



DOES ESG IMPACT THE DIVIDEND DECISIONS IN THE BANKS IN INDIA? MODERATION BY DISCLOSURES AND NON-PERFORMING ASSETS

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ABSTRACT

This paper investigates the relationship between the environmental (env) index, social (soc) index, governance (gov) index and environmental, social governance (ESG) index with dividends of the Indian banking sector. It also seeks to find evidence on the moderating effect of the transparency disclosure index (TDI) and non-performing assets (NPA) on the relationship between the ESG index with dividend decisions. The sample of 33 Indian banks representative of the major part of Indian banks has been considered for the post-crisis period 2010-2019. The data is retrieved using CMIE Prowess and the formal website of individual banks. The authors built two models using panel data methodology (PDM) to determine the specific effect of the env index, soc index, and gov index; and the consolidated effect of the ESG index on dividends (model 1 and 2, respectively). Additionally, another four PDMs are built to determine the interaction effect of TDI (models 3 and 4) and NPA (models 5 and 6) on the impact of ESG on dividends. Regression results indicate that the env and gov indexes significantly influence dividends. Further, we also find that a better ESG index causes a drop in banks' dividends. Furthermore, although we find no interaction effect of TDI on the relationship between the ESG index and dividends, TDI by itself is detrimental to dividends. The study also finds that bank NPA levels harm the relationship between gov index and dividends. On the contrary, we find no moderating effect of NPA on the relationship between the env and soc index on dividends. However, NPA harms the relationship between ESG and dividends. In addition, NPA itself is detrimental to dividends. Our findings show that ESG disclosure enhances a bank's reputation, fosters a better knowledge of its products, and, very crucially, strengthens its connections with its investors. There are a few studies on ESG index and equity dividends or profitability. However, studies highlighting the moderating role of TDI and NPA on the relationship between the ESG index with dividends, especially in the context of Indian banks, are absent.

KEYWORDS: Banks, Corporate governance, ESG, Transparency and Disclosure, Panel data

JEL Codes: G11, G12, G18, G21

1. INTRODUCTION

Over the past few decades, a significant trend in business sustainability has emerged, moving from voluntary participation in sustainable operations to de facto regulations because of social expectations and governmental pressure (Brockett and Rezaee, 2012). Businesses increasingly use sustainability strategies and disclose environmental, social, and governance (ESG) data, which has led to significant changes in business models and management theory. ESG is "a general term used in capital markets and by investors to evaluate corporate behaviour and determine the future financial performance of organisations" (Hummel et al., 2016). Analysts and investors commonly check the ESG rankings when assessing companies' financial performance. The ecological, social, and governance (ESG) score is a non-financial indicator of a company's sustainability efforts. The company's annual reports and CSR documents are used to produce the ESG score, which is scored from 0 to 100 and is based on quantitative and policy-related data (Yoon et al., 2018). Although ESG disclosure is frequently acknowledged as a crucial indicator of a company's sustainability, there is still a long way to go before these disclosures are standardised. ESG performance indices are provided by several rating agencies using various approaches (Huber and Comstock, 2017), which may make it difficult for investors to make decisions, and firms are only attempting to meet the basic requirements. There is currently no standardised data available to investors that can be utilised to pinpoint ESG risks and opportunities (Verga et al., 2020).

Further, in a recent report by Asian Corporate Governance Association (AGCA), the association has emphasised the importance of ESG policies to ensure the smooth and meaningful progression of business organisations in the future. They also highlight the need for a better alignment of corporate governance (CG) policy with ESG policy for Asian markets (ACGA, 2021). Accordingly, organisations and socially conscious societies are increasingly interested in ESG reporting. Stakeholders and fund managers contemplate that companies that disclose significant amounts of ESG information perform better operationally, generate higher returns, and have lower firm-specific risks (Chen et al., 2020). Hence it is likely for the ESG policy to influence the profit



distribution decision of a company. Accordingly, this paper aims to present some new quantitative evidence on the impact of ESG on a bank's profit distribution decision.

According to the Reserve Bank of India (RBI), India has 33 scheduled commercial banks (SCBs) comprising 12 public and 21 private sector banks. Accordingly, for this study, all these SCBs, which represent a significant share of the Indian banking sector, were selected. The data for all these banks from the post-crisis era, i.e., from 2010 to 2019, is used to build 6 models using panel data methodology (PDM) for analysis. Significance of PDM is established in various studies (Bhimavarapu, et al., 2022a; Rastogi et al., 2021; Kanoujiya, et al., 2022). This study demonstrates how the environmental (env) sustainability measures, social (soc) governance practices, and governance (gov) policies adopted by banks strive to influence their profit distribution decisions. Hence, the study investigates the effect of env, soc, and gov indices (individually) and through the ESG index (consolidated) on dividends of Indian banks (models 1 and 2, respectively). This paper also evaluates how TDI (models 4 and 5) and NPA (models 5 and 6) moderate the association between these two variables.

Following is a brief framework of the remaining paper. Section two describes the theoretical background and contextual framework. Section three gives a review of the literature and develops the hypotheses. Details about the research methodology, data sources, and preliminary analysis are shown in Section 4. Section 5 explains the empirical results and summarises the findings. Section 6 discusses these findings considering existing studies, and the final section 7 concludes the paper.

2. THEORETICAL BACKGROUND AND CONTEXTUAL FRAMEWORK

The United Nations General Assembly set up Sustainable Development Goals (SDGs) in 2015 to ensure sustainable development worldwide (Purvis et al., 2019). As the concept of SDGs evolved, it currently concentrates on achieving sustainability through economic improvement, social improvement, and environmental safety. Hence it has become essential for all entities to improve their business performance without endangering the ecosystem or disregarding societal rights.

According to the European Banking Authority Report (EBA), ESG issues are “environmental, social, or governance matters that may positively or negatively impact the financial performance or solvency of a business, sovereign, or individual”. Therefore, ESG is an investment philosophy that seeks long-term value growth and is a comprehensive and practical governance strategy. It is a sustainable and coordinated development value considering economic, environmental, social, and governance benefits. Several proposals are under examination for incorporating ESG factors into business decision-making. Integrated reporting is a significant step to meet the objective of allying the value-generating endeavours of the business with SDGs.

Numerous studies have shown a connection between sustainability practices and financial performance. Sustainability practices lead to higher operational and capital spending costs (Hamilton, 1995; Walley and Whitehead, 1994). Further, Porter (1996) and Flammer (2015) find that all stakeholders gain from sustainability disclosures, eventually encouraging accounting profitability. Nevertheless, only a few studies have found that sustainable practices negatively influence financial performance (Hamilton, 1995; Khanna and Damon, 1999; Konar and Cohen, 2001).

Numerous papers have shown a connection between ESG with financial performance or financial risk, or capital structure. Broadstock et al. (2021) recently evaluated whether ESG performance influenced the investor's view considering the worldwide disaster brought on by the COVID-19 pandemic. They find that (i) high-ESG portfolios usually outperform low-ESG portfolios, (ii) ESG performance reduces financial risk during financial crises, and (iii) the role of ESG performance is attenuated in ‘normal’ times, confirming its incremental importance during a crisis.

Further, Fatemi et al., 2018 analysed the relationship between ESG performance and firm value for US companies and reported that when ESG concerns decrease, ESG strengths increase the firm value. Their most notable sighting is that gov disclosure has a more significant influence than env and soc issues on firm value. However, for Malaysian listed firms, it is found that ESG is not significantly related to profitability or company value, but it does significantly positively influence the company's cost of capital (Atan et al., 2018). However, in German listed companies, ESG performance is reported to have a favourable impact on accounting performance but does not influence market value (Velte, 2017). Additionally, for FTSE 350 listed companies, it has been reported that ESG disclosure increases stakeholder trust, which raises a company's worth (Li et al., 2018).

A cross-country study finds that ESG disputes enhance the value of the company. However, corporate social performance (CSP) does not significantly moderate their relationship (Aouadi & Marsat, 2018). Further, in a recent study, Shaikh (2022) reports that ESG disclosures harm profitability and firm value. Regarding the three pillars of ESG, the study finds that environmental and social measures harm profitability and firm value. In contrast, governance measures are found to improve profitability only. Whereas for Korean businesses, it is reported that CSR practices improve the company's market value, while environmentally conscious industries have a lesser impact (Yoon et al., 2018).



Also, another study reveals that ESG levels, promoter and institutional holding significantly negatively influence the cost of capital (Ellili, 2020). Mainly they report that improvement in environmental and governance factors reduces a company's cost of capital.

As the above discussion shows, many studies have reported that sustainability practices or ESG indexes help improve companies' financial performance, firm value, or stock returns. Dividend refers to the distribution of profits to shareholders, which depends on financial performance. Moreover, several studies have also shown that profitability has a positive impact on dividends (Aivazian et al., 2003; Al-Najjar & Kilincarslan, 2017; Baker et al., 2007; DeAngelo et al., 2004; Denis & Osobov, 2008; Fama & French, 2001; Reddy & Rath, 2005). Hence, we expect to find a connection between ESG and profit distribution which motivates us to evaluate this relation in the context of Indian Banks during the post-crisis period.

3. REVIEW OF LITERATURE AND HYPOTHESES DEVELOPMENT

3.1 ESG index, its three pillars: environmental index, social index, governance index and dividends

3.1.1 ESG Index

As seen from the above section, various papers have studied the effect of ESG on financial performance, firm value, stock returns, financial risk, and cost of capital. Moreover, it is reported that investors utilise ESG data to judge companies' financial performance (Amel-Zadeh & Serafeim, 2018). ESG data is also advertised as a gauge of possibilities and hazards (Limkriangkrai et al., 2017). From the stakeholder theory viewpoint, environmental, social, and governance issues are the main interests of stakeholders (Russo and Perrini, 2010). Also, the perceptions of the stakeholders have led to a relationship between an organisation's ESG performance and its economic performance (Barnett, 2007). Further, since (Ellili, 2020) find that ESG levels help reduce the company's cost of capital, companies will undoubtedly be interested in improving non-financial disclosures and maintaining suitable CG mechanisms.

As seen from the ensuing discussion, few studies have evaluated the association between ESG, its three individual pillars and its dividends. (Matos et al., 2020) report that the stability of dividends is higher in firms with greater sustainability. Due to the stability of dividends, a higher ESG index also indicates improvement in the company's position towards stockholders' and other investors' goals in the long run. For the three measures of ESG, they report that the environmental and governance measures are crucial. Further, a positive relationship has also been reported between Corporate Sustainable Management (CSM) and dividends in Korea (Oh & Park, 2021). Hence, we evaluate the association between ESG and dividends.

3.1.2 Environmental index

Broadstock et al. (2021) report that env and gov measures positively influence stock yields, but they do not report any significant relationship between social factors and stock returns. Also, many studies have reported a significant relationship between dividends and stock market returns (Choi et al., 2014; Chou et al., 2009; Khan et al., 2011; Liu & Chi, 2014; Maitah et al., 2014). Hence, we seek to evaluate the relationship between env factors and dividends.

3.1.3 Social Index

Ghoul et al., 2017 contend that social performance can improve a company's capacity to gain a competitive edge and raise the market value. Further, a significant positive connection has also been reported between ESG performance with firm value (Nekhili et al., 2021, Tarmuji et al., 2016, Ghoul et al., 2017) and financial profits (Friede et al., 2015).

Furthermore, any socially irresponsible business activity significantly influences economic performance (Frooman, 1997; Marcus, 1989). Customer perceptions of product quality and safety also improve a company's economic performance. Mishra & Suar (2010) find a significant positive relationship between social performance and the return on assets (ROA) to measure financial profitability in India. However, another study finds a negative correlation between Tobin's Q, soc performance and ROA (Surroca et al., 2010). Despite some inconsistent findings, it can generally be claimed that soc measures add to a company's overall financial profitability (Ayton et al., 2022).

(Benlemlih, 2019) report that CSR and dividends are positively related. Additionally, they find that the stability of dividends is higher in socially accountable companies. Also, recently (Kong et al., 2022) reported that a decrease in tax on dividends decreases the burden on the extent of CSR events undertaken by the company. Moreover, a positive relationship has also been found between CSR policies and dividends in France (Salah & Amar, 2022). This situation shows a lack of consensus among researchers about the impact of social factors on dividends. Hence, we seek to explore this relationship in the context of Indian banks.

3.1.4 Governance Index

A company's board structure, ownership structure, vision and goal, CEO or executive remuneration policy, financial and non-financial information disclosure, and shareholder rights are some variables used to evaluate a company's CG mechanism. It has



been found that companies freely reveal info about CG to enhance honesty and lessen agency issues (Ha, 2022). Furthermore, the efficacy of CG enhances companies' ability to be responsive to social issues and stakeholder needs, thus improving their long-term economic performance (Yoon et al., 2018).

Further, in the dynamic international economic scenario, it is incredibly crucial to establish a synthesis between CG and CSR (Gill, 2008). Top management, including CEOs, is therefore inclined to participate in favourably viewed governance-related initiatives to increase support for the business and build its reputation (Barnea & Rubin, 2010). Moreover, various studies have found that effective governance mechanisms and firm performance are positively related (Gangi et al., 2018; Idun, 2019; Klettner et al., 2014; Li & Yang, 2012; Monda & Giorgino, 2019). Additionally, more robust governance mechanisms are also found to reduce the cost of capital in the US (Khlif et al., 2019) and benefit the capital structure and corporate value (Nguyen et al., 2020).

Besides, various studies have found support for (La Porta et al., 2000) "outcome agency model" and report that CG practices and dividends are positively associated (Bae et al., 2012; Baker et al., 2020; Garay & González, 2008; Mitton, 2004; Pinto & Rastogi, 2022a; Rajput & Jhunjhunwala, 2019; Sawicki, 2009; Yarram, 2015; Yarram & Dollery, 2015). On the contrary, some studies have supported (La Porta et al., 2000) "substitute agency model" and report that CG mechanisms and dividends are negatively associated (Hamdouni, 2015; Jiraporn & Ning, 2006; Renneboog & Szilagyi, 2008). This situation shows that there is a lack of consensus among researchers about the impact of CG mechanisms on dividends, and it needs further investigation.

Based on the above discussion, it is hypothesised that:

H1: Environmental index has significant effects on equity dividends

H2: Social index has significant effects on equity dividends

H3: Governance index has significant effects on equity dividends

H4: ESG index has significant effects on equity dividends

3.2 Moderating effect of TDI on the relationship between ESG and equity dividends

Env, soc, and gov issues are the three pillars covered by a company's operations and activities under the ESG concept (Bassen & Kovacs, 2020). ESG disclosures are also found to enhance a company's internal transparency regarding its env, soc, and gov standards (Eccles et al., 2014; Li et al., 2018). The revelation of this information induces managers, investors, and stakeholders to conduct more thorough assessments for better decision-making. ESG disclosure thus improves the information's availability and quality (Cheng et al., 2014). It helps to lessen the knowledge asymmetry among the company and its stakeholders (El Ghoul et al., 2011). Further, ESG management is also found to have long-term effects on technology, resources, workers, and society (Duque et al., 2021).

For measuring a company's TDI, it is found that its geographical location, age, number of activities, sales turnover, administrative expenses, personnel cost, and interest costs play a significant role (Singhania & Gandhi, 2015). Arsov & Bucevska (2017) evaluate the factors influencing TDI for companies across Croatia, Macedonia, Slovenia, and Serbia. They calculate the TDI based on S&P's checklist of 98 items broadly classified into the shareholding pattern, financial disclosures, board structure, and procedures. They report a significant positive association between TDI with the firm's size and debt but the inverse association with ownership concentration. However, they find no significant association between TDI and profitability. At the same time, Yoo & Managi (2022) employed both Bloomberg & MSCI ESG ratings and reported that ESG disclosure is vital for profits while the firms' actual actions in terms of ESG are more vital for the firm's long-term stability.

Alsayegh et al. (2020) find that a firm's ESG disclosure policy and an efficient CG mechanism, aid in improving its sustainability performance. According to stakeholder theory and shared value theory, the study further reiterates that divulging ESG data is beneficial for enhancing a company's sustainability performance. Moreover, TD policies also improve a company's extended economic stability (Jones et al., 2012) and share value (Azrak et al., 2020; Lawrence, 2013).

Various studies have also explored the relationship between CG or TDI with dividends and found them positively associated (Bebczuk, 2007) for Argentina; (Ellili, 2020) for UAE; Kowalewski et al., 2008 for Poland; (Zadeh, 2021) for the US). In contrast, (Saeed & Zamir, 2021) find an inverse relation between CSR disclosures and dividends across various developing economies, i.e. India, China, Indonesia, Pakistan, Malaysia, Korea, Turkey, and Russia. Also, few studies have not found any association between TDI and dividends (Sharif & Ming Lai, 2015). Accordingly, to investigate this relationship in the context of Indian banks, we hypothesise:

H5: TDI moderates the relationship between ESG and equity dividends

3.3 Moderating effect of NPAs on the relationship between ESG and equity dividends

It is found that NPAs affect a bank's productivity or profitability (Wadhwa, 2020; Rastogi et al., 2021). Likewise, there is compelling proof in favour of the mismanagement hypothesis, which states that high NPAs eventually hurt profitability since they arise due to a liberal credit policy that promotes profitability (Cesarone et al., 2022). Another study suggests that good risk-mitigation techniques and adequate provisioning for bad credits could break the link between NPAs and profitability (Bauer and Ryser 2004). Further, Konovalova et al. (2016) suggest that bad debts are mainly problematic when the bank employs subpar risk-mitigation techniques. Hence to evaluate the interacting influence of NPAs on the association between ESG and dividends, we hypothesise:

H6: NPAs moderate the relationship between ESG and equity dividends

4. DATA AND RESEARCH METHODOLOGY

4.1 Data and variables

The study examines the effect of the ESG index on the equity dividends of banks and how this relationship varies under the influence of TDI and NPAs. For this purpose, a sample of 33 Indian banks representative of a majority share of the Indian banking sector has been considered. We have considered the data from the post-crisis period, 2010-2019, to minimise the impact of adverse economic disruption caused by the financial crisis. The data is retrieved using CMIE Prowess and the official websites of respective banks. PDM is applied in the paper as it helps in deriving more meaningful insights from data, which might not be possible by carrying out either only a time series or a cross-sectional analysis (Bhimavarapu et al., 2023c; Bhimavarapu et al., 2022c; Gautam et al., 2021b, 2022c, 2023a; Kanoujiya, Rastogi, et al., 2022; Pinto & Rastogi, 2022b; Rastogi, n.d.; Rastogi & Kanoujiya, 2022a, ; Sharma & Rastogi, n.d.; Sidhu et al., 2022; K. Singh & Rastogi, 2022a, 2022b; S. Singh et al., n.d.) (Hsiao, 2005). Table I describes the variables used for this study.

Table 1 – Description of Variables

SN	Variable	Type	Code	Definition	Citations
1	Equity Dividends	DV	eq_div	Variable is calculated by dividing equity dividend by the bank's net worth.	Aivazian et al. (2003)
2	Environmental Index	IV	env	It represents the environmental measures adopted by banks. An Environmental index is developed for its measurement.	Fare et. al. (2004), Hajkowicz (2006)
3	Governance Index	IV	gov	It shows the governance measures of banks. A governance index is developed for its measurement.	Singhania and Gandhi (2015)
4	Social Index	IV	soc	It signifies the social governance practices of banks. A social index has been built for its measurement	Singhania and Gandhi (2015)
5	ESG Index	IV	ESG	A score for each bank is calculated using an unweighted methodology from the self-constructed ESG index.	Singh (2013), Sudha (2015)
6	Transparency and Disclosure Index	MV	TDI	It shows the level of transparency and disclosure of information by a bank. A T&D index is developed for its measurement.	Arsov and Bucevska (2017), Kamal Hassan (2012)
7	Non-performing asset	MV	NPA	A non-performing asset is a loan or advance for which the principal or interest payment has remained unpaid for 90 days.	Rai (2012), Wadhwa et. al. (2020)
8	ICR	CV	ICR	It is calculated by dividing a company's earnings before interest and tax by its interest expense during a period.	Ji (2017)
9	Asset Size	CV	l_assets	It indicates the bank size. The higher value means a larger bank size. The natural log is taken for consistency.	Rastogi et al. (2021), Jayadev (2013)

Note: DV, IV, MV and CV represent the dependent variable, independent variable, moderating variable, and control variable respectively.

4.2 Model specifications

The paper analyses the effects of ESG on the eq_div of Indian banks and how TDI and NPAs moderate the association between them. The models used in the study are fixed as below:

Model 1

$$eq_div = \beta_0 + \beta_1 env_{it} + \beta_2 gov_{it} + \beta_3 soc_{it} + \gamma_1 ICR_{it} + \gamma_2 L_asset_{it} + u_{it}$$

Model 2

$$eq_div = \beta_0 + \beta_1 ESG_{it} + \gamma_1 ICR_{it} + \gamma_2 L_asset_{it} + u_{it}$$

Model 3

$$eq_div = \beta_0 + \beta_1 env_{it} + \beta_2 gov_{it} + \beta_3 soc_{it} + \beta_4 TDI_{it} + \beta_5 envXTDI_{it} + \beta_6 govXTDI_{it} + \beta_7 socXTDI_{it} + \gamma_1 ICR_{it} + \gamma_2 L_asset_{it} + u_{it}$$

Model 4

$$eq_div = \beta_0 + \beta_1 ESG_{it} + \beta_2 TDI_{it} + \beta_3 ESGXTDI_{it} + \gamma_1 ICR_{it} + \gamma_2 L_asset_{it} + u_{it}$$

Model 5

$$eq_div = \beta_0 + \beta_1 env_{it} + \beta_2 gov_{it} + \beta_3 soc_{it} + \beta_4 NPA_{it} + \beta_5 envXNPA_{it} + \beta_6 govXNPA_{it} + \beta_7 socXNPA_{it} + \gamma_1 ICR_{it} + \gamma_2 L_asset_{it} + u_{it}$$

Model 6

$$eq_div = \beta_0 + \beta_1 ESG_{it} + \beta_2 NPA_{it} + \beta_3 ESGXNPA_{it} + \gamma_1 ICR_{it} + \gamma_2 L_asset_{it} + u_{it}$$

Where eq_div is the dependent variable. env, gov, soc and ESG are the explanatory variables. TDI and NPA are the moderating variables (MVs). Furthermore, the interaction terms envXTDI, govXTDI, socXTDI, ESGXTDI, envXNPA, govXNPA, socXNPA and ESGXNPA are also introduced to observe the interaction effect under (MVs). L_asset and ICR are taken as control variables for a good fit of models. The asset size and ICR are included as control variables because they are deciding factors in evaluating banks' economic importance across groups and can interfere with efficient parameter measurements. A detailed discussion on variables are reported in Table I. u_{it} are error terms, and 'i' is an entity (bank) at a time 't'. β_j is the coefficient where β_0 is constant. γ is the coefficient for control variables.

4.2 Descriptive statistics and correlation matrix

Table II depicts the outcome of the descriptive statistics of the sample. The .0183 mean value of eq_div, which is closer to its minimum value of 0 than its maximum of .0644, shows that most sample banks do not have high eq_div. Further, the more moderate mean values of env, gov, soc, TDI and ESG represent that most Indian banks are active concerning ESG norms. However, simultaneously a minimum value of 0 for these variables also highlights that there are few cases where banks are not compliant with any of the ESG norms. The NPA has an average score of 3.015, closer to its minimum of .01, indicating that most banks are operating at relatively lower NPA levels. The lower standard deviation of all variables shows that these determinants do not highly differ from one bank to another.

Table 2 - Descriptive analysis

Variables	Observations	Mean	Std. Dev.	Min.	Max.
eq_div	330	.0183	.0154	0	.0644
ESG	330	.2685	.0667	0	.4354
env	330	.0815	.0656	0	.2
soc	330	.1245	.0634	0	.277
gov	330	.4	.1166	0	.6764
TDI	330	.5024	.0942	0	.8431
NPA	330	3.015	2.723	.01	16
ICR	330	1.041	.4175	-.18	3.72
lassets	330	27.86	1.406	24.198	31.23

Note: Std. Dev. is standard deviation, and Min and Max are minimum and maximum, respectively.

Table III presents the correlation analysis among variables employed in the study. The correlation coefficients amongst the variables are not high. The highest significant correlation is observed between gov and ESG, with a value of 0.9437, which is acceptable as gov is one of the constituents of ESG computation. Accordingly, ESG is not included in any models where env, gov or soc are used individually as explanatory variables. The correlation between all other variables is lower than the value of 0.80. Hence, the multicollinearity issue between variables does not exist (Wooldridge, 2020; Gautam, et al., 2022d, 2022e, October, 2022f; Saxena, et al., 2022).

Table 3 - Correlation Matrix

Variables	eq_div	ESG	env	soc	gov	TDI	NPA	ICR	lassets
eq_div	1.000								
ESG	0.1681*	1.000							
env	-0.2910*	0.1987*	1.000						
soc	0.0956*	0.2408*	0.0722*	1.000					
gov	0.1950*	0.9437*	0.0217	-0.0524*	1.000				
TDI	-0.0754*	0.3164*	-0.3741*	0.1320*	0.2306*	1.000			
NPA	-0.4975*	-0.2894*	0.2452*	-0.0138	-0.3405*	-0.0466*	1.000		
ICR	0.0690*	0.3444*	0.0217	0.0018	0.3567*	0.3259*	-0.400*	1.000	
lassets	-0.0205	0.1258*	0.2252*	0.0694*	0.0729*	0.4258*	0.2945*	0.1231*	1.000

Note: * is for significance level at 0.05.

5. EMPIRICAL RESULTS

5.1 Outcomes of regression models

5.1.1 Regression results for the linear relationship

Table IV describes the results for Models 1 and 2, where the linear relationship between dependent variable eq_div and independent variables env, gov, soc is tested in Model 1, and the relationship between eq_div and ESG is tested in model 2. Both the models have a significant p-value (<0.05) for F-test (for fixed-effect) and the Breush-pagan test (for random-effect). Therefore, the Hausman test is applied to check the validity of fixed-effects or random effects. As the Hausman test exhibits a significant p-value (<0.05) for both models, the fixed effect is a valid approach for these models. Furthermore, the presence of autocorrelation (as revealed by the Wooldridge test with significant p-value<0.05) and the heteroscedasticity (confirmed by the Wald test with p-value<0.05) suggests considering the robust standard error estimates to interpret results (Baltagi, 2006). Model 1 shows that the coefficient (-.0940) for env is negative and significant, implying that env reduces eq_div of banks. On the contrary positive and significant coefficient of .0266 for gov demonstrates that eq_div tends to increase in response to better governance disclosure practices followed by banks. However, soc is found to have no bearing on the eq_div of banks. Furthermore, the results for model 2 depict that an improved ESG index leads to a decline in the eq_div of banks. Additionally, the control variable l_asset is found to be inversely related to eq_div, and ICR has no significant relationship with eq_div.

Table 4 - Base Models Result for Linear Relation (Static Panel Data Analysis)

DV: eq_div	Model 1	Model 2
env	-.0940* (0.000)	---
gov	.0266* (0.001)	---
soc	.0113 (0.522)	---
ESG	---	-.1383* (0.029)
lasset	-.0088* (0.000)	-.0095* (0.000)
ICR	.0023 (0.589)	.0034 (0.257)
Constant	.2588* (0.000)	.3139* (0.000)
F-Test (Fixed effect)	7.92* (0.0000)	6.18* (0.0000)
BP-test (Random effect)	121.39* (0.0000)	55.22* (0.0000)
Hausman Test	28.50* (0.0000)	65.46* (0.0000)
Wald test for Heteroscedasticity ¹	320.90* (0.0000)	1403.54* (0.0000)
Wooldridge Autocorrelation Test ² AR (1)	26.984* (0.0000)	34.041*(0.0000)
Model F-Stat	16.12* (0.0000)	340.03* (0.0000)

Note: ¹Wald test is for heteroscedasticity, having the null of no heteroscedasticity. ²Wooldridge test is for autocorrelation in a panel having the null of no autocorrelation (with 1 lag). BP test is Bruesch-Pagan-test for random effect. Parenthesis () has p-values.

5.1.2 Regression results for interaction models

Interaction models (3 to 6) examine the impact of env, soc, gov and ESG on eq_div under TDI and NPA. Analysis for models in Table V has been done applying the fixed-effect model as the results for Hausman Test are significant with p-value<0.05. Further, autocorrelation and heteroscedasticity necessitate the computation of robust estimates for better result interpretation.

The insignificant p-value for envXTDI, govXTDI and socXTDI in model 3 exhibits that TDI does not govern the relationship between env, gov, soc and eq_div. Results for model 4 are like that of model 3, wherein TDI is found to have no bearing on the association between ESG and eq_div. However, the negative, significant TDI coefficient in models 3 (-.0687) and 4 (-.0886) suggests that TDI individually has a detrimental effect on eq_div. Control variable l_aset is found to have a negative and significant relationship with eq_div in both models. Models 5 and 6 test how the relationship between env, soc, gov, ESG and eq_div varies with changes in the NPA levels of banks. The negative and significant coefficient of -.0348 for gov*NPA shows that a rise in the bank NPA levels hurt the relationship between governance disclosures and eq_div. On the contrary, NPA does not influence the association of env and soc index with eq_div (as the coefficients of both envXNPA and socXNPA are insignificant in model 5). The significant negative coefficient (.0427) for ESG*NPA signifies that NPA has an unfavourable effect on the relationship between ESG and eq_div. Furthermore, individually, NPA is found to be negatively associated with eq_div.

Table 5 - Interaction models result (Static panel data analysis)

DV: eq_div	Model 3	Model 4	Model 5	Model 6
env	-.0538* (0.000)	---	.0037 (0.912)	---
gov	-.0948* (0.017)	---	.0921* (0.043)	---
soc	-.0011 (0.961)	---	-.0504 (0.279)	---
ESG	---	-.1310*(0.036)	---	.1088* (0.024)
TDI	-.0687* (0.016)	-.0886*(0.001)	---	---
ESGXTDI		-.1522 (0.490)		
NPA	---	---	-.0138* (0.009)	-.0108* (0.000)
ESGXNPA				-.0427* (0.001)
envXTDI	.1378 (0.394)	---	---	---
govXTDI	-.0377 (0.802)	---	---	---
socXTDI	-.2798(0.288)	---	---	---
envXNPA		---	.0228 (0.131)	---
govXNPA		---	-.0348* (0.023)	---
socXNPA		---	-.0009 (0.917)	---
laset	-.0070* (0.003)	-.0072*(0.001)	-.0007 (0.878)	-.0021(0.538)
ICR	.0036 (0.238)	.0030 (0.296)	-.0062 (0.217)	-.0067 (0.102)
Constant	.2858* (0.000)	.295*(0.000)	.0569 (0.662)	.0896 (0.356)
F-Test (Fixed effect)	8.15* (0.0000)	7.12* (0.0000)	9.90* (0.0000)	9.05* (0.0000)
BP-test (Random effect)	113.41* (0.0000)	56.36* (0.0000)	162.02* (0.0000)	125.35* (0.0000)
Hausman Test	531.5* (0.0000)	128.78* (0.0000)	18.50* (0.0298)	111.00* 0.0000)
Wald test for Heteroscedasticity ¹	603.39* 0.0000)	1219.79* (0.0000)	359.40* (0.000)	1117.44* (0.0000)
Wooldridge Autocorrelation Test ² AR (1)	28.606* 0.0000)	30.287* (0.0000)	28.147* (0.0000)	33.897* (0.0000)
Model F-Stat	364.8*(0.0000)	381.45* (0.00)	148.90*(0.0000)	207.95*(0.000)

Note: ¹Wald test is for heteroscedasticity, having the null of no heteroscedasticity. ²Wooldridge test is for autocorrelation in a panel having the null of no autocorrelation (with 1 lag). BP test is Bruesch-Pagan-test for random effect. Parenthesis () has p-values.

5.1.3 Endogeneity and robustness

Table VI reports the outcome of the endogeneity test. The Durbin _Chi2_ and Wu _Hausman tests are performed to check endogeneity issues (Baltagi, 2006). Both tests reveal insignificant p-values supportive of the null hypothesis of no endogeneity. The results show that all the models have an endogeneity problem. Therefore, the instrumental variables technique is applied to ensure robust results.

Table 5 - Endogeneity Test

	env	soc	gov	ESG	TDI	NPA
Wu-Hausman Test	.048065 (0.8267)	.103778 (0.7476)	9.12613* (0.0028)	12.4794* (0.0005)	1.79419 (0.1818)	20.2293* (0.0000)
Wu-Hausman Test	.048065 (0.8267)	.103778 (0.7476)	9.12613* (0.0028)	12.4794* (0.0005)	1.79419 (0.1818)	20.2293* (0.0000)

Notes: p-values are in parenthesis (). Instrument: L3. variable tested for endogeneity satisfies the conditions of the valid and relevant instrument.

6. DISCUSSION

The empirical results in model 1 show that environmental sustainability measures negatively influence equity dividends. This result implies that improving env measures tends to reduce financial performance (Shaikh, 2022), thus reducing dividend payouts. Hence, we accept H1. Further, we also find that governance measures of banks positively influence equity dividends. It implies that banks following a better governance disclosure policy can improve their financial performance and thus distribute better dividends. This finding is consistent with previous papers which reported that gov measures and financial profitability are positively associated (Miralles-Quirós et al., 2019); (Xie et al., 2019). Accordingly, we also find support for La Porta et al., 2000's "outcome agency model" and report that CG practices and dividends are positively associated (Bae et al., 2012; Baker et al., 2020; Garay & González, 2008; Mitton, 2004; Pinto & Rastogi, 2022; Rajput & Jhunjhunwala, 2019; Sawicki, 2009; Yarram, 2015; Yarram & Dollery, 2015). Hence, we also accept H3. However, the study finds no impact of soc measures on the equity dividends of Indian banks (Aouadi & Marsat, 2018). Hence, we fail to accept H2.

Further empirical results in model 2 show that a better ESG index causes a drop in the equity dividends of banks. A possible reason for this could be that an improvement in the ESG index leads to a drop in the company's financial performance (Shaikh, 2022), thus reducing dividends. Hence, we accept H4.

Further research outcomes in model 3 show that the association amongst the env, gov, soc index and equity dividends is not governed by TDI. Additionally, results in model 4 confirm no interaction influence of TDI on the association amongst the ESG and dividends (Cek & Eyupoglu, 2020; Dremptic et al., 2020; Gebhardt et al., 2022; Khan, 2022; Shakil, 2021; Singhanian & Gandhi 2015). Hence, we fail to accept H5. However, we find that individual TDI is inversely related to equity dividends (Hassan, 2012; Rajesh & Rajendra, 2020).

The empirical results in model 5 indicate that an increase in bank NPA levels negatively influences the connection between governance disclosures and dividends. On the contrary, we report no moderating effect of NPA on the association amongst env and social index with dividends (Wadhwa, 2020). Further results in model 6 indicate that NPA negatively influences the relationship between ESG with dividends (Rastogi et al., 2012). Furthermore, individually also, NPA is found to have a negative link with equity dividends (Jayadev, 2013).

Furthermore, we also find that the control variable, I_{asset} (model 1 to 6), is found to have an inverse relation with dividends (Balatbat et al., 2012; Cek & Eyupoglu, 2020; Cesarone et al., 2022; Gurol & Lagasio, 2022; Koundouri et al., 2022; Li et al., 2021; Singh, 2013; Sudha, 2015). Whereas ICR is not found to be related to equity dividends in any of the models (Broadstock et al., 2021).

7. CONCLUSION

As seen from the existing studies, many varying outcomes and inconsistencies exist in the association of ESG with dividends. Hence the effects of ESG on the equity dividends of Indian banks are examined in this study. Moreover, we also examine the moderating influence of TDI and NPAs on the association between ESG with dividends. Our primary contribution involves combining the lines of research to look at the link between these variables simultaneously in the context of Indian banks. Regardless of its potential positive or lousy impact on a company's success, ESG practices are now a mandate for all businesses, and stakeholders are putting more and more pressure on their compliance. Implementation of the ESG mandate by the banks' stakeholders can thus ensure the socially responsible conduct of the banks for the overall progress of the public. The dishonour the banking sector has endured due to the previous economic crisis, which seriously tarnished its reputation, must also be considered. Hence these requirements are essential for the banking sector as they are crucial for the efficient operation of the financial system.



ESG index, governance index, and social index appear as major indicators contributing to the sustainability performances of Indian enterprises and represent that banks have followed better governance disclosure policy and social governance practices to increase profit according to the findings of the grey incidence research. This suggests that leaders and experts in Indian businesses have greater concern with the optimum utilisation of scarce resources to get long-term benefits for stakeholders and the economy at large. Additionally, it has been observed that CSR and the ESG index are receiving more attention to secure long-term competitive advantages. On the downside, it is discovered that environmental sustainability, ICR and bank size measures play less significant roles in influencing the overall ESG performances of Indian enterprises. Further, this study also reveals that TDI does not moderate the relationship between the environmental index, governance index, social index, and dividends, nor does it moderate the association between ESG with dividends. The study also discovered that NPA harms the connection between ESG and dividends. These indicators seem to be less significant to the Indian banking industry. Therefore, it is advised that managers concentrate on these indicators to enhance the overall sustainability performances of Indian banks.

The study has theoretical and policy implications, like banks that pay more significant dividends, are more liquid and do not face immediate survival problems. These banks can fund CSR initiatives that subsequently produce long-term integrated value. Secondly, the importance of TDI also suggests that the banking sector companies have higher ESG indexes. These banking businesses frequently provide more information to safeguard their reputation, which lends credence to the signalling theory. Finally, this paper too adds to the existing information on how CSR and CG policies influence profit distribution by examining the unique instance of the Indian banks using a sizable sample in a post-crisis environment where the adoption of these factors is relatively common.

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