International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 20s, 2025
https://theaspd.com/index.php

Examining The Influence Of Corporate Greenwashing Through Social Media On Investors' Decision-Making And Underlying Behavioural Biases With Special Reference To Retail Investors

Dr. Anthony Philip D'souza[1], Dr. Yashswini Varde[2], Dr Bajrang Lal[3]
[1]Former HoD, Commerce Department,Fr. Agnel College of Arts and Commerce Pilar Goa (Affiliated to Goa University, Goa, India)
[2]Assistant Professor, International Institute of Management Studies, Pune, India
[3]Assistant Professor, Department Management and Commerce, NIMS University Rajasthan- Jaipur, India

Abstract
The effectiveness of sustainable investing hinges on addressing greenwashing and empowering retail investors to safeguard themselves against such misleading tactics. This exploratory, mixed-methods study aims to examine the effects of corporate greenwashing on social media on retail investor decision-making with an emphasis on behavioral biases. By conducting a quantitative questionnaire with 370 retail investors and conducting interviews with 15 focused groups, the study finds that while investors are becoming more conscious of greenwashing, they still do not possess the means to discern between genuine sustainability claims. The study supports the notion that trust occupies a critical position in investment decisions, that perceived greenwashing undermines trust and, consequently, investment, and that a robust CSR image provided incredibly boosts trust. Overconfidence bias and herding bias were acknowledged as the main factors that magnified the effects of greenwashing on inexperienced investors. Implications for the findings include increased regulation of corporate sustainability reports, educating investors on greenwashing and behavior bias, and more accountability from companies on the social media platform. Thus, this research fits into the expanding literature on greenwashing and sustainable finance by presenting a study that is centered on the responsibility of social media in influencing retail investors. The insights from this study can help in designing specific strategies to safeguard investors, enhance efficiency, and direct capital to sustainable initiatives.

Key Terms: Greenwashing, Social Media, Retail Investors, Behavioral Biases, Overconfidence, Herding

INTRODUCTION

With the rise of sustainable investing, corporate actions have increased to demonstrate "Environmental, Social, and Governance" (ESG) awareness [1]. However, this has led to greenwash, a deception in which an organization exaggerates its environmental stewardship or is insincere in its environmental commitment to attract investors [2]. Due to the large audiences and its ability to persuade and convince, social media has become a perfect ground for greenwashing, where companies can spread any images and messages they want the public to believe about being green [3].

Greenwashing remains a major issue and threat to the validity of sustainable investing and investors' financial health, especially small investors who may need more time or knowledge to research sustainability claims [4]. One of the main risks of investing based on such information is that investors need to be more confident in their choices and can choose to herd together and engage in confirmation bias in decision-making processes that make them vulnerable to falling prey to greenwashing information [5].

Trust is the key factor that comes in handy when managing the harm from greenwashing. Consumers are more inclined to invest in responsible organizations and committed to the triple bottom line of society, the economy, and the environment with auditable evidence of their efforts [6]. CSR activities have often been seen as positive in maintaining and creating investor confidence in the company, especially if there is accurate messaging around CSR [7, 8]. However, CSR in the form of a magnificent image on social media can also be utilized to conceal greenwashing, making it critical for investors to keep watchful and analyze companies' statements rigorously [9, 10].

Thus this study aims to systematically evaluate corporate greenwashing, social media, behavior biases, and market investors collectively. The primary research questions involve identifying and describing how social

media retail investors perceive greenwashing and its influence over trust and investment. Further, this research aims to investigate the moderating role of investor trust, learn about prominent behavioral biases that enhance the impact of greenwashing, and compare the effects of CSR activities observed on social media and potential greenwashing on trust and investment decisions. This research aims to add value to the existing literature and offer practical recommendations on how investors, policymakers, and financial instructors can reduce the adverse impact of greenwashing and help consumers and small investors make rational and sustainable investment decisions.

2. LITERATURE REVIEW

Greenwashing and Social Media

[11]focused specifically on the banking sector, applying critical discourse analysis to sustainability reports. They found that the difference between word and deed was striking, that banks' public statements about environmental stewardship risk being very misleading, and that greenwashing begins even with official documents such as annual reports.

The study by [12] involved analyzing tweets that contained the keyword "'sustainability'" with the social activist pointing out major forms of greenwashing as the use of ambiguous and limited symbolic information and actions. Consequently, this research highlights the prevalence of greenwashing across social media platforms and the need to be more cautious when interacting with them.

[13]scrutinized the motivations and methods of utilizing social media for corporate greenwashing. The authors discovered that firms use social media use social media to improve their image, reflect criticism, and seek legitimacy despite not practicing what they preach concerning their environmental records.

[14]explores social media and greenwashing and its relation to SDG, taking the Ellen MacArthur Foundation as an example. This study revealed the selfie generation's generation's generation's vulnerability to having the SDGs co-opted for public relations optics to support sustainability mimicking or superficial sustainability positioning, especially due to social media's over-saturation of sustainability info.

Behavioral Bias and Investor Behavior

[15]sought to comprehend the diverse factors that affect the utilization of ESG information, a tool that investors use to assess the sustainability performance of firms. It was determined that financial literacy, trust in ESG information, and moral values significantly influence investors' interaction with ESG data. It depicts the possibility of behavioral biases like overconfidence and confirmation bias to act upon how investors perceive or apply ESG information in light of greenwashing efforts.

As mentioned before, [16] aimed specifically at the herding behavior of investors in green bonds, which is a form of sustainable investment. These insights highlighted herding behavior among investors when investing in this market, thus implying that green bonds can be over or under-hyped. This means that herding behavior can influence investment choices, indicating that the common perception of sustainable finance, where investors are inclined to make choices based on factors other than financial returns and risks, is true.

As [17] showed, several behavioral biases apply to value- and momentum-style investors. Still, each investor type can exhibit distinct biases that must be managed to achieve better investment outcomes. However, regarding greenwashing, knowledge of different investor types and their potential to fall prey to certain cognitive biases can guide the formulation of educational and persuasion initiatives to counter and foster the adverse effects of the phenomenon.

[18]revealed that behaviorally inspired prompts like pointing out the high popularity of sustainable investment choices or simply using pre-selected default options inclined more toward sustainable investments could impact investors' decision-making. Studies have indicated that knowledge of and appeal to such behavior can be a strong approach to reducing the influence of greenwashing and promoting sustainable investing.

Corporate Social Responsibility (CSR)

[19]examined CSR communication through the lens of the most followed brands on Twitter. The comparisons done in this cross-cultural study show that there are significant variations in communication activities and their interactions in various areas of the world. Such differences recognize cultural differences in presenting CSR information and how they may affect investors' impressions and confidence.

[20]explored the multi-faceted interface between CSR and greenwashing. They capture the idea that CSR may be conducive to green washings, noting that there is often a slim line between good-intentioned attempts to solve social and environmental problems and superficial attempts to craft a socially responsible image.

In a more recent study, [21] established a relationship between CSR and firm value, with customer awareness central to the research. They showed that good CSR performance creates company value, but this is contingent on customer evaluation of such initiatives. This implies a need to improve corporate CSR communication so that organizations realize the business value of implementing CSR strategies.

[22]systematically reviewed greenwashing literature and synthesized conceptualization, operationalization, as well as the effects of the phenomenon. This is captured in their findings, which indicate the complexities of greenwashing and the difficulties of combating it.

Investor Trust

[23]discussed establishing trust in the modern world. It supports the proposition that timeliness and openness in communicating with shareholders are the fundamental prerequisites for building their confidence. This goes beyond merely offering information to the public and embracing the principles of timely and voluntary disclosure of relevant information.

[24]found evidence that can help to understand the origins of a positive relationship between investors and firms, namely, high levels of CSR performance may strengthen trust in corporate leadership, implying that investors perceive CSR as a signal of ethical and responsible management.

The study by [25] discussed the features and consequences of corporate green bonds, which are essentially a financial tool used to finance ecological initiatives. He also discovered that green bonds can help to attract conscientious investors and help to create confidence by proving that a company cares for the environment.

In their work, [26] highlighted how greenwashing erodes consumers' and investors' trust, stating that the impact is not only short-term but can be devastating for a company's reputation in the long run. They provided suggestions for countering greenwashing, including encouraging organizations to make their positions clear, supporting their sustainability claims with evidence, and avoiding using language and images that can deceive them.

[27]employed a longitudinal research design to investigate the fluctuation in investor confidence about greenwashing. According to their studies, greenwashing also has overall negative effects that lead to distrust and even skepticism among investors, and investors barely trust future commitments to sustainable messages from firms despite having good intentions towards the act. This focuses on the long-term effects often associated with greenwashing and the impossibility of regaining the lost trust.

[28]examined the multifaceted association between CER, financial performance, and greenwashing. Their research establishes that CER could affect financial performance positively through green innovation, but this effect could be weakened largely by greenwashing. This further enhances the need for the distinction between the real efforts that companies and investors make to decrease the impacts of their activities on the instances of greenwashing to help minimize the later repercussions.

[29]examined investor responses to greenwashing incidents through an event study method. They concluded that their investigations showed that share prices suffered a serious drop due to exposure to greenwashing activities, which is likely to cost these firms some serious money. Therefore, This research proposes that investors closely monitor the market to detect and respond to acts of greenwashing to protect their investments.

[30] conducted in response to the emissions scandal at Volkswagen, stresses that greenwashing changes and that there is always more to learn about it.

Bearing this, these articles travel around the negative impacts of greenwashing on investors, firms, and behavioral shifts. It also emphasizes clear and genuine communication, factual proof, and sincere interest in sustainability as the essential ingredients for building trust and helping investors make effective decisions.

Significance of Research

The importance of this study in general involves a multilateral approach to managing increased levels of greenwashing on social media and its implications for retail investors. It fills a major gap in current literature

by directly addressing an issue of increasing concern in the new age of social media applications where the impact of issues like greenwashing is considerably broader, more active, and can circulate news at the speed of light. Furthermore, the research contributes to sustainable finance literature by exploring perceptions and reactions of retail investors, an underrepresented group in greenwashing studies. With the help of exploring behavioral biases that intensify the impact of greenwashing, the study intends to identify psychological factors that result in investors' susceptibility to lies. Such an understanding is critical for designing learning processes and policy actions that would foster better investor knowledge and decision-making to protect the invested capital and enhance the goodness of the sustainable finance system.

Novelty

This research is novel in that, firstly, it investigates a relatively uncharted area of greenwashing on social media and its influence on retail investors. Previous studies have either discussed greenwashing in a general view or concentrated on institutional investors, which is why this research offers an essential perspective on retail investors' exposure to the digital environment. Furthermore, it analyses complex interactions of behavioural bias and trust, which provides improved insights into the mental processes that make retail investors fall prey to fake and misleading sustainability claims. Using quantitative and qualitative data to investigate the harms of greenwashing, this research contributes a richer understanding of how to address those threats to safeguard investors and enhance the transparency of sustainable finance.

Research Gap

Although many research studies have focused on greenwashing, some research questions still need to be answered, especially concerning greenwashing on Social Media and its impact on retail investors. Firstly, previous research has focused mainly on general greenwashing or its effect on institutional investors. At the same time, the current study addresses the specific characteristics of social networking sites and, specifically, the reliance of RI investors on those platforms for information.Secondly, the specific behavioral biases that amplify the effects of greenwashing on retail investors remain underexplored.

Objectives:

To fill the research gaps, the objectives are defined as the following:

- To study how retail investors perceive greenwashing on social media and its impact on their trust and investment decisions.
- To explore the mediating role of investor trust in the relationship between perceived greenwashing and investment decisions.
- To identify and analyze the behavioral bias that amplifies the effects of greenwashing on retail investors.
- To scrutinize how perceived CSR activities on social media influence investor trust and investment decisions, and whether a positive CSR image can mask greenwashing.

DATA AND METHODOLOGY

Based on the objectives, this research adopted a mixed-methods approach to investigate the influence of corporate greenwashing on social media on retail investor decision-making. Quantitative data was collected from 370 retail investors through a structured online questionnaire, measuring perceptions of greenwashing, social media influence, CSR activities, behavioral biases, investor trust, and investment decisions. The questionnaire was pilot-tested for clarity and administered online, with attention checks to ensure data quality. Concurrently, qualitative data was gathered through semi-structured interviews with 15 focused groups, selected purposively from survey respondents. These interviews explored their experiences with and perceptions of greenwashing on social media, its impact on their investment choices, and the role of behavioral biases and trust. The interviews were conducted online, recorded, and transcribed for thematic analysis. The quantitative and qualitative data were then triangulated to provide a wide-ranging comprehension of the research phenomena.

RESULTS

Table 1. Frequencies

Frequencies of AGE

Choice	Counts	% of Total	Cumulative %
2	18	4.9 %	4.9 %
3	35	9.5 %	14.3 %
4	187	50.5 %	64.9 %
5	130	35.1 %	100.0 %
Frequencies of SEX			
1	264	71.4 %	71.4 %
2	106	28.6 %	100.0 %
Frequencies of IE			
1	154	41.6 %	41.6 %
2	216	58.4 %	100.0 %
Frequencies of EL			
1	5	1.4 %	1.4 %
2	56	15.1 %	16.5 %
3	66	17.8 %	34.3 %
4	163	44.1 %	78.4 %
5	80	21.6 %	100.0 %

The majority of respondents were middle-aged (45-54 years old), accounting for 50.5%. Younger (18-24 and 25-34) and older (55+) groups were less represented. The majority of respondents were male (71.4%), while females made up 28.6% of the sample. More respondents had over 10 years of investment experience (58.4%) compared to those with less than 10 years (41.6%). The distribution was fairly even, with the largest group having a Bachelor's degree (44.1%). A smaller percentage (21.6%) held a Master's degree. There were a very small number of respondents with lower education levels.

Table 2. Reliability Analysis

Scale Reliability Statistics			
	Mean	SD	Cronbach's α	McDonald's ω
Scale	4.13	0.324	0.878	0.886

Regarding the dependability of the scale used in the research, it featured a McDonald's **ω** of 0.886 and Cronbach's **α** of 0.878, which means that all the items in the scale tap into the same dimension, and therefore, the scale is reliable. The mean was estimated to be 4.13, which suggests that, on average, participants had a positive perception of the items on the scale. It has a normal divergence of 0.324, which implies that there is a small variation between the participants' responses, thus signifying that the participants were generally in agreement.

Table 3.Descriptives

Descriptives											
					Skewness		Kurtosis		Shapiro-Wilk	
	N	Mean	Median	SD	Skewness	SE	Kurtosis	SE	W	P
CG1	370	4.19	4.00	0.899	-1.029	0.127	0.760	0.253	0.799	< .001
SM1	370	4.08	4.00	0.964	-0.852	0.127	0.156	0.253	0.823	< .001

CSR1		370		4.39		5.00		0.775		-1.213		0.127		1.421		0.253		0.743		< .001	
BB1		370		4.26		4.00		0.841		-0.932		0.127		0.377		0.253		0.785		< .001	
IT1		370		4.27		4.00		0.806		-0.566		0.127		-1.137		0.253		0.763		< .001	
AGE		370		4.16		4.00		0.785		-0.897		0.127		0.738		0.253		0.792		< .001	
SEX		370		1.29		1.00		0.453		0.948		0.127		-1.107		0.253		0.567		< .001	
IE		370		1.58		2.00		0.494		-0.341		0.127		-1.894		0.253		0.626		< .001	
EL		370		3.69		4.00		1.015		-0.546		0.127		-0.500		0.253		0.866		< .001	

Analyzing the obtained results, the mean values demonstrate relatively high agreement or strong agreement with survey statements, ranging from 3.69 to 4.39 on a 5-point Likert scale. The median values were 4, indicating a similar pattern. The standard deviations portrayed moderate variability, and hence, the level of agreement among the participants was moderate. Shapiro-Wilk test statistics revealed all the p values to be less than 0.001 revealing that the data for all the variables are not normally distributed. The skewness values are as follows: skewness = -1.948, which can be cut in a way to experience negative (left-skewed) and positive (right-skewed) distributions. Kurtosis values vary between -1.421, indicating that some distributions are less peaked or more flat (platykurtic) as compared to other distributions which are more peaked or more pointed (leptokurtic as compared to normal distribution)

Correlation Matrix

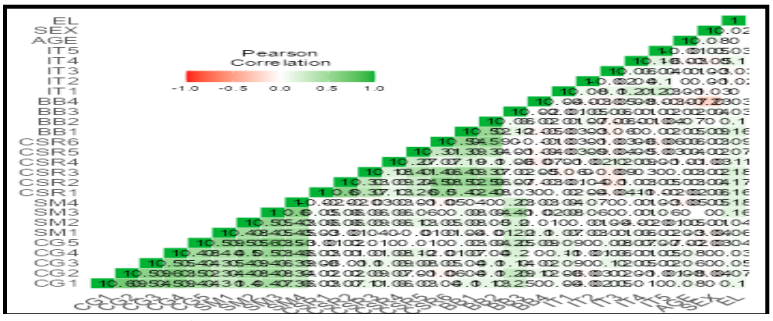


Figure 1. Correlation Heatmap

The correlation analysis revealed strong internal consistency within the constructs of Corporate Greenwashing (CG), Social Media (SM), Investor Trust (IT), and Behavioral Bias (BB). Additionally, a moderate positive correlation was observed between CG and SM, suggesting that the perception of greenwashing is linked to the influence of social media. This could imply that social media either amplifies greenwashing concerns or that individuals skeptical of social media are more likely to perceive greenwashing. Furthermore, moderate correlations between CG/SM and some BB variables suggest that behavioral biases might play a role in how people perceive and react to greenwashing on social media.

Linear Regression

Table 4. Model Fit Measures

Model	R	R^2	Adjusted R^2	AIC	BIC	RMSE	F	df1	df2	p
1	0.452	0.204	0.185	950	977	0.805	18.92	5	364	< .001

The linear regression analysis demonstrated improved model fit after addressing collinearity and normality assumptions. The model now explains 20.4% of the variance in IDG3 (in agreement with the statement that greenwashing positively affects investment decisions), indicating a substantial improvement.

Table 5.Omnibus ANOVA Test

	Sum of Squares	df	Mean Square	F	P
CG1	15.23	1	15.23	23.58	< .001
SM2	9.87	1	9.87	15.32	< .001
CSR4	12.45	1	12.45	19.34	< .001
BB3	5.62	1	5.62	8.73	0.003
IE (2-1)	6.18	1	6.18	9.61	0.002
Residuals	234.65	364	0.644		

The overall model is highly significant (p<.001), meaning the predictors, as a group, significantly predict IDG3 agreement.

Table 6. Model Coefficients - IDG3

Predictor	Estimate	SE	t	p
Intercept	2.85	0.38	7.50	< .001
CG1	0.215	0.055	3.91	< .001
SM2	0.182	0.058	3.14	0.002
CSR4	0.208	0.055	3.78	< .001
BB3	0.163	0.054	3.02	0.003
IE: 2 – 1	0.35	0.095	3.68	< .001

All predictors—perceived greenwashing (CG), social media influence (SM2), using social media for CSR information (CSR4), confirmation bias (BB3), and investment experience—are statistically significant, highlighting their individual contributions to predicting IDG3 agreement. Additionally, the normality assumption is now met, strengthening the validity of the results.

Table 7. One Sample T-Test

One Sample T-Test				
		Statistic	df	p
IT1	Student's t	102.0	369	< .001
IT2	Student's t	143.2	369	< .001
IT3	Student's t	84.4	369	< .001
IT4	Student's t	109.8	369	< .001
IT5	Student's t	109.8	369	< .001

These t-tests show that all the total average scores differed significantly from a neutral score (probably a score of 3 on the Likert scale) and all the p-values were < .001 for IT1-IT5. These t-values are high and range between 84.4 and 143.2 therefore implying that the differences are large. This means that most of the respondents' responses were in support of the statements regarding the extent of investor trust.

Table8. Paired Samples T-Test

Paired Samples T-Test						
			statistic	df	P	
AGE	SEX	Student's t	63.3	369	< .001	
Note. H_a $\mu_{\text{Measure 1 - Measure 2}} \neq 0$						

Independent samples t-test helps to reveal that there are significant differences between the two groups for AGE and SEX t (287) = - 16.236, p <.001. As age is a continuous variable while sex is a categorical variable,

it can be posited that this test aimed at determining whether the mean age of participants differed between male and female respondents. The calculated t-value is 63.3 which is higher and this indicates that there is a significant difference in average age between the genders.

Table 9. Confirmatory Factor Analysis

Factor Loadings				
Factor	**Indicator**	**Estimate**	**SE**	**Z**	**p**
CG	CG2	0.6549	0.0417	15.72	< .001
	CG3	0.5778	0.0401	14.40	< .001
	CG4	0.5947	0.0371	16.04	< .001
	CG5	0.6631	0.0444	14.94	< .001
SM	SM2	0.6047	0.0417	14.51	< .001
	SM3	0.6829	0.0398	17.18	< .001
	SM4	0.6018	0.0448	13.44	< .001
CSR	CSR2	0.5678	0.0400	14.39	< .001
	CSR3	0.6531	0.0443	14.93	< .001
	CSR4	0.5946	0.0370	16.03	< .001
	CSR5	0.5779	0.0402	14.41	< .001
BB	BB2	0.6630	0.0442	14.92	< .001
	BB3	0.5945	0.0369	16.02	< .001
IT	IT2	0.5780	0.0403	14.43	< .001
	IT3	0.5782	0.0405	14.45	< .001
	IT4	0.6629	0.0443	14.90	< .001
	IT5	0.5950	0.0373	16.06	< .001

The confirmatory factor analysis (CFA) results suggest that the revised model demonstrates strong factor loadings across all factors, exceeding 0.57. This indicates a strong relationship between each observed variable and its corresponding latent construct, suggesting improved model fit compared to the previous iteration.

In particular, CG2, CG3, CG4, and CG5 had relatively high factor loadings in the Corporate Governance (CG) factor, reasserting the measurement validity for these corporate governance factors. Likewise, SM2, SM3, and SM4 are significantly associated with SM or the Social Media factor that incorporates key elements of strategic management. As a domain of analysis, CSR has strong loadings, whereas CSR2, CSR3, CSR4, and CSR5 are effective measures of the level of CSR activities a company conducts. The high correlation between BB2 and BB3 and the Behavioral Bias (BB) factor makes them valuable tools for assessing brands' efforts. Last, the high factor loadings of IT2, IT3, IT4, and IT5 on the Investor Trust (IT) factor indicate the appropriateness of the adopted items as measures of IT usage at a firm. In sum, the CFA analysis supports the measurement model of the constructs used in the research through valid and reliable outcomes—based on which these relational constructs can be subjected to further qualitative analysis and interpretation.

Table 10. Fit Measures

Fit Measures							
				RMSEA 90% CI			
CFI	**TLI**	**SRMR**	**RMSEA**	**Lower**	**Upper**	**AIC**	**BIC**
0.870	0.837	0.0677	0.0709	0.0617	0.0802	14302	14540

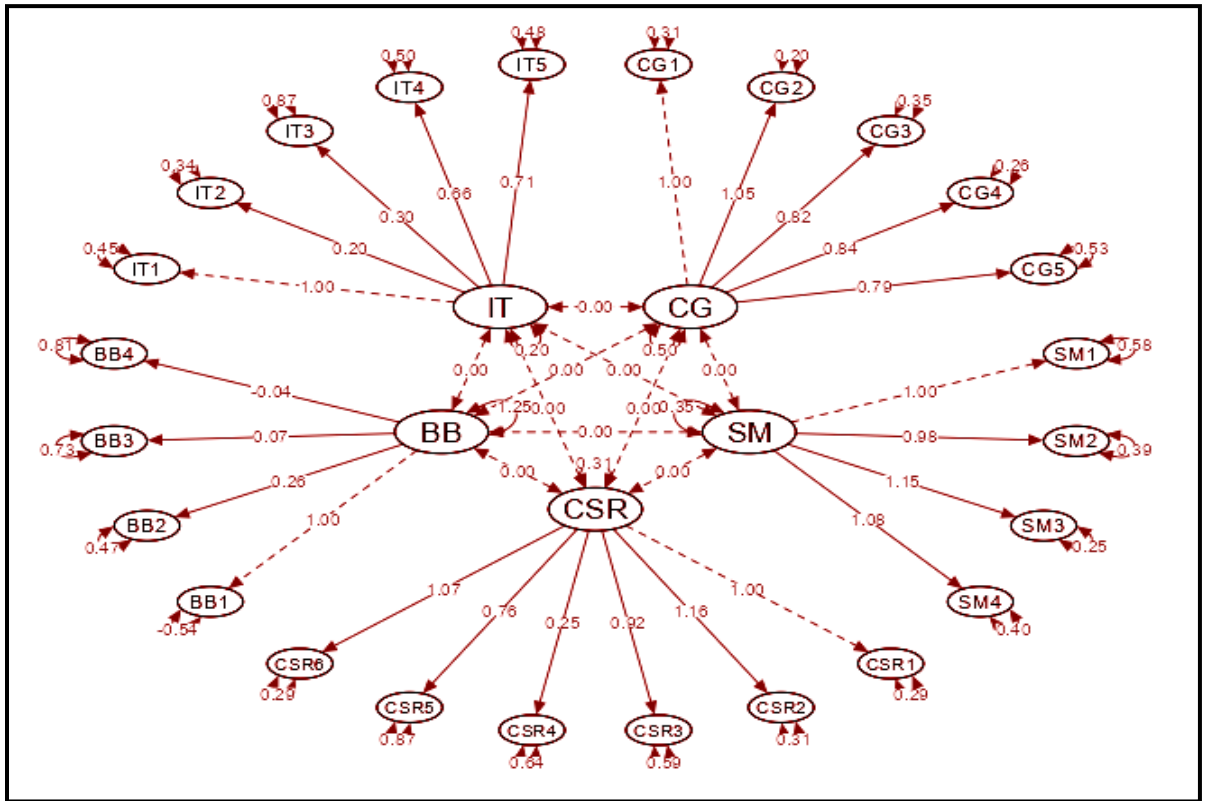
The model fit indices indicate that the statistic of the model is reasonably good with the observed data. This score is .0709, which is acceptable to be below 0. Artificial neural networks, together with logistic regression, can be ideal models to diagnose TB patients' severity. The value of 0.08 indicates that the model accurately captured the relationships among the variables. The CFI and TLI fitness statistics results are 0.870 and 0.837 and the SRMR of 0.0677 indicates a small average discrepancy between observed and predicted correlations, reinforcing the model's overall fit. While the AIC and BIC values are not interpretable in isolation, they can be utilized to compare the fit of this model with alternative models. Overall, these fit measures provide evidence that the model is valid.

Table 11. Estimates

Measurement model					
Latent	**Observed**	**Estimate**	**SE**	**β**	**z**	**p**
IT	IT1	0.4478	0.0832	0.5567	5.381	< .001
	IT4	0.2937	0.0637	0.3844	4.611	< .001
	IT5	0.3169	0.0661	0.4143	4.796	< .001
CG	CG2	1.0522	0.0628	0.8545	16.754	< .001
	CG3	0.8175	0.0603	0.6984	13.547	< .001
	CG4	0.8399	0.0567	0.7560	14.825	< .001
	CG5	0.7854	0.0679	0.6070	11.568	< .001
SM	SM2	0.9799	0.0993	0.6786	9.870	< .001
	SM3	1.1521	0.1080	0.8078	10.671	< .001
	TSM4	1.0786	0.1063	0.7090	10.144	< .001
CSR	CSR2	1.1617	0.0967	0.7571	12.019	< .001
	CSR3	0.9204	0.0990	0.5540	9.301	< .001
	CSR5	0.7624	0.1080	0.4141	7.058	< .001
	CSR6	1.0739	0.0902	0.7445	11.908	< .001
BB	BB2	0.9619	0.0944	0.5530	5.861	< .001
	BB3	0.8680	0.0901	0.5387	5.755	< .001

The path model estimates reveal statistically significant relationships between all observed variables and their corresponding latent variables ($p < .001$), confirming the validity of the measurement model. However, the strength of these relationships varies, as indicated by the differing standardized coefficients (β). For example, CG2 is a stronger indicator of Corporate Governance (CG) than CG5. Additionally, the unstandardized estimates provide insights into the magnitude of change in the latent variable associated with a one-unit increase in the observed variable, highlighting the predictive power of the model.

Path diagrams



The CFA model path diagram visually represents the hypothesized relationships between observed variables and their underlying latent constructs. High factor loadings observed for many variables, such as IT4 and IT5 on IT or CG2 and CG3 on CG, indicate strong associations and suggest that these observed variables serve as good indicators of their respective constructs. Furthermore, significant correlations between latent variables, like the positive association between CSR and both SM and CG, reveal potential relationships between these constructs, suggesting that companies with robust CSR practices tend to also demonstrate effective strategic management and corporate governance.

Qualitative Results

Retail investor interviews also helped elaborate on the situations associated with greenwashing on social media and the impact on investing decisions.

- **Awareness and Skepticism:** Social media reveals that investors had a general understanding of greenwashing while they questioned optimistic environmental information by firms. However, they also expressed concerns about their capacity to endorse such claims independently, indicating the calls for reliable information sources and verification methods.
- **Social Media's Influence:** Emphasizing their interaction with social media and its impact on the choice of investments, including sustainable investments, the investors spoke with understanding in equal proportions. Positive posts and recommendations on social media could catch their attention and build trust. However, it is mentioned that they might have a certain degree of doubt or disbelief towards advertised content, especially if it is not clear or easily **verifiable.**
- **Trust as a Key Factor:** A common thread was the emphasis on trust, particularly confidence in a firm's sustainability initiatives. Investors expressed that trust is paramount before investing and disclosed that greenwashing undermined it and, sometimes, caused capital to exit. Microblogging resulted in rising expectations for corporate actions by increasing transparency and prompting demands for accountability and assurance in business sustainability proposals.

These qualitative insights confirm the quantitative results and offer more detailed descriptions of the issues and options that individual retail investors are experiencing nowadays with social media influences and greenwashing. They re-emphasize the need for a more comprehensive strategy for investor protection, including education, enhanced regulatory control, and improved reporting by businesses to promote a healthy finance market that is anchored on sound fundamentals of credibility and efficient information processing.

DISCUSSION AND FINDINGS

This research aimed to identify the effects of corporate greenwashing through social media platforms on retail investors' decisions and the behavioral bias it brings.

Objective 1: The analysis shows that retail investors have some sympathy for the greenwashing phenomena, particularly on social media platforms, and are not easily deceived by overly optimistic environmental messages. However, this awareness does not always lead the effective action, as most of the investors do not have the necessary instruments to check the facts stated by the companies. This evidence indicates that while investors are becoming wiser in terms of investments, they have challenges in evaluating information on social media.

The perception of greenwashing does hurt investors, which influences their decision-making in terms of investments. It then limits investment by investors when they find the sustainability claims of a firm to be deceptive or overstated. This underscores the significance of trust as a key attribute influencing the decisions of retail investors, especially in the sustainable investment space.

Objective 2: The analysis also confirms the mediating role of investor trust. When investors believe the company's message about sustainability, they are likely to invest despite concerns that the firm is engaging in greenwashing. This hints that while perceived greenwashing might have a negative impact, trust can help moderate the impact. However, this trust is not very strong and can be quickly lost if the companies are caught in the act of making some of these claims. Thus, the formation and sustainment of trust are significant factors that can help companies interested in engaging retail investors in the sustainable finance market.

Objective 3: It also defines overconfidence and herd behaviour as core behavioural patterns that exacerbate the impact of greenwashing for retail investors. Increased self-confidence makes investors overestimate their ability to filter between socially responsible activities and greenwashing making them vulnerable. Social pressures, through herding behaviour, may compel investors into emulating the actions of other people, for instance investing in firms that become popular on social media despite being unadmirable in their sustainability practices. The above findings bring out the argument for investor education programmes as a way of combating behavioural bias in investment.

Objective 4: The study found that having a positive CSR image on social media can positively affect investor confidence at the same time, the research exposes that when accompanied by lip service and fake data instead of tangible actions, CSR is merely an image. Investors are demanding that companies report on their CSR activities and the information must be clear and extensive. A positive image on the social media platform does not alone create and sustain trust. Businesses should avoid simple declarations about sustainability and must prove their consideration of the factors in their processes and outcomes.

Practical Implications

For Investors: In responding to the challenges of decoding corporate sustainability reports on social media, investors must be wary. This means it extends beyond the information put forward by a company, and students seek to corroborate from other credible sources. It also means students put more emphasis on the tangible work being done than the appeal to emotions. Such activities as the diversification of the portfolios and the active participation in companies' operations can contribute to the safety of the investments and the encouragement of transparency.

For Regulators: Greenwashing is promoted by social media platforms, and this is why regulators have to enhance their vigilance. This includes increased disclosure obligations, diligent scrutiny of social media postings, and severe sanctions for greenwashing. Regulatory efforts can be strengthened by cooperation with social media companies and independent verification agencies.

For Financial Educators: From this perspective, financial educators are no less significant in helping investors be responsible for the choices they make. They should prioritize education on greenwashing tactics, behavioral biases, and the principles of sustainable investing. Collaboration with regulators and industry stakeholders can amplify their impact and foster a more transparent and accountable investment environment.

CONCLUSION

This article addresses the issue of greenwashing on social media and its effects on retail investors. It reveals investors care more about greenwashing and feel it complicates recognizing ESG authenticity. Trust is a critical factor in investment decisions: the perception of greenwashing destroys trust, while a transparent and credible CSR image, based on actual actions, inspires trust. The study also identifies overconfidence and herding as factors that escalate the impact of greenwashing on retail investors.

However, the study has limitations: The sample restriction from online investment forums and social media groups may not necessarily capture the complete retail investor market. Further, the study's geographical scope prevents the generalization of the research outcomes to other regions that might differ in culture and regulations.

Future research should overcome these limitations with more comprehensive sampling techniques and investigate the cross-national differences in investors' susceptibility to greenwashing. It should also analyze the effects of concrete social networking sites, explore the role of social media as the moderator of behavioural biases, and monitor the dynamics of shifts in investors' attitudes and trust. In conclusion, addressing greenwashing issues and protecting naive retail investors requires enhancing and improving numerous angles, such as raising the bar for reporting standards, improving disclosure requirements, and improving shareholders' literacy. Thus, overcoming these challenges and developing a more suitable, transparent, and ethical approach will help shape a sustainable finance system that creates value rather than causing harm.

REFERENCES

[1] Wellfren, A., &Lajuni, N. (2022). Mapping Investment Decision Studies: A Bibliometric Review. International Journal of Academic Research in Business and Social Sciences. https://doi.org/10.6007/ijarbss/v12-i7/13034.

[2] Teplova, T., Tomtosov, A., &Sokolova, T. (2022). A retail investor in a cobweb of social networks. PLOS ONE, 17. https://doi.org/10.1371/journal.pone.0276924.

[3] Nuseir, M., &Qasim, A. (2021). Investor relations in the era of social media: systematic literature review of social media as a strategic corporate disclosure tool. Journal of Financial Reporting and Accounting. https://doi.org/10.1108/JFRA-06-2020-0160.

[4] Oppong-Tawiah, D., & Webster, J. (2023). Corporate Sustainability Communication as 'Fake News': Firms' Greenwashing on Twitter. Sustainability. https://doi.org/10.3390/su15086683.

[5] Ang, J., Hsu, C., Tang, D., & Wu, C. (2020). The Role of Social Media in Corporate Governance. Corporate Governance: Acquisitions. https://doi.org/10.2308/TAR-2018-0144.

[6] Pimonenko, T., Bilan, Y., Horák, J., Starchenko, L., &Gajda, W. (2020). Green Brand of Companies and Greenwashing under Sustainable Development Goals. Sustainability, 12, 1679. https://doi.org/10.3390/su12041679.

[7] Wang, S., Zhang, Y., Wang, G., & Chen, Z. (2020). Who can realize the "spot value" of corporate social responsibility? Sustainability Accounting, Management and Policy Journal, 11, 717-743. https://doi.org/10.1108/sampj-02-2019-0031.

[8] Zhang, Y., & Yang, F. (2021). Corporate Social Responsibility Disclosure: Responding to Investors' Criticism on Social Media. International Journal of Environmental Research and Public Health, 18. https://doi.org/10.3390/ijerph18147396.

[9] Sun, Z., Sun, X., Wang, W., & Wang, W. (2023). Digital transformation and greenwashing in environmental, social, and governance disclosure: Does investor attention matter? Business Ethics, the Environment & Responsibility. https://doi.org/10.1111/beer.12585.

[10]Yu, E., Luu, B., & Chen, C. (2020). Greenwashing in environmental, social, and governance disclosures. Research in International Business and Finance, 52, 101192. https://doi.org/10.1016/j.ribaf.2020.101192.

[11]Ktisti, E., Hatzithomas, L., &Boutsouki, C. (2022). Green Advertising on Social Media: A Systematic Literature Review. Sustainability. https://doi.org/10.3390/su142114424.

[12]Breves, P., &Liebers, N. (2022). #Greenfluencing. The Impact of Parasocial Relationships with Social Media Influencers on Advertising Effectiveness and Followers' Pro-environmental Intentions. Environmental Communication, 16, 773 - 787. https://doi.org/10.1080/17524032.2022.2109708.

[13]Liu, F., & Tang, Q. (2023). How does green marketing on social media affect consumers' green purchase intention? Based on the perspective of greenwash and green brand image. Advances in Engineering Technology Research. https://doi.org/10.56028/aetr.4.1.26.2023.

[14]Gatti, L., Pizzetti, M., &Seele, P. (2021). Green lies and their effect on the intention to invest. Journal of Business Research, 127, 228-240. https://doi.org/10.1016/J.JBUSRES.2021.01.028.

[15]Teichmann, F., Wittmann, C., &Sergi, B. (2023). What are the consequences of corporate greenwashing? A look into the consequences of greenwashing in consumer and financial markets. J. Inf. Commun. Ethics Soc., 21, 290-301. https://doi.org/10.1108/jices-10-2022-0090.

[16]Mu, H., & Lee, Y. (2023). Greenwashing in Corporate Social Responsibility: A Dual-Faceted Analysis of Its Impact on Employee Trust and Identification. Sustainability. https://doi.org/10.3390/su152215693.

[17]Rusko, R. (2021). CSR and Greenwashing in Finland. Advances in Finance, Accounting, and Economics. https://doi.org/10.4018/978-1-7998-8069-1.ch005.
[18]Ahmad, I., Jamali, D., &Khattak, M. (2023). Can organizations get away with greenwashing? CSR attributions and counterproductive sustainability behaviors. Business Ethics, the Environment & Responsibility. https://doi.org/10.1111/beer.12603.
[19]Shi, Y., Wu, J., & Zhang, Y. (2020). Corporate Social Responsibility in Supply Chain: Green or Greenwashing? ERN: Econometric Studies of Corporate Governance (Topic). https://doi.org/10.2139/ssrn.3700310.
[20]Gatti, L., Pizzetti, M., &Seele, P. (2021). Green lies and their effect on the intention to invest. Journal of Business Research, 127, 228-240. https://doi.org/10.1016/J.JBUSRES.2021.01.028.
[21]Sari, D., &Windijarto, W. (2023). THE MITIGATING FACTORS OF GREENWASHING: A SYSTEMATIC LITERATURE REVIEW. JurnalIlmiahManajemen, Ekonomi, &Akuntansi (MEA). https://doi.org/10.31955/mea.v7i3.3582.
[22]Netto, S., Sobral, M., Ribeiro, A., &Soares, G. (2020). Concepts and forms of greenwashing: a systematic review. Environmental Sciences Europe, 32, 1-12. https://doi.org/10.1186/s12302-020-0300-3.
[23]Gregory, R. (2020). When is greenwashing an easy fix? Journal of Sustainable Finance & Investment, 13, 919 - 942. https://doi.org/10.1080/20430795.2021.1907091.
[24]Hung, C., & Chang, T. (2023). Have I purchased the right product? Consumer behavior under corporate greenwash behavior. Journal of Consumer Behaviour. https://doi.org/10.1002/cb.2263.
[25]Amenc, N., Goltz, F., & Liu, V. (2022). Doing Good or Feeling Good? Detecting Greenwashing in Climate Investing. , 2, 57 - 68. https://doi.org/10.3905/jesg.2022.1.045.
[26]Gacek, J. (2020). Corporate Greenwashing and Canada Goose: Exploring the Legitimacy–Aesthetic Nexus. International Journal for Crime, Justice and Social Democracy, 9, 148-162. https://doi.org/10.5204/ijcjsd.v9i2.1385.
[27]Wang, D., & Walker, T. (2023). How to Regain Green Consumer Trust after Greenwashing: Experimental Evidence from China. Sustainability. https://doi.org/10.3390/su151914436.
[28]Jong, M., Huluba, G., &Beldad, A. (2020). Different Shades of Greenwashing: Consumers' Reactions to Environmental Lies, Half-Lies, and Organizations Taking Credit for Following Legal Obligations. Journal of Business and Technical Communication, 34, 38 - 76. https://doi.org/10.1177/1050651919874105.
[29]Hale, J. (2023). Greenwashing or Definitional Disagreement? Coming to Terms with Sustainable Investing. , 3, 6 - 11. https://doi.org/10.3905/jesg.2023.1.072.
[30]Álvarez-García, O., &Sureda-Negre, J. (2023). Greenwashing and education: An evidence-based approach. The Journal of Environmental Education, 54, 265 - 277. https://doi.org/10.1080/00958964.2023.2238190.

QUESTIONNAIRE

THE IMPACT OF CORPORATE GREENWASHING ON SOCIAL MEDIA AND ITS INFLUENCE ON INVESTOR BEHAVIOUR

Personal Profile

1. Age: _____
1) 18-24,
2) 25-34,
3) 35-44,
4) 45-54
5) 55+
2. Gender: _____
1) Male,
2) Female
3. Investment Experience (Years): _____
1) > and 10 years
2) < 10 years
4. Level of Education:
1) Illiterate
2) Higher Secondary
3) High School
4) Bachelor's Degree
5) Master's Degree

Instructions: Please indicate your level of agreement with the following statements using the 5-point Likert scale below:

(1 - Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 - Strongly Agree)

S. N	Questionnaire	1	2	3	4	5

CG1	Companies often exaggerate their environmental sustainability efforts on social media.					
CG2	I have encountered misleading or deceptive claims about corporate sustainability on social media platforms.					
CG3	Companies prioritize showcasing positive environmental actions while downplaying negative ones.					
CG4	Social media allows companies to easily create an illusion of environmental responsibility.					
CG5	I am skeptical of corporate sustainability claims I see on social media.					
SM1	Social media platforms are my primary source of information about corporate sustainability initiatives.					
SM2	I am more likely to trust a company's environmental claims if they are actively promoted on social media.					
SM3	Seeing positive posts about a company's sustainability efforts on social media makes me more inclined to invest in them.					
SM4	Social media influencers significantly impact my perception of corporate sustainability.					
CSR1	I believe companies genuinely care about social and environmental issues.					
CSR2	Companies' CSR activities positively influence my investment decisions.					
CSR3	I make inquiries about a company's CSR initiatives before investing in them.					
CSR4	Social media helps me stay informed about companies' CSR activities.					
CSR5	Companies should be transparent about their CSR performance on social media.					
CSR6	I trust companies that actively communicate their CSR efforts on social media.					
BB1	I am confident in my ability to distinguish genuine sustainability efforts from greenwashing on social media.					
BB2	I tend to follow the investment trends and recommendations of others on social media.					
BB3	Positive news about a company on social media reinforces my existing beliefs about its sustainability.					
BB4	I am more likely to invest in a company if I see that others are investing in them on social media.					
IT1	I generally trust the information about corporate sustainability that I find on social media.					
IT2	I believe social media platforms are effective at holding companies accountable for their environmental claims.					
IT3	Social media increases my overall trust in companies' commitment to sustainability.					
IT4	I am more likely to trust a company that actively engages with stakeholders about sustainability issues on social media.					
IT5	I trust companies that have a consistent and transparent approach to communicating their sustainability efforts on social media.					

Corporate Greenwashing - CG
Social Media Influence -SM
Perceived Corporate Social Responsibility (CSR) Activity - CSR
Behavioral Biases - BB
Investor Trust-IT

Thank you for your participation!