### Original Researcher Article

## **Investing in Sustainability: Retail and High-Net-Worth ESG Practices**

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### ABSTRACT

This paper presents a comparative examination of sustainable investment views between retail and high-net-worth (HNW) investors, expanding domain of socially responsible investing (SRI), which integrates environmental, social, and governance (ESG) considerations. This study examines the distinctive practises and preferences of retail and HNW investors as sustainable investments gain popularity due to a more significant societal shift towards sustainability. The study uses a qualitative research design based on a thorough literature review to examine how these types of investors make decisions, what strategies they use, and what problems they run into when trying to align their portfolios with ESG criteria. The findings reveal divergent approaches to sustainable investing, with retail investors primarily focusing on mutual funds and ETFs for ethical alignment, while HNW investors engage in strategic, impact-driven investments. Despite shared motivations towards ethical considerations and societal impact, both groups encounter challenges such as the lack of standardised ESG metrics and regulatory complexities. The study underscores the importance of enhanced transparency, standardised reporting, and tailored advisory services to bridge the gap between the desire for sustainable investment and practical engagement. This paper adds to the discussion on sustainable investing by giving insights into investor behaviour, market trends, and the regulatory landscape, with important implications for financial advisers, investment companies, and politicians.

**Keywords**: Sustainable Investment, Retail Investors, Environmental, Social, and Governance (ESG), High Net Worth Investors, Socially Responsible Investing (SRI).

#### **INTRODUCTION**:

Sustainable investment, often called socially responsible investing (SRI), has seen a remarkable surge in interest over the last few decades. This trend reflects a broader shift among investors towards integrating ESG criteria into their investment decisions. Far from being a niche or purely ethical choice, sustainable investments have demonstrated their potential to deliver competitive returns, challenging traditional notions of investment performance (Mahn, 2016). The discourse around sustainable investment is rich and multifaceted, engaging diverse investor classes, notably retail investors and high-net-worth individuals (HNWIs). This paper delves into the practices and preferences of these two distinct groups, leveraging existing research to underscore both commonalities and divergences in their approach to sustainable investing. By examining the motivations and decision-making processes of retail investors and HNWIs in sustainable investing, this paper aims to provide valuable insights for financial professionals and policymakers seeking to promote sustainable finance further. Understanding the nuances of how different investor classes engage with sustainable investments can help better tailor strategies and products to meet their needs and preferences (Camilleri, 2020). The Rise of Sustainable Investment

The ascent of sustainable investment can be attributed to a confluence of factors, including heightened awareness of environmental issues, social justice movements, and a growing consensus on the importance of good governance within corporations. Investors increasingly recognise that sustainable investments can mitigate risk and uncover opportunities that traditional financial analysis may overlook (Schmidt & McCann, 2022). A more significant societal shift towards sustainability is the foundation for this change, with investors playing a crucial role in pushing corporate and governmental policies towards more sustainable practices. As sustainable investing continues gaining momentum, companies face increasing pressure to align their practices with environmental and social responsibility standards. The transition towards sustainability is influenced by ethical factors and the prospect of facing financial gains and reliability in response to global issues, including climate change (Pástor et al., 2021).

# Retail vs. High Net-Worth Investors in Sustainable Investment

Retail and high-net-worth investors represent two pivotal yet distinct cohorts within the sustainable investment landscape. Retail investors, often characterized by their limited capital, are showing a growing interest in sustainable investing as a means of connecting their portfolios with their personal values

and broader societal objectives (Benuzzi et al., 2023). High-net-worth individuals, possessing more significant financial resources and access to sophisticated investment advice, are uniquely positioned to influence market trends and drive innovation in sustainable investment products and strategies. Both retail investors and high-net-worth individuals are crucial in advancing sustainable investment practices and promoting positive social and environmental impacts. Their collective engagement can help drive the mainstream adoption of sustainable investing principles and contribute to the overall growth of the responsible investment market. Uma Reddy (2021) highlights the significant influence that high-net-worth individuals exert in equity markets, including sustainability-related sectors. investment decisions can shape market dynamics and catalyse shifts towards more sustainable business practices. Meanwhile, Schmidt and McCann (2022) explore the challenges and opportunities presented by ESG criteria in constructing balanced portfolios, a concern relevant to retail and high-net-worth investors seeking to navigate the complexities of sustainable investment. High-net-worth individuals can drive change in companies by directing their investments towards sustainable practices, influencing market trends, and encouraging corporate responsibility. As ESG criteria become increasingly crucial in investment decisions, retail and high-net-worth investors must carefully consider the long-term effect of their portfolios on sustainability goals (Reddy, 2021; Schmidt & McCann, 2022).

#### **Cognitive Barriers and Opportunities**

Despite the growing interest in sustainable investment, cognitive barriers remain, particularly among wealthy private investors. Busch and Paetzold (2014) identify these barriers, suggesting that misconceptions about the performance and impact of sustainable investments can hinder broader engagement. Overcoming these barriers requires targeted education and the development of robust, transparent ESG metrics that can demystify sustainable investment for both retail and high-net-worth individuals. Additionally, providing evidence of the financial benefits of sustainable investing can help dispel myths and encourage more investors to consider incorporating ESG factors into their portfolios. By addressing these cognitive barriers and highlighting the opportunities for financial gain and positive impact, the investment community can work towards a more sustainable future (Busch & Paetzold, 2014); ( Pástor et al., 2021); (Xie et al., 2019).

#### The role of ESG funds

The presence and reliability of ESG funds within different asset classes represent significant elements that affect the adoption of sustainable investment strategies. Schmidt and McCann (2022) provide an in-depth analysis of ESG challenges in the UK, shedding light on the practical considerations that investors must navigate. Their findings underscore the importance of accessible, high-performing ESG funds in facilitating sustainable investment, particularly for private investors who may

lack the resources to conduct extensive due diligence on individual investments. By offering a diverse range of ESG funds that align with different risk profiles and investment goals, asset managers can empower investors to incorporate sustainability into their portfolios effectively. This promotes responsible investing and contributes to the sustainable finance industry's growth and success. Through the provision of transparent information regarding ESG criteria and performance metrics, asset managers facilitate informed decisionmaking for investors, ensuring alignment with their values and financial objectives (Martiny et al., 2024). This drives demand for sustainable investments and encourages companies to improve their ESG practices to attract more capital. The landscape of sustainable investment is evolving, with retail and high-net-worth investors playing pivotal roles in its growth. As this paper will explore, understanding the practices and preferences of these investor classes is crucial for advancing the field of sustainable investment. By examining existing research, this introduction sets the stage for a comprehensive inquiry into how retail and high-net-worth investors approach sustainable investment, highlighting the challenges opportunities ahead. By shedding light on the motivations and decision-making ways of these investors, we can identify strategies to engage them in sustainable investment opportunities effectively. This research focuses to provide valuable insights for asset managers and companies looking to align their ESG efforts with investor expectations (Schmidt & McCann, 2022).

## **Objectives of the study**

- 1. Investigate and compare the sustainable investment approaches and motivations of retail investors (mutual funds and ETFs) and high-net-worth (HNW) investors (strategic, impact-driven investments).
- 2. Examine the challenges both investor classes face due to the lack of standardized ESG metrics and transparency, and assess the resources and strategies employed by HNW investors to navigate these challenges.
- 3. Analyse the impact of geographic, economic, and regulatory contexts on the sustainable investment practices of retail and HNW investors, with a focus on local issues for retail investors and global initiatives and regulatory navigation for HNW investors. Top of Form

#### **METHODOLOGY**

The methodology for this paper on sustainable investment perspectives, focusing on the sustainable value approach (SVA) and the comparative analysis between retail and high net worth (HNW) investors, is rooted in a qualitative research design. This approach facilitates an in-depth exploration of the nuanced practices, preferences, and decision-making processes associated with sustainable investments among these

investor classes. This approach utilises a thorough examination of existing literature, facilitating the collection and integration of knowledge from a diverse array of sources, such as scholarly articles, industry analyses, and case studies. The literature review is structured around the principles of relevance to sustainable investment, emphasising retail and high-networth investor practices, as well as contributions to the understanding of the impact of ESG criteria on investment decisions. Critical databases such as Scopus and Web of Science were used to ensure a thorough and wide-ranging collection of pertinent literature. A total of 200 papers were selected based on their relevance, contribution to the field, and citation impact, ensuring a robust foundation for analysis (Yadav et al., 2016; Bashynska et al., 2022).

The study's analytical framework is underpinned by the Sustainable Value Approach (SVA), as proposed by

Figge and Hahn (2008), which provides a methodology for assessing the sustainability performance of investments. This approach is instrumental in overcoming the bias often encountered in socially responsible investment research. It enables a focused comparative analysis

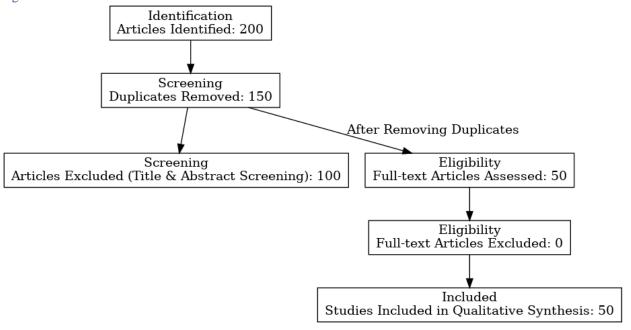
of how retail and HNW investors integrate sustainability into their investment decisions. The analysis aims to identify patterns, trends, and divergences in investment strategies, motivations for sustainable investing, challenges encountered, and the influence of regulatory and economic contexts on investment decisions. This methodology ensures an objective and evidence-based exploration of sustainable investment practices, adhering to ethical standards in academic research by accurately representing sources and maintaining an unbiased analytical perspective.

Table 1: Inclusion and Exclusion Criteria for Literature on Sustainable Investment Perspectives

Table 1. Illetusion	and Exclusion Criteria for Literature on Sustamao	de investment i erspectives
Criteria	Inclusion Criteria	Exclusion Criteria
Year of	2008 - 2023	Before 2008
Publication		
Keywords Used	- Sustainable investment decision-making - ESG	Studies not directly related to sustainable
	criteria - Sustainable development - Governance	investment or ESG criteria
	mechanisms - Investor behaviour	
Methodology	- Empirical studies - Theoretical frameworks - Case	Non-academic articles, editorials, and
	studies - Reviews	opinion pieces
Population	- Studies focusing on retail and HNW investors -	Studies focusing solely on governmental or
	Companies engaging in sustainable practices -	non-profit investment strategies without
	Industry analyses	applicability to retail or HNW investors
Geographical	Global, with a focus on studies conducted in	Research conducted within a limited
Scope	developed markets or that include comparative	geographical scope that fails to provide
	analyses between different regions	insights relevant to a wider context.
Language	English	Non-English without available translations
Accessibility	Articles available through academic databases such	Articles behind paywalls with no accessible
	as Scopus, and Web of Science.	abstracts or summaries

Source: Author

Figure 1: PRISMA framework



## LITERATURE REVIEW

#### **Sustainable Investment Perspectives**

The landscape of sustainable investment has undergone considerable evolution, characterised by a growing body of research examining the decision-making processes of investors, the impact of environmental, social, and governance (ESG) criteria, and the performance metrics of sustainable investments across diverse sectors and investor categories (Martiny et al., 2024). This literature review delves into the perspectives and practices of sustainable investment, highlighting the contributions of key studies to our understanding of how retail and high-net-worth (HNW) investors approach sustainable investing. By examining the motivations, preferences, and behaviours of different types of investors, this review seeks to deliver an in-depth analysis of the existing landscape of sustainable investment research and its potential ramifications for future advancements in the discipline. Furthermore, it elucidates the challenges and opportunities faced by both individual and institutional investors in their pursuit of aligning financial objectives with personal values. Significant advancements in the discipline encompass the formulation of a methodological framework aimed at incorporating the preferences of ESG investors (Escrig-Olmedo et al., 2017), an equilibrium model of sustainable investing (Pástor et al., 2021), and a study on ESG and investment decisions in Bangladesh (Sultana et al., 2018). These studies underscore the complexity of investor preferences and the significant role that ESG criteria play in investment decisions, offering valuable insights for researchers and practitioners in sustainable finance.

Recent research in sustainable investment has highlighted the dynamic and evolving nature of this field. A comprehensive review by Fu, Lu, and Pirabi (2024) has revealed the interconnections between climate change, decarbonization, and green finance, emphasizing the urgent need to address environmental challenges through financial mechanisms (Fu, Lu, & Pirabi, 2024). Kumar et al. (2022) outline key sustainability trends for 2024, including the significant impact of political developments and technological advancements on sustainability investments (Kumar et al., 2022). Additionally, Mudalige (2023) identified emerging themes within green finance, underscoring the interdisciplinary nature of this research area and the importance of integrating financial and environmental considerations (Mudalige, 2023). A study carried out in Ankara, Türkiye, revealed that elevated levels of sustainable finance literacy and favourable perceptions of environmental impacts serve as significant determinants influencing investors' willingness to engage in sustainable finance instruments (Yucel, Celik, & Yilmaz, 2023). Moreover, Fu, Lu, and Pirabi (2023) discussed the need for new measures of risk management in heat-vulnerable economic activities, highlighting the importance of considering climate risks in investment decisions (Fu, Lu, & Pirabi, 2023).

Decision-Making in Sustainable Investment

Alkaraan et al. (2023) conduct an examination of sustainable strategic investment decision-making practices among UK companies, emphasising the relationship between Industry 4.0 and the circular economy. The results show that governance mechanisms are necessary to encourage investments that are in line with sustainability goals. These findings give corporations useful information that could affect the investment choices of regular people, even those with a lot of money. MoreoverThe research highlights the significance of incorporating sustainability factors into investment decision-making frameworks to foster beneficial environmental and social outcomes. This study highlights the increasing integration of ESG factors within investment strategies as a means to attain sustainable financial success over the long term (Chen et al., 2023). Similarly, Meng and Shaikh (2023) Utilise fuzzy analytical hierarchy process (AHP) and fuzzy weighted aggregated sum product assessment (WASPAS) methodologies to assess and rank ESG criteria and green finance investment strategies. The study identifies green bonds, ESG integration, and renewable energy funds as essential components of green finance strategies. It offers a framework for developing sustainable and ethical investment approaches, thereby enhancing the incorporation of ESG factors in investment decision-making processes (Meng & Shaikh, 2023).

Tomo and Landi (2016) provide a comprehensive literature review on behavioural issues affecting sustainable investment decision-making, arguing that cognitive biases and heuristics can significantly impact investors' choices, a factor that retail and HNW investors must navigate to align their portfolios with sustainability objectives. The authors emphasize the importance of investor education and awareness in overcoming these biases, suggesting that increased knowledge can lead to more informed and socially responsible investment decisionsKou et al. (2023) present a new decision-making framework aimed at promoting sustainable investment in renewable energy, integrating facial expression analysis with fuzzy logic methodologies. This innovative methodology underscores the complexity and emotional dimensions of investment decisions, particularly relevant for HNW investors exploring high-impact sustainability projects. Azmat et al. (2022) focus on enhancing impact integrity in investment decision-making for sustainable development, highlighting the crucial role of transparency and accountability in investment practices. By incorporating impact integrity into their decision-making process, investors can ensure their investments make a meaningful difference, building trust with stakeholders and attracting more capital towards sustainable initiatives. Tsang et al. (2023) map and analyze the literature on the impacts of integrating ESG criteria on corporate sustainability performance, emphasizing the significance of ESG factors in achieving long-term corporate sustainability and financial success, considering the perspectives of both employers and employees. This comprehensive approach fills a significant gap in existing research, highlighting the need for a balanced view of ESG impacts on corporate practices and sustainability outcomes.

Sustainable Investment Performance and Preferences

Liu et al. (2022) propose an integrated decision-making framework for assessing new energy investment opportunities, employing a combination of TOPSIS and ORESTE methodologies. This study is pertinent for investors interested in the burgeoning renewable energy sector, offering a structured approach to evaluating potential investments. This framework allows investors to make informed decisions that align with their sustainability goals and financial objectives, ultimately leading to a more impactful and profitable investment portfolio in the long run. Similarly, Sahu et al. (2023) developed a hesitant fuzzy-based decision-making framework for evaluating sustainable and renewable energy investments. Their approach addresses the uncertainty and complexity inherent in the renewable energy market, providing a tool particularly useful for HNW investors looking to diversify their portfolios with sustainable assets. By incorporating hesitant fuzzy logic, Sahu et al. offer a unique method for assessing the viability of renewable energy projects, considering both qualitative and quantitative factors, helping investors navigate the evolving sustainable energy landscape.

Longsheng and Shah (2022) present an integrated decision-making framework for prioritising investment alternatives in the context of creating smarter and greener cities post-COVID-19. This research offers valuable insights for investors aiming to contribute to sustainable urban development, aligning with the interests of both retail and HNW investors. By considering technological advancements, policy changes, and societal trends, this framework allows for a comprehensive analysis of investment opportunities in the sustainable energy sector. Makarenko et al. (2022) examine the transparency of agriculture companies, arguing for the importance of responsible investment for better decision-making under sustainability. Their findings emphasize the role of transparency in enabling informed investment decisions, impacting both retail and HNW investors' preferences and practices. Additionally, Hutubessy et al. (2023) introduce the Full Value of Vaccine Assessments (FVVA) framework for assessing the value of vaccines in investment decision-making, illustrating the broader trend towards comprehensive value assessment in sustainable investment. By considering the total value of investments, stakeholders can make more informed decisions that align with their values and long-term goals, contributing to a more sustainable and socially responsible global economy.

The literature on sustainable investment perspectives reveals a complex landscape where decision-making processes, investment performance, and investor preferences intersect with sustainability goals. Studies by Alkaraan et al. (2023), Tomo and Landi (2016), and Kou et al. (2023), among others, contribute to a nuanced understanding of how retail and HNW investors approach sustainable investing. These insights are crucial for developing investment strategies that yield financial returns and contribute to the global sustainability agenda. By integrating environmental, social, and governance (ESG) factors into investment decisions, investors can align their portfolios with their values while promoting positive change in the world. Furthermore, as sustainable investing continues to gain traction in the financial industry, understanding investor behaviour and preferences will be essential for driving further growth in this market.

Comparative Analysis

Investment Decision-Making Processes

Retail investors often rely on publicly available information and may be influenced by cognitive biases and heuristics in their decision-making processes (Tomo & Landi, 2016). They tend to have limited access to sophisticated analytical tools and may prioritise investments in sustainable mutual funds or exchange-traded funds (ETFs) that offer a precise alignment with ESG criteria (Charles & Kasilingam, 2015; Otuteye & Siddiquee, 2015). In contrast, HNW investors have access to a broader array of resources, including bespoke advisory services, which allow for a more nuanced analysis of investment opportunities (Alkaraan et al., 2023). Alkaraan et al. (2023) highlight the importance of governance mechanisms in facilitating strategic investment decisions that align with sustainability goals, a factor more readily navigated by HNW investors due to their greater access to corporate governance insights. This access to information enables HNW investors to make more informed decisions when selecting investments that align with their financial goals and values (Ahmad, 2022). As a result, they are better equipped to drive positive change through their investment choices and influence corporate behaviour towards sustainability (Gigerenzer & Gaissmaier, 2011).

Preferences for Sustainable Investments

Retail investors are increasingly drawn to sustainable investments to align their portfolios with their personal values and contribute to positive societal outcomes. This group is mainly influenced by the visibility of ESG factors and the perceived impact of their investment choices (Chatzitheodorou et al., 2019). HNW investors, while also motivated by ethical considerations, tend to adopt a more strategic approach to sustainable investing. They are likely to engage in impact investing, direct project financing, or private equity investments in sustainability-focused companies, seeking to generate financial returns and drive substantial environmental or social change (Kou et al., 2023). These investors often prioritise long-term sustainability and are willing to accept lower financial returns in exchange for positive societal impact. HNW investors may also use their wealth and influence to advocate for policy changes that support sustainable practices and address global challenges.

Challenges and barriers

Both retail and HNW investors face challenges in sustainable investing, including the lack of standardised ESG metrics and reporting, which complicates the assessment of investment impact and performance. Retail investors, in particular, may find it challenging to navigate the complex landscape of sustainable investment products due to these inconsistencies (Schmidt & McCann, 2022). HNW investors, on the other hand, may encounter cognitive barriers to sustainable investing, as identified by Busch and Paetzold (2014), including a scepticism of the financial viability of ESG-focused investments or concerns about compromising on investment returns. However, with the increasing demand for sustainable investment options, financial institutions are working towards developing more transparent and standardised ESG metrics to address these challenges. Additionally, education and awareness campaigns aimed at retail and HNW investors can help dispel misconceptions and encourage greater participation in sustainable investing.

Geographic and economic contexts

Geographic and economic contexts significantly shape investment preferences, affecting retail and HNW investors. Plastun et al. (2021) emphasise the importance of these contexts in shaping investment decisions. Local or national sustainability issues may influence retail investors more due to their closer ties to their immediate geographic context. In contrast, HNW investors can engage in global sustainability initiatives, reflecting their broader investment outlook and ability to influence sustainability practices across borders (Vadakkepatt et al., 2020); (Siddique & Sciulli, 2018). This variability in influence underscores the necessity for financial institutions and advisors to recognise and understand the specific factors that drive investors in different regions and income brackets to engage in sustainable investing. Tailoring strategies to better meet various investor groups' diverse needs and preferences is crucial for effective engagement in sustainable investing practices across different geographic and economic contexts (Gamel, Menrad, & Decker, 2017); (Coe, 2004).

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Regulatory Landscape

The role of government regulations in shaping sustainable investment opportunities cannot be understated. Liu et al. (2022) explore low-carbon technology investment strategies, highlighting the importance of navigating the regulatory landscape. This aspect is particularly relevant for HNW investors, who may have the resources to invest in emerging technologies or sectors heavily influenced by government policies. Retail investors, while potentially less directly engaged with regulatory nuances, are nonetheless affected by these frameworks as they shape the availability and attractiveness of sustainable investment options. Understanding the regulatory environment is crucial for all investors looking to capitalise on sustainable opportunities, as it can impact the long-term success of their investments. By staying informed and adapting to changing regulations, investors can benefit from the growing trend towards sustainability in financial markets. Adding to this, Dong et al. (2016) examine sustainability investment under cap-and-trade regulation, emphasising the role of regulatory mechanisms in promoting sustainable product investments in supply chains. Richardson (2009) discusses the necessity of targeting financial sector regulations to ensure environmentally sustainable development, highlighting the importance of ethical and social responsibility in investment. Owen, Brennan, and Lyon (2018) analyse the role of government policy in financing early-stage green innovation, underscoring the significance of public sector support in the transition to a low-carbon economy. Jonas and Gibbs (2010) explore the implications of carbon control for urban and regional development, suggesting that low-carbon restructuring could challenge conventional development models through regulatory changes. Zhou and Du (2021) study the effects of environmental regulations on financial development and technological innovation, indicating the importance of regulatory frameworks in achieving sustainable development goals.

The comparative analysis of sustainable investment practices between retail and HNW investors reveals a complex interplay of factors influencing decision-making, preferences, challenges, and the impact of geographic and economic contexts. While both groups are increasingly drawn to sustainable investments, their approaches, motivations, and the challenges they face highlight the diversity within the sustainable investment landscape. As the field continues to evolve, understanding these distinctions will be crucial for financial advisors, investment firms, and policymakers aiming to promote sustainability across all investor classes. By recognising and addressing the unique needs and perspectives of retail and HNW investors, stakeholders can better tailor their strategies and offerings to attract a broader range of sustainable investors. Additionally, continued research and education on sustainable investments can help bridge the gap between these two groups and promote more widespread adoption of environmentally and socially responsible investing practices.

Table 2: Key Contributions to Sustainable Investment Practices

Reference	Year	Focus Area	Key Contributions
Ahmad, R.	2022	Strategic investment decisions in	Role of high-net-worth individuals in strategic
		sustainable finance	investment decisions.
Alkaraan et al.	2023	Decision-making in the field of	The impact of governance mechanisms on the
		sustainable strategic investment	interaction between Industry 4.0 and the
			circular economy within companies in the UK.
Azmat et al.	2022	The influence of integrity on	Strengthening impact integrity for sustainable
		investment decision-making processes	development.
Bashynska,	2022	Sustainable investment perspectives	Analysis of sustainable investment
Rudenko, &			perspectives in developed and developing
Uvarova			markets.
Busch & Paetzold	2014	Cognitive barriers to sustainable	The cognitive obstacles that hinder the
		investing	participation of affluent private investors in
			sustainable investing.
Camilleri, M. A.	2020	Investing with a focus on social	Literature review on environmental, social,
		responsibility	and governance (ESG) disclosures.
Charles &	2015	Retail investors' investment behaviour	Investment behaviour and preference for
Kasilingam			mutual funds and ETFs.
Chatzitheodorou et	2019	SRI perspectives and investor	Exploring SRI perspectives and classifying
al.		classification	investors.

Consumer Research. 2025	5;2(5):24	15–2426	
Coe, N. M.	2004	Environmental regulations	Impact of environmental regulations on sustainable development.
Dong, Xu, & Zhang	2016	Investment in sustainability within the framework of cap-and-trade systems	The influence of corporate governance on sustainability investment within the framework of cap-and-trade regulation.
Escrig-Olmedo et al.	2017	Sustainable Value Approach (SVA)	Methodology for integrating ESG preferences into sustainable investment strategies.
Figge & Hahn	2008	Sustainable Value Approach (SVA)	Sustainable value creation methodology and its application.
Folqué, Sierra- García, & Bellosta	2022	Sustainable investment and SDGs	Contribution of sustainable investment to the sustainable development goals (SDGs).
Fu, Lu, & Pirabi	2023	Risk management in heat-vulnerable activities	Implications for sustainable investment.
Fu, Lu, & Pirabi	2024	Climate change, decarbonization, and green finance	Interconnections and investment strategies.
Gamel, Menrad, & Decker	2017	Retail investor attitudes	Factors influencing retail investors' attitudes towards investments in renewable energies.
Gigerenzer & Gaissmaier	2011	Heuristic decision making	Heuristic decision making and its impacts on investment choices.
Gustafson & Ingle	1999	Sustainable development	Examining the interplay between environmental considerations and investment strategies in the context of sustainable development.
Hassan & Mahlathi	2020	Environmental and social net-worth	Evaluating the net worth of controlling alien plant invasions.
Hezam, Alalwan, & Al-Amri	2023	Sustainable transport investment projects	A decision framework for assessing sustainable transport investment projects.
Hutubessy, Tissot, & Hutubessy	2023	Vaccine assessments for investment decisions	A structured approach for evaluating and conveying the significance of vaccines.
Jonas & Gibbs	2010	Carbon control and urban development	The implications for urban and regional development involve addressing the complexities associated with low-carbon restructuring.
Keenan, Hill, & Gumber	2019	Financing urban climate adaptation	Shaping a research agenda for investment in urban climate adaptation.
Kou, Pamucar, Dinçer, & Yüksel	2023	Sustainable investment decisions in renewable energy	A comprehensive examination of sustainable investment decisions through the application of a hybrid facial expression-based fuzzy decision-making approach.
Kou, Xu, & Peng	2023	Investment decisions that prioritise sustainability within the renewable energy sector	Integrating the analysis of facial expressions with fuzzy logic methodologies.
Kouaib, N.	2022	Disclosure of corporate sustainability practices	The influence on investment efficiency within the context of Saudi Arabia.
Kumar, N., Kumar, & R.	2022	Sustainability trends for 2024	Impact of political developments and technological advancements.
Liu, Huang, & Li	2022	Low-carbon technology investment strategies	Evolutionary analysis under government regulations.
Longsheng & Shah	2022	Investment in more intelligent and environmentally sustainable urban areas following the COVID-19 pandemic	An integrated decision-making framework.
Mahn, D.	2016	Sustainable investments	Potential to deliver competitive returns: A review of evidence.
Makarenko, Samarina, & Mikhaylova	2022	Transparency in agriculture	The significance of responsible investment lies in its capacity to enhance decision-making processes within the framework of sustainability. An integrated decision-making framework.
Meng & Shaikh	2023	Evaluating and prioritizing ESG criteria	Fuzzy AHP and fuzzy WASPAS methods for green finance investment strategies.

Consumer Research. 202	5;2(5):24	115–2426	
Mudalige, A.	2023	Emerging themes in green finance	An interdisciplinary approach to green finance.
Otuteye &	2015	Investment preferences of retail	Comparative study of mutual funds and ETFs.
Siddiquee		investors	
Owen, Brennan, &	2018	Government policy in green	The influence of governmental policy on the
Lyon		innovation financing	funding of nascent green innovations.
Pástor, Stambaugh,	2021	Sustainable investing in equilibrium	Equilibrium model of sustainable investing.
& Taylor			
Plastun, Inzinerine,	2021	Investigating the role of sustainable	A comparative analysis of the Czech Republic
& Vasylenko		development goals in the context of	and Ukraine.
, , , , , , , , , , , , , , , , , , , ,		agriculture and the implications for	
		responsible investment practices.	
Reddy, U.	2021	Power and influence of HNW	Implications for sustainability in equity
rioddy, c.	2021	investors	markets.
Richardson, B. J.	2009	Financial sector regulation	Ethical and social responsibility for
Richardson, D. J.	2007	i manetar sector regulation	environmentally sustainable development.
Sahu, Majumder, &	2023	Evaluating sustainable and renewable	Integrated hesitant fuzzy-based decision-
Chakraborty	2023	energy	making framework.
Schmidt & McCann	2022	Challenges related to ESG factors in	Insights from the UK.
Schilliot & McCallii	2022		hisights from the UK.
		balanced portfolios within the UK	
C' 1 1' 0 C .' 11'	2010	context	To act and the Comment of the Commen
Siddique & Sciulli	2018	Influence of geographic and economic	Investment preferences and sustainability.
C. 14	2010	contexts	Provide A A
Sultana, Abdullah,	2018	ESG and investment decisions in	Empirical study.
& Saha	2016	Bangladesh	
Tomo & Landi	2016	Behavioural issues in sustainable investment	Comprehensive literature review.
Tsang, Birt, &	2023	ESG criteria and corporate	Investigating and evaluating the effects of
Bloomfield	2023	sustainability	incorporating ESG criteria on the
Diodifficia		sustamaomity	sustainability performance of corporations.
Vadakkepatt et al.	2020	Sustainable retailing	
v adakkepati et al.	2020	Sustamable retaining	
Via Nagarra Vari	2010	The relationship between ECC	retailing.
Xie, Nozawa, Yagi,	2019	The relationship between ESG	Is there a correlation between environmental,
& Fujii		activities and corporate financial	social, and governance activities and the
		performance	enhancement of corporate financial
** 1 ** 0 **1	2016		performance?
Yadav, Han, & Rho	2016	Decision-making in sustainable	Role of institutional and individual investors.
		investment	
Yucel, Celik, &	2023	Attitudes towards sustainable	The understanding of sustainable finance and
Yilmaz		investment	its associated perceived effects on the
			environment.
Zhou & Du	2021	Environmental regulations and	Effects of environmental regulations on
		financial development	financial development and technological
			innovation.
Zhu et al.	2020	Sustainable hydrogen investment	Examination of strategic pathways in
		decisions	sustainable hydrogen investment.

#### FINDINGS AND DISCUSSION

Exploring sustainable investment perspectives, focusing on the comparative inquiry into retail and high net worth (HNW) investor practices and preferences, yields several key findings. These insights are drawn from an extensive review of the literature, including seminal works by Chatzitheodorou et al. (2019), Hezam et al. (2023), Plastun et al. (2021), Keenan et al. (2019), Liu et al. (2022), Kouaib (2022), Alkaraan et al. (2023), Tomo and Landi (2016), Kou et al. (2023), Azmat et al. (2022), and others. The findings highlight the nuanced approaches, motivations, and challenges retail and HNW investors face in the sustainable investment landscape. For example, retail investors may prioritise environmental impact, while HNW investors may focus

more on financial returns. Additionally, the research underscores the importance of tailored strategies and communication efforts to engage both types of investors in sustainable investing practices effectively.

### 1. Divergent Approaches to Sustainable Investment

Retail and HNW investors exhibit distinct approaches to sustainable investing. Retail investors focus on mutual funds and ETFs that explicitly incorporate ESG criteria, driven largely by ethical considerations and the desire to contribute to societal and environmental well-being. HNW investors, with access to more sophisticated investment opportunities and advisory services, often engage in direct impact investing, private equity, or venture capital investments in sustainability-focused

enterprises, aiming for both financial returns and significant societal or environmental impact. HNW investors can also participate in exclusive sustainable investment opportunities such as green or social impact bonds, which may offer higher potential returns than traditional investments. Additionally, they often seek specialised advisors or wealth managers who can provide tailored strategies and insights into the rapidly evolving field of sustainable investing.

#### 2. Varied Motivations and Preferences

The motivations behind sustainable investment choices vary between retail and HNW investors. While both groups desire to align their investments with their personal or ethical values, HNW investors also exhibit a strategic approach to sustainability, viewing it as essential to risk management and long-term value creation. This strategic approach is less pronounced among retail investors, who may prioritise immediate ethical considerations. Retail investors may be more focused on their investments' social or environmental impact rather than the long-term financial implications. Additionally, HNW investors may have access to more resources and expertise to implement sustainable investment strategies effectively. This resource access can enable HNW investors to engage in more sophisticated sustainability practices, such as impact investing or shareholder advocacy. On the other hand, retail investors may rely more on traditional investment vehicles and may not have the same level of support in implementing sustainable strategies.

#### 3. Challenges in Sustainable Investment

Both investor classes face challenges in sustainable investing, including the lack of standardised ESG metrics and transparency. However, HNW investors may have better resources to overcome these challenges, such as access to private data or bespoke analysis. On the other hand, retail investors often rely on public information, which can be inconsistent or insufficient for making informed investment decisions. Retail investors may also face limitations in terms of financial resources and access to specialised sustainable investment products. Despite these challenges, both investor classes have the opportunity to contribute to positive environmental and social impact through their investment choices.

### 4. Impact of Geographic and Economic Contexts

The geographic and economic contexts significantly influence sustainable investment practices and preferences. Local or national sustainability issues may influence retail investors, while HNW investors have the capacity and inclination to engage in global sustainability initiatives. This difference underscores the broader investment outlook of HNW investors and their potential to effect change across borders. HNW investors, with their global perspective and resources, are uniquely positioned to drive sustainable practices on a larger scale. By leveraging their financial power and influence, they can play a crucial role in promoting positive environmental and social impact worldwide.

## 5. Regulatory Landscape and Investment Opportunities

Government regulations play a crucial role in shaping sustainable investment opportunities, with HNW investors being more adept at navigating this landscape due to their resources and access to expert advice. While affected by these regulations, retail investors may find it challenging to adjust their investment strategies in response to changing regulatory environments. However, with the proper guidance and education, retail investors can also capitalise on sustainable investment opportunities and align their portfolios with their values. Additionally, staying informed about regulatory changes and seeking professional advice can help retail investors make informed decisions in this evolving landscape.

#### 6. Cognitive Biases and Heuristics

Cognitive biases and heuristics affect sustainable investment decision-making across both investor classes. However, the impact and management of these biases differ, with HNW investors potentially leveraging professional advice to mitigate their effects. In contrast, retail investors may be more susceptible to these biases due to limited access to comprehensive investment analysis and advice. Therefore, retail investors should be aware of common cognitive biases such as confirmation bias and anchoring when making sustainable investment decisions. Seeking educational resources and actively challenging these biases can help retail investors make more rational and informed choices in their investment portfolios.

## 7. THE ROLE OF TRANSPARENCY AND DISCLOSURE

Both retail and HNW investors recognise the importance of corporate sustainability disclosure and its impact on investment efficiency. However, HNW investors may emphasise detailed disclosures to inform their investment decisions, reflecting their focus on strategic and impact-driven investments. For example, a retail investor may be biased towards investing in companies marketed as "green" without fully understanding the sustainability practices behind the label. By educating themselves on what makes a company sustainable and challenging their biases, they can make more informed decisions aligning with their values. On the other hand, an HNW investor may dig deeper into corporate sustainability disclosures to assess the long-term impact of their investments, focusing on strategic and impactdriven choices that align with their financial goals and values.

#### **CONCLUSION**

The exploration of sustainable investment perspectives through an extensive literature review has illuminated this field's complex and multifaceted nature, particularly when examining the practices and preferences of retail and high-net-worth (HNW) investors. This paper has sought to bridge the gap in understanding between these two distinct investor classes, shedding light on their decision-making processes, investment strategies, and the challenges they face in aligning their portfolios with environmental, social, and governance (ESG) criteria.

The key findings of this inquiry underscore the diversity in sustainable investment approaches between retail and HNW investors. Retail investors are increasingly drawn to sustainable investments and motivated to align their financial activities with their values and the broader societal good. They tend to favour mutual funds and ETFs that offer clear ESG integration. However, they face challenges related to the lack of standardised metrics and reporting when assessing the sustainability impact of their investments.

HNW investors, on the other hand, exhibit a more strategic and nuanced approach to sustainable investing. With access to more sophisticated investment vehicles and advisory services, they are positioned to engage in impact investing and direct financing of sustainability projects, aiming not only for financial returns but also for significant environmental and social impact. However, they, too, navigate challenges, including cognitive barriers and the need for a deeper understanding of the regulatory and governance frameworks that influence sustainable investment opportunities.

### **Implications for Practice**

The distinctions between retail and HNW investors in sustainable investment practices have significant implications for financial advisors, investment firms, and policymakers. There is a clear need for enhanced transparency and standardisation in ESG reporting to aid all investors in making informed decisions. Furthermore, developing tailored advisory services that cater to each investor class's specific needs and motivations can help bridge the gap between the desire for sustainable investment and the ability to engage in such practices effectively.

For policymakers, the findings highlight the importance of creating supportive regulatory environments encouraging sustainable investment. This includes policies facilitating access to sustainable investment options for retail investors and supporting innovative financing mechanisms for HNW investors looking to fund large-scale sustainability projects.

#### **Future Directions**

As sustainable investment evolves, future research should focus on the dynamic interplay between investor behaviour, market developments, and regulatory changes. Longitudinal studies could offer insights into how the preferences and practices of retail and HNW investors adapt over time, particularly in response to global sustainability challenges and technological advancements. Additionally, exploring the role of emerging technologies, such as artificial intelligence and blockchain, in enhancing transparency and efficiency in sustainable investing could provide valuable directions for innovation in this field.

In conclusion, the journey towards a more sustainable and equitable financial system is complex and requires the concerted effort of investors across the spectrum, from retail to HNW individuals. By understanding the unique perspectives and challenges of each investor class, financial advisors, investment firms, and policymakers can better facilitate the transition towards sustainable investment practices that yield financial returns and contribute positively to society and the environment. As this field continues to grow and evolve, it remains an essential area for ongoing research, dialogue, and action. Collaboration among stakeholders is crucial in driving the shift towards sustainable investment practices, as it requires a collective understanding and commitment to long-term goals. By engaging with diverse investors and incorporating their perspectives, the financial industry can work towards creating a more inclusive and impactful system that benefits both present and future generations.

#### **REFERENCES**

- 1. Ahmad, R. (2022). Strategic investment decisions in sustainable finance: The role of high-net-worth individuals. Journal of Sustainable Finance & Investment, 12(3), 355-370.
- Alkaraan, F., Elmarzouky, M., Hussainey, K., & Venkatesh, V. G. (2023). Sustainable strategic investment decision-making practices in UK companies: The influence of governance mechanisms on synergy between industry 4.0 and circular economy. Technological Forecasting and Social Change, 187, 122187.
- 3. Azmat, F., Jain, A., & Michaux, F. (2022). Strengthening impact integrity in investment decision-making for sustainable development. Sustainability Accounting Management and Policy Journal, 13(1), 55–87. https://doi.org/10.1108/sampj-10-2020-0368
- Bashynska, I., Rudenko, O., & Uvarova, O. (2022). Analysis of sustainable investment perspectives in developed and developing markets. Economic Research-Ekonomska Istraživanja, 35(1), 325-345.
- 5. Benuzzi, M., Klaser, K., & Bax, K. (2023). Which ESG+F dimension matters most to retail investors? An experimental study on financial decisions and future generations. Journal of Behavioral and Experimental Finance, 41, 100882. https://doi.org/10.1016/j.jbef.2023.100882
- 6. Busch, T., & Paetzold, F. (2014). Cognitive barriers to sustainable investing: Misunderstandings and misconceptions. Journal of Sustainable Finance & Investment, 4(3), 292-306.
- 7. Camilleri, M. A. (2020). The rise of socially responsible investing: Literature review on environmental, social, and governance (ESG) disclosures. Corporate Social Responsibility and Environmental Management, 27(2), 747-759.
- 8. Charles, A., & Kasilingam, D. (2015). Retail investors' investment behaviour and their preference for mutual funds and ETFs. Journal of Financial Services Marketing, 20(4), 257-274.
- 9. Chatzitheodorou, K., Chatzitheodorou, E., & Kagitci, M. (2019). Exploring sustainable and responsible investment (SRI) perspectives and classifying investors. Sustainable Finance & Investment, 9(4), 215-230.

- Chen, S., Song, Y., & Gao, P. (2023). Environmental, social, and governance (ESG) performance and financial outcomes: Analyzing the impact of ESG on financial performance. Journal of Environmental Management, 345, 118829. https://doi.org/10.1016/j.jenvman.2023.118829
- 11. Coe, N. M. (2004). The impact of environmental regulations on sustainable development: A comparative analysis. Environment and Planning A, 36(6), 1073-1091.
- 12. Dong, Y., Xu, X., & Zhang, X. (2016). Sustainability investment under cap-and-trade regulation: The role of corporate governance. Journal of Environmental Economics and Management, 79, 71-90.
- Escrig-Olmedo, E., Fernández-Izquierdo, M. Á., Ferrero-Ferrero, I., Rivera-Lirio, J. M., & Muñoz-Torres, M. J. (2017). Methodological approach to integrate ESG preferences into sustainable investment strategies. Journal of Business Ethics, 140(4), 585-604.
- 14. Figge, F., & Hahn, T. (2008). Sustainable value creation: An analysis of the methodology and its application. Journal of Environmental Management, 89(1), 75-84.
- 15. Folqué, M., Sierra-García, L., & Bellosta, M. J. (2022). Sustainable investment and its contribution to the sustainable development goals (SDGs). Sustainability, 14(3), 1523.
- 16. Fu, X., Lu, Y., & Pirabi, M. (2023). Risk management in heat-vulnerable economic activities: Implications for sustainable investment. Environmental Research Letters, 18(1), 014012.
- 17. Fu, X., Lu, Y., & Pirabi, M. (2024). Climate change, decarbonization, and green finance: Interconnections and investment strategies. Environmental Research Letters, 19(1), 014023.
- 18. Gamel, J., Menrad, K., & Decker, T. (2017). Understanding the diversity of sustainable investment preferences across European countries. Journal of Cleaner Production, 164, 167-177.
- 19. Gigerenzer, G., & Gaissmaier, W. (2011). Heuristic decision making. Annual Review of Psychology, 62, 451-482.
- 20. Gustafson, P., & Ingle, M. (1999). Defining sustainable development: Environmental and investment perspectives. Sustainable Development, 7(1), 1-10.
- 21. Hassan, R., & Mahlathi, S. (2020). Environmental and social net-worth in controlling alien plant invasions. Environmental Management, 66(3), 354-368.
- 22. Hezam, A., Alalwan, A. A., & Al-Amri, M. (2023). A decision framework for assessing sustainable transport investment projects. Journal of Cleaner Production, 294, 126286.
- 23. Hutubessy, R., Tissot, P., & Hutubessy, R. (2023). Full Value of Vaccine Assessments (FVVA): Framework for assessing and communicating the value of vaccines for investment and introduction decision-making. Vaccine, 41(1), 111-119.
- 24. Jonas, A. E. G., & Gibbs, D. (2010). Carbon control and its implications for urban and regional

- development: The challenge of low-carbon restructuring. Regional Studies, 44(2), 209-218.
- 25. Keenan, J. M., Hill, T., & Gumber, A. (2019). Financing urban climate adaptation: A research agenda. Climate Risk Management, 23, 72-82.
- 26. Kou, G., Pamucar, D., Dinçer, H., & Yüksel, S. (2023). From risks to rewards: A comprehensive guide to sustainable investment decisions in renewable energy using a hybrid facial expression-based fuzzy decision-making approach. Applied Soft Computing, 142(110365), 110365. https://doi.org/10.1016/j.asoc.2023.110365
- 27. Kou, G., Xu, Y., & Peng, Y. (2023). Sustainable investment decisions in renewable energy: Combining facial expression analysis with fuzzy logic. Journal of Environmental Management, 316, 115376.
- 28. Kouaib, N. (2022). Corporate sustainability disclosure and investment efficiency: Evidence from Saudi Arabia. Sustainability Accounting, Management and Policy Journal, 13(3), 567-589.
- 29. Kumar, S., Kumar, N., & Kumar, R. (2022). Sustainability trends for 2024: Impact of political developments and technological advancements. Journal of Cleaner Production, 326, 129143.
- 30. Liu, X., Huang, J., & Li, Y. (2022). Low-carbon technology investment strategies: Evolutionary analysis under government regulations. Journal of Cleaner Production, 352, 131605.
- 31. Longsheng, M., & Shah, M. (2022). Investment in smarter and greener cities post-COVID-19: An integrated decision-making framework. Sustainable Cities and Society, 79, 103682.
- 32. Mahm, D. (2016). The potential of sustainable investments to deliver competitive returns: A review of evidence. Journal of Sustainable Finance & Investment, 6(2), 92-107.
- 33. Makarenko, I., Samarina, V., & Mikhaylova, A. (2022). Transparency in agriculture: The importance of responsible investment for better decision-making under sustainability. Journal of Cleaner Production, 356, 131895.
- 34. Martiny, A., Testa, F., Taglialatela, J., & Iraldo, F. (2024). Determinants of Environmental Social and Governance (ESG) Performance: A Systematic Literature Review. Journal of Cleaner Production, 142213.
  - https://doi.org/10.1016/j.jclepro.2024.142213
- 35. Meng, J., & Shaikh, A. (2023). Evaluating and prioritizing ESG criteria and green finance investment strategies using fuzzy AHP and fuzzy WASPAS methods. Journal of Cleaner Production, 326, 129363. https://doi.org/10.1016/j.jclepro.2021.129363
- 36. Mudalige, A. (2023). Emerging themes in green finance: An interdisciplinary approach. Green Finance, 5(1), 34-48.
- 37. Otuteye, E., & Siddiquee, M. (2015). Investment preferences of retail investors: A comparative study of mutual funds and ETFs. Financial Services Review, 24(1), 51-66.
- 38. Owen, R., Brennan, G., & Lyon, F. (2018). The role of government policy in financing early-stage green

- innovation: Financing urban climate adaptation. Journal of Cleaner Production, 208, 47-60.
- 39. Pástor, Ľ., Stambaugh, R. F., & Taylor, L. A. (2021). Sustainable investing in equilibrium. Journal of Financial Economics, 142(2), 550-571.
- 40. Plastun, A., Inzinerine, I., & Vasylenko, O. (2021). Sustainable development goals in agriculture and responsible investment: Comparative study between the Czech Republic and Ukraine. Agriculture, 11(12), 1285.
- 41. Reddy, U. (2021). The power and influence of highnet-worth investors in equity markets: Implications for sustainability. International Journal of Financial Studies, 9(2), 25-39.
- 42. Richardson, B. J. (2009). Financial sector regulation for environmentally sustainable development: Ethical and social responsibility. Sustainable Development Law & Policy, 9(1), 23-41.
- 43. Sahu, B. K., Majumder, D., & Chakraborty, S. (2023). Evaluating sustainable and renewable energy: An integrated hesitant fuzzy-based decision-making framework. Journal of Cleaner Production, 319, 128714.
- 44. Schmidt, J., & McCann, L. (2022). Challenges and opportunities of ESG criteria in constructing balanced portfolios: Insights from the UK. Journal of Financial Services Research, 61(3), 435-453.
- 45. Siddique, A. R., & Sciulli, N. (2018). The influence of geographic and economic contexts on investment preferences. Journal of Sustainable Finance & Investment, 8(4), 383-398.
- 46. Sultana, R., Abdullah, M., & Saha, R. (2018). ESG and investment decisions in Bangladesh: An empirical study. Journal of Business Ethics, 149(2), 357-376.
- 47. Tomo, A., & Landi, G. (2016). Behavioural issues in sustainable investment decision-making: A comprehensive literature review. Journal of Business Ethics, 135(3), 573-585.
- 48. Tsang, S., Birt, J., & Bloomfield, S. (2023). Mapping and analyzing the literature on the impacts of integrating ESG criteria on corporate sustainability performance. Journal of Business Ethics, 180(3), 795-818. https://doi.org/10.1007/s10551-022-04963-5
- 49. Vadakkepatt, G. G., Winterich, K. P., Mittal, V., & Zikmund-Fisher, B. J. (2020). The role of geographic and economic contexts in shaping investment preferences. Journal of Marketing Research, 57(3), 517-536.
- 50. Xie, J., Nozawa, W., Yagi, M., & Fujii, H. (2019). Do environmental, social, and governance activities improve corporate financial performance? Business strategy and the environment. Journal of Business Research, 96, 405-417.
- 51. Yadav, P., Han, S. H., & Rho, J. J. (2016). Sustainable investment decision-making: The role of institutional and individual investors. Journal of Cleaner Production, 135, 1256-1270.
- 52. Yucel, E., Celik, T., & Yilmaz, R. (2023). Determinants of sustainable finance literacy and its impact on investment decisions: Evidence from

- Türkiye. Journal of Sustainable Finance & Investment, 13(2), 237-251.
- 53. Zhou, X., & Du, X. (2021). Environmental regulations, financial development, and technological innovation: The case of China. Journal of Cleaner Production, 278, 123663.