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Socially responsible investments inside out: a new conceptual framework for investigating retail investor preferences

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Matteo Pasquino and Caterina Lucarelli
Department of Management, Università Politecnica delle Marche, Ancona, Italy

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Abstract

Purpose – The literature on the drivers affecting retail investor preferences towards socially responsible investments (SRIs) has increased significantly over recent years, revealing several influencing factors. Given the wide variety and ambiguity of the available evidence, the purpose of this paper is to analyse the existing literature on this topic and develop a new unified approach to study this phenomenon.

Design/methodology/approach – We conducted a systematic literature review, followed by a research profile analysis and a thematic analysis, which uncovered four major emerging foci: the research outcome type, the external environment, sociodemographic characteristics and the internal dimension of retail investors.

Findings – Our analysis revealed that studies investigating investor preferences often neglected to consider the concurring influence of multiple perspectives. In fact, we observed how the literature has not yet adequately addressed the mediating and moderating effects of the various factors that determine retail investor decisions regarding SRI.

Research limitations/implications – In response to these shortfalls, we propose a new integrated conceptual framework that may inspire scholars to conduct further studies to refine our understanding of investor preferences towards SRI.

Practical implications – This framework offers some suggestions on how to expand future research and underline some managerial and policy interventions aimed at developing the retail demand for these products.

Originality/value – To our knowledge, this is the first study to perform a systematic review on the drivers of SRIs, elaborating a new conceptual framework to understand the dynamics of retail investor sustainable preferences.

Keywords Socially responsible investments, Sustainable investments, Preferences, Retail investor, Systematic literature review, Conceptual framework

Paper type Literature review

1. Introduction

Socially responsible investments have registered remarkable growth in recent years both in Europe (Eurosif, 2021) and the USA (US SIF, 2022). As documented in a 2020 Global Sustainable Investment Alliance (GSIA) Report, even though the market for socially responsible investing tends to be dominated by institutional investors, retail investor interest has grown steadily since 2012: retail investors held 25% of sustainable assets in 2020 with respects to just 11% in 2012. To understand what drives this increasing demand, it is worth systematising the factors that may be steering retail investors towards sustainable investments.

This remarkable focus on the development of sustainable investment is certainly due to the increasing pressure of regulatory institutions on the financial service industry, globally

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but with a specific intensity in the European Union. Indeed, as an example, the Action Plan on Financing Sustainable Growth issued by the European Commission in 2018 drastically influenced the financial market dynamics, inducing financial institutions to implement strategies able to accommodate the increasing regulatory pressure and growing retail customer sensitivity towards socially responsible investments (SRIs). In this vein, Huynh *et al.* (2024) show that, in response to different institutional pressures, banks implement corporate social responsibility (CSR) practices and green marketing strategies, which lead them to gain a competitive advantage. Maintaining long-term customers' bases for banks through CSR activities can help the marketers achieve sustainable competitive advantage (Shah and Khan, 2020). However, Tuyon *et al.* (2023) highlight the need for the banking industry to innovate new financial products, service delivery and marketing strategies that care about social and environmental risks in addition to economic benefits to satisfy pro-sustainability stakeholders' pressure. Thakker *et al.* (2023) point out that the first step for the marketer of financial products is to create strong investor motivation and favourable demand. Thus, to this end, understanding the determinants of individual investors demand for socially responsible products stand as a priority for the financial services industry.

SRIs, also referred to as sustainable or ethical investments (Nilsson, 2008), are financial investments that integrate a long-term-oriented approach into the selection process while taking environmental, social and governance (ESG) factors into consideration (Eurosif, 2018). According to classic economic models and asset pricing theories (Markowitz, 1952; Sharpe, 1964), investors should only consider SRI if they provide a better risk-adjusted return. However, the literature offers mixed findings concerning the profitability of SRI compared with traditional funds (for example, Revelli and Viviani, 2015).

In parallel, empirical studies have also revealed non-financial drivers of investment decision-making, such as moral values (Hofmann *et al.*, 2008), social preferences (Nilsson, 2008; Riedl and Smeets, 2017) and ethical considerations (McLachlan and Gardner, 2004). However, investors' intentions towards SRI are not always mirrored in their actual investment behaviours, thus creating what it is known in the literature as the intention-behaviour gap (Pilaj, 2017); in other words, even if investors show a desire to invest in financial products that reflect their personal values, they may not necessarily invest accordingly (Heinemann *et al.*, 2018), as highlighted in a 2DII report [1]. External conditions might affect the strength of intention–behaviour relationships, whereby intentions are less (more) likely to induce behaviour in the presence of strong negative (positive) external conditions (Guagnano *et al.*, 1995). Thus, interpretations based exclusively on "internal" variables may be misleading since choices also depend on the context in which individuals take decisions; on the other hand, only taking contextual and situational factors into consideration in investment decisions would similarly lead to error due to overlooking individual-level variables (Stern, 2000).

The wide variety and ambiguity of the available evidence stimulated the purpose of this article: to unify the existing literature through the generation of a conceptual framework able to explain why some retail investors choose SRI, having considered both the financial and non-financial features. The proposed framework takes the multiple influences of antecedent forces, mediators and moderators affecting the decision-making process into account.

The groundwork for the framework's construction involved a systematic literature review (SLR) of the Scopus and Web of Science (WOS) databases. The SLR identified 77 articles after a standard purification procedure, which were then used to perform research profile and thematic analysis. The thematic analysis extracted four different thematic foci from the literature, addressing the most influential drivers of socially responsible investing. These foci were used to develop a unified conceptual framework that offers a coherent and organic approach to understanding the sustainable investment preferences of retail investors. This approach permitted the resulting framework to (1) identify research gaps,

(2) suggest lines for future research and (3) systematise four different clusters of practical interventions that could be implemented by public or private institutions to stimulate retail investor demand for these products.

The research on SRIs has drastically developed in recent years, as has the number of literature reviews that deal with this topic. Several authors reviewed the literature regarding SRI from multiple perspectives, mainly focusing on the relationship between SRI and portfolio performance, the impact of sustainability on firms' value, ESG metrics and the definition of socially responsible investing (Beloskar *et al.*, 2023; Junkus and Berry, 2015; Talan and Sharma, 2019). Some other authors dedicated parts of their thematic analyses on SRI to the factors influencing investor preferences (Kapil and Rawal, 2023; Kräussl *et al.*, 2024; Widyawati, 2020). However, these authors only partially and briefly focused on the drivers of SRI preferences. Our paper differentiates from these works by conducting a deep and throughout research on which factors influence the retail demand for these products, instead of considering this topic as part of a broader analysis on the SRI literature. Our review allowed us to obtain a holistic view on the multiple perspectives that can influence retail investor preferences, and we generated an innovative theoretical framework that is aimed at highlighting the dynamics behind the investor decision-making process from a new point of view. In this sense, our paper has a similar approach to other reviews conducted on the factors influencing green consumption (Katt and Meixner, 2020; Kumari *et al.*, 2022; Sharma, 2021; TM *et al.*, 2021; Testa *et al.*, 2021). However, since consumption decisions and investment decisions are intrinsically different, given that the latter are often perceived as more complex and are subject to different cognitive biases (Barr *et al.*, 2008), there is the need to focus on investors too. For these reasons, our paper aims at offering an additional value to the existing literature, being the first study to perform an SLR specifically focused on the drivers and barriers of retail investor preferences for SRIs, elaborating a new unified approach to study this phenomenon with an innovative approach of considering the mediating and moderating effects of the various factors. The inevitable consequence is detecting several implications in terms of academic research, managerial marketing strategies and regulatory interventions.

In accordance with other SLR studies (TM *et al.*, 2021), the paper is structured as follows: Section 2 describes the SLR methodology; Section 3 presents the research profile of the sample; Section 4 contains the results of the thematic analysis; Section 5 presents a new conceptual framework based on the results of the thematic analysis; Section 6 proposes suggestions for future research and Section 7 contains the conclusions and limitations of the study.

2. Methodology

We adopted the SLR approach (Tranfield *et al.*, 2003; Xiao and Watson, 2019), which ensures a high level of transparency and reliability (Palmatier *et al.*, 2018; Paul and Criado, 2020; Sharma, 2021), to answer the following research questions:

RQ1. What are the trends and characteristics of the literature dealing with retail investor preferences towards SRI?

RQ2. What factors and themes influence retail investor sustainability preferences? How can they be classified, and how are they interrelated with each other?

RQ3. What are the gaps and limitations in the literature, and what directions should future research take?

In light of these research questions, we identify our research purpose in developing a new unified conceptual framework, which considers the integrated effect of different dimensions of factors, to explain retail investor preferences towards SRI, within a mediating and/or moderating perspective. This framework will advance the knowledge on investor preferences other than providing an instrument for academics, managers and regulators that want to study and develop retail investor demand for socially responsible financial products.

Many different types of domain-based SLR exist (Paul *et al.*, 2021). We opted for the SPAR-4-SLR protocol, a rigorous review protocol developed by Paul *et al.* (2021) and previously adopted by other authors (Harju, 2022; Lim *et al.*, 2022). It consists of three stages: *assembling, arranging and assessing* (Figure 1).

In the *assembling* stage, we extrapolated papers from Scopus, WOS and Google Scholar, adopting the following research query: ("Socially Responsible Investment*" OR SRI OR "sustainable invest*" OR "green invest*" OR "ESG invest*") AND preference*) and obtaining a total of 533 articles. In the *arranging* stage, for the purification of the sample, we excluded all the articles that were not relevant to the aim of our review. Therefore, we excluded (1) articles that didn't study SRIs; (2) articles that focused on institutional investors, as they follow different logics from non-professional retail investors; (3) articles that studied SRIs but didn't focus on the variables influencing investor demand for these products, resulting in a total of 431 articles excluded. We expected a high number of articles excluded for being non-relevant, as we purposely decided to use more general terms in the research query to broaden the research and avoid loss of data. We then excluded 27 duplicated articles. Furthermore, we included two additional articles obtained through forward and backward research, as suggested by Webster and Watson (2002), by searching in the text of all the articles in our sample for any relevant paper that has been cited by the authors to minimise the risk of overlooking any pertinent article for our review. The final sample, therefore, comprises 77 articles.

Regarding the evaluation performed within the last *assessing* step, we adopted a quantitative analysis approach, namely the construction of a research profile, and a qualitative thematic analysis. The reporting output consists of best practices, gaps in the literature and areas of future

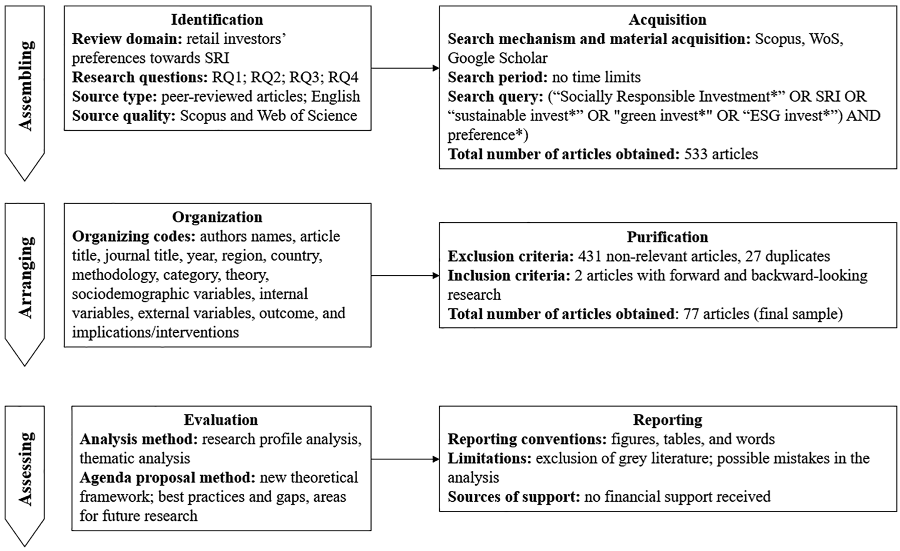

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Figure 1.
SPAR-4 SLR protocol

research. The limitations of the study are discussed at the end of this paper. Given the novelty of the topic, we did not apply any filtering rule based on journal rankings to avoid the risk of missing relevant papers.

3. Research profile

Our final sample of 77 articles offers an overall research profile of the literature. The data were extrapolated both manually and using R software. The following analysis has been implemented to offer an overview of the trends in the literature (RQ1).

3.1 Temporal distribution

The temporal distribution of publications was relatively constant from 2000 until 2019, ranging from zero to seven articles per year (Figure 2). It then exhibited a dramatic increase in 2022, when the number of publications shot up to 18, confirming the surge in interest in this topic [2].

3.2 Geographical distribution

We conducted both macro-level (geographical continents) and micro-level (countries) analyses. Figure 3 shows the results of the former and highlights a large difference between Europe and the rest of the world, with most research being conducted in Europe. This probably indicates a higher interest in sustainability-related research themes in Europe, considering also the higher attention that climate change has in the public debate. That said, the single most productive country was the USA (11 papers), followed by the Netherlands (9), Sweden (9), Germany (8), Spain (4) and the UK (5) (Figure 4).

3.3 Publication outlet

The publication outlet summary (Table 1) shows the three most productive journals on this topic as follows: the *Journal of Business Ethics* (with 12 articles), *Journal of Behavioural and Experimental Finance* (7 articles) and *Journal of Sustainable Finance and Investments* (6 articles). The literature presents a high degree of heterogeneity in terms of publication outlets. There are not journals that prevail in this research topic, but publications are distributed among several sources. Applying a filtering rule based on a journal's circulation

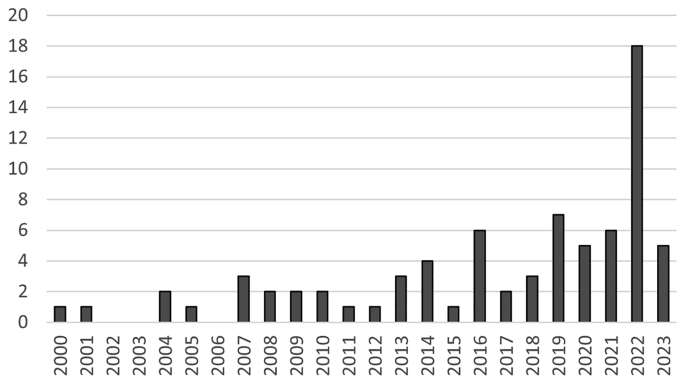

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Figure 2.
Temporal distribution

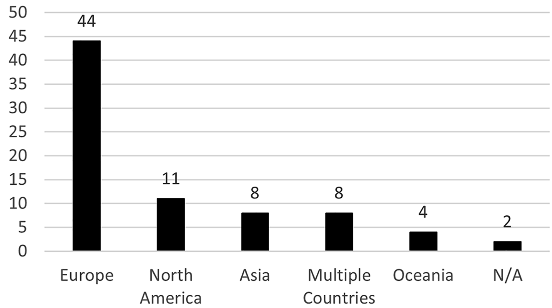

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Figure 3. Distribution by continent

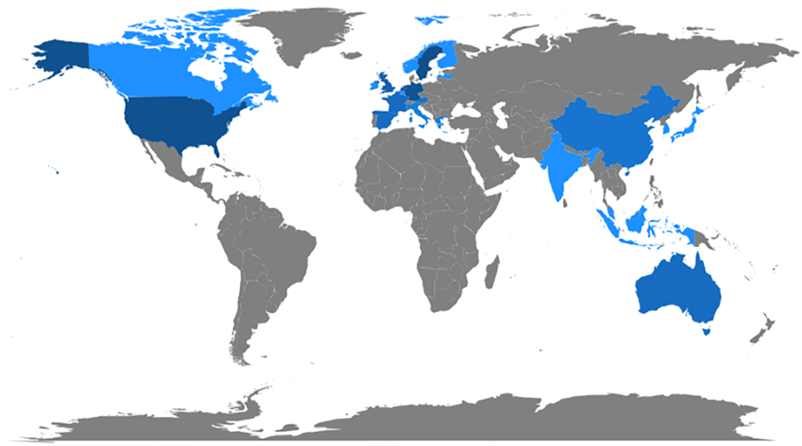

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Figure 4. Distribution by country

level (e.g. impact factor, CiteScore and ABS ranking) would exclude a non-negligible number of papers. Moreover, any filtering rule could be considered arbitrary.

3.4 Methodological approach

The large majority of papers in this sample adopted quantitative methodologies. Only four articles used qualitative methods such as qualitative interviews or case studies.

The majority of articles (40 out of 77) applied "stated preferences" methodologies, gathering data through survey questionnaires, lab and online experiments, discrete choice experiments and choice-based conjoint analysis. Another share of the sample (30) studied individuals' revealed preferences, using data available from public and/or institutional sources or specific databases. A smaller number of papers (5) adopted both methodologies, integrating both stated and revealed preferences, and two articles developed theoretical models.

Concerning econometric models, the most commonly applied methods were logit and probit regression analyses. Other studies applied ordinary least squares (OLS), multiple linear regression or the structural equation model (SEM, a method popular in social and behavioural sciences) as well as latent class analysis (LCA) to detect latent (or unobserved) heterogeneity in samples (Hagenaars and McCutcheon, 2002).

Journal	Publisher	N. articles	Impact factor (2022–2023)	CiteScore (2021–2022)	Ranking ABS (2021)
Journal of Business Ethics	Springer Nature	12	6.3	9.0	3
Journal of Behavioural and Experimental Finance	Elsevier BV	7	8.2	3.0	1
Journal of Sustainable Finance and Investment	Taylor and Francis Ltd.	6	0.6	2.4	Non-rated
Sustainability	MDPI	5	3.9	1.7	Non-rated
Business Strategy and the Environment	Wiley-Blackwell	3	10.8	10.3	3
Review of Financial Studies	Oxford University Press	2	8.4	9.2	4*
Management Science	Institute for Operations Research and the Management Sciences	2	6.2	7.2	4*
Journal of Banking and Finance	Elsevier	2	3.5	4.4	3
Finance Research Letters	Elsevier	2	9.8	5.3	2
Corporate Social Responsibility and Environmental Management	Wiley-Blackwell	2	8.5	8.0	2

Source(s): Created by authors

Table 1.
Publication outlet

3.5 Theoretical foundations

Only 29 articles from the sample gave their reasons for choosing a specific theoretical model to investigate retail investor choices. Although there was no single prevailing theory, the most popular was the theory of planned behaviour (TPB) (Ajzen, 1991). TPB is widely adopted for studying the green intentions and behaviours in individuals (Kumari *et al.*, 2022; TM *et al.*, 2021), as its flexible structure allows scholars to add variables to the original model (Rajeh, 2022). Nevertheless, the literature is also aware of its limitations, such as its failure to consider the moral dimension (Klöckner, 2013), a weak attitude-behaviour correlation (Zhang *et al.*, 2019) and the fact that people are considered as a homogeneous population, thus excluding differences between cultures and contexts (Susanty *et al.*, 2021).

The other theoretical frameworks used were as follows: (1) *nudge theory*, where a nudge is defined as a simple, costless and non-coercive action to orient agents' decisions in a given direction (Thaler and Sunstein, 2009) by modifying the choice architecture; (2) *construal-level theory* (CLT), which focuses on concepts that are distant and abstract and therefore placed at a higher construal level, implying a greater psychological distance (Liberman *et al.*, 2007; Trope and Liberman, 2000), and (3) *social signalling theory*, based on the idea that individuals undertake certain actions as a means to signal their moral identity to themselves (Bénabou and Tirole, 2011). Other theories were adopted to a lesser extent, such as the *warm glow-giving theory* (Gutsche and Ziegler, 2019), the *value-belief-norm* theory (Brodback *et al.*, 2019) and the *theory of universal values* (Roos *et al.*, 2024).

3.6 Citation analysis

Table 2 lists the three articles most cited in the literature (global citations) and the three articles most cited in the extracted sample (local citations).

Author	Year	Publication title	Journal	Global citations
Riedl and Smeets	2017	Why do investors hold socially responsible mutual funds?	*Journal of Finance*	274
McLachlan and Gardner	2004	A comparison of socially responsible and conventional investors	*Journal of Business Ethics*	151
Nilsson	2008	Investment with a conscience: examining the impact of pro-social attitudes and perceived financial performance on socially responsible investment behaviour	*Journal of Business Ethics*	149

Author	Year	Publication title	Journal	Local citations
Lewis and MacKenzie	2000	Morals, money, ethical investing and economic psychology	*Human Relations*	8
McLachlan and Gardner	2004	A comparison of socially responsible and conventional investors	*The Journal of Business Ethics*	6
Rosen *et al.*	1991	Social issues and socially responsible investment behaviour: a preliminary empirical investigation	*The Journal of Consumer Affairs*	5

Source(s): Created by authors

Table 2.
Most-cited articles

4. Thematic analysis

The literature addresses the factors, from different perspectives and by means of different dimensions, which act as barriers or catalysts to investor preferences for sustainable investments. Thematic analysis allows us to extract the themes and sub-themes in the literature, revealing patterns of different studies in a research topic (Braun and Clarke, 2006; Nowell *et al.*, 2017).

To answer RQ2, we assessed each paper in the sample one-by-one, coding the various themes emerging from the literature in order to answer the research questions [3]. We identified four major thematic foci that reflect the trends in the considered literature: (1) research outcome type, (2) external environment, (3) sociodemographic characteristics and (4) individuals' internal dimensions (Figure 5). While the first theme is related to the dependent variables, the others are related to the independent variables. Each theme, in turn, is divided into sub-topics.

4.1 Outcome type

We define *outcome* as the dependent variable studied in empirical papers. In our sample, the outcome types could be classified according to two main categories: intentions and actions.

4.1.1 Intentions. The papers that study investor intentions to invest in socially responsible products generally adopt stated preference methodologies in the form of two different measures: the preference for these products compared with that for conventional investments (Jansson *et al.*, 2014; Yee *et al.*, 2022) and investor willingness to pay for sustainable investments (Bauer *et al.*, 2021; Gutsche and Ziegler, 2019).

While the study of individuals' intentions to act in a certain way has some advantages, such as flexibility and the possibility to control for different conditions, these studies also have some limitations; for example, they rely on a hypothetical context instead of actual

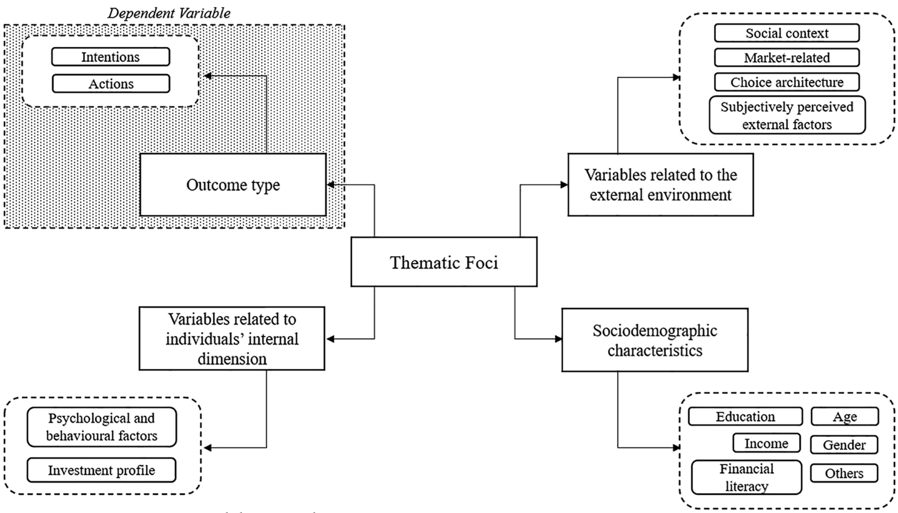

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Figure 5. Thematic foci

behaviour. In fact, the literature has highlighted a gap between stated and revealed preferences in consumers' intentions towards sustainable products (Bray *et al.*, 2011; Vermeir and Verbeke, 2006), and this intention-behaviour gap is also evident in the SRI market (Heinemann *et al.*, 2018; Pilaj, 2017; 2DII Report, 2023). The reason is that, contrary to real behaviours, self-reported intentions imply a social desirability bias (Apostolakis *et al.*, 2018b), and individuals might overstate their preferences for socially responsible investing, especially as stated intentions have no real financial consequences (Brodback *et al.*, 2019). However, measuring intentions to invest in SRI through declared preferences remains a widely used method in the literature, and it is considered to be one of the best methods for predicting actual behaviour (Louviere *et al.*, 2000).

4.1.2 Actions. The papers studying the effective investments of investors through the analysis of revealed preferences generally gathered data from databases, institutions, private and public organisations and survey questionnaires. The studies that observed real investment data mostly relied on financial flows to determine the demand for SRI, while survey questionnaires, which permit more in-depth analysis, involve asking participants about their investment behaviour. This second methodology has some limitations, as asking participants to disclose their investments can be subject to social desirability bias and even memory error (Baumeister *et al.*, 2007). The advantages gained from observing real investment data, however, may come at the cost of losing flexibility and depth in the research.

Some authors, when studying investment behaviour, differentiate between *holding* SRI and the SRI *exposure* as the percentage of the portfolio invested in these products. Riedl and Smeets (2017) noted that investors' intrinsic social preferences are needed to buy SRI funds in the first place, but they are less important in deciding the SRI portfolio share. Moreover, they observed that investors with weak social preferences who strongly signal their investment behaviour hold significantly smaller shares in SRI, suggesting that "relatively selfish" investors who hold SRI for signalling reasons will minimise the percentage of SRI they hold. Christiansen *et al.* (2023) also obtained different results when differentiating between these two dependent variables. This suggests that only considering whether investments in SRI are made or not without considering their share of a portfolio may produce misleading results.

4.2 Variables related to the external environment (57 papers)

A prolific stream of literature, starting with the seminal paper of Belk (1975), has given rise to the notion that external and situational factors will either facilitate or constrain pro-environmental choices, thereby affecting individual motivations (Steg and Vlek, 2009; Stern, 2000). This indicates that the external environment in which decisions are made can enhance the ability to explain and understand a person's behaviour. The literature lists the following as external environmental factors: social influences, physical environment, institutional factors, economic factors, information interventions, advertising, product characteristics and the circumstances under which behavioural choices are made, as well as subjectively perceived external factors (Ertz *et al.*, 2016; Olli *et al.*, 2001; Steg and Vlek, 2009; Yadav *et al.*, 2019).

In the extracted sample, we distinguished four sub-categories of assessed variables related to the external environment: the social and cultural context, market-related characteristics, product-related characteristics and choice architecture.

4.2.1 Social and cultural context. The *national culture* can be taken as the set of values and characteristics of a given group, the connection of an individual to a certain culture and the acquisition of those values and characteristics (Soley and Pandya, 2003). Scholtens and Sievänen (2013) and Labidi *et al.* (2021) focused on Hofstede's (2001) four dimensions of national culture to study the impact of this factor on SRI investments and observed that femininity and openness to novelty are the two cultural dimensions associated with higher SRI demand. Delsen and Lehr (2019), drawing on a cultural-theoretical explanation, observed that post-material value orientation is particularly associated with willingness to pay for sustainable investments. Choy *et al.* (2023) showed that mutual funds managed in countries with high social capital employ superior CSR practices since social capital fosters social preferences for cooperation and altruistic behaviour.

4.2.2 Market-related characteristics. Several authors investigated the impact of *economic conditions* on SRI preferences and observed that the retail investor demand for SRI is significantly influenced by economic cycles (Bansal *et al.*, 2022; Cho, 2023). Specifically, recent papers focused on the impact of *external shocks* on retail demand for SRI by studying the effects of the COVID-19 pandemic, with contrasting results emerging. Döttling and Kim (2024) observed that USA sustainable funds experienced sharper declines in retail flows during the economic shock caused by COVID-19, whereas Xu *et al.* (2022) showed that Chinese investors became more interested in SRI during the pandemic. He and Shi (2023) observed that a rise in public concern resulting from an increase in air pollution had a positive impact on SRI demand among Chinese investors, while other major crisis events, like COVID-19, hindered this positive mediation process by generating a negative trend and distracting the public. Lastly, Singh *et al.* (2022) noted an increase in the world-level demand for SRI after the outbreak of COVID-19 in March 2020, whereas a decreasing trend ensued with the start of the Russia–Ukraine conflict.

A further sub-category includes factors related to the market context in which retail investors make choices, including the characteristics of the market agents. Regarding the role of the *financial market institutions*, Choy *et al.* (2023) found that the relationship between a country's social capital and the retail investors' demand for SRI is more significant in financially developed countries, probably because a well-developed financial market promotes financial disclosure and the production of firm-specific information, creating less information asymmetry. Scholtens and Sievänen (2013), focusing on four Nordic countries, suggested that the larger the pension industry, the wider the scope is for norm-based and value-based investing. Diouf *et al.* (2016), in their survey experiment, surprisingly observed that investors who "strongly agree" with the statement that their financial advisor was very familiar with SRI were less likely to hold sustainable investments than respondents who "somewhat agree". They also showed that SRI investors typically gained information through articles or the Internet rather than through advisors and financial intermediaries. The literature shows that when investors receive *sustainability information* about financial products, they are more prone to include them in their portfolios (Hafenstein and Bassen, 2016). According to Haigh (2007), information-processing difficulties present an important barrier, inhibiting people from selecting sustainable investments. Similarly, Anderson and Robinson (2022) suggest that informational hurdles prevent households from expressing their pro-environmental values through investment decisions, and for this reason, greater transparency and ESG-related information are required. Gutsche and Zwergel (2020) offer an analogous analysis, pointing out that information costs are an important barrier in the development of SRI and banks are not fulfilling their role as intermediaries by reducing them. Moreover, they found that the effect of sustainability certificates on reducing information costs was strong, especially for new investors.

4.2.3 Choice architecture. *Choice architecture* relates to how an investment option is presented and its influence on decision-making (Thaler *et al.*, 2013). This includes the *nudge* concept, defined as a costless and non-coercive action to orient agents' decisions in a given direction (Thaler and Sunstein, 2009). While the *information provided* relates to a company's sustainability data transparency, *choice architecture* concerns the different nudging techniques and the way in which information is framed rather than its actual content. Pilaj (2017) suggested that the attitude-behaviour gap in the SRI market and the resulting low retail demand for SRI products are caused by a behavioural market failure, and nudging strategies may offer a solution. Gajewski *et al.* (2022) studied the impact of three different types of nudges on SRI preferences and observed that the default option resulted as the most efficient nudge. The efficacy of the default option in nudging investors towards SRI was also observed by Hoffmann *et al.* (2019). Several other authors also observed that the intention to invest in SRI highly depended on how the investment option and the related information were framed and/or presented (Barreda-Tarrazona *et al.*, 2011; Døskeland and Pedersen, 2016; Glac, 2009). The results obtained by Vanwalleghem and Mirowska (2020) show that "proactive" investor personalities, when exposed to positive environmental images, tend to prefer SRI, but they obtained opposite results when they were exposed to negative environmental images.

4.2.4 Subjectively perceived external factors. Several studies on pro-environmental behaviours draw upon the attitude-behaviour-context (ABC) theory (Stern, 2000; Stern and Oskamp, 1987), which capitalises on the idea that behaviour (B) is a product of the interaction between attitudinal variables (A) and contextual factors (C). In particular, according to the ABC theory, contextual factors include both objective contextual factors and subjectively perceived contextual factors (Ertz *et al.*, 2016; Olli *et al.*, 2001; Xing *et al.*, 2022). Therefore, we adopted this approach, based on the Lewinian idea that objective contextual factors cease to be objective as soon as individual perceptions come into play (Ertz *et al.*, 2016; Lewin, 1939), and categorised the subjectively perceived external factors as external and/or contextual variables.

The *perceived consumer effectiveness* (PCE) refers to the idea that consumers are more likely to act according to environmental or social appeals if they believe that their behaviour will help solve the issue at hand (Straughan and Roberts, 1999). When sustainable financial products give retail investors the perception that their decisions will have an impact on real-world issues, individuals are more likely to invest in such products (Nilsson, 2008). Wins and Zwergel (2016) and Riedl and Smeets (2017) observed PCE to be a discriminating ingredient in differentiating socially responsible investors from conventional investors. Brodback *et al.*

(2019) observed that the perceived effectiveness of SRI has a significant mediating effect on the relationship between altruistic values and socially responsible preferences.

An important characteristic of SRI is their *financial risk and/or reward performance*. The literature related to the impact of ESG scoring on financial products' performance reports two contrasting observations: on the one hand, investing in SRI may increase financial risk due to the fact that the selectable pool of investments is smaller, thereby generating less efficient diversification (Campbell *et al.*, 2001; Merton, 1987); on the other, the majority of empirical studies have observed a positive correlation between a financial product's integration of ESG criteria and lower volatility (Giese *et al.*, 2019; Gomez-Valencia *et al.*, 2021; Reber *et al.*, 2022). Therefore, the results concerning the relationship between the integration of sustainability strategies in financial products and their performance is heterogeneous, and we cannot confidently state that SRI outperform conventional investments (Demers *et al.*, 2021; Revelli and Viviani, 2015). Putting aside the empirical evidence on the impact of ESG screening on portfolio returns, here we analysed papers dealing with the *perception of SRI financial performance* and its influence on investors' decisions. Several authors in our sample offer evidence showing that, compared with traditional investors, financial motives are secondary for socially responsible investors; for them, ethical values are prioritised at the expense of financial returns (Bauer *et al.*, 2021; Jonwall *et al.*, 2023; Rossi *et al.*, 2019). Conversely, other studies found that socially responsible investors take financial and non-financial motives into equal consideration in their investment decisions (Jansson *et al.*, 2014; Nilsson, 2008; Pérez-Gladish *et al.*, 2012). That said, in some cases, socially responsible investors were noted to consider the financial reward of SRI as the main criteria in their decision, showing unwillingness to pay more for sustainability rewards and making them comparable to conventional investors (Mackenzie and Lewis, 1999; Vyvyan *et al.*, 2007).

Since policy measures may act as a motivational device and change individuals' behaviours (Wan and Shen, 2013), Yee *et al.* (2022) included the *evaluation of the regulatory framework* in a TPB model and observed its strong mediating effect on the TPB constructs towards individuals' intention to invest in renewable energy.

Trust towards socially responsible claims is another strong predictor of investor preferences. Scepticism towards ESG claims made by financial institutions is likely to be a major problem in financial markets, reflecting the issue of greenwashing (Amenc *et al.*, 2022). Hence, it is not surprising that the impact of trust towards socially responsible claims made by investment funds generally has a strong positive effect on retail investors' decisions to invest responsibly (Apostolakis *et al.*, 2018b; Wins and Zwergel, 2016).

4.3 Sociodemographic characteristics (45 papers)

Sociodemographic characteristics are objective and easily measurable, allowing tailored interventions and marketing strategies to develop participation in sustainable financial instruments. The main variables studied in the literature are *age, income, education, gender and financial literacy*.

Several authors observed a negative relationship between *age* and sustainable investing, with younger investors often being more sensitive to environmental and social issues (Christiansen *et al.*, 2023; Junkus and Berry, 2010; Rosen *et al.*, 1991). For example, Diouf *et al.* (2016) found younger adults to be more aware of SRI, and they associated this with their greater use of the Internet to source information. However, the relationship between age and socially responsible investing remains ambiguous since several authors observed a greater inclination of older people towards sustainable investments, associating it with their greater affluence (Apostolakis *et al.*, 2016), although other studies showed older and less wealthy people to be more sensitive to sustainable investment (Berry and Yeung, 2013; Faradynawati and Söderberg, 2022).

The variable *income* is also associated with contrasting evidence. Some papers show that wealthier investors are better placed financially to take their views on sustainability into account, even if this means incurring additional costs (Borgers and Pownall, 2014; Escrig-Olmedo *et al.*, 2013). By contrast, some authors noticed that investors on lower incomes showed greater preferences towards SRI (Apostolakis *et al.*, 2018a; Berry and Yeung, 2013), while others found income to have no influence over sustainability preferences (Delsen and Lehr, 2019; McLachlan and Gardner, 2004).

The evidence on *gender* is more consistent. Most papers show that women, independent of nationality, are generally more concerned about ethical issues than men when investing (Gutsche *et al.*, 2021; Nilsson, 2008; Valor *et al.*, 2009; Wins and Zwergel, 2016).

In the extracted papers, *education level* was a strong predictor of sustainable investing (Diouf *et al.*, 2016; Escrig-Olmedo *et al.*, 2013; Junkus and Berry, 2010), in line with other studies on pro-environmental behaviours (Tianyu and Meng, 2020), with investors prepared to accept potentially lower financial reward for sustainable financial products (Apostolakis *et al.*, 2016; Dorfleitner and Utz, 2014). Other papers showed *financial literacy* to strongly influence the decision to hold SRIs (Cucinelli and Soana, 2023; Gutsche *et al.*, 2021). For example, Anderson and Robinson (2022) showed that pro-environmental households are generally not more likely to hold more socially responsible portfolios, as they are less active in investment decision-making. This creates a financial disentanglement, which does not exist, however, when pro-environmental households show greater financial literacy.

4.4 Variables related to individuals' internal dimension (42 papers)

These variables are related to the individual sphere that comprises cognitive, psychological, personal, emotional and temperamental features. From the analysis of literature, two different sub-topics emerge: (1) psychological and behavioural factors and (2) investment profile.

4.4.1 Psychological and behavioural variables. Psychological variables include factors like attitude, norms, values and beliefs. *Attitude* refers to an individual's latent predisposition, which guides them in a certain direction, affecting their intention to act in that way (Ajzen, 1980). It is one of the main predictors in the TPB framework, and it is frequently studied in papers on environmental behaviour (Kang *et al.*, 2012; Kollmuss and Agyeman, 2002). In a TPB framework, attitude has a positive impact on investor preferences towards sustainable investments (Adam and Shauki, 2014; Hofmann *et al.*, 2008), renewable energy investments (Yee *et al.*, 2022) and SRI pension funds (Borgers and Pownall, 2014).

Another psychological variable related to attitude is *environmental concern* or *environmental awareness*, defined as the individual's general orientation towards the environment and willingness to consider environmental issues (Dunlap and Jones, 2002). Gutsche and Ziegler (2019) show that investors with high environmental awareness choose to invest in SRI while accepting potentially lower financial returns. Moreover, investors who are aware of ESG issues and concerned about climate change tend to invest significantly more in sustainable financial products (Barreda-Tarrazona *et al.*, 2011; Diouf *et al.*, 2016; He and Shi, 2023).

The role of *personal values* in investment decision-making challenges the traditional assumption in finance that risk-adjusted return is the only driving force regarding investment choices. When value-based motives are considered alongside financial ones, some scholars found no proof of the latter being dominant (Jansson *et al.*, 2014). Retail investors may also be willing to accept lower financial returns when investing in products that respect their personal values (Pasewark and Riley, 2010). In the same vein, Brodback *et al.* (2019) showed that altruistic values are positively associated with SRI investments, especially when the perceived impact of the investments is higher.

Moreover, retail investors' *social preferences* are a strong driver that can lead investors to prefer sustainable financial products even when it is against their financial interest to do so, as revealed by Riedl and Smeets (2017) and confirmed by Bauer *et al.* (2021). *Social identity* is a similar concept that refers to the portion of an individual's self-concept derived from the perceived sense of belonging to a relevant social group (Tajfel and Turner, 1979). This construct may drive individuals' preferences, as retail investors can create a pro-social identity by investing in a socially responsible way (Bauer and Smeets, 2015). Riedl and Smeets (2017) and Bauer *et al.* (2021) studied the role of *social signalling* in sustainable investments: the notion that people want to create a positive social image of themselves (Glazer and Konrad, 2008). They observed social signalling to have a positive effect on individuals' decisions to invest in SRI, as talking to others about such investments fostered the creation of a positive self-image.

Aristei and Gallo (2021) observed that *overconfidence* was positively related to investing in SRI, supporting the idea that, due to the cost of information asymmetries and assuming that sustainable investments are more complex, overconfidence can push individuals to invest in these products regardless of their information costs. Vanwalleghem and Mirowska (2020) observed that a *proactive personality* can predict higher or lower investments in SRI depending on the images shown to investors.

Everyday behaviours may also help predict investors' preferences for sustainable investments versus conventional financial products through the *spillover effect*: the concept that engaging in a pro-environmental behaviour might increase the probability of engaging in subsequent pro-environmental behaviours, even in different domains (Thøgersen, 1999). In the research field of investor behaviour, Williams (2007) showed that individuals who tend to "punish" firms with low CSR compliance as consumers exhibit similar behaviours as investors. Similarly, Jonwall *et al.* (2023) observed that socially responsible investors are also responsible consumers in everyday life and tend to avoid products offered by "irresponsible" companies.

4.4.2 Investment profile. The evidence in our extracted sample related to the relationship between *investor risk profiles* and sustainable investment preferences is somewhat confusing. In some papers, the SRI choices are preferred by risk-averse investors (Bauer and Smeets, 2015; Faradynawati and Söderberg, 2022). Jansson *et al.* (2014) predicted that risk attitude would be positively related to SRI preferences on the basis of less efficient diversification, but their results showed the opposite, suggesting that sustainable investments were perceived as less risky. Aslan and Posch (2022) noted that with increasing levels of risk aversion, investors seek to incorporate sustainable investments into their portfolios, whereas Lagerkvist *et al.* (2020) showed that sustainability-focused individuals tend to avoid larger levels of risk exposure compared with financially-focused individuals. Conversely, other authors found the opposite. Apostolakis *et al.* (2016) confirmed their prediction that people would perceive an SRI portfolio as riskier than a conventional one and observed that individuals with higher risk tolerance were more willing to pay for an SRI portfolio, in agreement with Borgers and Pownall (2014) and Christiansen *et al.* (2023). Gutsche *et al.* (2021) performed an online survey on Japanese households and found that risk-seeking individuals were more inclined to invest in sustainable assets, as they were more accepting of limited risk diversification and tended to search for new investment opportunities.

Investment horizon is another aspect influencing investor decisions relative to asset allocation (Veld-Merkoulova, 2011). The time preferences of investors are relevant when studying their preferences towards sustainable investments because companies conducting their operations in a socially responsible manner may be more likely to be perceived as better for long-term investments (Sethi, 2005), but evidence of this was sparse in the extracted sample. Riedl and Smeets (2017) provide evidence that investors who generally hold on to funds longer are more likely to invest in SRI equity funds, which indicates a longer investment horizon. Although Faradynawati and Söderberg (2022) predicted a positive relationship between long-term horizon and SRI preferences, they obtained the opposite result, while Gutsche *et al.* (2021) did not find any significant influence of temporal preferences on the SRI preferences of retail investors.

5. A new integrated conceptual framework

Our thematic analysis revealed that studies investigating investors' preferences often neglected to consider the concurring influence of multiple perspectives. Indeed, only 31 articles out of the 77 extracted papers simultaneously studied the influence of both internal and external factors, and only 19 of these considered a model, which also included sociodemographic characteristics. Interpretations based exclusively on internal dimensions could generate misleading conclusions since investors' decisions are contingent on the external environment. Likewise, studies that only consider external variables will fail to observe, and thus understand, the effect of individual-level variables (Stern, 2000). Individuals with similar internal factors may invest differently depending on the context, and individuals who are subject to the same external influences will invest differently depending on their internal dimensions, explaining why apparently similar studies might obtain opposite results.

Of the papers adopting an integrated approach, by taking the different dimensions of influences into consideration, Williams (2007) compared investors from the UK, Australia and Canada and observed that even though UK investors were not less concerned about social issues than those from Australia and Canada, their demand for SRI was lower, reflecting the differences in institutional contexts and in the level of investment intermediation. Vanwalleghem and Mirowska (2020) showed how a proactive personality in an investor was a strong predictor of sustainable investing, but they then observed how this influence was dependent on the investors' decision-making context. Diouf *et al.* (2016) found that while sociodemographic characteristics and psychological variables were important for identifying socially responsible investors, the role played by financial institutions and financial advisors was crucial in setting the demand for SRI. Yee *et al.* (2022) showed that evaluation of the regulatory framework was the strongest predictor of intention to invest in renewable energies and that it mediated the effect of the TPB antecedents. Finally, Nilsson (2008) developed a model incorporating all the variables influencing SRI decisions, which encompassed all the different dimensions of preference drivers.

Based on our research, we propose a conceptual framework for studying the drivers of retail investors' sustainable decisions (Figure 6). This framework describes the *conditional indirect effect* (Preacher *et al.*, 2007) to provide insight into the nature of the effect of the independent variable (i.e. the investor's internal dimension) on the dependent variable (i.e. the retail investor's preferences for SRI) through the mediator (i.e. the investor's perception of an SRI offer) contingent on the moderator (i.e. the external environment).

Link 1 in the framework (Figure 6) depicts the direct effect of the variables comprising the *internal dimension* of retail investors (i.e. sociodemographic characteristics, psychological and behavioural variables and the investment profile) on their preferences for SRI. Link 2 shows the mediation effect of the retail investors' *perceptions of the SRI offer*. The effects that the investors' internal and sociodemographic variables have on the dependent variable (i.e. *retail investor preferences for SRI*) are mediated through their perceptions of SRI offers. This refers to the set of variables investigated in the literature concerning how individuals evaluate SRI products' characteristics and SRI market characteristics, such as the perceived effectiveness, the perceived financial performance, the reliability of market actors and their declarations and the perceived efficacy of the regulatory framework. Some authors in our

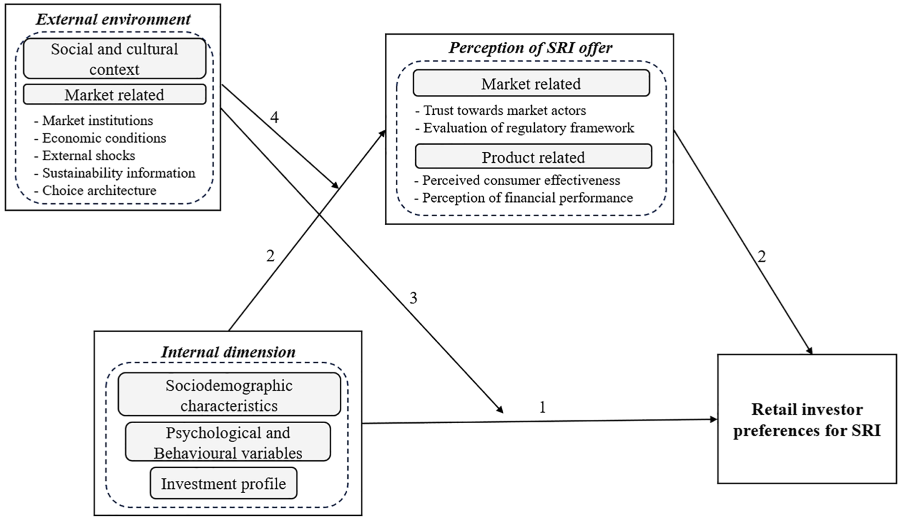

Figure 6.
Conceptual framework

Source(s): Created by authors

extracted sample observed the potential of these factors as mediators to explain the retail investor intentions or behaviours towards SRI (Brodback *et al.*, 2019; Carlsson Hauff and Nilsson, 2023; Yee *et al.*, 2022). The internal dimension of retail investors, our starting point in the analysis, affects how they perceive the SRI product features and the related market, which in turn influences their demand for SRI. Furthermore, we considered the moderation effect of the *external environment* on the relationship expressed in Link 1. The external environment comprises (1) social and cultural contexts (which generate common norms in a certain population of individuals) and (2) market factors, such as the characteristics of financial and public institutions, the economic conditions, external shocks, the quality of sustainability information provided and the choice architecture proposed. These factors can strengthen or weaken the relationship expressed in Link 1, even without the influence of the investors' perceptions of the SRI offer; for example, consider the situation in which investors completely delegate their investment choices to a third party with the only request that their sustainable preferences are expressed. In this case, the demand for SRI will be affected by the internal dimension, which is contingent on the external environment, but not by the investors' perceptions of the SRI offer (Link 3). Finally, we developed our model considering the total effect expressed through the moderation effect that the external environment exerts on the indirect relationship between the internal dimension of investors and their preferences for SRI (Link 4). This interaction is defined as "moderated mediation", and it refers to the situation in which the mechanism pathway through which an independent variable, which exerts its effect on the dependent variable through a mediator is contingent on the value of a moderator (Hayes, 2012). Given that the relationship between the internal dimension of investors and their perception of SRI offers can vary depending on the influence of the external environment, we posit that when the social and market contexts are favourable towards the diffusion of sustainable investments, this will strengthen the effect of the internal dimension on the individual's positive perception of an SRI offer, increasing, in turn, the likelihood that individuals will invest in sustainable products. This effect of moderated mediation takes all the interaction effects that emerged from our literature review into consideration and expresses the totality of the complex of influences existing between the different drivers of retail investor preferences for SRI.

6. Research agenda

By exposing the gaps and contrasting results in the literature and through our conceptual framework depicted in Figure 6, this paper provides some indications for future avenues of research in order to answer RQ3. First, the holistic approach proposed in our model needs to be subjected to empirical testing. Other authors might want to apply it to indagate investor preferences for SRI in future studies.

Regarding the outcome type, when studying the actual behaviours of investors, most authors have focused on the presence vs absence of SRI without considering their share in a portfolio, and these different approaches may produce very different results (Christiansen *et al.*, 2023; Riedl and Smeets, 2017). In addition, most of the literature focuses on preferences for socially responsible mutual funds, equity funds or pension funds, while investor preferences for green bonds have been mostly neglected. Since different financial instruments are defined by different characteristics, it would be interesting to observe how results may change when investments in green bonds, or in other SRI products, are taken into consideration.

Moreover, in studies considering the *sociodemographic profile* of socially responsible investors, contrasting results have been obtained in relation to most of the factors expected to predict pro-environmental behaviours; the strongest predictors in this category are *education* and *financial literacy*, making it crucial that future studies address government policies on the population's knowledge of SRI products. Another significant theme is the *gender* issue, with converging evidence (Gutsche *et al.*, 2021; Nilsson, 2008; Wins and Zwergel, 2016) showing women to be more willing to invest in SRI, alongside the equally unanimous awareness that the female members of a household are generally less involved in making financial decisions (Aristei and Gallo, 2022; Wagner and Walstad, 2023).

Furthermore, the *investment profile* factors are a crucial aspect that differentiates this topic from consumer behaviour research. We observed that, while the empirical literature on SRI tends to attribute lower risk to these products, retail investors do not always perceive them as less risky, and a positive correlation between *risk preferences* and socially responsible investing is also noticeable (Apostolakis *et al.*, 2016; Borgers and Pownall, 2014) – which may be causing a supply-demand discrepancy, as risk-averse investors tend to avoid them. Future research needs to investigate the reasons causing this discrepancy and deepen our understanding of whether investors include sustainable products in their investment portfolio to mitigate overall risk or as a risk-seeking strategy.

The impact of the *investment horizon* on investing in SRI has been surprisingly neglected by the literature, yet it would be interesting to understand since sustainable investments should be viewed as a safer long-term investment (Sethi, 2005). Hence, the dynamics that exist between retail investors' temporal preferences and sustainable investing are anything but obvious – contrary to our expectations – and need to be the topic of future studies.

Of the variables affecting the construct *perception of SRI offer*, a gap is evident in the literature regarding the *role of intermediaries*, financial advisors in particular, for the diffusion of SRI. Financial advisors have a prominent role in reorienting private financial flows (Hackethal *et al.*, 2012) and can nudge clients towards SRI, enhancing the market demand for these products (Diouf *et al.*, 2016; Strauß, 2021). However, surprisingly, the impact of financial advisors on retail investor sustainable preferences and the impact that regulations can have on the function of intermediaries and advisors have both been largely neglected in the literature, thus offering further interesting avenues for future research.

Finally, given that scholars have observed heterogeneity in ESG rating criteria (Billio *et al.*, 2021), it will be important to study how regulatory development regarding ESG ratings will affect retail investors' demand for SRI, since greater standardisation and homogeneity among the rating agencies may facilitate investors' evaluation of the information provided and enhance their trust in the market's actors and its regulatory framework.

6.1 Policy and managerial implications

We have systematised the policy and managerial interventions that emerged from our analysis into four categories:

(1) Interventions to increase *public knowledge and information* aimed at developing the population's sensitivity towards SRI, their concern for environmental and social issues and awareness about the impact that these investments can have on society through educational campaigns. Interventions should also exploit the role of financial and government institutions in this regard. These interventions should act on the individual dimension of investors, increasing their level of education, financial literacy and awareness and influencing their internal factors such as attitudes, personal norms, values and ESG concern, to name just some.

(2) Interventions to change the *choice architecture* of the offer, as this variable can significantly alter an investor's decision-making process. The literature provides evidence on the strong efficacy of nudging investors towards sustainable choices by applying default options (Gajewski *et al.*, 2022; Hoffmann *et al.*, 2019).

(3) *Market interventions*. This category comprises government regulatory interventions intended to act on market-related attributes to promote the diffusion of SRI, affecting both the external environment and the investors' perceptions of the reliability of the SRI market and SRI market actors. For example, requiring mandatory labelling schemes for SRI could improve information accountability, standardisation and comparability among ESG ratings. Economic incentives and legal instruments could enhance investors' trust in financial institutions and increase their expectation for transparency. In this sense, developing the role of pension funds would be worthwhile.

(4) *Company interventions* that could impact both market-related factors and product-related factors. Company interventions proposed in the literature to date include the implementation of green marketing strategies, the implementation of CSR and non-financial disclosure, the setting up of a system to report on the real-world environmental and social impacts of SRI, advertising that exploits social identification and adopting different sustainability screening strategies.

These political and/or managerial interventions should facilitate the demand-supply interaction with the aim of increasing SRI retail investments and promoting the market for these financial products.

7. Conclusions

This paper identified the trends and characteristics of the literature on sustainable investments, answering RQ1. The number of papers being published on SRI underwent a dramatic rise in the last half decade, especially in Europe, despite being a very young research field. The predominant analytical approach has been quantitative, with heterogeneity in the journals publishing studies on SRI and no prevailing theory has been applied to date. We then identified four thematic areas in SRI research and highlighted several factors that emerge as strong drivers of socially responsible preferences, answering RQ2. Applying the findings of our literature review, we propose a conceptual framework based on the idea that retail investor decisions are subject to simultaneous influences coming from multiple perspectives, resulting in a model of mediated moderation that considers the interrelationship of all these drivers. This conceptual framework offers a reference point from which to answer RQ3 and to investigate, in an empirical manner, what drives investor preferences for SRI. The framework helps to gain a better understanding of the topic and fosters the development of the SRI marketplace, especially in view of national, regulatory and cultural differences, with political and managerial practical implications aimed at improving the retail demand for SRI.

The review presents two major limitations. First, we only considered English-language peer-reviewed paper; thus, the sample may not be exhaustive as other relevant literature may also exist in books, reports and working papers (i.e. the grey literature). Secondly, despite the thorough review protocol applied, we cannot exclude the possibility of having missed some pertinent articles or to have made some other inadvertent mistake in our analysis. Like any study, this work has its limitations, but it has also revealed new important avenues to pursue in future research.

Notes

1. The 2° Investing Initiative (2DII) is an independent, non-profit think tank working to align financial markets and regulations with the Paris Agreement goals.
2. The number of publications in 2023 is underestimated since it considers paper published up until September only.
3. Two other research assistants verified this coding.

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Corresponding author
Matteo Pasquino can be contacted at: m.pasquino@pm.univpm.it