



Role Of ESG Consideration In Determining Investment Decision: An Individual Investor Perspective

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INTRODUCTION:

Investment in the stock market has grown significantly, reflecting a country's economic prosperity and expansion (Sood et al., 2022; Jain et al., 2021a). Investors and investment managers face crucial decisions when selecting stocks. Traditional financial models assume that investors primarily consider risk and profitability (Cubas-Díaz & Martinez Sedano, 2018; Sood et al., 2022). However, in today's complex market environment, these models are no longer sufficient. With increasing uncertainty and challenges in determining what to invest in, investors are exploring new decision-making frameworks that go beyond financial metrics.

In recent years, the concept of **Environmental, Social, and Governance (ESG)** investing, often termed sustainable investing, has gained prominence. ESG factors now play a critical role in investment decision-making as investors and asset managers recognize their importance in evaluating the long-term sustainability of assets. Rising public awareness of issues such as climate change, social inequality, and corporate governance failures has contributed to the increasing focus on ESG concerns. Companies that effectively manage their ESG risks are seen as better positioned to deliver sustainable, long-term profits (Sultana et al., 2017; FasterCapital).

Investors have become more conscious of ESG risks as socially irresponsible companies face potential legal costs and brand damage (Sultana et al., 2017). As a result, organizations are prioritizing ESG criteria in their operations. In the 21st century, businesses are moving away from focusing solely on profit maximization, and instead adopting a "Triple Bottom Line" (3Ps) approach, which integrates people, the planet, and profit into their business models (Linnenluecke, 2022; Sood et al., 2022; Zehir & Aybars, 2020). The rapid pace of global warming and social inequalities has prompted organizations to embed these considerations into their long-term strategies (Milne & Ball, 2005).

Behavioral finance offers a different perspective on investment decision-making, suggesting that investors often act irrationally due to cognitive and emotional limitations. Investors are influenced by social norms, beliefs, and assumptions, leading to suboptimal decisions (Hohenberger et al., 2019; Neal et al., 2022). Different investors prioritize ESG factors differently based on their values. For instance, Deegan and Rankin's (1997) Australian study found that 72% of shareholders considered environmental information important, while a U.S. study by Epstein and Freedman (1994) showed that financial outcomes were often prioritized over ESG considerations.

The concept of ESG investing can be traced back to an initiative led by former UN Secretary-General Kofi Annan in January 2004. Annan invited CEOs of major financial institutions to participate in a collaboration aimed at incorporating ESG considerations into the financial system. This initiative, supported by the UN Global Compact and the International Finance Corporation, laid the foundation for ESG's integration into capital markets (Meher et al., 2020; Duuren et al., 2016). Over time, the focus of businesses has expanded beyond shareholder profit to include stakeholder engagement, corporate social responsibility, and community involvement (Rounok et al., 2023; Steyn, 2004).

Socially Responsible Investment (SRI) integrates ESG factors into investment processes to achieve long-term competitive financial returns alongside positive social outcomes. According to Elkington (2018), the success of ESG investments should be measured by their impact on a billion people's well-being and the health of the ecosystem, in addition to profit. Green bonds, a type of SRI, have gained popularity as a vehicle for funding environmentally sustainable projects. Investors with high SRI preferences are drawn to financial intermediaries that offer both traditional and socially responsible products and adopt ESG strategies (Prajapati et al., 2021; Cucinelli & Soana, 2023).

Despite the growing body of research on non-financial factors like ethics, religion, and social responsibility, there remains a gap in understanding how individual investors' perspectives on ESG issues influence their investment decisions (Nair & Ladha, 2014; Sultana et al., 2018; Dorfleitner & Utz, 2014; Viviers et al., 2014). This lack of research is critical because individual investor behavior plays a vital role in advancing sustainable investment practices and achieving broader social and environmental goals.

Thus the current study aims to close a gap in the ESG literature by examining individual investors' ESG concerns in Indian stock market. This research contributes knowledge in an emerging area by claiming that ESG concerns indirectly impact investment decisions (ID).

This study will address the following research question:

- i. How do environmental, social, and governance (E, S, and G) factors influence investors when they make investment decisions?

The overall structure of this article consists of five primary parts. An introduction is provided in the research's first section. The literature review, hypothesis generation, and conceptual framework of this study are presented in the next section. The third section outlines the methodology of the process. The fourth section presents a discussion based on the research's empirical findings. The fifth and final section contains the study's conclusions and consequences, a list of references, and recommendations for further study.

REVIEW OF LITERATURE:

Investment decision making is a critical process in which individuals evaluate and select various financial assets, such as stocks, available in different stock markets. Traditional economic theory suggests that investors are rational decision makers who utilize knowledge, experience, and opportunities to make objective decisions (Pradhan & Kasilingam, 2015). However, behavioral finance challenges this notion, positing that psychological biases, ingrained thought patterns, and emotional inclinations heavily influence investors' perspectives and decision-making processes. This divergence from traditional finance lays the groundwork for exploring how non-financial factors such as environmental, social, and governance (ESG) information can impact investment decisions. Despite growing emphasis on ESG factors, awareness among the general public and investors remains relatively low. In Japan, a study by Keiichi Fukuyama (2018) found that only 5% of the surveyed population was familiar with ESG investing and 86% were entirely unaware of it. Similarly, a survey by Capital.com (2022) revealed that 52% of global traders and investors had never considered ESG criteria when making stock selections, with a lack of knowledge being a key barrier. These findings highlight the prevalent gap in ESG awareness and underscore the need for educational initiatives to inform investors about the potential benefits of investing in ESG. The appeal of ESG investments lies in their dual purpose of promoting ethical investment practices while simultaneously enhancing portfolio performance. Broadstock et al. (2021) argue that ESG investing offers not only ethical advantages but also the potential to increase returns and reduce portfolio risks. Socially responsible investors (SRIs) are driven by ethical motivations as they incorporate ESG data into their investment strategies in pursuit of both social impact and long-term financial rewards (Staub-Bisnang, 2012; USSIF, 2014). These investors prioritize sustainability and responsibility over short-term gains. Several studies explore the specific impact of ESG factors on investment decisions. For instance, Sultana et al. (2018) found that Bangladeshi retail investors considered environmental risks such as industrial pollution and climate change when making investment decisions. Similarly, Berry and Junkus (2013) observe that environmental performance is a significant concern for both SRI and non-SRI investors. Social factors, including worker health and safety and equal employment opportunities, also play a crucial role in shaping investment choices, particularly in

emerging markets (Sultana et al., 2018). Governance factors, such as corporate governance practices, conflict resolution between controlling and minority shareholders, and strong governance structures, are essential for protecting investor interests. Al-Hiyari and Kolsi (2021) argued that effective governance mechanisms enhance long-term shareholder value. Investors often prefer companies with strong governance practices, including those with high foreign ownership and independent structures (Bae and Goyal, 2010). Risk perception significantly influences investment decisions, particularly when the ESG factors are considered. Investors who are more risk-averse tend to shy away from high-risk investments, whereas those with higher risk tolerance are more likely to invest in equities (Awais et al., 2016). For example, Deka et al. (2023), ESG consciousness moderates the relationship between risk perception and investment decisions, with higher ESG awareness weakening the positive association between bias and risk perception. Park and Jang (2021) highlight that institutional investors in South Korea prioritize environmental factors such as pollution control and waste management when making investment decisions. These factors, tied to the goals of the Paris Agreement, significantly influence risk assessments and choices. Socially responsible investment (SRI) has become a focal point for investors seeking to align their financial goals with their social values. Nilsson (2009) identified three primary drivers of ESG investment: financial, mixed, and altruistic. Daugaard (2019) further noted that investors committed to ESG principles are likely to continue with their investments even when they underperform compared with conventional portfolios. This resilience reflects a deeper commitment to ethical investing. In India, socially responsible investors are distinguished from conventional investors by their higher awareness of ESG issues and stronger ethical inclinations. Jonwall et al. (2022) segmented Indian retail investors based on their attitudes towards ESG, demonstrating the growing importance of ESG awareness in emerging markets. This segmentation suggests that mutual fund managers should tailor their SRI offerings to meet Indian investors' unique preferences. The intersection of behavioral finance and ESG investing reveals that psychological factors such as biases and heuristics also shape investment decisions. P et al. (2013) study the behavioral traits of long- and short-term investors and find significant differences in how these groups approach investment decisions. Herding behavior, overconfidence, and cognitive dissonance are among the biases that affect decision-making processes. Manzoor et al. (2023) examined the influence of personality traits, risk perception, and external factors like the COVID-19 disruption on investment behavior. Their study focused on the Indian stock market and identified how investors' perceptions of risk and ESG issues shaped their investment decisions in times of market uncertainty. The literature underscores the growing relevance of ESG factors in investment decision making, with investors increasingly considering ethical and sustainability aspects alongside financial performance. Although awareness of ESG investment remains limited in certain regions, its potential to offer competitive returns while addressing social and environmental concerns is gaining traction. As investors' understanding of ESG principles deepens, their risk perceptions and investment strategies are likely to evolve, particularly when they seek to balance profitability with ethical considerations.

CONCEPTUAL FRAMEWORK OF THE STUDY.

Researchers have presented various theoretical frameworks to incorporate ESG considerations into investors' investment decisions (Sandberg et al., 2009). Brunena and Laubach (2022) developed a framework for their study to investigate whether sustainable clients consider sustainability when making investment decisions using consistent behavior. Sultana et al. (2018) examined retail investors' preferences for ESG concerns and how such preferences affected their investment decisions by utilizing theoretical underpinnings from the behavioral asset pricing model (BAPM), goal setting theory (GST), and theory of planned behavior (TPB). Wins, A., & Zwergel, B. (2016). This study makes use of Spence's (1973) signaling theory and Ajzen's (1991) theory of planned behavior. In order to operationalize TPB, the research first takes into account subjective criteria and the "attitudes" of stock market investors toward ESG information before concentrating on the investors' "intention" to invest in ESG by taking those decisions into account. Investors are encouraged to favor investing in firms that disclose environmental, social, and governance (ESG) disclosures since, according to the TPB, their own standards enhance their perspectives on these matters. Naveed(2020) ESG is been incorporated as an explanatory variable in while risk tolerance as the intervening variable and investment decision as dependent variable in the context of PSX. Therefore it is expected that ESG information has an impact on investment decisions. To shed light on this, the following hypothesis has been framed,

H1: ESG information has no significant impact on individual investors' decisions.

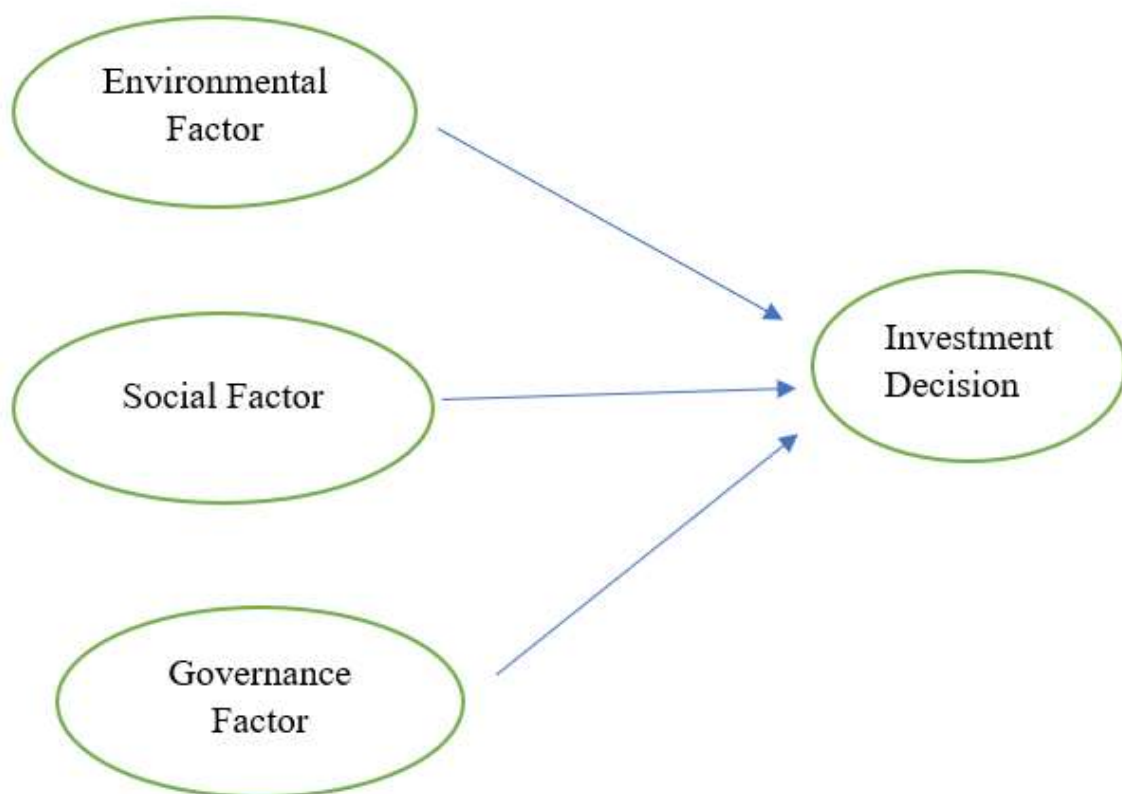


Figure 1: Conceptual model

RESEARCH METHODOLOGY:

Retail investors involved in stock market trading or investing are part of the study population. The sample framework of this study includes investors from all brokerage firms in Chennai. A non-probability (purposive) sample was adopted because of the nature of the investigation. A software-generated questionnaire is created, and the link to it is emailed to investors. Primary data has been collected through adopted questionnaires from past studies. The below table shows the demographic profile of the study, Males made up the majority of the sample (59.7%), while females made up of a minority of (40.3%); the majority of the population is between the age group of 31 – 40 years (38.8%), 18-30 years (35.9%), above 51 years (16.5%) and were over by 41-50 years (8.7%). (64.1 %) had a postgraduate degree, (18.9%) were high school qualified, and (17%) had completed a Bachelor's degree.

TABLE 1 : DEMOGRAPHIC PROFILE OF THE RESPONDENTS

ITEMS	CHARACTERISTICS	RESPONSE %
Gender	Male	59.7
	Female	40.3
Age	18–30	35.9
	31-40	38.8
	41–50	8.7
	51 and above	16.5
Qualification	High School or equivalent	18.9
	Bachelor's or equivalent degree	17
	Postgraduate or equivalent degree	64.1
Occupation	Salaried	66.5
	Self-employed/Businessman	10.7
	Unemployed/student/retired	22.8
Annual Income	Less than 500,000	58.7
	500,001–10,00,000	10.2
	10,00,001–15,00,000	27.2
	Above 15,00,001	3.9
Investment Experience in Stock market	Less than 5 years	82.5
	5–10 years	4.4
	10 years and above	13.1

The respondent is specified to mention their occupation, Annual income, and investment experience. Results found that the major portion (66.5%) of the people were salaried, most of the investors (58.7%) were under the income group below 5,00,000rs and most of them (82.5% investor) had experience of less than 5 years.

TABLE 2 : Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.468 ^a	0.219	0.207	2.7492

a. Predictors: (Constant), GF, EF, SF

The correlation coefficient (R) is 0.468. This value suggests a moderate positive correlation between the independent variables (GF, EF, SF) and the dependent variable (ID). The R^2 value is 0.219, which indicates that approximately 21.9% of the variance in investment decision-making (ID) can be explained by the combined influence of the independent variables (GF, EF, SF). The adjusted R^2 value is 0.207, which adjusts the R^2 value for the number of predictors in the model. This value is slightly lower than the R^2 , indicating that when accounting for the number of predictors, about 20.7% of the variance in ID is explained by GF, EF, and SF. The standard error of the estimate is 2.74920. This value indicates the average distance that the observed values fall from the regression line. A smaller standard error indicates a better fit of the model to the data.

TABLE 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	427.364	3	142.455	18.848	.000 ^b
	Residual	1526.738	202	7.558		
	Total	1954.102	205			

a. Dependent Variable: ID

b. Predictors: (Constant), GF, EF, SF

The ANOVA results indicate that environmental, social, and governance factors significantly influence investment decision-making. The model explains a significant portion of the variance in investment decisions, as demonstrated by the significant F-statistic and low p-value. Specifically, the independent variables collectively explain 427.364 units of the total variance, leaving 1526.738 units unexplained. Therefore, these findings suggest that ESG factors influence individual investment decisions, providing investors with valuable insights into their decision-making processes.

FINDINGS:

The study looks at the respondents' demographics as well as how Environmental, Social, and Governance (ESG) considerations affect investors' decisions to make investments. Males constitute the majority of the sample (59.7%), compared to females (40.3%), which suggests that men participate in investing activities at a larger rate. The majority of respondents (38.8%) and (35.9%) are between the ages of 18 and 30, suggesting that younger and middle-aged people are more likely to invest and take ESG factors into account. On the other hand, there is a lower representation of senior age groups (over 51 years, 16.5%, and 41–50 years, 8.7%).

Postgraduate degrees are held by a sizable fraction of respondents (64.1%), suggesting a high level of education that may improve knowledge of ESG aspects. Just 18.9% of people have a high school diploma, and 17% have a bachelor's. The majority of responders (66.5%) have a salary, with a lower percentage being self-employed (10.7%), with the remaining percentage made up of retirees, students, and unemployed individuals (22.8%). This group of paid people may be able to make larger ESG investments because they appear to have more secure financial backgrounds.

The income distribution of the respondents indicates that 58.7% make less than ₹500,000 a year, which may restrict their ability and inclination to make high-risk ESG investments. Furthermore, only 3.9% make more than ₹1,500,001, with 27.2% falling within the ₹1,000,001 and ₹1,500,000 range. In addition, 82.5% of respondents have fewer than five years of experience investing in the stock market, suggesting that most of the respondents are novices who may not have a thorough understanding of ESG investing, which could undermine their confidence in their ability to make wise judgments.

The results of the regression study show that ESG factors have a significant influence on investment decisions. With an R-squared value of 0.219, they explain 21.9% of the variance in investment decision-making. The overall statistical significance of the regression model is confirmed by the ANOVA results, which display an F-statistic of 18.848 with a p-value of 0.000. This suggests that environmental, social, and governance considerations have a large, combined impact on investment decision-making, highlighting their significance in influencing investor choices.

CONCLUSION:

In conclusion, the findings from the demographic profile and regression analysis provide valuable insights into the characteristics of individual investors and the impact of ESG factors on investment decision-making. The demographic analysis reveals a predominantly young, well-educated, and relatively inexperienced investor base that is increasingly attentive to ESG considerations. The regression analysis underscores the significant influence of Environmental, Social, and Governance factors on investment decisions, highlighting the importance of these criteria in shaping the investment landscape.

As the interest in ESG investing continues to grow, it is crucial for financial institutions and stakeholders to recognize the evolving preferences and values of investors. By promoting awareness and education about ESG investing and addressing the challenges that investors may face, the financial industry can

contribute to the development of a more sustainable and responsible investment environment. The insights gained from this study can inform future research and practices aimed at fostering a greater understanding of ESG factors and their role in investment decision-making. Ultimately, the findings underscore the potential for ESG factors to not only influence individual investment choices but also to shape broader market trends and investment behaviors in an increasingly sustainability-conscious world.

REFERENCES:

- Sood, K., Pathak, P., Jain, J., & Gupta, S. (2022). How does an investor prioritize ESG factors in India? An assessment based on fuzzy AHP. *Managerial Finance*, 49(1), 66–87. <https://doi.org/10.1108/mf-04-2022-0162>
- Jain, J., Walia, N., Singh, S. and Jain, E. (2021a), “Mapping the field of behavioral biases: a literature review using bibliometric analysis”, *Management Review Quarterly*, pp. 1-33, doi: 10.1007/s11301-021-00215-y.
- Cubas-Diaz, M. and Martinez Sedano, M.A. (2018), “Measures for sustainable investment decisions and business strategy—a triple bottom line approach”, *Business Strategy and the Environment*, Vol. 27 No. 1, pp. 16-38, doi: 10.1002/bse.1980.
- Linnenluecke, M.K. (2022), “Environmental, social and governance (ESG) performance in the context of multinational business research”, *Multinational Business Review*, Vol. 30 No. 1, pp. 1-16, doi: 10.1108/MBR-11-2021-0148.
- Zehir, E. and Aybars, A. (2020), “Is there any effect of ESG scores on portfolio performance? Evidence from Europe and Turkey”, *Journal of Capital Markets Studies*. doi: 10.1108/JCMS-09-2020-0034.
- Milne, M.J. and Ball, A. (2005), “From soothing palliatives and towards ecological literacy: a critique of the triple bottom line”, available at: <http://hdl.handle.net/10523/1551>.
- Al-Hiyari, A. and Kolsi, M.C. (2021), “How do stock market participants value ESG performance? Evidence from Middle Eastern and North African countries”, *Global Business Review*. doi: 10.1177/09721509211001511
- Syed, A.M. (2017), “Environment, social, and governance (ESG) criteria and preference of managers”, *Cogent Business and Management*, Vol. 4 No. 1, doi: 10.1080/23311975.2017.1340820.
- Khan, M., Serafeim, G. and Yoon, A. (2016), “Corporate sustainability: first evidence on materiality”, *The Accounting Review*, Vol. 91 No. 6, pp. 1697-1724, doi: 10.2308/accr-51383.
- Diouf, D., Hebb, T. and Toure, E.H. (2016), “Exploring factors that influence social retail investors’ decisions: evidence from Desjardins fund”, *Journal of Business Ethics*, Vol. 134 No. 1, pp. 45-67, doi: 10.1007/s10551-014-2307-4.
- Perez-Gladish, B., Benson, K. and Faff, R. (2012), “Profiling socially responsible investors: Australian evidence”, *Australian Journal of Management*, Vol. 37 No. 2, pp. 189-209, doi: 10.1177/0312896211429158.
- Ning, Y., Xiao, Z. and Lee, J. (2017), “Shareholders and managers: who care more about corporate diversity and employee benefits?”, *Journal of Management and Governance*, Vol. 21 No. 1, pp. 93-118, doi: 10.1007/s10997-015-9335-z
- Park, S.R. and Jang, J.Y. (2021), “The impact of ESG management on investment decision: institutional investors’ perceptions of country-specific ESG criteria”, *International Journal of Financial Studies*, Vol. 9 No. 3, p. 48, doi: 10.3390/ijfs9030048

- Meher, B. K., Hawaldar, I. T., Mohapatra, L., Spulbar, C., & Birau, R. (2020). THE EFFECTS OF ENVIRONMENT, SOCIETY AND GOVERNANCE SCORES ON INVESTMENT RETURNS AND STOCK MARKET VOLATILITY. *International Journal of Energy Economics and Policy*, 10(4), 234–239. <https://doi.org/10.32479/ijeeep.9311>
- Schneider, F., Kallis, G., Martinez-Alier, J. (2010), Crisis or opportunity? Economic degrowth for social equity. *Journal of Cleaner Production*, 18, 511-518
- Duuren, E.V., Plantinga, A., Scholtens, B. (2016), ESG integration and the investment management process: Fundamental investing reinvented. *Journal of Business Ethics*, 138, 525-533.
- Rounok, N., Qian, A., & Alam, M. A. (2023b). The Effects of ESG issues on investment decision through corporate reputation: Individual investors' perspective. *International Journal of Research in Business and Social Science*, 12(2), 73–88. <https://doi.org/10.20525/ijrbs.v12i2.2354>
- Steyn, B. (2004). From strategy to corporate communication strategy: A conceptualisation. *Journal of communication management*, 8(2), 168-183. <https://doi.org/10.1108/13632540410807637>
- Sultana, S., Zulkifli, N., & Zainal, D. (2018). Environmental, social and governance (ESG) and investment decision in Bangladesh. *Sustainability*, 10(6), 1831. <https://doi.org/10.3390/su10061831>
- Staub-Bisang, M. (2012). Sustainable investing for institutional investors: Risks, regulations and strategies. John Wiley & Sons.
- Epstein, M. J., & Freedman, M. (1994). Social disclosure and the individual investor. *Accounting, Auditing & Accountability Journal*, 7(4), 94-109. <https://doi.org/10.1108/09513579410069867>
- Nair, Abhilash & Ladha, Rani. (2014). Determinants of non-economic investment goals among Indian investors. *Corporate Governance: The international journal of business in society*. 14. 714-727. 10.1108/CG-09-2014-0102.
- Dorfleitner, G., & Utz, S. (2014). Profiling German-speaking socially responsible investors. <https://www.semanticscholar.org/paper/Profiling-German-speaking-socially-responsible-Dorfleitner-Utz/949c58fda5d7c2faef71381a7f0374d78ac14bb0>
- Viviers, Suzette & Krüger, Janine & Venter, Danie. (2014). The relative importance of ethics, environmental, social, and governance criteria. *African Journal of Business Ethics*. 6. 10.15249/6-2-29.
- Jagongo, A.; Mutswenje, V.S. A survey of the factors influencing investment decisions: The Case of Individual Investors at the NSE. *Int. J. Humanit. Soc. Sci.* 2014, 4, 92–102.
- Bikas, E.; Jurevičiene, D.; Dubinskas, P.; Novickytė, L. Behavioural finance: The emergence and development trends. *Procedia Soc. Behav. Sci.* 2013, 82, 870–876.
- Cohen, G.; Kudryavtsev, A. Investor rationality and financial decisions. *J. Behav. Financ.* 2012, 13, 11–16.
- Prajapati, D., Paul, D., Malik, S., & Mishra, D. K. (2021). Understanding the preference of individual retail investors on green bond in India: An empirical study. *Investment Management and Financial Innovations/Investment Management & Financial Innovations*, 18(1), 177–189. [https://doi.org/10.21511/imfi.18\(1\).2021.15](https://doi.org/10.21511/imfi.18(1).2021.15)
- Cucinelli, D., & Soana, M. G. (2023). Investor preferences, financial literacy and intermediary choice towards sustainability. *Research in International Business and Finance*, 66, 102027. <https://doi.org/10.1016/j.ribaf.2023.102027>

Park SR and Oh K-S (2022) Integration of ESG Information Into Individual Investors' Corporate Investment Decisions: Utilizing the UTAUT Framework. *Front. Psychol.* 13:899480. doi: 10.3389/fpsyg.2022.899480

Broadstock, D. C., Chan, K., Cheng, L. T. W., and Wang, X. (2021). The role of ESG performance during times of financial crisis: evidence from COVID-19 in China. *Financ. Res. Lett.* 38:101716. doi: 10.1016/j.frl.2020.101716

Jimnee Deka, Meghna Sharma, Nishant Agarwal, Kamesh Tiwari (2023). Linking ESG-Investing Consciousness, Behavioral Biases, and Risk-Perception: Scale Validation with Specifics of Indian Retail Investors. *European Journal of Business Science and Technology*, 9 (1): 70–91. ISSN 2694-7161, DOI 10.11118/ejobsat.2023.004.

Neal, T., Lienert, P., Denne, E. and Singh, J. P. 2022. A General Model of Cognitive Bias in Human Judgment and Systematic Review Specific to Forensic Mental Health. *Law and Human Behavior*, 46 (2), 99–120. DOI: 10.1037/lhb0000482.

Hohenberger, C., Lee, C. and Coughlin, J. F. 2019. Acceptance of Robo-Advisors: Effects of Financial Experience, Affective Reactions and Self-Enhancement Motives. *Financial Planning Review*, 2 (2), e1047. DOI: 10.1002/cfp2.1047.

Nilsson, J. 2009. Segmenting Socially Responsible Mutual Fund Investors: The Influence of Financial Return and Social Responsibility. *International Journal of Bank Marketing*, 27 (1), 5–31. DOI: 10.1108/02652320910928218.

Daugaard, D. 2019. Emerging New Themes in Environmental, Social and Governance Investing: A Systematic Literature Review. *Accounting & Finance*, 60 (2), 1501–1530. DOI: 10.1111/acfi.12479.

Ahmed, Z., Rasool, S., Saleem, Q., Khan, M. A., & Kanwal, S. (2022). Mediating Role of Risk Perception Between Behavioral Biases and Investor's Investment Decisions. *SAGE Open*, 12(2), 215824402210973. <https://doi.org/10.1177/21582440221097394>

Noussair C. N., Trautmann S. T., van de Kuilen G. (2014). Higher order risk attitudes, demographics, and financial decisions. *The Review of Economic Studies*, 81(1), 325–355.

Yitzhaki, S., & Lambert, P. J. (2014). Is higher variance necessarily bad for investment? *Review of Quantitative Finance and Accounting*, 43(4), 855–860.

Awais, M., Laber, M. F., Rasheed, N., & Khursheed, A. (2016). Impact of financial literacy and investment experience on risk tolerance and investment decisions: Empirical evidence from Pakistan. *International Journal of Economics and Financial Issues*, 6(1), 73–79.

Sahul Hamid, F., Rangel, G. J., Taib, F., & Thuramy, R. (2013). The relationship between risk propensity, risk perception and risk-taking behaviour in an emerging market. *International Journal of Banking and Finance*, 10(1), 134–146

Mallik, K. A., Munir, M. A., & Sarwar, S. (2017). Impact of overconfidence and loss aversion biases on investor decisionbehavior: Mediating role of risk perception. *International Journal of Public Finance, Law and Taxation*, 1(1), 1–12

Ishfaq, M., Maqbool, Z., Akram, S., Tariq, S., & Khurshid, M. K. (2017). Mediating role of risk perception between cognitive biases and risky investment decision: Empirical evidence from Pakistan's equity market. *Journal of Managerial Sciences*, 11(3), 1–14.

Aren, S., & Zengin, A. N. (2016). Influence of financial literacy and risk perception on choice of investment. *Procedia - Social and Behavioral Sciences*, 235, 656–663.

Lim, T. S., Mail, R., Abd Karim, M. R., Ahmad Baharul Ulum, Z. K., Jaidi, J., & Noordin, R. (2018). A serial mediation model of financial knowledge on the intention to invest: The central role of risk perception and attitude. *Journal of Behavioral and Experimental Finance*, 20(3), 74–79

Jonwall, R., Gupta, S., & Pahuja, S. (2022). A comparison of investment behavior, attitudes, and demographics of socially responsible and conventional investors in India. *Social Responsibility Journal*, 19(6), 1123–1141. <https://doi.org/10.1108/srj-08-2021-0358>

P, D., Visalakshmi, S., Natarajan, T., & B, S. (2013). *Assessing the Linkage of Behavioural Traits and Investment Decisions Using SEM Approach*.

Manzoor, A., Jan, A., Shafi, M., Parry, M. A., & Mir, T. (2023). Role of perceived COVID-19 disruption, personality traits and risk perception in determining the investment behavior of retail investors: a hybrid regression-neural network approach. *Mağallaī Al-‘ulūm Al-iqtisādiyyaī Wa-al-idāriyyaī*. <https://doi.org/10.1108/jeas-01-2023-0026>

Naveed, Muhammad & Sohail, Muhammad & Naqvi, Zain & Awais, Madiha & Batool, Noshaba. (2020). Role of ESG Disclosure in Determining Asset Allocation Decision: An Individual Investor Perspective. 10.24312/193014024.

