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Shifting investors towards social responsibility: a narrative review of effective intervention strategies

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ABSTRACT

This article provides a comprehensive overview of the most promising behavioral interventions to foster socially responsible investment (SRI) among retail investors. Using the SHIFT framework, five key avenues that underpin sustainable behavior change are elaborated: harnessing social influences, embedding new investment habits, navigating individual influences, as well as feelings and cognitive drivers, and enhancing SRI's tangible impact. Significant barriers arise from the lack of comparability, reliability and tangibility of SRI information, exacerbated by low levels of SRI and financial literacy. Meanwhile, investors often perceive SRI as underperforming. Promising interventions include simplifying the decision-making context through labelling and defaults, tailoring information to specific motives and capturing the tangible impact of SRI to increase self-efficacy. Priming and framing techniques can be used to create a long-term focus, leverage social and personal norms, and activate self-conscious emotions such as guilt and pride, or align financial with ethical interests. Despite growing academic evidence on the drivers and barriers to SRI, this narrative literature review encourages more research that causally tests intervention strategies aimed at changing investor behavior toward socially responsible investing.

IMPACT STATEMENT

This study explores behavioral interventions to accelerate socially responsible investment (SRI) adoption among retail investors, addressing barriers such as low financial literacy, information overload, and skepticism about SRI's performance and tangible impact. Utilizing the SHIFT framework, the research identifies five pathways for fostering sustainable investment behaviors, including leveraging social influences, enhancing tangibility, and aligning financial with ethical motives. The findings offer actionable strategies for policymakers, educators, and practitioners—such as labeling, defaults, framing, and feedback mechanisms—that simplify decision-making and align financial with ethical motives. This review underscores the untapped potential of behavioral interventions in driving SRI adoption and calls for experimental research to validate these approaches across diverse contexts and investor profiles.

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1. Introduction

Pressing global crises such as climate change, biodiversity loss and social inequality require fundamental shifts to promote a sustainable and inclusive economic transformation. Against this backdrop, socially responsible investment (SRI) has been emphasized as an effective mechanism to promote this urgent change in corporate behavior (Heinkel et al., 2001; Pilaj, 2017). With the resulting pressing need of motivating investors to adopt social responsibility in their investment choices, public policy measures and intervention strategies by SRI providers must be based on sound behavioral research that explains investor behavior and how it can be changed. Despite the longstanding focus of behavioral scientists on

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the sustainable choices of individuals as consumers, there has been little attention paid to their influence in other societal roles, such as investors (Nielsen et al., 2021). Drawing on the framework of White et al. (2019), this narrative literature review aims to address individuals in their role as retail investors, shedding light on how to shift them towards SRI.

While there are significant strategic, practical and terminological differences (Sandberg et al., 2009), a common definition characterizes SRI as investments that integrate environmental, social and governance (ESG) criteria with financial objectives (Derwall et al., 2011; Sandberg et al., 2009; Wins & Zwergel, 2015). Strategies that are commonly distinguished for SRI are: The exclusion of certain industries (e.g. tobacco, fossil fuels); positive screening which focuses on companies with a high ESG rating; and the best-in-class approach, which selects the best ESG performers in their sector (Sandberg et al., 2009). More recently, impact investing has been added to these strategies, focusing on material, real-world change of the investment (Busch et al., 2021; Kölbel et al., 2020). Busch et al. (2021) distinguish between impact-aligned investments, which direct investments towards companies that deliver superior environmental or social impact, and impact-generating investments, which actively contribute to transformative change, for example through shareholder engagement. According to Sandberg et al. (2009), the most commonly used term besides SRI is ethical investment, which is used synonymously in this article.

Previous literature reviews have taken a broader view of the topic, including historical, regulatory, performance and SRI screening perspectives (Renneboog et al., 2008; Wallis & Klein, 2015), focusing primarily on potential barriers to SRI adoption (Paetzold & Busch, 2014), comparing findings from global SRI research across time and countries (Wins & Zwergel, 2015), or classified socially responsible (SR) investors (Chatzitheodorou et al., 2019). This narrative literature review, in contrast, focuses on feasible interventions to change investor choices. Behavioral interventions aim to change specific behaviors through a set of coordinated measures (Michie et al., 2011). A range of techniques can be employed, targeting either directly internal processes by addressing people's perceptions, cognition, abilities and preferences or modifying the external environment or choice architecture in which decisions are made (Abrahamse et al., 2005; Mertens et al., 2022; Michie et al., 2011).

This article pursues two primary objectives. Firstly, to categorize existing research on SRI behavior into two broad strands—studies that explain SRI preferences or profile SR investors, and studies that test interventions seeking to change investor behavior. Based on this categorization, the review aims to identify intervention strategies that have been studied in the SRI context, while highlighting substantial gaps in the literature (overview in Supplementary Appendix Table 2). This leads to the second objective of exploring the transferability of interventions from other sustainable behavior contexts that have not yet been systematically linked to investment behavior (overview in Supplementary Appendix Table 3). This approach offers a cross-contextual perspective on sustainable behavior while taking into account the specificities of the investment context. Behavioral interventions are inherently complex (Craig et al., 2008) and challenging to replicate, as their effectiveness depend on factors such as the intervention's target group, format, duration, and context (Michie et al., 2013). For interventions to be effective, it is essential to first develop a comprehensive understanding of the targeted behavior and its underlying behavioral processes in order to identify opportunities for change (Michie et al., 2005). While the extensive body of literature on behavioral interventions from other sustainable behavior contexts offers a promising potential for the SRI context, the context-dependent nature of these interventions and the complexity in designing them make a nuanced transfer to the investment context essential.

The article begins with an introduction to the SHIFT framework and a description of the applied narrative review method (cf. Baumeister & Leary, 1997; Snyder, 2019). Section three outlines the results of the literature review along the five behavioral intervention pathways of the SHIFT framework. The article concludes with a discussion section that synthesizes the results, highlights the practical implications, and offers general research suggestions for the SRI field.

2. Framework and method

The acronym SHIFT encompasses the five broad categories of social influences, habit formation, individual factors, feelings and cognition and tangibility, which White et al. (2019) identified as the most frequently occurring factors that encourage consumers to adopt sustainable behaviors. This framework is

applied to thematically analyze and structure the research on SRI behavior and to identify behavioral intervention avenues that have not yet been explored by research in the field.

Three major advantages make the SHIFT framework compelling for this specific narrative literature review: its comprehensiveness (1), its relevance to the investment context (2), and its relative actuality (3) compared to other frameworks and behavioral models.

The framework provides a holistic approach that incorporates individual, social and contextual factors to encourage sustainable behavior. Unlike other frameworks, like the work of Gifford (2014) and Peattie (2010), the SHIFT framework is more comprehensive and includes two key avenues for SRI: tangibility and cognitive aspects (White et al., 2019, p. 23). Financial assets are intangible in nature (Atasoy et al., 2022), represent a trade-off between immediate and long-term benefits (Hardisty & Weber, 2009), and involve high uncertainty, risk and complexity of choice for the individual (Hadar et al., 2013).

Therefore, strategies to improve tangibility, such as aligning the temporal preferences (cf. Hershfield et al., 2011; Zaval et al., 2015), and reducing the cognitive effort, for example, through SRI labeling (Bassen et al., 2019; Hartzmark & Sussman, 2019), prove particularly relevant in the investment context, making the framework highly suitable. While the investment context's characteristics require a nuanced application of the SHIFT framework that takes into account the differences with the consumption context, the long-held assumption that capital goods are completely different from consumer goods has proven unrealistic (Fama & French, 2007). SRI is a symbolic example of people treating financial assets as a form of consumer good (Fama & French, 2007). Individuals also tend to maintain a cross-contextual consistency between their sustainable consumption and investment choices (Brunen & Laubach, 2022; Williams, 2007), enhancing the transferability of consumer research findings to the investment context. R. Thaler (1980) has highlighted the central link between individual consumption and investment behavior, but the application of consumer behavior to financial research is limited (Clark-Murphy & Soutar, 2004). This paper demonstrates the flexibility and extendibility of the SHIFT framework to other behavioral domains, as also suggested by White et al. (2019, p. 37). Lastly, the SHIFT framework was published in 2019, making it a relatively recent addition to the literature that provides an overview of current research findings on sustainable behavior change.

This article adopts a narrative literature review approach. The review method is particularly useful for interdisciplinary work that aims to connect and synthesize different areas of research while developing new hypotheses (Baumeister & Leary, 1997; Snyder, 2019). The literature included in this review is drawn from the disciplines of finance, marketing and psychology in the areas of general financial research, sustainable consumer research and SRI research. Compared to a systematic review, the narrative approach allows for a broader focus on the topic and the review process can be customized to the specific research objective (Snyder, 2019). Therefore, it facilitates the research objective of systematically integrating sustainable consumer and financial behavior research, identifying transferable strategies from the consumer context and highlighting avenues for future research. The narrative review approach has also been successfully applied in other reviews on sustainable behavior, such as the classification of SR investors (Chatzitheodorou et al., 2019) or the review of the attitude-intention-behavior gap literature (ElHaffar et al., 2020).

The initial phase involved a comprehensive search of key papers in the SRI field. The articles selected for the review had to be peer-reviewed and conduct behavioral research in the field of SRI, while explicitly referring to retail investors, excluding research on institutional investors. First, the literature included in the earlier reviews of Chatzitheodorou et al. (2019), Paetzold and Busch (2014), and Wins and Zwergel (2015) was screened, which resulted in the identification of 25 articles. Further, a comprehensive search using a set of keywords in the Web of Science and Google Scholar database was conducted. The keywords used were 'invest*' or 'financ*' AND 'ethic*' or 'environment*' or 'social*' or 'responsib*' or 'green' or 'SRI' or *ecologic or *ESG or *sustainab. The list of results was manually screened against the inclusion criteria to ensure that irrelevant articles are excluded, while identifying duplicates. In this way, a total of 51 quantitative papers on the behavior of retail investors in the SRI field were identified. These key papers were subsequently divided into studies that surveyed explaining factors for SRI preference and choice, and (quasi-) experimental studies that causally tested interventions to change investor behavior (see Table 2 in the Supplementary Appendix). In addition, seven articles that employed qualitative methods, such as focus groups (Lewis, 2001), were also included. The results of these studies were

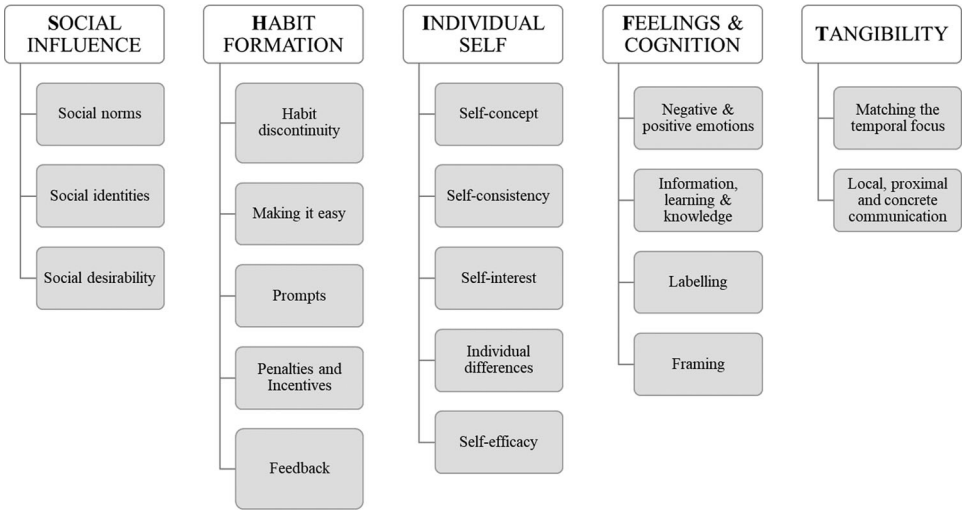

Figure 1. SHIFT framework by White et al. (2019), own illustration.

then thematically analyzed and clustered into the SHIFT dimensions (see Table 3 in the Supplementary Appendix).

3. Results

The results of the narrative literature review are presented in the following section along the five pathways that drive investors towards social responsibility (Figure 1). Key concepts are explained and placed in the financial context, highlighting the relevance of each of the five paths for the investment domain. Each subcategory of the five SHIFT factors is complemented by empirically tested behavioral interventions that encourage investors to choose ethical alternatives, as summarized in Table 1. The literature review identified nine confirmed intervention strategies in the SRI context. Missing evidence was enriched with established interventions from the White et al. (2019) review on sustainable consumption and systematically linked to investment behavior, resulting in 16 interventions that are considered transferable. Therefore, for each subcategory of the SHIFT factors, the review distinguishes between two types of evidence: intervention tested specifically in the SRI context (referred to as 'Confirmed SRI Intervention Strategy', or CSS) and interventions from other sustainable behavior contexts, referred to as 'Transferable Strategies' (TS). CSS are characterized by having been the subject of at least one study that has causally tested the effectiveness of the intervention in changing investor behavior toward SRI. References to the CSS studies are underlined in the text. TS, on the other hand, have only been tested in other contexts of sustainable behavior, not explicitly in the SRI context, and should be confirmed in future research.

3.1. Social influence

Despite the high level of privacy in investment decisions, people are generally strongly guided by social influences and investment decisions are not exempt from this (Hirshleifer & Hong Teoh, 2003). The susceptibility to social influence varies strongly among investors and has been found to depend on investment-related knowledge, self-image concerns as well as social needs for meaningful relationships (Hoffmann & Broekhuizen, 2009). Social influences are the starting point for the SHIFT framework, with the drivers being social norms (a), social identities (b), and social desirability (c). Intervention strategies that harness social influences have not yet been directly tested in the SRI context. However, the evidence on the social drivers of SRI suggests that interventions from other sustainable behaviors should be transferable.

3.1.1. Social norms

The unwritten rules and expectations prevalent in a society or group that shape the collective understanding of what is considered socially approved are referred to as social norms (Akerlof & Kranton,

Table 1. Strategies to SHIFT investors towards SRI.

	Transferable Strategies (TS)	Confirmed SRI intervention strategies (CSS)
SOCIAL INFLUENCES		
Remind people of injunctive or descriptive social norms to invest ethically (TS 1)	x	
Heighten the salience of the social identity as a SR investor (TS 2)	x	
Cue a social identity and then offer SRI funds that adhere to the values and preferences of that social identity (TS 3)	x	
Increase the observability of investment choice and encourage public commitments to invest ethically (TS 4)	x	
HABIT FORMATION		
Leverage discontinuity (e.g. life changes, regulatory changes) to break the habit of investing conventionally (TS 5)	x	
Present ESG information in an easily accessible way (CSS 1)		x
Make SRI the default option (CSS 2)		x
Use prompts that specify SRI as the desired choice (TS 6)	x	
Implement tax incentives for SRI (CSS 3)		x
Use small gift incentives for conventional investors (CSS 4)		x
Give investors feedback on the ESG impact or financial performance compared to conventional investments (TS 7)	x	
INDIVIDUAL FACTORS		
Positively associate SRI as an attractive investment choice that aligns the individual's self-concept (TS 8)	x	
Encourage self-consistency by reminding and praising their sustainable choices in the past or other domains (TS 9)	x	
Address investors' self-interests by communicating financial motives for SRI (CSS 5)		x
Target investors with tailored information, e.g. based on value- vs. profit-driven motives (TS 10)	x	
Address investors with characteristics that have been identified as drivers for SRI, such as strong personal norms for SRI (TS 11)	x	
Enhance the self-efficacy perception of investors (TS 12)	x	
FEELINGS AND COGNITION		
Subtly activate feelings of guilt (CSS 6)		x
Encourage feelings of warm-glow, positive affect or pride (TS 13)	x	
Provide explicit information on the SR nature of investments (CSS 7)		x
Increase investors' financial and SRI literacy (TS 14)	x	
Utilize SRI labels (CSS 8)		x
Use framing techniques (e.g. financial, expressive) (CSS 9)		x
TANGIBILITY		
Create a focus on the future, to match the long-term perspective of environmental sustainability (TS 15)	x	
Communicate about SRI and its consequences in a manner that relates to direct and local implications and addresses personal experience (TS 16)	x	

Note. Confirmed SRI intervention strategies (CSS) have been the subject of at least one study that has causally tested the effectiveness of the intervention in changing investor behavior toward SRI. Transferable interventions (TS) have only been tested in other sustainable behavior contexts, not explicitly in the SRI context.

2005). Subjective perceptions of norms generally influence financial behavior (Musa et al., 2024). Prevailing social norms (Adam & Shauki, 2014), the subjective perception of norms (Hofmann et al., 2008; Sultana et al., 2018), and normative expectations from the social environment, especially from the narrowest social environment (Gutsche, 2019), are highly relevant in explaining SRI choices and preferences. The literature review did not identify any studies that tested social norm interventions in the SRI field. However, social norm interventions, such as normative appeals, have been found to be effective in promoting a range of other sustainable behaviors (see Farrow et al., 2017 for a review). Therefore, it is proposed that interventions that make use of social norms are also likely to be effective in the investment context.

TS 1 The preference and choice of SRI will increase when normative messages are used, such as demonstrating that the peer group is also investing ethically.

3.1.2. Social identities

The aspect of a person's self-concept that is rooted in their membership of a particular social group is referred to as a social identity, which is derived, for instance, from religion, gender or nationality (Tajfel et al., 1979). Social identities can be situationally activated and people seek to align their actions in an identity-congruent way (Oyserman, 2009). A strong social identification with SRI is related to a higher

allocation of investments to SRI banks, particularly among investors who are less wealthy, young and highly educated (Bauer & Smeets, 2015). Whether interventions that situationally activate this social identity can effectively increase SRI behavior remains to be explored. It is proposed that, based on intervention studies from other sustainability contexts (e.g. water conservation, recycling, composting), such as White et al. (2014) and T. Schultz and Fielding (2014),

TS 2 heightening the salience of the social identity as a SR investor will increase the preference and allocation to SRI asset.

It has been shown that distinct social groups of SR investors, differing for instance in terms of gender, religion or political affiliation, place varying emphases on CSR issues. For example, women's portfolios tend to favor stocks with progressive labor practices for women and minorities and there are funds that explicitly target religious beliefs (Hood et al., 2014). Interventions leveraging in-group identification to promote SRI have not yet been tested. However, interventions using social identities have been shown to be effective in initiating sustainable behavior change and intentions (e.g. Ferguson et al., 2011; Rabinovich et al., 2012). It is therefore suggested that

TS 3 SRI providers can develop and offer specialized SRI products that are aligned with and cater to specific social identities. For example, cueing a religious identity and then offering SRI funds that adhere to the values of that religious identity will increase preference.

3.1.3. Social desirability

People tend to respond in ways that are considered socially acceptable or desirable (Green & Peloza, 2014). In the investment context, retail investors can leverage their ethical choices to publicly signal a positive image (Beal et al., 2005). Investment decisions are generally rather private in nature. However, people can actively choose to increase the visibility of their investments by, for example, discussing it with others (Hong et al., 2004) or joining platforms offering social trading services (Dorfleitner & Scheckenbach, 2022), while maintaining control over how much to disclose. Unlike norm-constrained institutional investors whose choices are publicly observable, retail investors generally do not hold sin-stocks to a lesser degree (Hong & Kacperczyk, 2009). This difference is attributed to the inherent unobservability of retail investor decisions (Hong & Kacperczyk, 2009). Furthermore, individuals who talk a lot about their investments, suggesting high image concerns, have been found to be more likely to invest in SRI (Gutsche et al., 2019; Riedl & Smeets, 2017).

The literature review did not identify any intervention studies that explicitly examine the potential of image concerns and social desirability in the context of SRI. However, research in other contexts of sustainable behavior suggests that social desirability can serve as a catalyst for behavior change (e.g. Baca-Motes et al., 2013; Green & Peloza, 2014). In order to leverage social desirability concerns effectively, intervention studies in the context of sustainable consumption (Green & Peloza, 2014) and resource conservation (Baca-Motes et al., 2013) have demonstrated that behavior needs to be observable and public commitments have been found to increase the willingness to act accordingly.

TS 4 Therefore, making the investment choice observable, e.g. by a personal advisory meeting or through social network platforms, and making public commitments to invest ethically will increase SRI preference and choice.

3.2. Habit formation

Stable contextual cues can encourage the formation of habits that are fairly automatic and persistent (Verplanken et al., 2008), such as consistently choosing certain types of assets. Investors may develop habits in their portfolio management, often refraining from updating their retirement portfolios (J. Choi et al., 2004) and adhering to default plans (Cronqvist & Thaler, 2004).

Therefore, using discontinuity to change unsustainable investment habits (a), making SRI an easier choice (b), utilizing prompts (c), as well as penalties and incentives (d), and giving feedback (e) can be strategically leveraged to disrupt unethical investment habits. Shifting investors towards SRI through habit disruption is

certainly not a straightforward approach. Unlike automatic habits, investment choices involve conscious control and high involvement, requiring adaptation to new information and market dynamics (Hadar et al., 2013). Nonetheless, several experiments have been conducted on SRI interventions that seek to change habits and insights from this research which can benefit SRI providers and policymakers.

3.2.1. Habit discontinuity

The habit discontinuity hypothesis proposes that major life events or interruptions can create opportunities for people to break existing habits and make significant changes in their behavior. When contextual cues are altered, it provides the opportunity to break out of one's habitual patterns and engage in new behaviors (cf. Verplanken et al., 2008), like including ESG criteria into the investment selection. Studies in the context of travel mode choices found that the disruption of the behavior's context or life changes can create a window of opportunity to change unsustainable habitual behavior (e.g. Bamberg, 2006; Verplanken et al., 2008). While this has not been tested for SRI, findings from Verplanken et al. (2008) and Bamberg (2006) are proposed to be transferable to the context of SRI.

TS 5 Thereby, consistent with the habit discontinuity hypothesis, contextual disruptions (e.g. regulatory changes, switch of bank) or life changes (e.g. retirement, birth of child) can provide an impetus to rethink habitual, conventional investment decisions and encourage investors to consider SRI.

3.2.2. Making it easy

Limited stock market participation by retail investors has been explained by the concept of participation cost, which entails direct transaction costs for trading (e.g. Vissing-Jorgensen, 2002), but also indirect costs of retrieving information and learning about the stock market (e.g. Christiansen et al., 2008). Those who perceive that they can't easily buy shares tend to withdraw from the stock market (East, 1993). It also appears that investors are reluctant to switch funds because of search costs (e.g. Sirri & Tufano, 1998). Adding ESG criteria to financial ones certainly increases complexity of choice. This might exhaust the cognitive limitations of investors (cf. Bassen et al., 2019; Gajewski et al., 2022) and result in SRI to be perceived as effortful and time-consuming (Gutsche & Zwergel, 2020). SR investors are significantly more confused from over-choice than their conventional counterparts (McLachlan & Gardner, 2004). Gathering necessary information for investing in SRI is perceived as a major barrier (Gutsche & Zwergel, 2020; Wins & Zwergel, 2016). The prevalence of negative screening (Berry & Junkus, 2013) might be explained by its lower complexity compared with holistic screening (Cahan et al., 2017). Pilaj (2017) proposes that cognitive limitations of investors and resulting market inefficiencies could be counteracted by using subtle tools that make SRI choices easier, such as defaults, simplifications and reminders. The results of Hartzmark and Sussman (2019), who examined the natural experiment of the introduction of sustainability rating label for mutual funds in 2016, imply that

CSS 1 making it easier to access and process ESG information will increase the choice of SRI (see also section on Labeling).

While defaults have been demonstrated to effectively influence other sustainable behaviors, the most prominent examples of default strategies come from financial behavior (Dolan et al., 2012). For example, people stick with the default instead of choosing their individual pension plan (Cronqvist & Thaler, 2004). Gajewski et al. (2022) found that the default method was most effective in steering investors toward SRI compared to messages and framing, with about half of the participants adhering to the default allocation.

CSS 2 Making SRI the default option will increase ethical investments.

3.2.3. Prompts

Spoken or written messages that are given before an activity takes place are referred to as prompts. They specify desired target behaviors and are considered to be easy to implement, which makes them cost-effective (Lehman & Geller, 2004). In line with the notion that attitudes need to be activated to influence behavior (Verplanken & Holland, 2002), prompts can be used to trigger socially responsible attitudes (cf. Moussaoui et al., 2019). Prompting strategies are effective for initiating pro-ecological

behavior (Osbaldiston & Schott, 2012) and in the financial context, they have been demonstrated to successfully increase the savings rates (Karlan et al., 2016). Providing information on the SR character of investments increases the allocation to SRI (Holm & Rikhardsson, 2008). Effective prompts need to be clearly defined, easy to follow and should be in close proximity to the investment choice (Austin et al., 1993). While prompting interventions have not been directly tested for SRI, it is assumed that evidence from other sustainable behavior contexts, such as recycling (e.g. Austin et al., 1993) and energy conservation (e.g. Moussaoui et al., 2019), can be transferred.

TS 6 Prompts indicating SRI as the desirable choice at the time of investment will be effective in activating the appropriate attitudes and consequently the decision to invest in SRI.

3.2.4. Penalties and incentives

By implementing penalties for conventional investments, like taxes or fees, or providing extrinsic incentives such as gifts, rewards, or tax cuts, SRI can become more attractive to investors (Rossi et al., 2019; Scholtens, 2005). Meanwhile, research also suggests that their implementation should be done judiciously. Extrinsic incentives are often associated with a limited short-term effect, whereby motivation depends on the continuation of the incentive (Cairns et al., 2010). This was illustrated by the example of Dutch investors, of whom only a fraction would hold on to their sustainable investments after the abolition of tax benefits (Scholtens, 2005). Further, extrinsic incentives can diminish intrinsic motivation (cf. Brodback et al., 2019) and might only trigger minimal effort (Ryan & Deci, 2000), such as allocating lower shares of the overall portfolio to SRI. Nonetheless, Scholtens (2005) found that about half of the growth in SR investments in green projects between 1995 and 2001 in the Netherlands could be attributed to a tax regulation that exempted the returns from income tax, suggesting that

CSS 3 tax policy can incentivize SRI, steering investors towards SRI.

Further, the results of Rossi et al. (2019, p. 19) imply that while there are 'pure social investors' who do not require monetary incentives or gifts,

CSS 4 small gift incentives can be effective in nudging rather conventional investors towards SRI.

3.2.5. Feedback

Feedback can be given on past performance of the individual (e.g. Abrahamse et al., 2007) or as a comparison to others (e.g. Schultz et al., 2007), concerning the ESG impact or financial performance compared to conventional assets. Providing feedback on the ESG impact might be a powerful and inexpensive method to encourage SRI and to empower investors to make more informed decisions, creating awareness, transparency and accountability. Nevertheless, feedback can also backfire. For example, the moral licensing phenomenon suggests that people sometimes reduce their commitment after exhibiting a moral or sustainable behavior (cf. Jordan et al., 2011). Furthermore, a boomerang effect has been found, wherein people who initially outperform others subsequently reduce their sustainable behaviors after receiving this feedback (Schultz et al., 2007). In the context of SRI practice, tools already exist to monitor the ESG impact of an individual's portfolio. However, the literature review did not identify any intervention studies testing feedback strategies specifically in the context of SRI. Evidence from other domains, such as energy use, suggests that real-time feedback can be effective in influencing behavior (e.g. Abrahamse et al., 2007). It is therefore suggested that

TS 7 positive feedback on the ESG impact of the investments will reinforce the individual's commitment to SRI.

3.3. Individual factors

Individual factors have received considerable attention from research in the SRI field. However, the literature review shows that intervention studies aimed at leveraging these individual motives are limited. The self-concept (a), and the need for consistency (b), as well as the role of self-interest (c), individual

differences (d), and perceived self-efficacy (e) constitute the individual factors that provide opportunities to shift investors towards SRI.

3.3.1. Self-concept

SR investors seem to perceive investment decisions as an extension of their self, being part of their lifestyle. This is also reflected in the notion that SR investors are frequently members of social engagement groups (Rosen et al., 1991) and environmental organizations (Gutsche et al., 2019). SRI can be instrumentalized to avoid negative symbolic associations with unethical business conduct, or to approach positive association with SR businesses (Glac, 2009, 2012). People generally tend to attribute positive things to themselves, while attributing negative outcomes to external or social causes (Mezulis et al., 2004). When given the opportunity to profit from selfish choice, self-concept protection methods may be used, such as the delegation of responsibility (e.g. Chang et al., 2016) or the exploitation of the so called 'moral wiggle-room', leaving the outcome of the selfish choice uncertain (Dana et al., 2007).

The aim of individuals to maintain a positive self-concept can potentially be utilized to increase investors' preference for ethical investments. However, this has not yet been demonstrated in the context of SRI. It is assumed that interventions that have successfully leveraged self-concept motives in other contexts of sustainable behavior, such as climate action and recycling behavior (e.g. Sparks et al., 2010) can be transferred to the SRI context.

TS 8 Positively associating SRI as an attractive investment choice that aligns the individual's self-concept, e.g. through self-affirmation techniques (cf. Sparks et al., 2010), will increase preference for SRI.

3.3.2. Self-consistency

Next to a positive self-concept, people want to perceive themselves as consistent, since inconsistency could lead to cognitive dissonance (Festinger, 1957) or self-discrepancy (Higgins, 1987), i.e. negative psychological consequences for the individual. Consistency can refer to a temporal dimension, meaning that individuals who have invested in SRI before are more likely to invest in SRI again (Rossi et al., 2019), or it can refer to cross-domain consistency, as indicated by studies for behavioral consistency between consumption and investment decisions (Brunen & Laubach, 2022; Williams, 2007) and between charity and SRI (Riedl & Smeets, 2017). On the other hand, research has found evidence for inconsistent behavior. Moral self-regulation theory posits that people tend to balance their costs stemming from morality and their moral self-worth around an acceptable level (Jordan et al., 2011). SR investors typically have both ethical and conventional investments in their portfolios (Dorfleitner & Nguyen, 2016; Riedl & Smeets, 2017; Webley et al., 2001), whereby only a small group of investors consistently invests in a SR manner (Dorfleitner & Nguyen, 2016).

Research has examined the drivers of higher SRI portfolio shares and thus the tendency for portfolio consistency. Pro-social attitudes, perceived consumer effectiveness, as well as return perception (Nilsson, 2008) and lower financial concern (Dorfleitner & Nguyen, 2016) were shown to increase SR portfolio shares. On the other hand, Riedl and Smeets (2017) found that people who are driven by social image motives and low intrinsic social preferences hold only a very small percentage of their portfolio in a SR manner. Therefore, these investors can benefit from being perceived as ethical without bearing associated costs of SRI. Men and less-educated investors are less likely to invest larger shares of their portfolio in a SR manner than women and higher-educated investors (Dorfleitner & Nguyen, 2016; Nilsson, 2008). Additionally, investors with a higher overall portfolio volume invest lower proportions in SRI (Dorfleitner & Nguyen, 2016; Riedl & Smeets, 2017).

While SRI research has shown evidence of both temporal (Rossi et al., 2019) and cross-domain consistency motives (Brunen & Laubach, 2022; Riedl & Smeets, 2017; Williams, 2007), no intervention studies have yet been conducted in this context. Drawing on finding from other contexts, such as sustainable consumption (e.g. Lanzini & Thøgersen, 2014), it is suggested that self-consistency motives can be used to shift investors towards SRI.

TS 9 Reminding people and praising their impact of past SRI choices or referring to their sustainable choices in other domains, will increase the likelihood of investors to choose ethical investments.

3.3.3. Self-interests

According to traditional finance theory (e.g. H. Markowitz, 1952), investment choices only cater to the self-interests of risk and return, which Lewis (2001) calls the 'normal' frame of financial decisions. Ethical considerations would induce inefficiencies by limiting the number of investment opportunities, thus they should not exist. SRI is thereby a strong deviation from this traditional, self-interested perception of investment decisions (cf. Bauer & Smeets, 2015; Beal et al., 2005). Nonetheless, research has suggested that SR investors often prioritize financial performance similar to conventional investors (Mackenzie & Lewis, 1999; McLachlan & Gardner, 2004; Rosen et al., 1991). Hence, aligning self-interest with ethical concerns is critical to encourage the adoption of SRI.

Despite meta-analyses indicating similar or superior performance of SRI funds (Friede et al., 2015; Wallis & Klein, 2015), retail investors often base decisions on their subjective SRI performance perception (Gutsche & Zwergel, 2020; Nilsson, 2008). Thus, a significant barrier to wider adoption of SR funds appears to be the negative perception of fund performance compared to conventional alternatives (Wins & Zwergel, 2016). Negative performance perceptions reduce the willingness to invest in a SR manner (Riedl & Smeets, 2017), while positive performance perceptions lead to a higher probability of becoming a SR investor (Dorfleitner & Nguyen, 2016) and a higher portfolio share (Nilsson, 2008). Generally, there seems to be a certain willingness for financial sacrifices (Bauer et al., 2021; Gutsche & Ziegler, 2019; Renneboog et al., 2011; Rossi et al., 2019). Furthermore, SR investors are more inclined to keep worse performing SRI than conventional investments (Renneboog et al., 2011; Webley et al., 2001).

To encourage broader adoption of SRI among investors who are hesitant to engage in SRI, especially those influenced by negative performance perceptions (Wins & Zwergel, 2016), emphasizing self-interested motives may be effective. Døskeland and Pedersen (2016) field experiment compared moral to financial framing for SRI and found that

CSS 5 communicating financial motives leads to a higher preference and choice probability of SRI.

3.3.4. Individual differences

Research has identified two investor clusters: individuals that are rather return-driven and those who tend to integrate their values and principles into the investment decision (Brodback et al., 2019; Derwall et al., 2011; Glac, 2012). These groups differ significantly in their SRI profitability perceptions, financial literacy, personal values, and sense of moral obligation to invest ethically (Brodback et al., 2019). They also vary in risk preferences, with the return-driven segment being less risk-averse (Brodback et al., 2019; Lagerkvist et al., 2020). Furthermore, the clusters exhibit differences in their level of moral reasoning as well as CSR expectations (Glac, 2012) and their SRI screening preferences (Derwall et al., 2011; Lagerkvist et al., 2020).

The literature review did not identify any intervention studies that specifically tailor SRI arguments to these investor segments. However, evidence from other contexts, such as the intervention study on energy consumption by Abrahamse et al. (2007), demonstrates that tailored information can be effective in inducing behavior change. Accordingly, it is proposed that

TS 10 the distinct perceptions and motives for SRI of the two investor segments should be addressed through tailored information.

SRI is generally driven by social preferences (Bauer et al., 2021; Brodback et al., 2019; Nilsson, 2008; Riedl & Smeets, 2017; Wins & Zwergel, 2016) and altruistic values, while higher egoism scores are inversely correlated with SRI (Brodback et al., 2019; Jansson & Biel, 2011). SR investors perceive greater moral obligation and personal norms to invest ethically (Brodback et al., 2019; McLachlan & Gardner, 2004). Pro-social attitudes towards addressed issues enhance SRI allocation (Nilsson, 2008; Williams, 2007). Furthermore, heightened environmental consciousness drives willingness to sacrifice returns (Gutsche & Ziegler, 2019).

In line with the literature on sustainable consumers, women (Tippet & Leung, 2001; Wins & Zwergel, 2016), as well as younger (Rosen et al., 1991; Tippet & Leung, 2001), and highly educated individuals (Rosen et al., 1991; Rossi et al., 2019; Tippet & Leung, 2001) are more likely to invest in a SR manner.

Other studies find no or only low exploratory power of sociodemographic factors (McLachlan & Gardner, 2004; Glac, 2012; Gutsche et al., 2019; Lagerkvist et al., 2020; Williams, 2007).

Laroche et al. (2001) have suggested that environmentally conscious consumers are the most responsive to sustainability appeals and should therefore be specifically targeted. Research has highlighted differences in motives, values and, attitudes (Wins & Zwergel, 2016) and screening preferences (Zwergel et al., 2019) between interested SRI investors and conventional investors not interested in SRI. Therefore, drawing on the extensive research that has studied the characteristics of SR investors compared to conventional investors that are not interested in SRI, such as personal norms, altruistic values and demographic variables, it is proposed that

TS 11 targeting investors with characteristics that have been associated with SRI preferences will increase the success likelihood of ethical investment promotion.

3.3.5. Self-efficacy

Bandura (1977) describes self-efficacy as a person's belief in their ability to execute the behavior effectively. Translated to the SRI context, self-efficacy describes the confidence in their ability to choose SRI effectively when targeting ESG issues.

Investors who are generally doubtful of the effectiveness of SRI are unlikely to choose it (Brodback et al., 2019; Riedl & Smeets, 2017) and this perceived effectiveness drives the percentage invested in a SR manner (Nilsson, 2008; Wins & Zwergel, 2016). Trust in ESG claims increases the preference for SRI (Wins & Zwergel, 2016), while distrust and scandals create a major obstacle for investors (Gutsche & Zwergel, 2020; Webley et al., 2001). Altruistic values (Brodback et al., 2019) and environmental attitudes (Iyer & Kashyap, 2009) are associated with efficacy perception. Berry and Junkus (2013) show that investors prefer more holistic approaches rather than widely applied negative screenings. Nonetheless, although investors generally have a higher willingness-to-pay (WTP) for SRI, the actual level of ESG impact does not translate into a higher WTP for these investments, leading Heeb et al. (2023) to warn of a significant risk of greenwashing.

For SRI to gain popularity, investors must believe in their own efficacy to initiate change (Nilsson, 2008; Wins & Zwergel, 2015, 2016). Although not directly tested in the SRI context, impact messages have repeatedly been shown to be effective in increasing sustainable behavior (cf. Sheng et al., (2023) for a review). It is therefore assumed that

TS 12 enhancing the self-efficacy perception of investors, e.g. by making the positive impact of their investment choices transparent, will increase both initial as well as subsequent SRI.

3.4. Feelings and cognition

Dual process theories suggest that people make judgments based on two distinct mechanisms: an affective reaction or a more deliberate, cognitive process (e.g. Chaiken, 1980; Petty & John 1986). The first part of this section discusses the affective route, i.e. the influence of negative and positive emotions (a) in motivating investors to adopt SRI. Emotions play a significant role in risky decision-making, making them critical for investment choices that are characterized by uncertainty and risk (Kuhnen & Knutson, 2011). The second part outlines the highly relevant cognitive processes in SRI decision-making by harnessing information, learning and knowledge (b), labeling (c), and framing (d) processes to shift investors towards SRI. The complexity of financial markets requires extensive information processing (Hadar et al., 2013). Furthermore, limited financial literacy has been identified as a central barrier to stock market participation (van Rooij et al., 2011) and sound financial behavior (Mireku et al., 2023).

3.4.1. Negative and positive emotions

Negative emotions, such as guilt, sadness and fear have been associated with SRI (e.g. Anderson & Robinson, 2019; Mackenzie & Lewis, 1999). Lagerkvist et al. (2020) found that negative emotions, but not positive emotions towards SRI, to influence investment behavior. Specifically, they found negative emotions towards SRI funds led to more inconsistent decision-making, potentially due to impulsive responses

or reduced attention to sustainability features. Guilt arises when people feel responsible for the environment (Kaiser & Shimoda, 1999), with the understanding of one's moral responsibility predicting the relative importance of ethicality in investment decisions (Brodback et al., 2019). Generally, Mackenzie and Lewis (1999) found that SR investors are often driven by their guilty conscience. Moreover, fear can be a powerful motivator (Li, 2014). Extreme weather conditions in Sweden in 2014 seem to have fueled fears of future environmental disasters, which in turn prompted people to shift their retirement portfolios towards green investments (Anderson & Robinson, 2019). The activation of negative emotions can be used to increase SRI. An experimental study, Gevorkova et al. (2024) showed that inducing guilt through autobiographical recall led to a greater willingness to invest in SRI and to sacrifice returns.

CSS 6 Banks can use subtle tools, such as making people aware of their personal norms and attitudes or autobiographical recall, to activate (anticipated) guilt of investing in harmful businesses.

On the other hand, warm glow, a positive feeling which is induced by the act of giving, has been found to increase the utility people derive from and the willingness to pay for SRI (Gutsche et al., 2019; Gutsche & Ziegler, 2019; Heeb et al., 2023). Although interventions that leverage positive emotions have not been directly tested in the context of SRI, evidence from other sustainability domains suggests their potential effectiveness (e.g. Antonetti & Maklan, 2014; Myers et al., 2012; Peter & Honea, 2012). For instance, the experiment conducted by Antonetti and Maklan (2014) demonstrated that eliciting feelings of pride resulted in an increase in sustainable consumption. Consequently, it is proposed that

TS 13 encouraging feelings of warm-glow, positive affect or pride as a result of investing ethically can increase the likelihood of subsequent SRI.

3.4.2. Information, learning and knowledge

Because individuals must predict unknown outcomes within a complex decision-making process and given the high consequences involved (Kahn & Baron, 1995), investment choices require a high degree of involvement, financial literacy and attention (Hadar et al., 2013). In high-involvement decisions, people typically engage in extensive information search to increase satisfaction (Punj & Staelin, 1983) and reduce the risk (Bennett & Harrell, 1975).

Studies suggest that investors feel poorly informed on ethical alternatives by their bank, which has been described as a major barrier for interested investors to turn their interest into action (Gutsche & Zwergel, 2020; Wins & Zwergel, 2016). Investors often do not consciously recognize the importance of SRI information on their decision-making, but only use it when provided (Holm & Rikhardsson, 2008). Meanwhile, information needs to be reliable, being validated by third parties or stemming from an audited or regulated document (Cohen et al., 2011).

CSS 7 Therefore, providing investors with explicit information on the SR nature of investments increases their likelihood of investing in SRI assets, as well as the allocation decisions (Holm & Rikhardsson, 2008), especially for those who declare to be concerned about social responsibility (Barreda-Tarrazona et al., 2011).

The general education and knowledge levels have been shown to determine investors' preference, willingness and ability to choose SR assets (Bauer & Smeets, 2015; Nilsson, 2008; Rossi et al., 2019; Tippet & Leung, 2001). A widespread lack of financial knowledge is understood to be a major barrier to the adoption of SRI practices (Anderson & Robinson, 2022; Borgers & Pownall, 2014) and objectively measured financial literacy is an important driver of SRI (Gevorkova et al., 2024; Gutsche et al., 2023). Anderson and Robinson (2022) study provides evidence that the complexity inherent in financial decisions poses a substantial obstacle for individuals who are environmentally engaged. Further, SRI literacy differs, with knowledge of SRI related concepts (Wins & Zwergel, 2016) and of SRI-related standards, regulations, norms (Filippini et al., 2024; Strauß et al., 2023) driving SRI. Although educational interventions to enhance financial or SRI literacy have not been studied within the context of SRI behavior, research from other domains of sustainable behavior indicates that increasing knowledge on the topic can effectively drive behavior change (e.g. Mobley et al., 2010).

TS 14 educational campaigns aimed at improving the financial and SRI specific literacy of retail investors will form a pivotal strategy to promote the adoption of SRI.

3.4.3. Labeling

Information overload is recognized as a significant barrier to making investment decisions (Agnew & Szykman, 2005). ESG information has increased dramatically, while available information is often not comparable due to lack of reporting standards (Amel-Zadeh & Serafeim, 2018). Inconsistencies in the scope and methodology of SRI ratings have been linked to systematic measurement errors in SRI ratings (Berg et al., 2022; Chatterji et al., 2016; Dorfleitner et al., 2015). Incorporating non-financial attributes to the investment choice adds layers of complexity (Anderson & Robinson, 2022) and is likely to result in higher confusion (Borgers & Pownall, 2014). Therefore, labeling of SRI products is a compelling solution (Gutsche & Zwergel, 2020). The simplified and compressed information display of ESG criteria by labels reduces the cognitive effort of information gathering and assessment to a minimum, which is especially effective for intuitive decision makers (Bassen et al., 2019). Labels, transparency logos and sustainability certifications have been shown to successfully shift investments towards SRI (Bassen et al., 2019; Hartzmark & Sussman, 2019) and increase investors' willingness to sacrifice returns (Gutsche & Ziegler, 2019).

CSS 8 The introduction of labels for SRI will increase the choice of ethical investments (Hartzmark & Sussman, 2019), especially for investors with a predominant involvement of the automatic system (Bassen et al., 2019).

3.4.4. Framing

The way information is presented or communicated influencing the subsequent actions individuals take, which is referred to as framing (Døskeland & Pedersen, 2016). Gajewski et al. (2022) assume that the financial market environment is less susceptible to ethical decision-making because people's mental framework is focused on money. Consequently, investors may not even recognize the situation as an ethical decision. Framing techniques can be used to make investors think about the ethicality of their investment choice (Glac, 2009), focus on a fairness moral foundation (Liu & Peifer, 2022), or match SRI with the monetary mental frame (Døskeland & Pedersen, 2016). Compared to a financial frame, Glac (2009) found an expressive choice frame that incorporates values and social beliefs into the investment decision fosters SRI. Døskeland and Pedersen (2016) showed that information on SRI framed as financially lucrative to be generally more effective than a moral framing, especially when addressing wealthy investors (Døskeland & Pedersen, 2021).

CSS 9 Framing investors, e.g. with a financial framing (Døskeland & Pedersen, 2016), expressive framing (Glac, 2009), or fairness-focused reasoning (Liu & Peifer, 2022) can increase the likelihood of investors to choose SRI.

3.5. Tangibility

One obstacle to overcome is to make SRI implications more tangible. Investment assets are inherently intangible (Atasoy et al., 2022) and compared to tangible consumer goods, their utility lies in future returns (Hardisty & Weber, 2009). The abstract and vague ecological and social impact of investment products amplifies the intangible nature of investments. Therefore, matching the temporal focus (a) as well as using local, proximal, and concrete communication (b) constitute the final driver of tangibility within the SHIFT framework. As investment assets are intangible, the subcategory 'encouraging the desire for intangibles' of the original framework is excluded from this review.

3.5.1. Matching the temporal focus

Temporal considerations are crucial in both environmental sustainability and investment, both involving a trade-off between immediate gains and long-term impacts (Hardisty & Weber, 2009). In line with

hyperbolic discounting, Hardisty and Weber (2009) found environmental outcomes to be discounted similarly to financial ones. Ecological sustainability is often perceived as future-oriented, which contradicts people's present orientation and leads to future ecological gains being perceived as less desirable in the present. In contrast to conventional investors, ethical investors tend to have longer investment horizons (Sultana et al., 2018), holding funds for longer time frames (Riedl & Smeets, 2017), while also demonstrating greater loyalty to their SR funds compared to their conventional ones (Peifer, 2014).

The inability of retail investors to correctly forecast consequences of their savings and investment choices has led researchers to develop tools that make future financial outcomes more tangible, present framed and thus attractive (Thaler & Benartzi, 2004). In a similar manner, research in the ecological context suggests that encouraging people to focus more on future benefits of pro-environmental actions (Reczek et al., 2018) or to focus on future generations or legacy motives can reduce the present-focused bias and increase sustainable actions (e.g. Zaval et al., 2015). The literature review did not identify any studies testing interventions that elicit a future focus to promote SRI. However, based on evidence in other sustainable behavior contexts (e.g. Reczek et al., 2018; Zaval et al., 2015) and the results of Hershfield et al. (2011), which showed that connecting people to their future selves increased the willingness to invest in retirement savings, it is assumed that

TS 15 encouraging people to identify with their future selves or a long-term focus (e.g. retirement saving, legacy motives, future outcome tools) will lead to a higher willingness to invest in SRI assets.

3.5.2. Local, proximal, and concrete communication

Psychological distance captures the perceived detachment in terms of time, space, social relation, or probability (Spence et al., 2012). Global environmental challenges, such as biodiversity loss or ocean acidification, may seem abstract and geographically distant from one's immediate surroundings. People also tend to perceive a social gap between themselves and those who seem to be directly impacted by the issues (Spence et al., 2012; Weber, 2006). This spatial and social separation and lack of concreteness experienced by individuals can create an impression of remoteness, thereby reducing personal relevance and engagement with the issue. This, in turn, is associated with lower levels of awareness, weaker attitudes and a reduced willingness to act (Spence et al., 2012; Weber, 2006). Extreme weather events, such as exceptionally high local temperatures, were found to act as 'wake-up calls' (D. Choi et al., 2020, p. 1113), prompting people to sell stocks in carbon-intensive companies (D. Choi et al., 2020) and shifting retirement portfolios towards green investments (Anderson & Robinson, 2019).

Therefore, next to the temporal dimension, communication strategies can help to overcome the abstractness, psychological, social or geographical distance from environmental issues. Although this has not been directly examined in the context of SRI, research from other domains, including that of sustainable consumption (e.g. Reczek et al., 2018) and energy use (e.g. Spence et al., 2012), suggests that

TS 16 local and proximal communication, as well as addressing personal experience and communicating concrete, personally relevant ESG issues, will help to make the issues more tangible and thus foster SRI.

4. Discussion

Retail investors who channel their capital into socially responsible business practices could have significant potential to change the way companies operate. Behavioral interventions offer promising avenues to accelerate the adoption of SRI among retail investors. However, most behavioral research has concentrated on individuals in their role as consumers, often overlooking other important roles, such as that of investors (cf. Nielsen et al., 2021).

4.1. Practical implications

In this article, a narrative literature review approach has enabled the systematic identification of behavioral intervention strategies aiming to change retail investor behavior toward SRI. Table 1 provides an overview of the identified interventions, which should serve as a valuable resource for policy makers,

practitioners and educators. The interventions are categorized into two groups: (1) strategies confirmed in the SRI context by at least one study (CSS), and (2) strategies tested in other sustainable behavior contexts and considered transferable to SRI (TS).

The literature review has demonstrated that in the context of SRI, key obstacles stem from information costs, issues of information overload and low financial and SRI literacy (e.g. Anderson & Robinson, 2022), as well as skepticism of SRI impact (e.g. Nilsson, 2008). Additionally, negative performance perceptions prevail among interested investors, who tend to remain passive in acquiring SRI information (Wins & Zwergel, 2016). Providing investors with feedback on the ESG impact of their investments (TS 7), focusing on the local, proximal and immediate implications (TS 16), enhancing financial and SRI literacy (TS 14), making SRI the default choice (CSS 2), and using labels (CSS 9) to simplify the decision context (CSS 1) have the potential to lower information costs and help link SRI to tangible implications while reducing impact skepticism. In addition, targeting distinct investor groups with tailored messages and information, e.g. by social identity (TS 3), the primary investment motive of values or profit (TS 10), or leveraging social norms (TS 1), self-consistency motives (TS 9), and thereby activate negative (CSS 6) or positive affect (TS 13), recognizes that investors have heterogeneous barrier perceptions and motives for SRI (cf. Wins & Zwergel, 2016; Zwergel et al., 2019). A combination of interventions may be beneficial (Michie et al., 2011; White et al., 2019) in convincing investors to adopt SRI (Gajewski et al., 2022).

4.2. Further research suggestions

The literature review has demonstrated that behavioral SRI research has dominantly focused on explaining SRI preferences rather than on behavior change of investors, while mostly relying on survey methodologies (see Supplementary Appendix Table 2 for an overview of methodologies). Experimental approaches to test causal effects of behavior change interventions remain understudied, with most experiments confined to laboratory settings. Consequently, more intervention studies are needed in the SRI context. Given the high-stakes nature of financial decisions, there is also a pressing need for more field experiments to provide tangible, real-world consequences and thus increase external reliability of behavior change interventions towards social responsibility. Some central measures for the SRI context - such as penalties and incentives, feedback on the ESG impact, tangibility enhancing techniques, and intervention strategies leveraging social influences or addressing perceptions of inferior returns - lack sufficient evidence in the SRI literature and should be subject to research in the field. Although the transferable strategies (TS) from other sustainable behavior contexts are promising, they have yet to be empirically confirmed in the SRI context. Hence, future experimental research is essential to test their applicability and effectiveness in fostering SRI behavior.

Additionally, while the confirmed SRI strategies (CSS) provide valuable insights, their evidence is often limited, frequently relying on a single study. With few exceptions (e.g. Døskeland & Pedersen, 2021), SRI intervention research has primarily focused on identifying main effects, neglecting meaningful consideration of investor heterogeneity (cf. Bryan et al., 2021). Moreover, research has been predominantly confined to the United States and Europe (Wins & Zwergel, 2015) and to 'WEIRD' samples overall (i.e. Western, educated, industrialized, rich, and democratic) (cf. Henrich et al., 2010). This underscores the need for further research to test these strategies across different conditions (e.g. frequency, duration, medium, intervention combinations), contexts and target groups (cf. Bryan et al., 2021; Michie et al., 2013). For instance, SRI framing experiments have yielded mixed evidence regarding the effectiveness of financial versus moral framing (Døskeland & Pedersen, 2016; Glac, 2009), highlighting the need to identify which type of framing works best for specific contexts and investor segments (cf. Døskeland & Pedersen, 2021).

4.3. Conclusion

This narrative literature review categorizes the behavioral SRI literature into five pathways for investor behavior change, using the SHIFT framework introduced by White et al. (2019). The review provides practitioners with an overview of promising intervention strategies to encourage a shift toward SRI. By synthesizing existing knowledge and identifying promising avenues for future research, this review

contributes to the growing body of literature on SRI. It aims to inspire further intervention research in the field and promote the exploration of these strategies through meaningful experimental studies.

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Data availability statement

Data and materials to support the findings presented in this article are available on request from the corresponding author.

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