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Environmental, social, governance (ESG) & sustainable finance : Emergence of new era of investing

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Abstract

Since the financial crisis, investors have given greater regard to environmental, social, and governance (ESG) factors when making stock market choices. To achieve sustainable development, these elements are fundamental. This research paper aims to assess the impact of risk profile, investing decision-making, and asset familiarity on the preferences

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of individual stock market investors for ESG investing by using investment behaviour as a mediator. According to the paper, there is a growing trend in investments that consider environmental, social, and governance (ESG) concerns. The study's methodology included secondary data sources as well as primary data obtained using a Google form poll, which yielded 400 legitimate responses. To examine the sample size, the programme G*Power 3.1.9.2 was used. A total of 400 responses were included into the research, with the programme determining a sample size of 262 individuals. People from all throughout India filled out the survey. To construct the structural equation model, the Smart PLS programme was used. The validity and reliability of the constructs were evaluated using Confirmatory Composite Analysis. Use of confirmatory composite analysis allowed for evaluation of the constructs' dependability. With Cronbach's Alpha, Composite Reliability, and Rho A values of 0.7, the validity and reliability tests utilised in this study were powerful. The study's results provide light on how ESG factors would influence investing choices in the long run. When drafting legislation pertaining to the stock market, authorities would have the option to include investor preferences.

Subject Classification: *60K37.*

Keywords: *ESG, Risk profile, Assets familiarity, Investment behaviour.*

1. Introduction

The overall objective of the research is to determine what factors individual investors value most when choosing how to allocate their capital.There are two types of investments that can be used to increase wealth: real and financial investments. Today, investors have a variety of options for depositing their funds. As a result, it's critical to look at the investment process and decision-making in a much broader framework. Finance experts have studied and considered stock market performance and volatility to be a mystery. The epidemic and the subsequent lockdown and low interest rate regime have piqued people's interest in the stock market. In the post-Covid-19 age, factor investing necessitates an understanding of ESG. Additionally, after the present economic downturn has passed, the Social and Environmental pillars could act as catalysts for complete recognition of ESG investing as a practical investment approach. Investors should integrate the overall ESG rankings as well as the individual E, S, and G rankings into their investment strategies, as we have recommended (Diaz et. al., 2021). Revealing a company's environmental, social, and governance (ESG) factors affects its crash risk. Environmental, social, and governance (ESG) disclosures all contribute to a lower risk of collapse, as shown by the ESG disclosure index. (Pereira, 2022)

There may have been an uptick in retail involvement in the Indian stock markets, since 44.7 lakh new accounts were opened by retail investors in the first two months of the current fiscal year, according to an analysis done by SBI. The number of individual investors in the business increased by 142 lakh in FY21, according to the research. The total number of new accounts established includes 122.5 lakh for CDSL and 19.7 lakh for NSDL. According to statistics from the National Stock market (NSE), the percentage of stock market transaction attributed to individual investors has increased from 39% in March of this year to 45% today. In the year 2021, according to Livemint,

The term "ESG" refers to ethical investments that include not just financial returns but also the impact of a firm on stakeholders and the environment.ESG ratings promote green growth and innovation in China. See Zhu and Tan (2022). As indicated in Figure 1, investors are actively watching the financial performance of ESG firms due to market turmoil induced by the COVID-19 outbreak. Strong ESG records lead to lower volatility compared to non-ESG organizations (Lomax, 2021).ESG ratings helped investors reduce the market impact of the pandemic while retaining the basic risk-reward trade-off (Loof et al., 2022). International institutional investors and responsible investors can learn from RIL's ESG disclosure policy (Singhania & Saini, 2022). This study examines how environmental, social, and governance (ESG) variables affect investment decisions.

Research indicates a correlation between IT company market value and ESG ratings. (2022, Egorova et al.)

Importance of topic

Research gaps and research questions

Characteristcs of research, structure of the paper



Source: Environmental, Social, and Governance Investment: Opportunities and Risks for Asia.

Figure 1

Environmental, Social, and Governance Investment

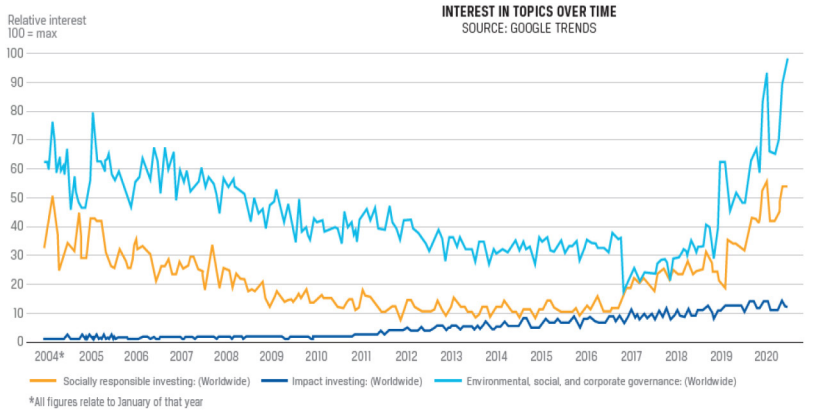
2. Background of The Study

Traditional investing produces value for investors by offering investment possibilities with risks proportional to expected profits. Investment assessment integrates traditional knowledge with ESG factors for long-term returns. Sustainable investment emerged from investment's evolution. Since industry actors are realizing that some ESG qualities are economic, especially in the long run, it is necessary to include significant ESG issues. The COVID-19 pandemic increased the need for sustainability reporting systems and standards, as well as investments that prioritize ESG aspects.(2022, Adams & Abhayawansa). ESG goods and processes are often confused since there is no defined sustainability taxonomy, which makes sustainable investment difficult. These products and processes come with different ESG goals and outputs. Sustainable investing may shine in an industry facing high customer expectations and challenging economic conditions.

Investor interest in ESG funds reached new highs in 2020 across all markets. New ESG funds have increased market breadth and variety. Environmental, social, and governance (ESG) investing was already heavily included into the investment strategies of some global fund managers before COVID-19 goes into force. Sustainable investment requests from clients and the desire of businesses to adhere to stringent environmental, social, and governance requirements pushed the topic forward in the years leading up to 2020. Companies and their executives have time to reevaluate their pledges and think about how their funds may have a more ESG effect during the epidemic and subsequent lockdowns.

According to Robert Jenkins, Global Head of Research at Refinitiv Lipper, COVID-19 prompted folks to examine significant topics more often, despite the constant coverage of natural disasters on TV. Humanitarian worries around racial unrest may increase the focus on business human resource management practices. This might lead to faster ESG development and investment in the future.

Implementing more diverse and inclusive hiring processes, placing more of an emphasis on attaining the UN Sustainable Development Goals, and enacting more equitable hiring and promotion procedures within a year all contribute to improved ESG performance in businesses across the globe. Companies that rates well in ESG metrics often have more cash on hand and lower capital expenditures.(Luo, 2022). Companies with lower ESG and human rights rankings are more likely to continue operating as



Source: CFA. (2020). Future of Sustainbility in Investment Management – From Ideas to Reality

Graph 1

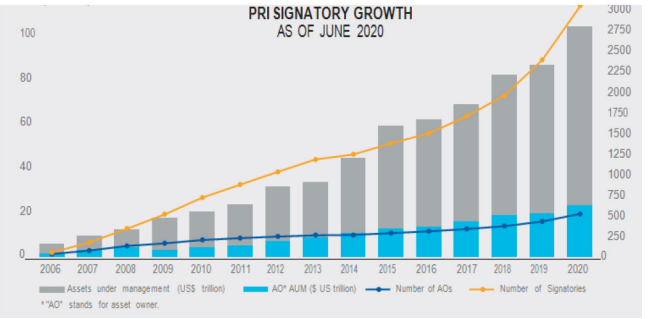
Interest in Environmental, Social, and Corporate governance

usual during the Russian invasion (Basnet et. al., 2022). Additionally, a quicker regression to the original equilibrium level of short-run stock return volatility is associated with a higher ESG score, demonstrating that increasing ESG serves as a safeguard for airlines and that ESG performance may be accommodated within corporate operational goals. (Chen et. al., 2022).

As seen in Graph 1, the subject of "environmental, social, and corporate governance" has never been more popular as it is right now, even though Google Trends has been collecting this data for nearly 15 years.

The Principles for Responsible Investment's growth chart, Graph 2, shows that from 2009 to 2019, the percentage of investment businesses committed to ESG features in their operations climbed by 16% yearly on average. Demand and strong performance led to a 28% rise in organizations, reaching over 3,000, and a 20% increase in assets under management (AUM), surpassing US$100 trillion.

Environmental, social, and governance (ESG) funds saw record levels of investor interest across all markets in 2020. Market diversity and choice have grown, and the gap between Europe and other regions has downsized, thanks to a new ESG funds. Prior to the introduction of COVID-19, several international fund managers had already included ESG investing into their investment strategies. Prior to 2020, the agenda was propelled by



Source: CFA. (2020). Future of Sustainbility in Investment Management – From Ideas to Reality

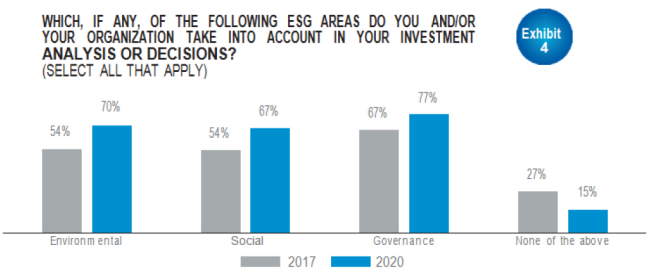
Graph 2

Growth chart for the Principles for Responsible Investment

client-driven demands for sustainable investments and the implementation of stringent ESG principles.

During the pandemic and lockdowns, companies and CEOs might examine their promises and consider making their funding more ESG-friendly.According to Robert Jenkins, Global Head of Research at Refinitiv Lipper, COVID-19 increased awareness of global climate crises and provided opportunity to reflect on important issues. Humanitarian concerns due to racial unrest may increase attention on corporate HR management, thereby accelerating ESG development and investment.

Within a year, businesses all over the globe started focusing on the UN's Sustainable Development Goals (SDGs), instituted more equitable policies for hiring and advancement, and made strides toward a more diverse and inclusive workplace. All three of these programmes improved



Source: CFA. (2020). Future of Sustainability in Investment Management -From Ideas to Reality

Graph 3

Practitioner poll of 2,800 CFA Institute members

the ESG (environmental, social, and governance) effectiveness. An overwhelming majority of 2,800 CFA Institute members (85%) said that they take E, S, and/or G elements into account when making investing decisions, up from 73% in a March 2020 practitioner survey. Environmental considerations received the most attention shown in Graph 3.

3. Literature Review

(A. Seetharaman, Indu Niranjan, 2017) This study seeks to shed light on the variables that impact portfolio performance and selection, with the aspirations of helping Singaporeans, financial counsellors, and investment planners improve their portfolio management and selection practises. Also explored are the factors that influence investors' decisions and the process by which they construct their portfolios. Using the Smart-Pls statistical tool, the survey was simulated.

(Cuandra et. al., 2021) This research aims to fill in the gap by investigating how much prospective stock investors should bare in mind. Study participants were asked to rate their interest in and likelihood of investing based on how locus of control, representational bias, and availability bias affected their responses.. For the purpose of this assessment, the Smart PLS app was used. In order to collect data for this research, 353 people in Batam were given questionnaires.

(Sultana, 2018) This study examines the perspectives of individual stock market investors on environmental, social, and governance (ESG) issues, as well as the ways in which their investment goals impact their choices, with the investment horizon serving as a moderator. The theoretical foundation was supplied by the behavioural asset pricing model (BAPM), goal setting theory (GST), and theory of planned behaviour (TPB). The main findings of the research show how investment objectives and ESG considerations affect the decision-making process.

(Nemoto & Morgan, n.d.) This paper addresses that investment can include both responsible and corporate social responsibility (CSR). The fact that ESG factors may increase monetary and social value makes ESG investing a good strategy even for return-only investors. Environmental, social, and governance (ESG) investing is an all-encompassing approach that does not favour any one sector or cause.

(Adiputra & Rahardjo, 2021). The study's sample consists of 255 people who have worked in Indonesia in the past and were affected by the COVID-19 pandemic. In this research, questionnaires were distributed over an internet system using the purposive sample approach, a non-

probability sampling strategy. This research found that during the COVID-19 pandemic, investment choices in Indonesia were heavily influenced by factors such as overconfidence, the herding effect, and self-monitoring.

(Heje et. al., 2021) The ESG-efficient frontier was the focal point of the article. In this respect, the ESG score of a stock serves the dual intent: it educates investors on the basics of the company and influences their choices. We show the pros and cons of ethical investing and compute the empirical ESG-efficient frontier using several big data sets.

(Patel et. al., 2021) The research shows that investors simply cut their growth discounts for companies with better ESG ratings and anticipate that sector businesses who experiment with utilising ESG to boost sales have less potential for short-term growth (i.e., dynamism). This study represents a relatively new area of research in this area.

(Aabo & Cristina, 2022) The review shows that Our investigation using Refinitiv's ESG data reveals no correlation between the gender of CEOs and CSR initiatives. However, there is a strong correlation between having female CEOs and having excellent ESG scores when we examine Bloomberg's ESG statistics.

Research Gap

Only a few works in literature demonstrate the impact of ESG on Investment decisions. Although studies have been conducted by many authors, this problem is still insufficiently explored. Understanding ESG's function in factor investing in the post-Covid-19 era calls for a more methodical and theoretical approach.

4. Conceptual Framework

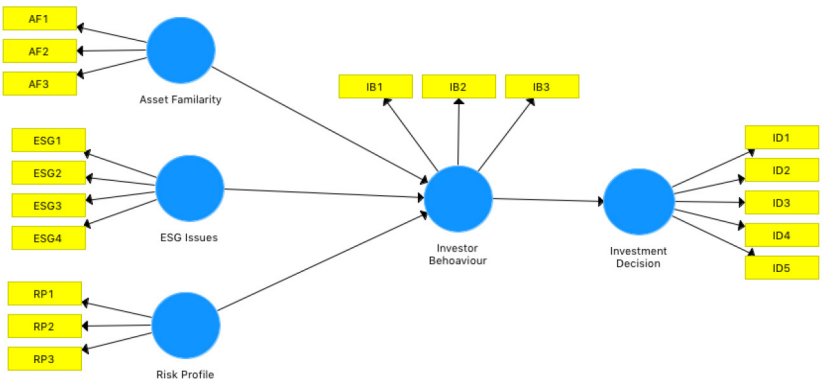
Socially conscious investors evaluate potential investments using ESG criteria, which stand for environmental, social, and governance. The year is 2021 According to Scott. Contrarily, there are a growing number of investors who believe that ESG criteria have a functional purpose beyond only addressing ethical issues. An Investopedia and Treehugger study found that nearly 60% of respondents had increased their interest in ESG investments, with 19% reporting that they had implemented ESG principles into their portfolios. "Demand for ESG investments soars emerging from COVID-19 pandemic," 2021. The global financial crisis has

made ESG factors—environmental, social, and governance—an important aspect of sustainable development plans for stock market investments. One of the environmental standards is corporate environmental responsibility. When assessing a corporation, social criteria consider its treatment of workers, vendors, consumers, and local communities. Corporate governance include executive remuneration, audits, internal controls, and shareholder interests. Hello, Scott. How asset familiarity and risk profile affect investing behaviour is one of the topics explored in this research, which also seeks to understand individual stock market investors' preferences on ESG problems. To measure assets familiarly (AF), we looked at people's financial literacy, investment goods accessible in their local market, familiar investment products, their level of patriotism, and their social identity. An individual's risk tolerance, expected return on investment (ROI), and risk attitude make up their risk profile (RP).(A. Seetharaman, Indu Niranjan, 2017) All the above have been covered and shown in Figure 2.

5. Hypothesis

Hypothesis-1 (H1). There is no significant relationship between Asset Familiarity and Investor Behavior.

Hypothesis-2 (H2). There is no significant relationship between ESG Issues and Investor Behavior.



Source: Authors own Work using Smart PLS

Figure 2

Conceptual Framework

Hypothesis-3 (H3). There is no significant relationship between Risk Profile and Investor Behavior.

Hypothesis-4 (H4). There is no significant relationship between Investor Behavior and Investment decision.

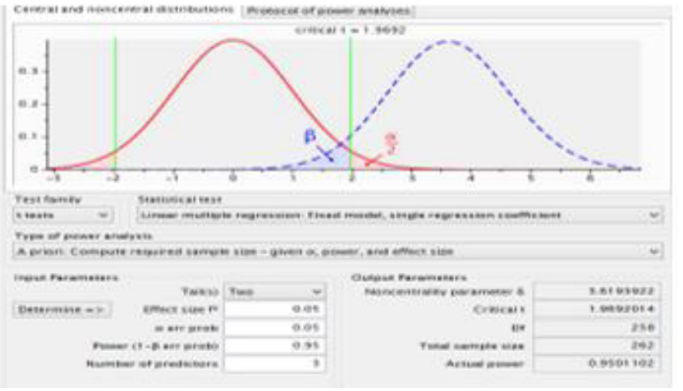
6. Research Objectives

- To examines individual stock market investors' preferences for ESG investing.
- To find out the impact of Asset Familiarity, Risk Profile, and Investment Behavior on investing decision-making, using investment Behavior as a mediator.
- In order to learn how ESG investments—which stand for "environmental, social, and governance"—have changed the situation.

7. Research Methodology

Using a Google form poll, 400 participants provided useful replies for the main data set. G*Power 3.1.9.2 was used to analyze sample size. The study gathered 400 replies and selected a sample size of 262 persons. People from around India took the poll. Smart PLS software was used to create the structural equation model.

The same procedure is used to test the research hypothes shown in Figure 3.



Source: Authors own Work using Smart PLS

Figure 3

Determination of Sample Size G* Power Analysis

8. Results and Discussions

Confirmatory Composite Analysis

Measurement Model

Validity and reliability of the constructs were assessed using Confirmatory Composite Analysis. The reliability of the constructs was assessed using confirmatory composite analysis. This study found 0.7 findings for Cronbach's Alpha, Composite Reliability, and Rho A in validity and reliability tests. A questionnaire with Composite Reliability (Hair et al., 2010), Cronbach's Alpha (Nunnally, 1978), and Rho A (Henseler, 2015) values over 0.7 was found to be reliable (Morgan et al., 2004). The internal consistency statistic Cronbach's alpha measures the degree of relatedness among things. Composite reliability measures internal

Table 1
Confirmatory Composite Analysis

		Factor Loadings
Asset Familiarity	AF1	0.837
	AF2	0.890
	AF3	0.869
ESG Issues	ESG1	0.877
	ESG2	0.910
	ESG3	0.898
	ESG4	0.883
Investor Behavior	IB1	0.891
	IB2	0.939
	IB3	0.908
Investment Decision	ID1	0.899
	ID2	0.858
	ID3	0.916
	ID4	0.916
	ID5	0.896
Risk Profile	RP1	0.909
	RP2	0.895
	RP3	0.920

Source: Authors own Work using Smart PLS

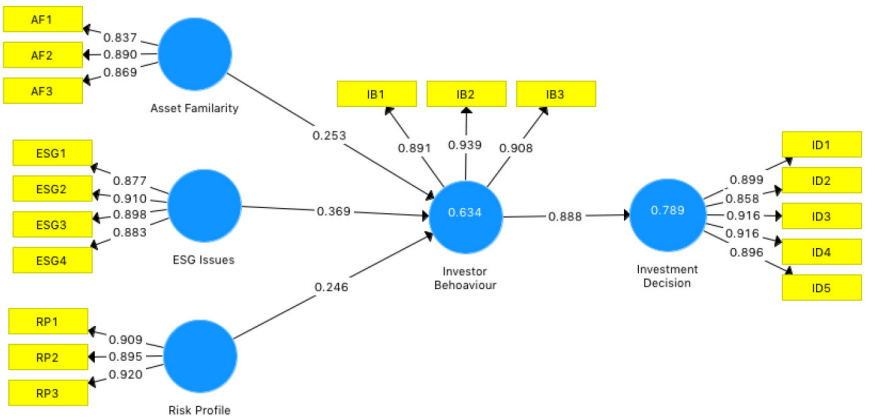
consistency based on dependability. Composite reliability does not assume that indicators have equal loadings, in contrast to Cronbach's alpha. A convergent validity statistic called average variance AVE in Table 1 and Table 2 indicates how effectively a latent idea can explain the variation of its indicators. Data is considered appropriate if its average variance extracted (AVE) is higher than 0.50. The survey satisfies all AVE standards, as shown in Table 1. Thus, it may be said that the data satisfies every condition for dependability. Smart PLS software uses partial least squares to determine the factor loading, which should be more than 0.70. Figure 4 shows that all indicators have factor loadings larger than 0.70, which means that they are all suitable and none of them should be lowered.

Table 2

Confirmatory Composite Analysis (Construct Reliability and Validity)

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Asset Familiarity	0.832	0.834	0.900	0.749
ESG Issues	0.915	0.915	0.940	0.796
Investment Decision	0.939	0.942	0.954	0.805
Investor Behavior	0.900	0.904	0.937	0.833
Risk Profile	0.894	0.894	0.934	0.825

Source : Authors own Work using Smart PLS



Source: Authors own Work using Smart PLS

Figure 4

Measurement Model

Discriminant Validity

The discriminant validity was evaluated using the Fornell-Larcker Criterion (1981). Evidence suggests that the correlational values of the structures should be smaller than the square roots of the AVE.As the inquiry reveals the same, Table 3 below suggests that using it for the final analysis is appropriate.

Table 3

Discriminant Validity (Fornell-Larcker Criterion)

	Asset Familiarity	ESG Issues	Investment Decision	Investor Behavior	Risk Profile
Asset Familiarity	0.866				
ESG Issues	0.716	0.892			
Investment Decision	0.706	0.768	0.897		
Investor Behavior	0.692	0.755	0.888	0.913	
Risk Profile	0.712	0.831	0.762	0.733	0.908

Source: Authors own Work using Smart PLS

The HTMT gives an image of how well various indicators assess the same construct in relation to one another by averaging the correlations of indicators measuring distinct constructs. The proposed HTMT threshold is the maximum of 0.85 (Kline, 2011, Henseler et. al., 2015), 0.90 (Teo et. al., 2008), and 0.85 (Gold et. al., 2001) criterion. According to Table 4, the concept demonstrates discriminant validity in the HTMT test as well, with a result smaller than 0.85.

Table 5

R Square

	R Square	R Square Adjusted
Investment Decision	0.789	0.789
Investor Behavior	0.634	0.631

Source: Authors own Work using Smart PLS

R-squared determines the strength of the correlation between two variables whose changes are dependent and independent. The R square value is shown in Table 5. The Investment Behaviour factor clearly influences 78.9 percent of Investment Decisions.

Collinearity Statistics

The Collinearity Index (VIF) is a tool used in regression analysis for evaluating the presence of non-linear relationships. If the VIF value is

large, the regression findings become less dependable. (Diamantopoulos, 2008) The maximum allowable VIF value is 3.33. The study's reliability is shown by Table 6, which indicates that all indicators have VIF values < 3.33.

Table 6

Variance Inflation Factor (VIF)

	VIF
AF1	1.628
AF2	2.333
AF3	2.208
ESG1	2.488
ESG2	3.355
ESG3	3.151
ESG4	2.682
IB1	2.531
IB2	3.577
IB3	2.822
ID1	3.816
ID2	3.144
ID3	4.208
ID4	4.366
ID5	3.638
RP1	2.767
RP2	2.409
RP3	3.033

Source: Authors own Work using Smart PLS

Model Fit

Analyzing model fitting can help determine how effectively a model is constructed to yield accurate results. For fitness, our research's

Table 4

Heterotrait-Monotrait Ratio (HTMT)

	Asset Familiarity	ESG Issues	Investment Decision	Investor Behavior	Risk Profile
Asset Familiarity					
ESG Issues	0.818				
Investment Decision	0.795	0.827			
Investor Behavior	0.796	0.829	0.963		
Risk Profile	0.823	0.918	0.829	0.815	

Source: Authors own Work using Smart PLS

Standardized Root Mean Squared Residual (SRMR) of 0.062 is within the allowed range of less than 0.08. The quality of fit is gauged by the Normal Fit Index (NIF). Though our analysis revealed that 0.877 is an acceptable Figure, it must be more than 0.90. (Table 7), and thus the model shall be considered as fit.

Table 7

Model Fit

	Saturated Model	Estimated Model
SRMR	0.045	0.062
d_ULS	0.343	0.649
d_G	0.355	0.383
Chi-Square	948.820	996.680
NFI	0.883	0.877

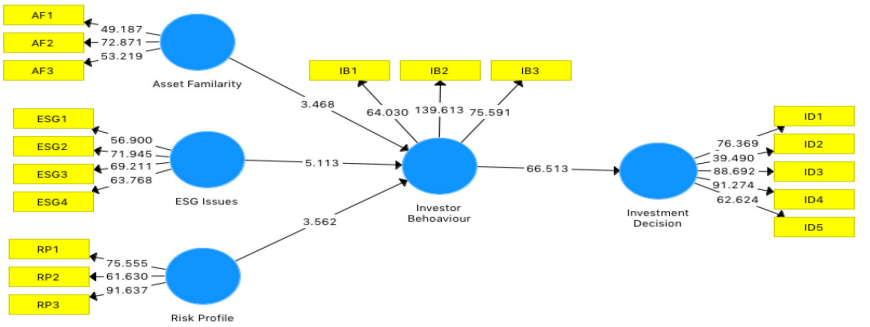
Source: Authors own Work using Smart PLS

Structural Equation Model

Results of Hypothesis Testing

To evaluate the model's prediction abilities and test the hypothesis, 5000 bootstraps were employed.

The study's findings are in Table 8 and Figure 5. The p-value and T test findings confirm the hypothesis. A p-value is considered statistically significant if it is below 0.05. It provides strong evidence against the null hypothesis, with a probability of validity below 5%. Hypotheses H1, H2, H3, and H5 are rejected by the T test and P value, indicating that investors' risk profiles, asset familiarity, and ESG concerns influence their investing choices. Using bootstrapping for hypothesis testing validates all values. All cases satisfy the T-Statistics threshold of higher than 1.96. We rejected all hypotheses owing to P value and T test.



Source: Authors own Work using Smart PLS

Figure 5

Structural Equation Model

Table 8

Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Asset Familiarity -> Investor Behavior	0.253	0.250	0.073	3.468	0.001
ESG Issues -> Investor Behavior	0.369	0.370	0.072	5.113	0.000
Investor Behavior -> Investment Decision	0.888	0.889	0.013	66.513	0.000
Risk Profile -> Investor Behavior	0.246	0.249	0.069	3.562	0.000

Source: Authors own Work using Smart PLS

9. Conclusions and Implications

Academia has long been interested in the topics of investor familiarity and rationality, risk profile, and ESG issues. Globally, ESG investing is rapidly growing in popularity. With the use of a survey questionnaire given to individual investors. The study's results provide light on how ESG factors would influence investing choices in the long run. In developing these rules and regulations, stock market authorities might take investor preferences into account. The creation and implementation of ESG rules and regulations would improve the country's ESG practises and help to maintain the ecological and social balance. Sustainable development may be achieved if investors are guaranteed a sustainable return on investment in addition to responsibility towards society, economic balance, and the environment.

10. Limitations and Furthur Study

The main issue of the study is the limited sample size of investors. The study might be improved by include controlled factors such as Age and Time Horizon. However, the study did not explore the primary reasons why investors prioritize ESG issues in their investing decisions.

Further research on this topic is necessary to understand the motivations for social, functional, emotional, value-based, or revolutionary change.

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