



Do Indian Firms Engage in Greenwashing? Evidence from Indian Firms

Sushobhan Sensharma¹, Dr. Manish Sinha² and Dr. Dipasha Sharma³

Abstract

This study aims to look at ESG reporting in India through the lens of greenwashing, with a focus on the companies listed in the National Stock Exchange under the NIFTY 50 index using available ESG scores and assessments. Further, it aims to measure the indulgence of greenwashing by the companies. This study also analyses and attempts to highlight the factors that influence a company's greenwashing behaviour, focusing specifically on the Indian context. Data for the empirical study and calculation of greenwashing score is collected from secondary data sources. We further use a regression method to study the nature of influence and significance of various factors on the calculated greenwashing score and assess the findings with our hypothesis. The study identifies 54% from the 48 companies, part of our sample size as green washers. Most of these companies belong to the manufacturing and energy sector of the Indian economy. The regression results suggest that a company's cross listing status or its presence in any ESG focus fund has a significant and negative relationship with its observed greenwashing score. On firm level characteristics, the regression results indicate that a company's board size and the presence of independent directors have a significant impact on the company's observed greenwashing score.

JEL: P28, Q01, Q56, G32, G34

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¹*Symbiosis Centre for Management & Human Resource Development, Symbiosis International (Deemed University) SIU, India. s3harma@yahoo.com*

² *manish_sinha@scmhrd.edu, Symbiosis Centre for Management & Human Resource Development, Symbiosis International (Deemed University) SIU, India*

³ *dipasha_sharma@scmhrd.edu, Symbiosis Centre for Management & Human Resource Development, Symbiosis International (Deemed University) SIU, India*

Introduction: -

With increasing expectations and incentives for businesses to be more responsible, accountable, ethical and moral, from consumers and investors alike, it is probably the right time for organizations to carefully understand the soft power of ethical business practices that go beyond the concept of delivering only high profits as their primary goal. To enforce such expectations, some investors engage in selective disinvestment or selective investment on ethical lines. A prominent and most renowned example for this was the disinvestment from South African companies to enforce the abolition of apartheid (Beloff and Chevallier, 2012). In modern times, along with social responsibility, ethical practices now extend to concepts like environmental sustainability, gender and racial diversity, and social upliftment and responsibility. It expects them to not only achieve continuous economic progress but also protect communities, the nature and the environment in the short term and long term. There has also been a steady rise in socially conscious investors who seek to secure their investments from such ethical risks (Oxford Analytica, 2018). They engage in a phenomenon commonly known as sustainable investing. This phenomenon, which was considered as a means of risk mitigation earlier, over the years, has now evolved into an investment philosophy (Bozesan, 2013).

The CFA institute defines three important tenets regarding sustainable investing (CFA Institute, Future of Sustainability in Investment Management, 2020). First one explains that the current adoption of sustainable investing is additive to the existing investment theories and doesn't mean to reject, replace or disregard the foundations. Secondly it talks about how sustainable investing is a collaborative and a multi-stakeholder approach. Thirdly it highlights how to derive more value in sustainable investing by using the environmental, social and corporate governance factors and corresponding metrics. These are abbreviated and more commonly referred to as ESG factors and metrics. In recent times, we have more than a quarter of assets which are currently being managed globally, that are being considered for investment after being influenced by ESG factors (Bernow, Klempner and Magnin, 2017).

To help assess organizations on these parameters, investors make use of ESG reports and metrics. These reports highlight an organization's environmental, social and corporate governance performance. Organizations publish these reports on a periodic basis, voluntarily. However, due to lack of regulations, standardized metrics and reporting format along with inconsistent and low-quality data inputs, these reports might not provide the actual representation of an organization's standing and progress (Schroders, 2017). Since these reports are also self-published, few organizations try to mislead investors and misrepresent their ESG performance and claim to be more ethical, responsible and sustainable than they actually are (Antonicic, 2020). This phenomenon in the world of investing is called as greenwashing which essentially makes it difficult for investors to incorporate ESG variables and leverage its benefits in their asset selection process. Brown washing, on the other hand involves companies understating their ESG performance.

While there are some ESG disclosure standards proposed by the Global Reporting Initiative (GRI) or similar, but companies are also allowed to cherry pick and disclose data which is more favourable to their narrative and hide some aspects completely as not all instruments under an ESG disclosure are mandatory and rightly so because not all industries can be assessed using the same scale and not all industries can be expected to maintain the same compliance. Due to this variability, the quality and the content of ESG reports varies (Büyüközkan and Karabulut, 2018). This also makes it difficult to evaluate a report's transparency, accuracy and performance. When these shortcomings are coupled with greenwashing practices, realising the true potential of ESG investing becomes a significant challenge (Halderen, Bhatt, Berens,

Brown & Riel, 2016). A survey response highlighted that 78% of the respondents believed that there should be improved standards for ESG products and disclosures to mitigate greenwashing (CFA Institute, Future of Sustainability in Investment Management, 2020)

India's effort and history to make an ecosystem of Indian companies and their business practices to have a social character, date back to the National Voluntary Guidelines (NVGs) on environmental, social and economic responsibilities of business that was released in 2011 (Pandey, 2020). These guidelines were later incorporated in the Companies Act drafted in the year 2013. As part of this Act, it is mandated by law for certain Indian companies to spend on corporate social responsibility (CSR). These NVGs were further updated as National Guidelines for Responsible Business Conduct (NGBRC) in 2019. The top 500 listed Indian companies (by market capitalization) have been instructed by the regulator to disclose their business sustainability performance through Business Responsibility Reporting. The Business Responsibility Reporting today includes and incorporates the current global practices in non-financial data reporting (Ministry of Corporate Affairs, Report of the Committee on Business Responsibility Reporting, 2020). The mandatory spending on CSR puts Indian companies significantly ahead of many other companies from other developed countries, at least in terms of corporate governance and social responsibility. However, it is the environmental performance of Indian companies that lag behind in this comparison (Morningstar ESG Conclave, 2021).

Financial institutions in India have also jumped onto this rising trend of encouraging ethical business practices by rewarding such companies with better rates of interest and exclusive funds. The young age demographic of India which is a major section of India's current workforce are known to be more sensitive towards sustainable and ethical business practices. Their presence in the financial markets, as investors especially, has been one of the key driving forces behind the accelerated adoption of ESG driven investment decisions in India (Rajesh Narain Gupta, 2021). Incorporation of ESG funds, green finance, have also witnessed significant surges in the last couple of years. The presence of 10 exclusive ESG focus funds including 6 that were launched in 2021 alone, stands as a strong testimony for its upward momentum. Currently India has the second largest green bond market among emerging markets (Prateek Pant, 2021). Additional initiatives from government in their attempt to push the adoption of renewable energy and cleaner transportation modes have been luring every business in the country, ranging from major conglomerates to dynamic and disruptive start-ups to tap into the business potential of such projects. Financial institutions on the other hand are maintaining this enthusiasm by ensuring flow of funds to projects related to electric vehicles, solar energy, etc. This is another area where ESG based investment decisions plays an important role in the Indian context.

Acknowledging that ESG is still a budding concept among Indian investors, the trend in India is surely gaining traction in the last couple of years. In line with this rising trend, this study aims to identify which Indian companies present in the National Stock Exchange indulge in greenwashing. As a benchmark, the study will only consider the companies that formed the weighted average for the NIFTY 50 index in 2019. The NIFTY 50 index is a flagship index of the National Stock Exchange of India Ltd. (NSE). This index is a portfolio consisting of the most liquid blue chip Indian securities offered by 50 companies that are the largest companies (by market capitalization) in the National Stock Exchange and feature the most prominent and impactful industry names. The NIFTY 50 index has often been regarded as the truest reflection of the Indian stock market. These 50 companies cover major sectors of business that contribute to the Indian economy and offers investment managers one efficient portfolio to summarise and encapsulate the Indian market. The NIFTY 50 index is widely used for benchmarking and

index funds and derivatives (NSE Indices Methodology Document, 2021). Hence, analysing the greenwashing behaviour of the companies listed under this index will be highly insightful and will be a guiding point from where further research can be undertaken. Additionally, this study will also list down internal company factors, external factors and financial factors that might be influencing a company's greenwashing behaviour and also assess the strength and nature of its relationship with our findings.

This paper is organised and presented in the following manner. We first provide an overview of prior literature in this field to study and build the theoretical framework. Using these theories as our foundation and picking out common aspects in these studies, we construct our hypothesis that we intend to test and validate in the Indian context. Next, we define and describe the framework, time frame, data collection, sample size and research tools. We then discuss and understand the observations, results and derived insights. Finally, we conclude and highlight implications, limitations and suggestions for further research in this field.

Theoretical Framework: -

Sustainability is unarguably one of the most crucial and significant challenge that the world is facing today (Liew, Adhitya & Srinivasan, 2014). This challenge of sustainability includes environmental and socio-economic issues that arise from or impact businesses (Sustainable Development Challenges - World Economic and Social Survey, 2013). The increasing focus on sustainability-based investment along with an expectation from firms to incorporate a more sustainable business practice has led to a growing trend in reporting, publishing, and marketing these efforts as a part of non-financial disclosures (Vukić, Vuković & Calace, 2018). This kind of reporting and communication on social and environmental factors of the company plays a very significant role in maintaining the sustainable development goals of an organization (Enrique & Michaela, 2015). Today we have a large number of financial regulators, investors and institutional shareholders who are carefully considering and incorporating ESG factors while assessing companies thereby influence their investment strategies (European Commission, 2016). Prior research studies in this field have acknowledged this growing trend but at the same time have highlighted multiple challenges that limit investors and businesses alike to realise the true potential of ESG based investments and disclosures. A major hindrance faced by financial institutions while integrating ESG-based information to their investment models is the intangible nature of CSR and ESG reports (Moniz, 2016). Since these reports are self-published, there is a certain kind of bias that affects any sort of assessment and investigation. This also gives rise to other challenges like unaudited data, lack of specific regulations or guidelines, and the potential of a misled perception and projection of ESG factors at company level (Fride, 2019; PRI 2017; Schroders, 2017; State Street Global Advisors, 2017; Khan, Serafeim & Yoon, 2016; PRI, 2015).

The presence of these challenges gives companies some scope to engage in selective, lengthy, and complex disclosures which could finally result in greenwashing of their ESG performance, which most studies have identified as a major threat while harnessing the full potential of ESG information. Greenwashing has been defined as a deliberate information disclosure decision initiated by a company that may be beneficial to the company but costly to society at large (Du, 2015; Bowen and Aragon-Correa, 2014). Brown washing, on the other hand, is the disclosure that understates the company's ESG performance.

Previous studies have identified and categorised three types of greenwashing behaviour. The first type consists of manipulation of disclosure to boost the valuation of a company by overstating their real performance (Marquis, Toffel, & Zhou, 2016; Montgomery & Lyon,

2013; Maxwell & Lyon, 2011). As a part of their strategy to cover up for their poor performance, the companies disclose complicated and large volumes of non-financial data which misleads the stakeholders and their assessments. The next type of greenwashing behaviour involves cherry picking disclosures that doesn't paint an accurate picture of ESG based performance, thereby misleading stakeholders. This selective disclosure strategy can be further classified in two strategies. The first strategy involves cherry picking of positive disclosures and not disclosing negative or unfavourable information. The second strategy involves information disclosure to only a selected or preferred group of stakeholders (Kirk and Vincent, 2014). The last type of greenwashing is the most prominent of the three. Compared to other two types that are done on company level, this type of greenwashing behaviour is practiced on product level (Cho and Baskin, 2018; Testa, Iraldo, Vaccari & Ferrari, 2015; Majid and Russell, 2015; Delmas and Burbano, 2011). Studies have shown how companies leverage this kind of greenwashing behaviour where they overstate the sustainability features and environment related benefits associated with a product only to help project a particular kind of brand image and increase the overall sales of that product when targeted towards a cohort that is more sensitive in this regard.

Several studies have drawn correlations between selective disclosure of a company's non-financial data, primarily ESG and CSR reports with the company's actual ESG and CSR performance. A sample study of energy and mining companies and their CSR disclosures showed that CSR performance was positively related to disclosure (Herbohn, Walker & Loo, 2014). That means, a company with higher CSR performance is more likely to higher CSR disclosures. Additionally, companies with greater CSR performance are more likely to publish higher number of CSR reports (Uyar, Karaman & Kilic, 2020). A significant and positive correlation exists between CSR performance and the readability of CSR reports, essentially implying that good CSR performance by a company makes them more likely to publish CSR reports which are more readable (Wang, Hsieh & Sarkis, 2018). Most of these prior studies on non-financial data disclosure and performance are limited to CSR reports and the positive relationship it has with CSR based performance and disclosures which reduces the chances of greenwashing.

However, when it comes to disclosing environmental performance along with social performance, CSR reports on social performance are seemingly more readable than environmental performance. (Wang, Hsieh & Sarkis, 2018). Another study proposes that companies with better ESG related performance might indulge in greenwashing lesser as they have less to hide (Marquis, Toffel, & Zhou, 2016).

There have also been studies that identify the various factors affecting a company's greenwashing or brownwashing behaviour. A company may choose to understate their ESG performance as few studies suggest that green credentials associated with a company or socially driven initiatives by the company can negatively affect the company's stock market performance (Fisher-Vanden and Thorburn, 2011; Khanna and Damon, 1999; Ullmann, 1985). Companies that are more exposed to scrutiny by external stakeholders and agencies, along with global norms, are also less likely to indulge in selective disclosures (Marquis, Toffel, & Zhou, 2016). At company level, the size of the serving board and its composition plays an important role in keeping checks on ESG based performance and disclosures. A study on the banking sector noted that the size of the serving board, its gender balance, and presence of a CSR sustainability committee has a positive effect on the bank's overall ESG performance (Birindelli, Dell'Atti, Iannuzzi & Savioli, 2018). A positive influence on CSR disclosures has been studied for companies with boards composed of a higher percentage of independent directors. (Adams & Mehran, 2012; Ben-amar & McIlkenny, 2015). Although a company's

ESG performance impacts its financial performance (Jyoti & Khanna, 2021), only when a company has good financial performance and bandwidth, they can proactively take ESG based initiatives.

India is the fastest growing economy in the world, but it is worth noting that its policies and business practices are also committed to be inclusive and sustainable as it progresses ahead. This is where a need for long term corporate sustainability arises. A study has covered issues relating to the capacity and willingness of the policymakers and stakeholders of the country to participate in this approach along with how facilitating the business environment is in India for such initiatives (Kaur H., 2019). The application of ESG based reporting and metrics is only a medium to structure and monitor this approach. Another study highlights the main challenges and deficiencies India faces in developing a green financial market and addresses the risks of greenwashing in this context (Freytag, 2020).

Previous studies and literature on this topic have demonstrated their analysis from a global perspective or a limited local perspective (Gyönyöröová, Stachoň, & Stašek, 2021; Ruiz-Blanco, Romero, & Fernandez-Feijoo, 2021; Uyar, Karaman, & Kilic, 2020). The subjectivity of this topic and its adoption on a regional level will vary and thus, it has to be seen if these findings are significant when applied to a regional setting as well. Further, although there have been studies related to ESG and non-financial data disclosures within the Indian context, not many have looked at ESG adoption from a greenwashing perspective and applied any empirical approach to calculate the magnitude of greenwashing indulgence by Indian companies. Some of these studies also look at only CSR level reporting as a whole and its readability quality. The study aims to extend the learnings, findings and approach discussed in previous studies, and apply it to the Indian financial market. ESG is a relatively new but growing topic of interest amongst Indian investors and this study aims to correlate company level behaviour in India with existing global theories of ESG based disclosure and actual performance.

Hypothesis Development: -

In our attempt to understand the different factors which can induce and influence a company to indulge in greenwashing or the company's greenwashing behaviour, based on prior literature, company level governance factors seems to have an impact on greenwashing behaviour (Ferrell, Liang & Renneboog, 2016; Liu, Miletkov, Wei & Yang, 2015; Dahya & McConnell, 2007; Bebchuk & Weisbach, 2010).

Company level governance factors focuses on scrutiny from the board and external stakeholders directly associated with the company. These may include independent directors serving on the board and institutional shareholders of that company. Studies have examined that higher number of independent directors serving on the company's board will have a positive relationship with CSR information disclosure (Cuadrado-Ballesteros et al., 2015). Institutional ownership in a company also influences non-financial reporting (Lubsen, 2019).

Thus, we hypothesise the following considering internal governance factors and its effect on greenwashing behaviour

- *H1] Increased share of institutional shareholders for Indian companies negatively affects greenwashing behaviour*

- *H2] A larger board size of Indian companies negatively affects greenwashing behaviour due to their increased monitoring capability*
- *H3] Increased number of independent directors for Indian companies negatively affects greenwashing behaviour*

Next, we focus on scrutiny by external bodies especially the ones assessing a company's inclusion or exclusion from ESG focus funds and international sustainability indices. Asset managers today are increasingly offering ESG focused mutual funds as an investment option in line with the current demands for sustainable business practices and studies have suggested that selection of potential companies for this kind of portfolio is done carefully taking into consideration ESG based principles, data and ratings (Curtis, Fisch & Robertson, 2021). Companies also try to position themselves in a way to attract this specific kind of fund flow (Gibson, Glossner, Krueger, Matos & Steffen, 2020). Further, cross listing of firms in other international exchanges exposes them to more stringent compliances and norms, thereby reducing their chances of selective disclosures to selective investors (Bosco & Misani, 2016).

We hypothesise the following considering scrutiny and required compliance by external bodies and its effect on greenwashing behaviour: -

- *H4] Cross listing of an Indian company in any other foreign stock exchange negatively affects greenwashing behaviour*
- *H5] Presence of an Indian company in any ESG Focus Funds or Sustainability Index negatively affects greenwashing behaviour.*

Lastly, the company's market size along with its profitability would indicate company's financial bandwidth to practice ESG based improvements and parallely have an effect on their ESG performance communication (Delmas & Burbano, 2011).

Therefore, considering the financial bandwidth of the company and its effect on greenwashing behaviour, we hypothesise the following: -

- *H6] Indian companies with high financial bandwidth and profitability negatively affects greenwashing behaviour*

Research Methodology: -

As per most of other research in this field (Ruiz-Blanco, Romero & Fernandez-Feijoo, 2021; Yu E, Luu B & Chen CH, 2020), this study also identifies companies as green washers if seem to publish large quantities of data thereby projecting themselves as seemingly transparent but in reality, they perform poorly when assessed on ESG based parameters. A wider and positive difference between disclosure and performance would indicate a higher extent of greenwashing behaviour for that particular entity. Therefore, we derive the following equation: -

$$\text{Eqn. 1] Greenwashing Score} = (\text{ESG Disclosure Score}) - (\text{ESG Performance Score})$$

Following previous studies (Yu E, Luu B & Chen CH, 2020; Tamimi & Sebastianelli, 2017; Bosco & Misani, 2016; Hartmann & Uhlenbruck, 2015; Ioannou & Serafeim, 2012), to measure a company's ESG or non-financial data disclosure score, we make use of

Bloomberg's⁴ ESG Disclosure Score. For measuring a company's ESG performance, we consider the Thompson Reuters⁵ ESG Performance Score.

Bloomberg rates companies annually based on the quantity of the company's ESG data disclosures in the public domain via annual reports, websites, sustainability and CSR reports and other public information. The score is rated on a scale of 100 and comprises of 120 ESG-based indicators like carbon emissions, waste management, renewable energy initiatives, human rights, supply chain performance, executive compensations, board compositions, etc. A high score of 100 signifies that the company has disclosed information for each and every data point and similarly a low score basically penalises the company for missing data. A high Bloomberg ESG Disclosure Score is an indication that more ESG-based data is disclosed.

The Thompson Reuters ESG Performance Score is calculated data for almost 6000 public companies based on the reported data available on them in the public domain. Data for a company is captured across 400 different ESG metrics from which few are selected and grouped into 10 broad categories. Each category is then weighted based on the volume of issues present in that category. The result is a percentile-based score and grade ranging between A+ and D-.

A key difference to be noted here, between the calculation of both the scores, is that Thompson Reuters ESG Performance Score considers different weights for its E, S and G pillars based on the volume of issues present. In contrast, Bloomberg ESG Disclosure Scores do not have varying weights for its E, S and G pillars.

Given the difference in scoring methods and scales, for facilitating relevant comparisons between the scores of disclosures and percentile based weighted scores of performances, we would re-weight the performance scores making it similar to the weighting scheme for the disclosure scores. The resultant scores of the three pillars namely Environmental, Social and Corporate Governance would be consistent and comparable for both disclosure and performance.

Thus, our equation evolves to: -

Eqn. 2] Greenwashing Score = (Bloomberg ESG Disclosure Score) – (Thompson Reuters ESG Performance Score)

After this, we transform our ESG disclosure & performance scores to ratios. To do so we divide the scores by 100, thereby limiting the values between 0 and 1 and then we further normalise the scores to bring them to the same scale, making it more comparable with each other.

Finally, to calculate the greenwashing score for a company: -

Eqn. 3] Greenwashing Score = (normalised Bloomberg ESG Disclosure Score) – (normalised Thompson Reuters ESG Performance Score)

We apply the greenwashing definition and its score calculation method on the Indian companies that formed the weighted average for NIFTY 50 in the year 2019 to identify which

⁴ It is a financial data vendor providing financial software applications and platforms to enable trading and analytics. Bloomberg Terminal offered by them is used by institutions and analysts worldwide.

⁵ It is a multinational media conglomerate and offers a financial information service with data on companies, markets, economies and countries. Their database tool is useful to gather information on companies, stocks, financial data and performance of markets.

companies show a higher greenwashing score and associate a quantifiable greenwashing score to each one of them.

A high positive greenwashing score would imply that the company indulges in greenwashing because of the imbalance between ESG disclosures and ESG performance, ESG disclosures being on the higher side. A high negative score could maybe imply that the company is understating its ESG achievements because of the imbalance between ESG disclosures and ESG performance with ESG performance being on the higher side.

Once we calculate the greenwashing scores for each company in our sample, we then list down factors that might be inducing these companies to indulge in greenwashing or factors that might be affecting a company's indulgence in greenwashing. To test the nature and strength of the relationship between the hypothesised factors and our calculated greenwashing score, we summarise our regression model as follows: -

Dependent Variable: Greenwashing Score

Independent Factors: External Scrutiny & Compliance, Internal Governance & Financial Bandwidth

Block 1: Greenwashing Score = Constant + (Cross Listing) + (Market Cap. & Profitability) + (Board Size) + (Independent Directors) + (Shares held by Institutional Owners)

Block 2: Greenwashing Score = Constant + (Presence in sustainability Index) + (Market Cap. & Profitability) + (Board Size) + (Independent Directors) + (Shares held by Institutional Owners)

Block 3: Greenwashing Score = Constant + (Presence in ESG Focus funds) + (Market Cap. & Profitability) + (Board Size) + (Independent Directors) + (Shares held by Institutional Owners)

We will also test the relationship for each segment of independent factors and identify which elements within those factors are significant.

HDFC Bank and Mahindra & Mahindra have been considered as missing values and therefore have been omitted from the sample and the subsequent calculations.

Data Sources: -

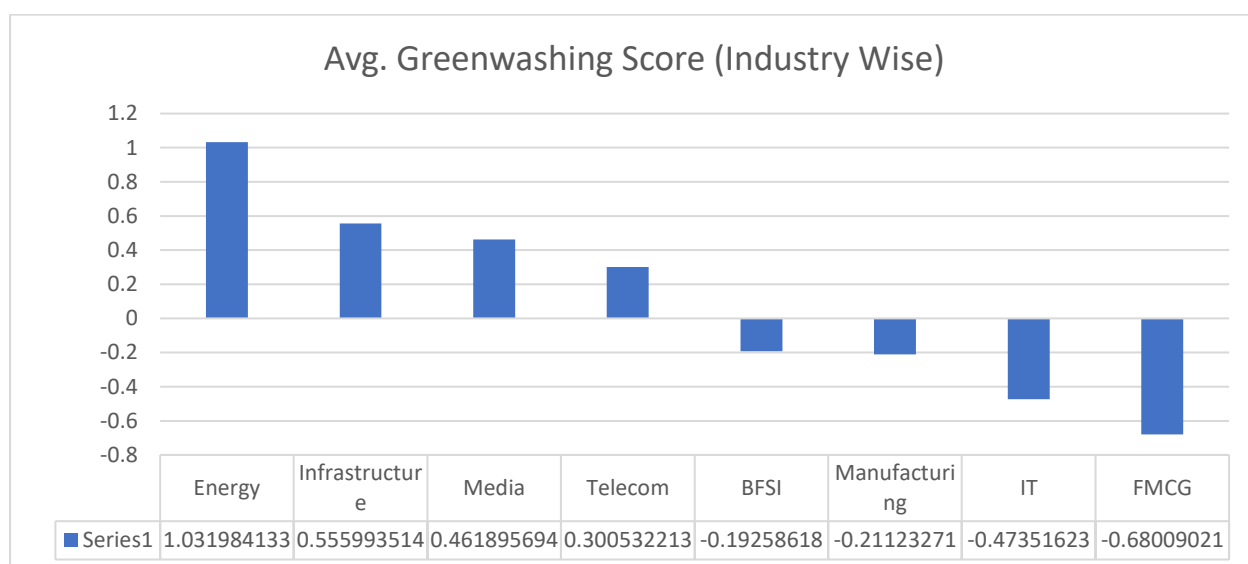
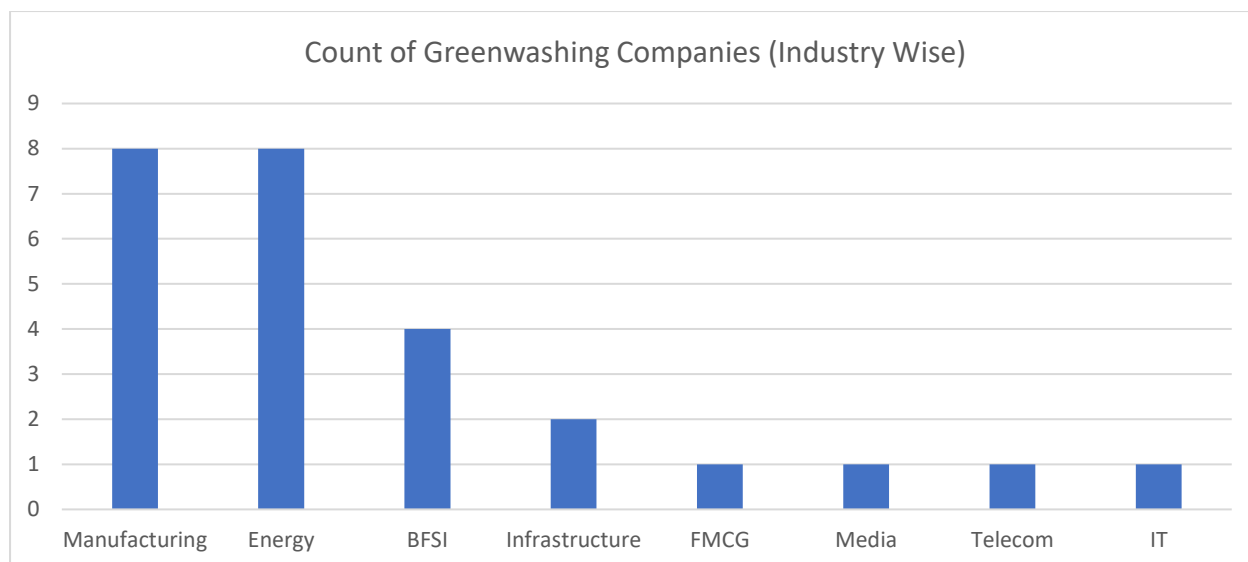
Our sample of NIFTY 50 companies were chosen from the financial year of 2019-20 time frame. Subsequently for all other data points, the same time frame has been considered. ESG scores for our sample companies have been collected from the Thompson Reuters database for ESG performance metrics and Bloomberg Terminal for ESG disclosure metrics. Company level data like net profits, size of the serving board during the time frame along with the number of independent directors serving in that board have been collected from each company's annual report. Information regarding the size of the company's market capitalization was collected from the National Stock Exchange website. Additional information regarding the company's cross listing status in any foreign exchanges, their presence in sustainability indices and Indian ESG focus funds have been collected from various financial information outlets available online.

Results & Analysis:

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The following observations were drawn from the greenwashing scores calculated for the sample size: -

Tata Consultancy Services Ltd	-0.58	Sun Pharmaceutical Industries	-0.33
Reliance Industries Ltd	-1.42	IndusInd Bank	0.56
Hindustan Unilever	-1.45	Titan Company Ltd	-0.89
Housing Development Finance Corporation Ltd	-1.25	Bajaj Auto	1.29
Infosys Ltd	-1.08	Bharat Petroleum Corporation Ltd	1.18
ITC	0.32	Adani Ports	0.36
Kotak Mahindra Bank	-1.44	Tech Mahindra	1.04
ICICI Bank	-1.12	Britannia Industries	-0.05
State Bank of India	0.37	GAIL (India) Ltd	2.28
Bajaj Finance Ltd	0.94	JSW Steel	0.49
Larsen & Toubro Ltd	0.75	Hero MotoCorp	0.40
Maruti Suzuki India	1.23	Vedanta Ltd	0.82
Bharti Airtel	-0.20	Grasim Industries	0.81
Axis Bank	-0.34	Bharti Infratel	0.81
Oil & Natural Gas Corporation	1.13	Eicher Motors	0.02
Asian Paints Ltd	-0.41	Tata Steel	-0.81
Wipro Ltd	-0.34	Dr. Reddys Laboratories Ltd	-0.36
HCL Technologies Ltd	-1.41	UPL Ltd	-1.08
Coal India Ltd	0.49	Hindalco Industries	-1.11
Indian Oil Corporation Ltd	0.76	Cipla Ltd	-1.23
NTPC Ltd	0.99	Tata Motors	-1.74
Bajaj Finserv	0.73	Zee Entertainment Enterprises	0.46
Ultratech Cement	0.79	Shree Cement	0.56
Power Grid Corporation Of India Ltd	0.60	Nestle India	-1.54



From the list of calculated greenwashing scores, 26 out of 48 (approx. 54%) of the companies (highlighted in green) in the sample size have positive greenwashing scores. Their disclosure scores are high but performance scores are lower. Within the 54%, only 6 companies have greenwashing score greater than 1. Within the 54%, most companies come from the Manufacturing & Energy sector. GAIL India has the highest green-washing score overall (Energy sector). Tata Motors has the lowest green-washing score overall (Manufacturing sector). Average greenwashing score is seen to be the highest for Energy sector (1.03) and lowest for FMCG sector (-0.68). ITC is the only company in the FMCG sector identified with greenwashing behaviour. Tech Mahindra is the only company in the IT sector identified with greenwashing behaviour. All 4 Tata companies have not been identified with greenwashing behaviour. All 3 Bajaj companies have been identified with greenwashing behaviour.

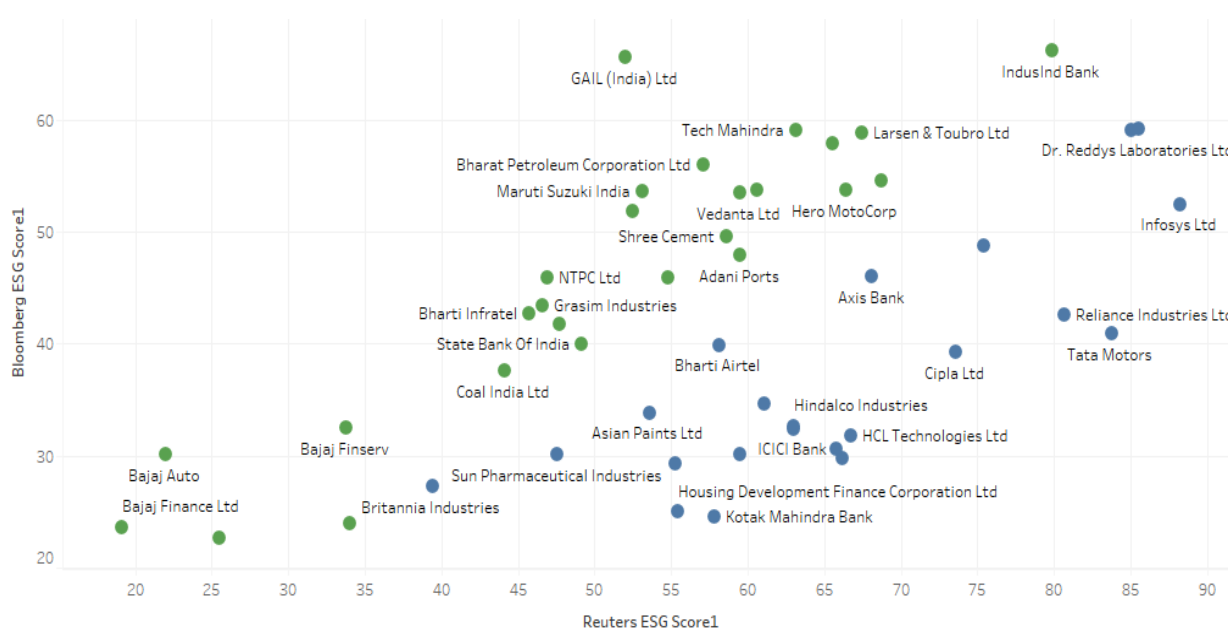
Looking at the manufacturing sector, the average greenwashing score is on the lower side due to the presence of large conglomerates whose leadership have been known for their philanthropy and have been known to take proactive initiatives towards sustainability and social responsibility (Rothlin & McCann, 2016; Srivastava 2010). Their scores help bring down the overall average of the sector. However, all automobile manufacturing companies from the sample other than Tata Motors have been observed to have greenwashing behaviour.

All companies belonging to the Energy sector have positive greenwashing scores and understandably so considering the uphill task their business process and their management have to strike a balance between sustainability and core business processes which might not be sustainable in nature or by design (Pathak, Kothari, Tyagi & Yadav, 2016). Additionally, the on-ground operational challenges faced by these companies comprising of geographical challenges, community specific challenges and traditional business outlook contribute to the lower scores of ESG performance (Ghose, 2009).

The average greenwashing score for the IT sector is observed on the lower side and can be attributed to the modern business practices incorporated by the companies and less usage of physical resources along with less or negligible disposal of harmful by-products coming out from their business processes (Solanki, n.d.; PTI-Economic Times, 2020).

For the FMCG sector, their low greenwashing behaviour can be attributed to the various social outreach programmes (Singh, 2016). While we do see a slight indication of greenwashing behaviour by ITC, it can be due to their presence and offerings in the tobacco business (Manjhi, 2015) and their wider and vibrant presence in other businesses along with their continued effort to improve their ESG performance, which covers up and reduces the magnitude of greenwashing behaviour as opposed to other companies.

ESG Disclosure vs ESG Performance: -



With reference to the ESG Performance Score vs ESG Disclosure Score scatter plot, the companies marked in green, present in the top middle part of the following scatter plot have been observed to have very high greenwashing scores (>1). The companies marked in blue, primarily in the lower center and lower right part of the scatter plot have been observed to have very low greenwashing scores (<-1).

Variable Name	Block 1		Block 2		Block 3	
	R. Sq.	0.4179	R. Sq.	0.3395	R. Sq.	0.3645
	Adj. R. Sq.	0.3327	Adj. R. Sq.	0.2429	Adj. R. Sq.	0.2715
	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
Intercept	10.0697		10.1143		7.8134	
Listed in Foreign Exchanges	-0.6582	***	-	-	-	-
Presence in Sustainability Index	-	-	-0.3159		-	-
Presence in ESG focus funds	-	-	-	-	-0.5210	*
Size of Marketcap'19 (Rs.)	-0.3914	***	-0.4005	***	-0.2983	
Profitability (net profit in Rs. Cr)	0.0420		0.0371		-0.0077	
Board Size	0.1942	***	0.2056	***	0.1995	***
No. of Independent Directors	-0.2272	***	-0.2144	***	-0.1990	***
% of Institutional Owners	-0.2986		-0.2497		-0.2820	
<i>F Test results are significant</i>						

Using the calculated greenwashing score as our dependent variable, we regressed it with the factors that we hypothesised to have an effect on or influence greenwashing behaviour by grouping them in 3 different blocks of equations.

- *Block 1: Cross Listing Status + Market Cap. + Net Profit + Board Size + No. of Independent Directors + Percentage of Institutional Owners on Greenwashing Score*

The regression results suggest a negative and significant relationship between a company's cross listing status and its greenwashing score. A study on Indonesian companies suggested that listing in any foreign exchange has a significant and positive impact on corporate social responsibility (Jannasari and Rizki, 2020). Other studies have also suggested that CSR performance increases significantly after cross-listing in U.S. markets and similarly decreases significantly after delisting from U.S. markets (Boubakri, El Ghouli, Wang, Guedhami, Kwok, 2016). The regression results are in line with our hypothesis and prior literature that cross-listed firms are exposed to more stricter disclosure requirements along with consistent monitoring by external agencies gives less room and incentive to indulge in greenwashing by deriving high quality disclosure and performance of ESG factors.

We see a positive and significant relationship between the size of a company's board and its greenwashing score. This observation is not aligned with our hypothesis which suggested a negative relationship. Analysing this observation and further reading on prior literature on board size (Adams and Mehran, 2012) led to few arguments to explain this observation. Although large board size equips them to monitor better, a large size might also suffer from co-ordination problems and slow decision making and that may be one of the reasons why the regression results into a direct relation. Another study (Jensen, 1993) suggested that board size beyond 8 members is less likely to function effectively. The average board size in our sample is approximately 11. Only 8 out of the 48 companies have board size less than or equal to 8.

Other factors like the company's market capitalization and the number of independent directors serving on a company's board was observed to have a significant effect on the company's greenwashing score and the nature of its relationship is in-line with our hypothesis and prior literature about board composition that suggest higher independence of the company's board facilitate improvements in social responsibility and help find an effective balance between financial and social performance of a company (Arayssi, Jizi and Tabaja, 2020).

- *Block 2: Presence in Sustainability Index/Indices + Market Cap. + Net Profit + Board Size + No. of Independent Directors + Percentage of Institutional Owners on Greenwashing Score*

The regression results do not show any value of significance between a company's presence in any sustainability index and its corresponding greenwashing score. It's presence in a sustainability index exposes the company to continuous monitoring, strict and standard disclosure requirements and scrutiny using a very holistic approach like company disclosures, ratings from external agencies, self-collected data, news reported in regional, national and international media and overall perception of the firm. Lack of significance for this factor on greenwashing score is concerning and can be investigated in further research. Removal of Adani Ports and Special Economic Zones (APSEZ) from S&P Dow Jones Sustainability Index (S&P Dow Jones Indices, 2021) is a good example to highlight the gaps that exist between the projected perception of a company and their actual performance along the ESG factors. Although the removal reassures commercial consequences for company's disregarding the ESG factors but the action was not proactive in nature and rather was in response to an Australian environmental campaign group to review APSEZ's status in its Dow Sustainability Index. So, a company's presence in any sustainability index does not have any significant effect on its greenwashing score.

Additionally, in this regression block we observe that a company's market cap., its size of board and the size of independent directors serving on that board has significance on its greenwashing score.

- *Block 3: Presence in ESG Focus Fund + Market Cap. + Net Profit + Board Size + No. of Independent Directors + Percentage of Institutional Owners on Greenwashing Score*

For the purpose of this research, we have considered only Indian ESG focus funds. Such kind of exclusive focus funds are still very new in India. Currently, there are approximately 10 ESG focus funds in India out of which 6 were formed as recently as 2021. Given its nascent stage, we considered a 10% error margin for this regression and observed a significant and negative relationship between the greenwashing score of a company and its presence in any ESG focus fund in India. Going forward, with the adoption and implementation of such kind of focus funds increasing in India, we expect to see a stronger and more significant relationship between the greenwashing score of a company and its presence in any ESG focus fund, along with a smaller error margin. Another point to be noted is that, this study was conducted using 2019 ESG performance and ESG disclosures scores, but the presence on a company in any ESG focus fund has been recorded as of June 2021. ESG performance and ESG disclosure

scores of 2021 might show a more significant and stronger relationship with the greenwashing score of 2021, thus reducing the need for the 10% margin. Additional factors of significance in this block of regression include size of the board and number of independent directors serving on the board.

Conclusion & Managerial Implications: -

In our study, we looked at ESG reporting of Indian companies through the lens of greenwashing focusing on the NIFTY 50 companies of 2019. This perspective of greenwashing while unlocking the potential of ESG based investing is essential as the Indian financial market continues to keep ESG trending even though its adoption might still be in its nascent stages. We extended the definition of greenwashing derived from previous studies and applied it to the NIFTY 50 companies which helped us identify how many of them showed greenwashing behaviour. We then listed down external influences, internal influences and financial influences which might affect greenwashing behaviour and tested our hypothesis.

Our results suggested that 26 out of the 48 companies (approximately 54%) in our sample show greenwashing behaviour as per our definition. Most of these companies belong to the Energy and Manufacturing sector of India. The Energy sector in India, within our samples size had the highest average greenwashing score. The average greenwashing score of companies belonging to the manufacturing sector is on the lower side due to the presence of large conglomerates whose leadership have been known for their philanthropy and have been known to take proactive initiatives towards sustainability and social responsibility. Their scores help bring down the overall average of the sector. IT and FMCG sectors have shown the lowest average greenwashing scores. For IT, this observation can be attributed to the modern business practices incorporated by the companies and less usage of physical or natural resources or less or negligible disposal of harmful by waste products coming out from their business processes. For FMCG sector, their low greenwashing behaviour can be attributed to the various social outreach programmes.

Our regression analysis indicated some internal, external and financial influences that could have an effect on greenwashing behaviour. Primarily it was noticed that if a company is cross listed in any other international stock exchange, the increased level of scrutiny and compliances reduces the chances for a company to indulge in greenwashing. However, a company's presence in any sustainability index has no significant effect on its greenwashing score. The study recommends a more proactive approach for sustainability indices to keep monitoring and refining their inclusions and exclusions. Building on the same initiative, consideration of additional data points and modern NLP based analytics might help these governing bodies to read between the lines and have a more holistic approach in monitoring and scrutinizing ESG based behaviour. The presence of these companies on any Indian ESG focus funds is a factor of significance that affects their greenwashing score. Going forward, with more maturity and sophistication of ESG adoption in India by related financial parties, the presence of a company in any Indian ESG focus fund has the potential to curb and influence greenwashing behaviour even more significantly than it has been observed in this study. On the company level, the size of the serving board seems to have a direct relationship with the company's greenwashing behaviour which could be indicating that a larger board size might not necessarily help in efficient monitoring of ESG performance, thereby impacting its score and resulting in a positive relationship. However, the number of independent directors serving the company has a negative relationship with the company's greenwashing score indicating that a higher percentage of board independence can be an influencing factor for the company's greenwashing behaviour. Lastly the size of the company's market capitalization, seems to have

a significant relationship with the company's greenwashing behaviour suggesting that the larger the size of the company's market capitalization, the less likely it is for the company to show greenwashing behaviour.

For companies that showed greenwashing score greater than 1, these vocal companies should improve their performance and decrease the noticeable gap. Studies have suggested that a multi-stakeholder approach has helped in reducing greenwashing and developing a framework on similar lines consisting of company representatives, policy makers, and local NGOs can be highly beneficial for the Indian business environment as well. This approach can help businesses align with the local demands of sustainability along with helping them plan their sustainable business practice on a strategic level. Such kind of involvement will also help increase transparency and scrutiny thereby directly affecting greenwashing behaviour.

Limitations and Future Research Areas: -

While this study acknowledges the small sample size chosen for establishing and extending the concepts of greenwashing behaviour and related hypothesis, the study indicative and not conclusive in nature. Secondly it aims to help researchers extend, explore and improve the perspective of greenwashing in the context of ESG in India. A historical study on Indian companies comprising of multiple financial years' data and studying the trends in ESG reporting, ESG performance, indulgence in greenwashing along with its correlation with market perception and financial performance can be an interesting topic of research going forward. Additionally, the limitations and blind spots of ESG scores, assessment methodology for inclusion and exclusion from sustainability indices or ESG focus funds can be another study whose conclusions can recommend better policy structures, derived metrics and technical improvements to overcome the challenges in the successful implementation of sustainable investing in India.

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