https://doi.org/10.1007/s10551-006-9037-1
8. Weber O, Diaz M, Schwegler R. Corporate social responsibility of the financial sector - Strengths, Weaknesses and the Impact on Sustainable Development. Sustain Dev. 2014.
9. Nwobu OA. Sustaianbility Reporting in Financial Institutions: A Study of the Nigerian Banking Sector. J Internet Bank Commer. 2017; 22(June):1–15.
10. Hossain M, Reaz M. The determinants and characteristics of voluntary disclosure by Indian banking companies. Corp Soc Responsib Environ Manag. 2007; 14(5):274–88. https://doi.org/10.1002/csr.154
11. Singhvi SS, Desai HB. An empirical analysis of the quality of corporate financial disclosure. Account Rev [Internet]. 1971; 46(1):129–38. Available from: http://www.jstor.org/stable/243894
12. Bhayani S. Association between firm-specific characteristics and corporate disclosure: The case of India. International

Conference on Business, Economics, Management and Behavioral Sciences. 2012. p. 479–82.
13. Aggarwal P, Singh AK. CSR and sustainability reporting practices in India: An in-depth content analysis of top-listed companies. Soc Responsib J. 2018; 15(8):1033–53. https://doi.org/10.1108/SRJ-03-2018-0078
14. Goel P, Misra R. Sustainability Reporting in India : Exploring sectoral differences and linkages with financial performance. Vision. 2017; 21(2):214–24. https://doi.org/10.1177/0972262917700996
15. Kumar V, Gunasekaran A, Singh K, Papadopoulos T, Dubey R. Cross sector comparison of sustainability reports of Indian companies : A stakeholder perspective. Sustain Prod Consum [Internet]. 2015 Oct 1 [cited 2020 Jun 29]; 8600417738(August):62-71. https://doi.org/10.1016/j.spc.2015.08.005
16. Kumar K. Emerging phenomenon of corporate sustainability reporting: Evidence from top 100 NSE listed companies in India. J Public Aff. 2020; (June). https://doi.org/10.1002/pa.2368
17. Kumar K, Kumari R, Kumar R. The state of corporate sustainability reporting in India: Evidence from environmentally sensitive industries. Bus Soc Rev. 2021; (September):1–26.
18. Fahad P, Nidheesh KB. Determinants of CSR disclosure: an evidence from India. Journal of Indian Business Research. 2020 May 14;13(1):110-33.
19. Sharma P, Panday P, Dangwal RC. Determinants of environmental, social and corporate governance (ESG) disclosure: A study of Indian companies. Int J Discl Gov 2020 [Internet]. 2020 Aug 1 [cited 2022 Jan 25]; 17(4):208–17. Available from: https://doi.org/10.1057/s41310-020-00085-y
20. Kumar K, Kumari R, Poonia A, Kumar R. Factors influencing corporate sustainability disclosure practices: Empirical evidence from Indian National Stock Exchange. J Financ Report Account. 2021; ahead-of-p(ahead-of-print). https://doi.org/10.1108/JFRA-01-2021-0023
21. Bhatia A, Tuli S. Corporate attributes affecting sustainability reporting: An Indian perspective. Int J Law Manag [Internet]. 2017 [cited 2021 Aug 9]; 59(3):322–40. www.emeraldinsight.com/1754-243X.htm https://doi.org/10.1108/IJLMA-11-2015-0057
22. Kumar K, Prakash A. Managing sustainability in banking: Extent of sustainable banking adaptations of banking sector in India. Environ Dev Sustain [Internet]. 2020; 22(6):5199–217. https://doi.org/10.1007/s10668-019-00421-5
23. Branco MC, Rodrigues LL. Factors influencing social responsibility disclosure by Portuguese companies. J Bus Ethics. 2008; 83(4):685–701. https://doi.org/10.1007/s10551-007-9658-z
24. Scholtens B. Corporate social responsibility in the international banking industry. J Bus Ethics. 2009; 86(2):159–75. https://doi.org/10.1007/s10551-008-9841-x
25. Kiliç M. Online Corporate Social Responsibility (CSR) disclosure in the banking industry: Evidence from Turkey. Int J Bank Mark. 2016; 34(4):550–69. https://doi.org/10.1108/IJBM-04-2015-0060
26. Hossain SMK, Rahat Khan M, Mazharul Haque M. Corporate voluntary disclosure practices and its association with corporate attributes: An empirical investigation of listed and non-listed commercial banks in Bangladesh. Int J Manag Financ Account. 2018; 10(4):331–51. https://doi.org/10.1504/IJMFA.2018.095972
27. Chang WF, Amran A, Iranmanesh M, Foroughi B. Drivers of sustainability reporting quality: financial institution perspective. Int J Ethics Syst. 2019; 35(4):632–50. https://doi.org/10.1108/IJOES-01-2019-0006
28. Dissanayake D, Tilt C, Qian W. Factors influencing sustainability reporting by Sri Lankan companies. Pacific Account Rev. 2019 Mar 18; 31(1):84–109. https://doi.org/10.1108/PAR-10-2017-0085
29. Khan HZ, Bose S, Mollik AT, Harun H. "Green washing" or "authentic effort"? An empirical investigation of the quality of sustainability reporting by banks. Accounting, Audit Account J. 2021; 34(2):338–69. https://doi.org/10.1108/AAAJ-01-2018-3330
30. Kumar K, Prakash A. Examination of sustainability reporting practices in Indian banking sector. Asian J Sustain Soc Responsib. 2019; 4(1). https://doi.org/10.1186/s41180-018-0022-2
31. Kumar K, Prakash A. Developing a framework for assessing sustainable banking performance of the Indian banking sector. Soc Responsib J. 2019; 15(5):689–709. https://doi.org/10.1108/SRJ-07-2018-0162
32. Akhtaruddin M. Corporate mandatory disclosure practices in Bangladesh. Int J Account. 2005 Jan 1; 40(4):399–422. https://doi.org/10.1016/j.intacc.2005.09.007
33. Owusu-Ansah S. The impact of corporate attribites on the extent of mandatory disclosure and reporting by listed companies in Zimbabwe. Int J Account. 1998 Jan 1; 33(5):605–31. https://doi.org/10.1016/S0020-7063(98)90015-2
34. Branco MC, Rodrigues LL. Communication of corporate social responsibility by Portuguese banks: A legitimacy theory perspective. Corp Commun. 2006; 11(3):232–48. https://doi.org/10.1108/13563280610680821
35. Hamid FZA. Corporate social disclosure by banks and finance companies: Malaysian evidence. Corp Ownersh Control. 2004; 1(4):118–30. https://doi.org/10.22495/cocv1i4p10

36. Deegan C. Introduction: The legitimising effect of social and environmental disclosures - a theoretical foundation. Accounting, Audit Account J. 2002; 15(3):282–311. https://doi.org/10.1108/09513570210435852
37. Milad IAA, Bicer AA. The impact of firm characteristics on the level of voluntary disclosure: Int J Financ Bank Stud. 2020; 9(2):13–25. https://doi.org/10.20525/ijfbs.v9i2.693
38. Andrikopoulos A, Samitas A, Bekiaris M. Corporate social responsibility reporting in financial institutions: Evidence from Euronext. Res Int Bus Financ [Internet]. 2014; 32:27–35. https://doi.org/10.1016/j.ribaf.2014.02.001
39. Chakroun R, Matoussi H, Mbirki S. Determinants of CSR disclosure of Tunisian listed banks: A multi-support analysis. Soc Responsib J. 2017; 13(3):552–84. https://doi.org/10.1108/SRJ-04-2016-0055
40. Roberts RW. Determinants of corporate social responsibility disclosure: An application of stakeholder theory. Accounting, Organ Soc. 1992; 17(6):595–612. https://doi.org/10.1016/0361-3682(92)90015-K
41. Ozcan A. Sustainability Reporting and Corporate Attributes: An Emerging Market Perspective. Asian J Account Gov. 2020; 14:115–22. https://doi.org/10.17576/AJAG-2020-14-09
42. Orazalin N, Mahmood M. Determinants of GRI-based sustainability reporting: Evidence from an emerging economy. J Account Emerg Econ [Internet]. 2020 [cited 2021 Dec 4]; 10(1):140–64. Available from: www.emeraldinsight.com/2042-1168.htm https://doi.org/10.1108/JAEE-12-2018-0137
43. Nyarku KM. Corporate social responsibility reporting of banks operating in Ghana. African J Bus Ethics. 2018; 11(2):19–36. https://doi.org/10.15249/11-2-146
44. Ramdhony D. Corporate social reporting by Mauritian Banks. Int J Account Financ Report. 2015; 5(2):56. https://doi.org/10.5296/ijafr.v5i2.8067
45. Bhatia A, Tuli S. An empirical analysis of sustainability disclosure practices: Evidence from India and China. IIM Kozhikode Soc Manag Rev [Internet]. 2014 Jul 27 [cited 2021 Apr 28]; 3(2):135–48. https://doi.org/10.1177/2277975214542057
46. Buallay A. Sustainability reporting and firm's performance: Comparative study between manufacturing and banking sectors. Int J Product Perform Manag. 2020; 69(3):431–45. https://doi.org/10.1108/IJPPM-10-2018-0371
47. Khan HZ, Ali M, Fatima J. Determinants and recent development of sustainability reporting of banks in developing countries: The case of Bangladesh. Corp Ownersh Control. 2014; 11(4):507–19. https://doi.org/10.22495/cocv11i4c6p1
48. Khan. The effect of corporate governance elements on Corporate Social Responsibility (CSR) reporting: Empirical evidence from private commercial banks of Bangladesh. Int J Law Manag. 2010; 52(2):82–109. https://doi.org/10.1108/17542431011029406
49. Kothari CR, Garg G. Research Methodology Methods and Techniques. 4th ed. New Delhi (India): New Age International Publishers; 2019.
50. Chapple W, Moon J. Corporate social responsibility (CSR) in Asia: A seven- country study of CSR website reporting. Business and Society. 2005 Dec; 44(4):415-41.

Appendix 1

Details of all Disclosure Items (50) included in SRDI

S.No.	Environment Dimension
1	Environment policy
2	Waste Management
3	Re-use & re-cycle
4	Reduction in energy consumption
5	Adoption and diffusion of eco-friendly technology
6	Initiatives for clean/renewable energy
7	Reduction in water consumption
8	Reduction in carbon emission
9	Adoption of Environmental Management system ISO 14001,EMAS
10	Impact on bio diversity
11	Environmental impact of product & services
12	Environment risk assessment framework
13	Reduction in GHG Emissions (Indirect Impact)
14	Green banking Practices
15	Environmental Audit
16	Award for Environmental Protection
17	Follower of Carbon Disclosure Project (CDP)
18	Adoption of IIRC Framework
19	Equator Principles
20	Inclusion in any ESG Index
	Social Dimension
1	Community development program
2	Training & development programs
3	Education and Awareness programs
4	Women empowerment program
5	Healthcare programs
6	Charity and sponsorships, donations at the time of disaster

7	Financial literacy and Financial Inclusion Programs
8	Programs for disabled/ weaker sections
9	ISO 26000 certification
10	CSR Award
	Governance Dimension
1	Sustainability and CSR policy
2	Sustainability/business responsibility committee or structure
3	Appointment of executive level sustainability positions
4	Anti-bribery/anti-corruption policy
5	Ethical code of conduct
6	Reporting mechanism of unlawful behaviour
	Human Rights and Labour Practices Dimension
1	Employee health and safety
2	Labour relations grievance mechanism
3	Human rights grievance mechanism
4	Prevention of sexual harassment
5	Employee associations recognized by the management
6	Policy for forced & child labour
7	Non-discrimination
8	Diversity in work force
9	Benefits provided to temporary/casual employees
	Product Responsibility and Customer Dimension (PC)
1	Product and service labelling
2	Customer health and safety
3	Green marketing Practices
4	Customer grievance mechanism and satisfaction
5	Customer Privacy

Appendix 2

Pearson Correlation Matrix

Variables	SRDI	BAGE	BSIZE	BPROFIT	BLEV	BINT	Sig. p value
SRDI	1						-
BAGE	-0.181	1					0.308
BSIZE	0.736	0.17	1				0.008*
BPROFIT	-0.204	-0.811	-0.461	1			0.286
BLEV	0.577	-0.324	0.003	0.108	1		0.040*
BINT	0.619	0.254	0.66	-0.589	0.046	1	0.028*

Note: *Significant at 5% level