

Intersection of ESG and Behavioral Finance: Unearthing Hidden Sustainability Potential within Investment Decision Making

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Abstract

The intersection of ESG (Environmental, Social, and Governance) and behavioural finance offers a promising framework for unlocking hidden sustainability potential in investment decision-making. ESG factors consider a company's environmental impact, social responsibility, and corporate governance practices, while behavioural finance explores the influence of cognitive biases and emotional factors on investment choices. Sustainable ESG investing integrates these two areas, evaluating companies based on their ESG performance and practices to identify responsible and sustainable behaviour. This study aims to understand the behavioural biases that impact ESG investment decision-making and explore how behavioural finance principles and interventions can promote greater adoption of ESG investing. It highlights the importance of overcoming cognitive biases, framing ESG issues positively, leveraging social norms, understanding the impact of investor sentiment, and incorporating behavioural insights into ESG analysis. By combining these approaches, investors can make more informed and impactful sustainable investment choices, leading to improved risk-adjusted returns and positive social and environmental outcomes. The study also provides an overview of ESG investing and behavioural finance, discusses common behavioural biases in ESG investing, and presents behavioural finance interventions in ESG decision-making. These interventions aim to address biases, improve decision-making, and align investor behaviour with ESG goals. By advancing our understanding of the intersection between ESG and behavioural finance, we can drive positive change in the investment landscape and contribute to a more sustainable future.

Keywords: Behavioural Finance, Behavioural Biases, ESG, Sustainable Investment, Decision Making

I. Introduction

The intersection of ESG (Environmental, Social, and Governance) and behavioral finance is a intriguing area that examines the hidden sustainability potential within investment decision-making. ESG factors consider a company's environmental impact, social responsibility, and corporate governance practices. Behavioral finance, on the other hand, explores how cognitive biases and emotional factors influence investment choices.

“Sustainable ESG” denotes the incorporation of Environmental, Social, and Governance (ESG) factors into investment practices and decision-making processes, emphasizing the pursuit of long-term sustainability. This approach encompasses an evaluation that extends beyond financial performance, taking into account the broader effects of investments on the environment, society, and corporate governance.

Till now there is very limited literature is available in this domain. Studies that have been performed yet only highlight the importance of ESG from corporate perspective. Very few studies incorporate investor's point of view while making investment decisions. However this paper makes the investor as the centre point of all investment decisions. It is finally the investor who makes the decision to invest or not. The companies, the agents and the government can only influence the investor to behave in a particular way. However it completely depends on the investor to make the final investment decision. So, it is very important to make the investors aware

about the various behavioural biases that may affect them in the process of decision making and that they can take informed decisions without being influenced by any external or internal factor.

The current paper talks about the integration of ESG and behavioural finance. It will enable investors to gain a comprehensive understanding of how psychological biases affect decision-making related to ESG factors. By incorporating ESG considerations into investment decisions, investors can influence their portfolio allocations and divulge unexploited opportunities for sustainable investments.

The paper begins with a brief discussion on the past developments of ESG investing and its relationship with behavioural finance. The goal of sustainable ESG investing is to generate positive financial returns while also promoting sustainable and responsible business practices. It recognizes that companies that effectively manage ESG risks and opportunities are more likely to create long-term value for investors and contribute to a more sustainable and equitable future.

A. Background of ESG Investing

ESG (Environmental, Social, and Governance) investing, also known as sustainable investing or responsible investing, has gained substantial momentum in recent years. This approach encompasses investment strategies that go beyond financial returns and take into account the environmental, social, and governance factors

associated with the companies or assets being invested in. The goal of ESG investing is to generate long-term value while considering the impact of investments on various stakeholders and the overall sustainability of the economy. By integrating ESG considerations into investment decisions, investors aim to promote positive change, drive sustainability, and align their portfolios with their values and goals.

Top of Form

The origins of ESG investing can be traced back to the socially responsible investing (SRI) movement, which gained prominence in the 1960s and 1970s. At its core, SRI aimed to exclude investments in industries associated with tobacco, alcohol, weapons, or other controversial sectors, while favouring companies aligned with specific ethical or social values. The SRI movement laid the foundation for incorporating non-financial factors into investment decisions and recognizing the potential impact of businesses on society and the environment. Over time, this approach evolved into ESG investing, which expanded the scope to include environmental, social, and governance considerations as essential components of investment analysis and decision-making. ESG investing represents a more comprehensive and holistic approach to responsible investing, with a focus on long-term sustainability and positive societal impact.

The growing recognition of urgent global challenges like climate change, social inequality, and corporate misconduct has driven the expansion of ESG investing. Investors now understand that incorporating ESG factors into their investment decisions can reduce risks, uncover opportunities, and align their investments with their values and long-term sustainability objectives. This increased awareness has

propelled the growth of ESG investing as a means to address pressing global issues while achieving financial returns..

B. Overview of Behavioral Finance

Behavioural Finance is an interdisciplinary field that merges concepts from psychology and economics to investigate the impact of cognitive biases and emotional factors on financial decision-making. It acknowledges that individuals often deviate from rational and unbiased decision-making when managing their finances and making investment choices. By examining the psychological and emotional aspects that influence financial behaviour, Behavioural Finance provides insights into the underlying drivers of financial decisions and helps explain deviations from traditional economic theories.

Traditional finance theory assumes that investors are rational and make decisions based on all available information to maximize utility. However, Behavioural Finance challenges this assumption by recognizing the impact of psychological biases and limitations on decision-making. These biases can lead to irrational behaviour, deviations from rationality, and market inefficiencies. By studying these biases, Behavioural Finance provides insights into how psychological factors influence financial decisions and market outcomes.

In summary, Behavioural Finance has enriched our understanding of financial decision-making by acknowledging the influence of cognitive biases, emotional factors, and social influences on investor behaviour. This field has practical implications in various areas of finance, including investment management, risk management, financial planning, and policy-making. By

incorporating insights from Behavioural Finance, professionals can adopt more nuanced and realistic approaches to finance that consider the inherent biases and limitations of individuals..

II. Statement of Purpose and Research Questions

Statement of Purpose:

The purpose of this research is to investigate the intersection of ESG investing and behavioral finance, with a particular emphasis on understanding how behavioral factors influence sustainable investment decisions. By combining insights from these two fields, the study seeks to uncover the psychological biases, decision-making processes, and behavioral interventions that can improve the effectiveness of ESG investing and drive sustainable outcomes. The research aims to provide valuable insights and recommendations for investors, policymakers, and practitioners in the field of sustainable finance.

Top of Form

Research Questions:

1. What are the key behavioural biases that impact ESG investment decision-making?
2. What are the Behavioural Finance Interventions in ESG Investing?
3. To discuss the implications and future directions of ESG investing.

III. Empirical Studies on Behavioral Biases in ESG Investing

Johnsson O & Henriksson E, 2022, investigated the performance of two investment

strategies, Dogs of Dow and Magic Formula, when incorporating ESG weights. In a quantitative study on the performance of two investment strategies, Dogs of Dow and Magic Formula, on the OMX Stockholm Large Cap index from 2012 to 2022, the impact of an ESG aspect was investigated. The returns were adjusted for risk, and the strategies were compared to their standard equally weighted approaches and the benchmark index, OMXSPI.

The study incorporates an ESG perspective by determining the weight of assets in the portfolios based on their ESG scores. ESG-weighted portfolios are compared to equally weighted portfolios. They concluded that the investment strategies, Dogs of Dow and Magic Formula, outperformed the market in terms of average annual returns, indicating that the efficient market hypothesis does not hold. However, The ESG portfolios were found to be less efficient than their classical counterparts.

Chen, M., von Behren, R., & Mussalli, G. (2021). Companies with more published ESG data are associated with a lower weighted average cost of capital (WACC), potentially due to a cognitive bias where greater data availability leads to a perception of better ESG performance, despite insufficient evidence.

The key implication of the findings is that it is advantageous for companies to disclose more ESG data, as the investment community increasingly expects and demands it. Companies without published ESG metrics may be viewed negatively, potentially suggesting they have something to conceal.

Tomo, A., & Landi, G. (2016) examine the impact of ESG on investor behaviour and managerial decision-making in investments. The literature review confirms the hypothesis of a positive impact of social and responsible matters on corporate

performance. ESG disclosure can have three main positive impacts for firms adopting them. Firstly, it demonstrates corporate attention to sensitive issues such as social ethics and responsibility. Secondly, it improves a company's capacity to be recognized, evaluated, and rewarded by the market. Lastly, it helps reduce information asymmetry by increasing available information for all investors, thereby aiming to make markets more efficient. They concluded that if all companies were to deploy an ESG strategy, the future market scenario would become more efficient in terms of ESG, and investors would not receive abnormal returns from impact investing.

Upadhyaya, C., Khan, S., & Sandanshive, V. (2023) studied the impact of behavioural factors over ESG investments in India. The findings of the study suggest that the behavioral aspects of investors towards Environmental, Social, and Governance (ESG) factors significantly influence investment decisions, emphasizing the need for administrators, regulators, and government officials to create a conducive atmosphere through effective policies and systems to encourage profitable and sustainable investments based on sound decision-making.

Schanzenbach, M. M., Sitkoff(2020) evaluate the existing theory and evidence regarding whether ESG investing can enhance risk-adjusted returns. They find that there is theoretical and empirical support for risk-return ESG, although it is not uniformly applicable and can be contextual.

Taleb, W, et al (2020) seeks to explore the potential impact of higher-frequency ESG news data on asset pricing and the behavior of ESG investors. The researchers note that the distribution of Truvalue Volumes, which represent the number of unique articles captured over a twelve-month period, does not follow a Gaussian

(normal) distribution. Instead, it can be better fitted to the sum of two Weibull or two Gamma distributions with different parameters. This suggests that the distribution of news volume related to ESG issues is not symmetric and exhibits different characteristics. The presence of two different distributions within the data suggests that there may be distinct factors or mechanisms influencing the generation of news articles related to ESG topics. This non-Gaussian distribution highlights the complexity and heterogeneity of news coverage on ESG issues and indicates that the volume of news articles may be influenced by multiple factors or sources. They also note that environmental issues are more reported in the European Monetary Union (EMU), while social issues receive more coverage in North America.

Zhang, D., & Liu, L. (2022) highlight the importance of ESG (Environmental, Social, and Governance) performance for firms in the face of increasing environmental uncertainty. Good ESG performance provides additional information to stakeholders and is a crucial consideration for investment decisions. It helps firms gain trust and support from stakeholders, enhancing their cash holding and external financing ability. The results presented confirm that good ESG performance is beneficial for improving financial flexibility. Good ESG performance signals responsibility and ethics, strengthens brand effects, enhances customer satisfaction, and improves corporate profitability and cash flow. By doing so, they can improve their financial flexibility, alleviate financing constraints, and better cope with uncertain environment. Study highlights the importance for investors and creditors to incorporate ESG factors into their decision-making processes. By considering ESG performance, they can

identify firms with lower operational and default risks, reducing investment risk and potentially improving their returns.

All the above studies prove that investors on an average now are slowly moving towards ESG investment. As humans are rational, being socially responsible individuals and also in the expectation of better returns they are moving towards ESG investments. However, in the process of decision making for investment some behavioural biases set in which affect their investment decisions. So, it becomes important for investors to keep in mind the following biases that may affect them at times because neither the investment agencies nor some other government interventions can help them, until and unless they themselves are aware and take every possible step to mitigate the influence of these biases over the investment decisions.

IV. ESG Factors and Behavioral Biases

Behavioral biases can significantly influence decision-making in ESG (Environmental, Social, and Governance) investing. If people were rational, they will probably only be buying sustainable stocks. Yet people do not always function as rational agents and they consider other factors too like another person's opinion or a Social media channel to base their investment decisions.

Here are some common biases that can impact ESG investment decisions:

1. **Confirmation Bias:** Confirmation bias is a cognitive bias wherein individuals tend to seek or interpret information in a manner that aligns with their existing beliefs or biases. In the context of ESG investing, this bias can manifest as investors selectively focusing on

information that confirms their preconceived notions or preferences regarding specific ESG issues. Recognizing and mitigating confirmation bias is crucial for ensuring a more comprehensive and unbiased evaluation of ESG-related investments.

2. **Availability Bias:** Availability bias is a cognitive bias where individuals rely on readily available information when making decisions. In the context of ESG investing, this bias can cause investors to prioritize or give excessive weight to certain ESG issues that are more prominently featured in the media or public discourse. As a result, they may overlook other equally important social or governance considerations that may be more relevant to a specific investment. Recognizing the influence of availability bias can help investors broaden their assessment of ESG factors and make more comprehensive and informed investment decisions..

3. **Overconfidence Bias:** Overconfidence bias refers to the tendency for individuals to have excessive confidence in their own abilities or judgments. In the context of ESG investing, overconfidence bias can manifest when investors believe they possess superior skills or knowledge in evaluating ESG factors. This can lead to biased assessments of companies' sustainability performance, as investors may overestimate the positive impact of their investments or underestimate the risks associated with ESG-related issues. Recognizing and mitigating overconfidence bias is crucial for ensuring more accurate and balanced evaluations of ESG considerations, promoting more informed investment decisions, and avoiding potential pitfalls in the pursuit of sustainable outcomes.

4. **Herding Behavior:** Herding behaviour refers to the tendency of individuals to imitate the actions or decisions of a larger group, rather than making independent judgments. A study by Fidelity found that 80% of institutional investors and 69% of individual investors are influenced by their peers when making investment decisions. This behaviour can result in a lack of diversification, the formation of investment bubbles, or the neglect of potentially promising but less mainstream ESG opportunities. Another study by Bollen and Whaley (2009) found evidence of herding behavior in financial markets, which can influence investment decisions related to ESG..
5. **Short-Term Bias:** Behavioural biases can lead to a short-term focus in investment decision-making, potentially overshadowing the longer-term implications of ESG factors. Investors may prioritize immediate financial returns over the long-term sustainability performance of companies. This bias can result in underinvestment in sustainable companies or the neglect of ESG issues with longer-term material impacts, such as climate change or social risks. To counteract this bias, it is crucial for investors to adopt a more comprehensive and forward-looking approach that considers the long-term sustainability and resilience of investments, aligning with the broader goals of ESG investing.
6. **Anchoring Bias:** Anchoring bias can have a significant impact on ESG investing, as it influences investors to rely excessively on initial information or reference points when making judgments or decisions. In the context of ESG, this bias can lead investors to anchor their evaluations on incomplete or outdated ESG data or ratings, without considering the evolving nature of a company's sustainability performance. A study by Statman and Glushkov (2009) found that investors often anchor their evaluations on incomplete or outdated ESG data or ratings, without considering the evolving nature of a company's sustainability performance.
7. **Disposition Effect:** The disposition effect, a common behavioural bias, can have implications in ESG investing. The disposition effect, where investors hold onto losing investments too long and sell winning investments too early, has been observed in ESG investing as well. A study by Morningstar found that ESG funds experienced higher outflows during periods of underperformance compared to non-ESG funds.

Recognizing and addressing these behavioral biases is crucial for ESG investors to make informed and unbiased decisions. Investment professionals can mitigate these biases through education, diversified research sources, well-structured decision-making processes, clear investment frameworks, and ongoing monitoring and reassessment of ESG factors to avoid distortions in their ESG investment strategies.

IV. Behavioural Finance Interventions in ESG Investing

Behavioural finance interventions in ESG investing aim to address the biases and limitations that affect decision-making by incorporating insights from the field of behavioural finance. These interventions can include various strategies and approaches designed to improve the quality of ESG investment decisions. By

understanding and mitigating cognitive and emotional biases, investors can make more informed and rational choices that align with their ESG goals. These interventions can range from providing clear and transparent ESG information to implementing decision-making frameworks that promote objective analysis and consideration of a broader range of factors. Overall, behavioural finance interventions in ESG investing seek to enhance the effectiveness and impact of sustainable investment strategies. Here are some common behavioral finance interventions in ESG investing:

- A. **Nudging Strategies for ESG Decision-Making:** A Nudging strategy in ESG investing involves using subtle cues or prompts to influence decision-making and encourage individuals or organizations to choose ESG investments. Examples include default options that automatically include ESG investments, emphasizing the social benefits of ESG investing, and leveraging social norms to promote positive ESG behaviours. Nudging interventions aim to facilitate and encourage ESG decision-making by leveraging behavioural insights to create a more sustainable investment landscape.
- B. **Framing Effects and Communication in ESG Investments:** Framing effects in ESG investing involve strategically presenting ESG-related information to influence decision-making. This intervention aims to highlight the positive impacts and benefits of ESG investments by framing them as opportunities for long-term value creation and emphasizing their alignment with investor values.
- C. **Incorporating Behavioral Insights in ESG Portfolio Construction:** Incorporating behavioural insights into the

construction of ESG portfolios is an intervention that acknowledges the influence of cognitive biases and heuristics on investor decision-making. By considering these biases, portfolio construction can be tailored to align with investor preferences and overcome behavioural barriers.

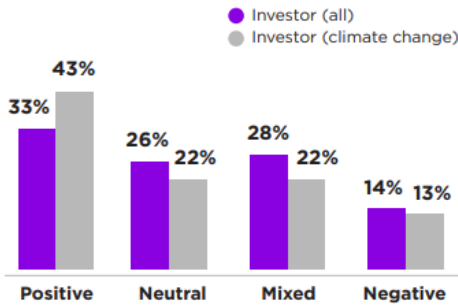
- D. **Shareholder Engagement and Behavioral Dynamics:** The intervention of shareholder engagement in ESG investing recognizes the role of behavioural dynamics and social influence in promoting sustainable practices. By leveraging behavioural dynamics like social proof or authority, investors can encourage improved ESG performance.

These behavioral finance interventions aim to address the psychological and behavioral factors that influence ESG decision-making and promote more sustainable investment practices. By leveraging insights from behavioral economics, they provide strategies to overcome barriers, improve communication, and align investor behavior with ESG goals.

V. Implications and Future Directions

Integrating ESG and behavioural finance brings forth challenges such as the complexity and subjectivity of ESG factors. However, it also presents opportunities to leverage behavioural insights for enhancing ESG investment strategies, improving investor engagement, and promoting sustainable finance. By exploring these challenges and opportunities, innovative approaches in ESG investing can be developed. According to a report from NYU on sustainability aggregating the evidence from more than one thousand studies over

a period of 5 years from 2015 -2020, there existed mainly positive results for investing in sustainability and very few studies showed a negative correlation.



Source: ESG and Financial Performance, NYU

Implications:

1. Improved decision-making: Behavioural finance interventions in ESG investing aim to improve decision-making processes by addressing cognitive biases, providing relevant information, and framing ESG choices effectively. Studies have shown a positive correlation between companies with strong ESG performance and financial performance. For example, a study by MSCI found that high ESG-rated companies outperformed low ESG-rated companies in terms of both stock price performance and profitability.
2. Increased ESG adoption: By applying behavioural insights, such as nudging strategies, framing effects, and effective communication, the adoption of ESG investments can be encouraged. According to a survey conducted by Morgan Stanley, 85% of asset owners globally are pursuing or considering ESG integration. These interventions make ESG investments more appealing, socially desirable, and aligned with

investor values, thereby increasing the likelihood of considering ESG factors in investment decisions and promoting greater ESG adoption..

3. Enhanced engagement and influence: Behavioural finance interventions in ESG investing highlight the significance of shareholder engagement and leveraging behavioural dynamics to promote ESG practices. Through active participation and the use of social influence, investors can drive better ESG performance and corporate behaviour, fostering improved sustainability practices and accountability within companies.

Future Directions:

Efforts are being made at the international level to foster comparability and interpretability of Environmental, Social, and Governance (ESG) approaches in financial markets. Various organizations and initiatives are working towards strengthening the methodologies underlying ESG disclosure, ratings, and valuations.

However their implementation still needs to go a long way. It is all the more important for investors to design their investment decisions for long term sustainability. Here is a list of steps taken worldwide for implementation of ESG in investment decision making.

The International Organization of Securities Commissions (IOSCO) has published a report on ESG ratings and data products providers, offering recommendations for securities markets regulators and users of these products. The report emphasizes the importance of publicly disclosed data sources, defined methodologies, and transparency in issuing high-quality ratings and data products.

The International Financial Reporting Standards (IFRS) Foundation Trustees have established the International Sustainability Standards Board (ISSB) in response to a recommendation by the G20. The ISSB aims to deliver a global baseline of sustainability disclosures to meet the needs of capital markets. An exposure draft on climate-related disclosures has been produced by the ISSB and is expected to be implemented in 2023.

Financial authorities and regulatory bodies are also taking steps to strengthen principles and taxonomies related to ESG labelling and traded products. The goal is to enhance market integrity in products such as green funds and climate-focused exchange-traded funds (ETFs).

The OECD has developed policy guidance on ESG investing and financing the climate transition. The recommendations provide support to policymakers and market participants, emphasizing the importance of high-quality disclosures, metrics, ratings, targets, and frameworks. They aim to improve transparency, credibility, and comparability of ESG rating methodologies while promoting market integrity.

The OECD's policy recommendations also focus on the transparency and comparability of climate-related factors in ESG ratings. They encourage the use of reliable and high-quality data to assess climate risks and opportunities. The guidance calls for science-based interim net-zero targets to ensure credible transition plans and support effective capital allocation.

In addition to ESG market practices, the OECD has also provided policy guidance on corporate transition plans, aiming to improve the credibility of environmental integrity in pathways and interim targets. These recommendations have contributed to the G20 Sustainable Finance Report,

which includes recommendations for scaling up transition finance and supporting credible transition plans in the financial sector.

While progress has been made in developing guidance and recommendations, further work is needed at both global and national levels to translate these recommendations into good practices and, where necessary, market regulations. This is crucial to support the scaling up of sustainable finance while ensuring transparency, investor confidence, and market integrity.

VI. Conclusion

This study of behavioural finance interventions in ESG investing has generated important findings. Nudging strategies, framing effects, and effective communication techniques have proven effective in influencing ESG decision-making and increasing the adoption of sustainable investments. Thus tailoring ESG portfolio construction to investors' risk preferences and cognitive biases enhances the effectiveness of ESG investment strategies. The above discussions explain that shareholder engagement and understanding behavioural dynamics are crucial for influencing corporate behaviour and promoting sustainability. These findings highlight the potential of behavioural finance interventions to drive positive change in ESG investing.

This study of behavioural finance interventions in ESG investing makes significant contributions by bridging the gap between behavioural finance and sustainable investing. The paper enhances decision-making in ESG contexts by applying behavioural insights. It expands the understanding of investor behaviour and factors influencing ESG investment choices, shedding light on the impact of cognitive biases and

psychological factors. The study provides practical strategies and interventions for investors, policymakers, and companies to promote ESG adoption and improve decision-making. It also emphasizes the importance of considering individual preferences, biases, and societal influences in designing effective ESG investment strategies and communication approaches.

Practical and Theoretical Implications:

The findings from this paper have both practical and theoretical implications:

- Practical implications: The paper provides actionable strategies for investors, policymakers, and companies. These strategies include the use of nudges to influence ESG decision-making, effective communication techniques, and tailored portfolio construction based on investor preferences and biases, and proactive shareholder engagement practices. By implementing these strategies, stakeholders can promote ESG adoption, enhance decision-making processes, and drive positive sustainable outcomes.
- Theoretical implications: This paper contributes to existing theoretical frameworks by integrating behavioural insights into the understanding of sustainable investing. It enhances our understanding of investor behaviour, decision-making processes, and the influence of cognitive biases on sustainable investment choices. By incorporating these insights, we gain a more comprehensive understanding of the complexities of ESG investing and can

develop more effective strategies to promote sustainable outcomes.

In summary, behavioural finance interventions in ESG investing provide valuable insights and practical approaches to drive positive change in sustainable finance. This paper provides interventions that enhance decision-making, promote the integration of ESG factors, and contribute to the overall advancement of environmental, social, and governance considerations in investment practices.

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