Socially Responsible Investing – Understanding Investors' Motivations*

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Abstract

By letting more than 3,000 clients of financial institutions play an incentivized investment game, we provide field experimental evidence on the determinants of socially responsible investment decisions. Our results show a positive link between personal values, beliefs, and preferences for socially responsible investments. To better understand their investment decisions, we expose participants to four experimental manipulations. Our results suggest that how responsible funds are advertised substantially influences participants' decisions. When individuals are able to donate to a charity prior to their investment decision, they are less likely to invest responsibly. We find that public image concerns are not an important determinant of socially responsible investments. Endorsements through ethical labels can trigger more responsible investments, but are necessary only for individuals with low beliefs in the effectiveness of social responsibility. Further, a restricted investment universe positively affects socially responsible investment allocations.

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1 Introduction

Socially responsible investing (SRI) deals with the incorporation of non-financial values in investment decisions. Instead of basing their investment decisions merely on the risk and return of an asset (Lintner (1965); Sharpe (1964)), socially responsible investors incorporate social norms and altruistic, political, or religious values in their investment decisions (Guenster (2012); Hong and Kacperczyk (2009); Hong and Kostovetsky (2012); Kumar et al. (2011); Peifer (2010)). A developing strand of literature uses surveys and experiments to analyze the motivations of socially responsible investors (Brodback et al. (2019); Døskeland and Pedersen (2016); Riedl and Smeets (2017); Jansson and Biel (2011); Nilsson (2008, 2009); Gutsche et al. (2016); Wiesel et al. (2016); Wins and Zwergel (2016)).

We contribute to this literature by conducting a field experiment with more than 3,000 clients of three French financial institutions. The participants take part in an incentivized investment game with an actual prize of €5,000. They are required to determine how they would invest the €5,000 prize money among conventional and responsible assets. That way, we are able to link revealed preferences for SRI, which we elicit in the investment game, to self-stated beliefs about the effectiveness of social responsibility and personal values. Our findings indicate that higher beliefs in the effectiveness of social responsibility and altruistic values translate into more responsible investments. These findings thus externally validate the relevance of values and beliefs for socially responsible investment decisions we have identified in previous work (Brodback et al. (2019)).

Another benefit of our experimental setting is that we are able to dig deeper into the drivers of socially responsible investments at an individual level. To do so, we expose the participants to four experimental manipulations: moral licensing, public image concerns, ethical labels, and investment universe. This enables us to assess how these four external factors affect responsible investment decisions.

All participants have the possibility of donating a fraction between 0 and 100% of the potential prize to well-known charities. As a first manipulation, we vary whether the possibility to donate occurs before or after the investment game. How much individuals give back is commonly used as measure for pro-social preferences and has been found to be positively related to socially responsible investments (Nilsson (2009); Riedl and Smeets (2017); Simon (1993); Wiesel et al. (2016)). However, recent evidence in marketing and psychology suggests that pro-social behavior might have adverse effects on subsequent decisions – a phenomenon coined as moral licensing. The idea of moral licensing is that previous pro-social behavior increases the self-image of an individual who then feels "licensed" to refrain from subsequent pro-social behavior (e.g., Mazar and Zhong (2010); Cornelissen et al. (2013); Blanken et al. (2015); Miller and Effron (2010); Merritt et al. (2010)). Initially discovered in the domain of political correctness and prejudice against ethnicity or sex (Monin and Miller (2001)), the literature finds licensing effects for a

variety of pro-social behaviors in the field and in laboratory settings. In field experiments, previous pro-social behavior such as recycling or lower water consumption has been linked to increased subsequent resource and energy consumption (Catlin and Wang (2013); Tiefenbeck et al. (2013)). Laboratory experiments find various forms of increased selfish behavior (Mazar and Zhong (2010); Khan and Dhar (2006); Cornelissen et al. (2013); Gino and Margolis (2011); Clot et al. (2014); Sachdeva et al. (2009)) and lower self-reported intentions for pro-social behavior (Conway and Peetz (2012); Jordan et al. (2011)) after a pro-social framing. Interestingly, merely imagining pro-social behavior is sufficient to observe licensing effects (Khan and Dhar (2006); Cornelissen et al. (2013); Gino and Margolis (2011); Clot et al. (2014); Conway and Peetz (2012); Sachdeva et al. (2009); Jordan et al. (2011)). We find strong and consistent evidence that participants who receive a pro-social manipulation before the investment game are subsequently less likely to invest responsibly. Further results for this licensing effect suggest that only individuals with high beliefs in the effectiveness of social responsibility seem to feel comfortable to engage in less subsequent pro-social behavior because they might feel they have done enough good already. This result suggests a situational saturation or personal limit of social responsibility that might ultimately counteract any prevalent intrinsic motivations. In addition, we do not find licensing effects for individuals that opted not to donate to charity. Our results are rather indicative that these individuals feel guilty, resulting in compensatory behavior. Participants who had the chance to donate before the investment game but did not donate allocate a *higher* percentage to socially responsible funds subsequently.

As a second manipulation, we vary whether the investment allocation of the potential winner is publicly announced on the institution's website. In their seminal paper, Riedl and Smeets (2017) are the first to look into the domain of image concerns and responsible investments. They find that investors who talk in private about their investments are more likely to invest responsibly. Private communications can however induce social desirability effects that bias individuals to present themselves favorably (e.g., Levitt and List (2007)). Image concerns have been shown to evoke different behavior between public and private domains (Ariely et al. (2009); Bénabou and Tirole (2006, 2010); DellaVigna et al. (2012); Ellingsen and Johannesson (2008); Friedrichsen and Engelmann (2018)). As far as we know, there is no study on public image concerns and SRI. Our results do not suggest that public image concerns are a significant determinant of socially responsible investment allocations. It hence seems that our participants do not exhibit social pressure to invest responsibly when their choices are made public.

In a third manipulation, we vary whether socially responsible funds receive an ethical label. A socially responsible fund that is endorsed by an official label might signal quality and trustworthiness to prospective investors. Individuals who are considering responsible investments might consequently be inclined to invest. Previous research finds labeling

to be effective (Bassen et al. (2018); Døskeland and Pedersen (2016)), but does not use an official sponsor for the label. For our manipulation, we vary whether responsible funds receive a certification-label of the French national organization for standardization, AFNOR. Our results suggest that labels relate positively to the percentage of SRI held, but not to the decision to invest responsibly. For individuals with low perceived effectiveness of social responsibility, an ethical label is also positively related to the decision to invest responsibly. For individuals with high perceived effectiveness, we do not find a significant relation. These results suggest that individuals with low beliefs in the effectiveness of socially responsible behavior seem to profit from endorsements via labels. Individuals with relatively high beliefs do not require additional endorsements, potentially because they are already convinced that SRI is useful.

Research in behavioral finance has identified a tendency for individuals to naively diversify. That is, instead of reaping the benefits of diversification (Markowitz (1952); Sharpe (1964)), individuals allocate a share closer to 1/N over all N offered assets, potentially because they are overwhelmed by the complexity of the decision (Benartzi and Thaler (2001, 2007)). Huberman and Jiang (2006) use a substantial amount of actual 401(k) pension plans to show that individuals follow easy heuristics and tend to evenly distribute among their held assets. Notably, these diversification effects also extend to individuals with advanced financial literacy and can be verified for a variety of presentation formats (Langer and Fox (2005)) and for equity portfolios (Goetzmann and Kumar (2008)). As fourth manipulation, we vary the investment universe for participants. Participants have to allocate their potential prize either between two or five mutual funds. In both scenarios, one fund is socially responsible, respectively. Our results indicate that individuals who allocate their prize money between two instead of five funds are significantly more likely to invest responsibly. Moreover, they allocate higher percentages to SRI funds and this finding is consistent for individuals regardless of their beliefs about the effectiveness of social responsibility. We cautiously interpret the results of our manipulation as follows. Limiting the investment universe does significantly increase both the choice for, as well as the percentage invested in SRI. The average percentage is significantly different from a naive 1/N strategy, however. We argue that while a reduction in offered investment products does evoke more responsible investments, the personal values and beliefs of investors might be paramount. Compared to a naive 1/N diversification, we find an over-investment into SRI when two and five funds are available to invest in. More research on the interplay between values and behavioral biases such as the diversification heuristic is needed, especially as values are manifested in the self and might have a substantial influence on investment decisions (Schwartz (1992); Fama and French (2007)).

This paper proceeds as follows. Section 2 discusses the experimental design, the implementation, and descriptive statistics. In section 3, we first investigate how

participants' personality characteristics relate to preferences for social responsibility as measured in the investment game. Thereafter, we assess the experimental manipulations. We conclude and discuss practical implications in section 4.

2 Experimental Design

2.1 General Setup and Implementation

We conduct the field experiment in conjunction with three major French financial institutions. Clients of two institutions received an e-mail informing them about an online questionnaire, while on the third institution's website, we placed a link to the questionnaire during "La Semaine de l'ISR" (since renamed "La Semaine de la Finance Responsable", a yearly weeklong event in France devoted to the awareness of socially responsible investments). The questionnaire was introduced as a collaboration between the respective financial institution and the Toulouse School of Economics. It was further introduced more generally as a way to better meet the client's needs, and not SRI specific.

The questionnaire is included in Appendix A. Central to our experiment is an investment game (see item 2 of Appendix A). In the invitation to participate, as well as upon starting the questionnaire, the 3,092 participants were informed that one participant will be randomly selected to win a prize of €5,000. We required participants to assume they have won this prize. All participants could further decide whether they want to donate parts of their potential prize to a charity. As evident from item 1 in Appendix A, we assured that participants did not feel pressured into giving.[1]

The participants' task in the investment game was to indicate how they would allocate their prize to a number of mutual funds of their respective financial institution. When they faced the allocation decision, participants learned that the funds are actually existing and were also able to consult the funds' prospectuses to make an educated investment decision. The choice set for an investment included conventional as well as responsible mutual funds. Participants were free to allocate their prize among all presented mutual funds. We obtain two main variables of interest from the reported investment allocations. With the binary variable *SRIChoice* we measure whether an individual opts to invest into an SRI fund or not. The variable hence takes on a value of one when the fraction invested in the responsible fund is larger than zero. The second main variable *PercentageSRI* indicates the percentage of the overall allocation invested in a socially responsible fund. Following the investment game, participants face a variety of questions on personality

[1] We select well-known charities that reflect environmental, social, or governance (ESG) issues as well as an alternative cause. For the environmental dimension, we select the "World Wide Fund For Nature" (WWF), for the social dimension the "Cooperative for Assistance and Relief Everywhere" (CARE), for the governance dimension "Transparency International", and as alternative cause we select a donation to the "Wikimedia Foundation" devoted to freely disseminate knowledge.

characteristics and demographics, which we discuss in detail in section 2.2.

To better understand the drivers of socially responsible investment decisions, we introduce four experimental manipulations. By manipulating whether the possibility to donate parts of their potential prize occurred before or after the investment game, we introduce a pro-social frame to the allocation decision. About 54.6% of participants were able to donate before they played the investment game instead of after. This pro-social frame allows us to investigate whether licensing effects occur in a socially responsible investment context. As previous literature has shown that merely imagining a pro-social act is enough to provoke licensing (e.g., Khan and Dhar (2006); Gino and Margolis (2011); Jordan et al. (2011)), we expect a negative effect on the socially responsible investment decision regardless of whether an actual donation occurs.

Second, we vary whether the investment allocation of the potential winner is publicly announced on the institution's website together with a short summary of the research project. A public announcement of the selected portfolio could potentially influence the investment allocation due to image concerns (Ariely et al. (2009); Bénabou and Tirole (2006); DellaVigna et al. (2012); Ellingsen and Johannesson (2008); Friedrichsen and Engelmann (2018); Riedl and Smeets (2017)). About 45.7% of the participants were subject to the public image concern manipulation.

In the third manipulation, we vary whether the responsible fund receives an ethical label. Ethical labels might signal quality and trustworthiness, which then translate into more responsible investments (Bassen et al. (2018); Døskeland and Pedersen (2016)). To assure that participants are familiar with the labeling system and sponsor we use the well-known "Démarche Investissement Socialement Responsable" certification-label of the French national organization for standardization, AFNOR. That way, we mitigate trust issues that might arise due to sponsor identity (Gutsche and Zwergel (2016); Pedersen and Neergaard (2006); van der Ven (2015)). In total, 49% of participants faced SRI funds with an ethical label by AFNOR instead of no label.

Fourth, we manipulate whether participants have an investment universe of two or five funds (see items 2.1–2.2 of Appendix A). Note that in all cases, one of these mutual funds is socially responsible, while the remaining funds are "conventional". That is, all participants allocate the prize between a responsible and either four or one conventional mutual funds, depending on this manipulation. The fraction of participants who faced two instead of five funds to invest in was 51%.

We argue that in order to arrive at meaningful investment allocations that do not suffer from experimenter effects (Camerer (2015); Levitt and List (2007)), we need higher stakes that induce participants to carefully reflect upon their decisions. Instead of paying every participant a small compensation, we opted for one large prize in order to motivate the financial institutions' clients to participate (Charness et al. (2016); Laury (2005)). We tied the distribution of the prize directly to allocations in the investment game in order

to motivate participants to realistically reveal their preferences for SRI. That way, the winner receives the selected investment allocation in her portfolio. The average yearly net income in France is less than €30,000 (INSEE (2017); OECD (2017)). As indicated above, the investment game is introduced with an actual prize of €5,000. A potential prize of €5,000 hence represents a substantial incentive to elicit real investment preferences. At the end of the questionnaire, participants were able to consult the terms & conditions of the "competition" to be selected for the €5,000 prize. Participants further learned from the terms & conditions that a bailiff was responsible for overseeing the appropriate conduct of the competition. The winner of the competition was identified out of all complete questionnaires at a predetermined date and received the prize in the form of her investment allocation of the €5,000 minus potential donations in her portfolio.[2]

2.2 Control Variables

We obtain a variety of personality characteristics as control variables in the questionnaire reported in Appendix A. Previous research has shown that values and beliefs are a crucial determinant for socially responsible investment decisions (Brodback et al. (2019,?); Nilsson (2008)). We extend the Johnson (2014) scale to measure altruism with items 5.16–5.23. Our scale includes additional items that are proposed in the current form of the International Personality Item Pool (IPIP) item A3: Altruism.[3] Participants rate on a 1-7 Likert scale to what extent they agree with items such as, e.g., "I love to help others", "I anticipate the needs of others", or "I take no time for others". We adapt the Nilsson (2008) perceived consumer effectiveness (PCE) scale to elicit participants' beliefs about social responsibility, because beliefs are a crucial premise for any behavior (Ajzen (1991); Stern et al. (1999)). With items 5.1–5.4, participants indicate on 7 point Likert scales their agreement to statements such as "Every consumer can have a positive effect on society by buying products sold by socially responsible companies", or "When I buy products, I try to reflect how their use will affect the environment and other consumers". Conceptually, this scale covers a broader understanding of socially responsible behavior compared to eliciting participants' perception of the societal impact of SRI with a single item (Riedl and Smeets (2017)).

The next personality characteristic we measure is time perspective. How individuals perceive time is a central concept for their decision-making that ultimately manifests as a personality trait and affects their pro-social behavior (Keough et al. (1999); Milfont and Gouveia (2006); Nevins et al. (2007); Zimbardo et al. (1997); Zimbardo and Boyd

[2] The winner was contacted by the financial institution. Note that for legal reasons, the winner could also select to receive the prize via bank transfer. Receiving the investment allocation in the portfolio was the default option, however.

[3] Specifically, we rely on an extended form of the Johnson (2014) scale that builds on the IPIP new NEO key A3 and the well-established NEO personality inventory (Costa and McCrae (1992); McCrae et al. (2005)), see also `https://ipip.ori.org/newNEOKey.htm`.

(1999)). Previous studies have used scales to assess the long-term orientation of students or managers (Bearden et al. (2006); Wang and Bansal (2012)), whereas we deliberately use a financial framing to deduct whether individuals are short- or long-term oriented. With items 3.1–3.4, we ask investors whether they prefer immediate consumption of a pre-determined sum promptly or a slightly higher sum later and vary the definitions of promptly and later from instantaneously to one year plus one day. Technically, individuals' decisions should be consistent over time, whereas in reality, individuals often deviate and prefer immediate consumption over future consumption, even when the future consumption is more attractive (Laibson (1997); Prelec and Loewenstein (1998); Strotz (1955); Thaler (1981); Thaler and Benartzi (2004)). If an individual prefers immediate consumption, we classify her as present-biased. We use the participants' decisions to obtain two dummy variables, *Disc10* and *Disc500*, which take on a value of one if an individual prefers immediate consumption, i.e., is present-biased. Previous literature on short-term orientation has shown a negative link towards pro-social or pro-environmental behavior (Milfont and Gouveia (2006); Slawinski et al. (2017); Strathman et al. (1994)).

We assess participants' financial literacy with a reduced form of the van Rooij et al. (2011) quiz through items 4.1–4.3. We count each participant's correct answers to the questions and store them in the variable *InvestQuiz*. Items 5.5–5.15 measure the extent to which participants' engage in self-monitoring. This scale basically assesses if an individual monitors and controls whether her public image fits to a situation and hence how she appears to others (Snyder (1974); Snyder and Gangestad (1986)). Participants indicate the extent to which they agree with a selection of presented statements such as "When I am uncertain how to act in a social situation, I look to the behavior of others for cues." or "In a group of people I am rarely the center of attention." as "rather true" or "rather false". Participants' responses are then aggregated into a self-monitoring score in line with the recommendations of Snyder (1974). We next assess with items 5.24–5.29 whether a participant can be classified as risk-seeking. We select items from the IPIP representation of the Jackson (1994) Personality Inventory.[4] The items we select cover a broad set of behaviors from hang-gliding to high-risk investments because risk-propensity scales have been shown to relate to a variety of different behaviors (Barsky et al. (1997); Dohmen et al. (2011); Lönnqvist et al. (2015); Sahm (2012)). Items 5.30–5.31 are devoted to deduct an assessment of participants' financial situation. The following items measure a variety of SRI perceptions. In items 5.32–5.36 participants report on 7 point Likert scales ranging from "Fully disagree" to "Fully agree" whether they believe that socially responsible investments help to preserve the environment or improve society, whether they have a good knowledge of SRI, whether SRI results in an overabundance of information to consider when investing, and if they believe that SRI mutual funds

[4] The full IPIP representation of the Jackson (1994) scale is available at `https://ipip.ori.org/newJPI-RKey.htm`.

are less risky than conventional mutual funds. To further disentangle the drivers for responsible investments we measure with items 5.37 and 5.38 on a 7 point Likert scale if participants would invest in SRI to "have an impact and improve corporate behavior" (*SRIimpact*) or "not to be complicit in inappropriate behavior" (*SRIcomplice*). Similar to Dorfleitner and Utz (2014) and Brodback et al. (2019), participants then assess the return of responsible relative to conventional funds on a scale of 1 ("Inferior") to 5 ("Superior"). Note that participants can also indicate they have "No opinion" on the SRI return perception. In items 5.45–5.47 we repeat this question for time frames of 1, 10, and 30 years. We introduce these varying time frames because some individuals might feel that the benefits of SRI materialize slowly. Participants then indicate how much of their portfolio is currently invested responsibly (item 5.42, *SRIShare*) and how their ideal SRI fraction in their portfolio would look like (item 5.43, *SRIObjective*) on a spectrum of 0–100%. Lastly, we collect standard demographic items such as gender, age, education, occupation, and wealth level. Participants were moreover able to enter their personal data if they wanted to participate in the competition to win the prize of €5,000.

2.3 Descriptive Statistics

We present an overview of participant characteristics in Table 1.[5] The table further depicts differences in characteristics between responsible and conventional investors, which we classify according to their allocations in the investment game. With an average of 41.8 years, our participants' age is quite close to the average of the French population of 41.2 years (Statista (2019)). In our sample, 38% of participants are female and 62% are male. There is no significant difference in age, yet we identify a significantly higher amount of female responsible investors. The proportion of female responsible investors is 49.11% ($\frac{0.3959}{0.2655} - 1$) higher than the proportion of female conventional investors. This difference is highly statistically significant and corroborates previous literature, as gender is a common determinant of social responsibility (e.g., Eckel and Grossman (1998); Junkus and Berry (2010); Schueth (2003)).

With a mean of 5.52 on a scale ranging from 1 to 7, participants in our questionnaire are rather altruistic. An average perceived consumer effectiveness of 5.77 on a scale ranging from 1 to 7 suggests that the majority of participants believes socially responsible behavior to have a meaningful impact. Responsible investors score significantly higher on both scales, which confirms the important role that values and beliefs play for socially responsible investment decisions (Brodback et al. (2019,?); Nilsson (2009)). When we look at the overall donations, the mean is €649.10. Socially responsible investors are more charitable than conventional investors – on average, they donate about €193 more of their prize to charities than conventional investors. The difference amounts to

[5] The interested reader is referred to Table B1, which provides a comprehensive presentation of participant characteristics and control variables.

Table 1: Participant Characteristics

Variable	Mean	SRI	No SRI	Difference	t-statistic
Age (in years)	41.8221	41.8533	41.5693	-0.2840	-0.3356
Gender (1=female)	0.3816	0.3959	0.2655	-0.1304	-4.6801
Altruism	5.5226	5.5426	5.3599	-0.1827	-3.6779
PCE	5.7700	5.8130	5.4204	-0.3926	-6.7095
Overall Donations	649.1035	670.2357	477.4897	-192.7461	-3.0302
InvestQuiz	1.6168	1.6008	1.7463	0.1455	2.8228
SRIShare	4.5640	4.7308	3.2094	-1.5214	-1.9344
SRIObjective	32.7872	34.0549	22.4923	-11.5626	-6.9124
SRIperfOne	2.4139	2.4268	2.3077	-0.1191	-1.6965
SRIperfTen	3.4916	3.5311	3.1585	-0.3726	-5.2645
SRIperfThirty	4.1151	4.1543	3.7733	-0.3810	-4.5895
PercentageSRI	0.4358	0.4894	0	-0.4894	-33.2246

Note: This table shows averages of variables of interest. It further distinguishes participants by their decision to allocate money to the socially responsible fund in columns "SRI" and "No SRI", respectively. Age is the participant age in years. Gender is a dummy variable taking a value of 1 if the participant is female. Altruism assesses a participant's altruistic values on a (1-7) Likert scale. PCE is the perceived consumer effectiveness and measures whether a participant believes socially responsible behavior to be feasible on a (1-7) Likert scale (Nilsson (2008)). Overall Donations is the aggregate sum of how much a participant wants to donate to charity. InvestQuiz is a measure of financial literacy and refers to the amount of correct answers (out of 3) to questions derived from van Rooij et al. (2011). SRIShare and SRIObjective are the participant's self-reported current and ideal SRI holdings in %. SRIperfOne/Ten/Thirty are the participant's return perceptions of SRI relative to conventional investments on a scale of 1 "Inferior" to 5 "Superior" for one, ten, or thirty years, respectively. PercentageSRI is the percentage (0-1) allocated to the socially responsible mutual fund.
We report t-statistics of two-sided t-tests to assess whether participants who allocate money in the investment game to SRI differ from those who choose to invest only in conventional funds.

40.37% ($\frac{670.2357}{477.4897} - 1$) and suggests that responsible investors consider their investments as complementary to other socially responsible behavior (Riedl and Smeets (2017)). Our participants are relatively familiar with financial markets with an average value of 1.62 out of three correct answers, while responsible investors score slightly lower than conventional investors. We document a self-reported level of SRI holdings of approximately 4.6%, whereas participants indicate to ideally hold about one-third of socially responsible assets in their portfolios. Participants who invest in SRI have 47.40% (51.41%) higher current (ideal) SRI holdings. These findings are statistically significant at the 10% and 1% level, respectively. In line with previous studies (Brodback et al. (2019); Geczy et al. (2005); Riedl and Smeets (2017)), the majority of our participants feel that investing responsibly is costly, as shown in Table B1. While a substantial part (63.2%) of participants perceive SRI funds to be less risky than mutual funds, only 8.1% believe that SRI can outperform conventional investments over a time frame of one year. In contrast, 36.8% of participants believe that SRI yields lower returns over one year than conventional investments. Interestingly, we find an increasing SRI return perception over time. 38.4% (52.0%) of participants believe that SRI can outperform conventional funds over a time period of 10 (30) years. This finding indicates that individuals believe the benefits of social responsibility to materialize slowly. Socially responsible investors believe that their investments pay off – compared to conventional investors they have significantly higher perceptions of SRI returns. This finding is suggestive of a pecuniary motive for SRI which manifests across all time horizons (Beal et al. (2005); Brodback et al. (2019); Derwall et al. (2011); Døskeland and Pedersen (2016); Glac (2009); Riedl and Smeets (2017)). Overall, 89% of our participants choose to invest into the responsible mutual fund while the average percentage allocated to SRI amounts to 43.6%.

3 Results

In previous work, we have identified in a survey and a laboratory experiment that personal values and beliefs are important determinants of socially responsible investment decisions (Brodback et al. (2019,?)). A major benefit of this paper is that the field experimental setting allows us to improve the external validity of our previous work. We thus start by investigating how participants' decisions in the investment game are affected by their values and beliefs. To do so, we investigate the preferences for SRI, which we derive from portfolio allocations in the investment game. Here and in the following, we first consider the decision to invest responsibly, as measured by the binary variable SRIChoice. Thereafter, we consider the average percentages invested responsibly, as measured by PercentageSRI. Figure 1 compares the average SRIChoice across participants with low and high beliefs in social responsibility (PCE, Panel (a)) and low and high altruism (Panel (b)), respectively. We classify participants into the low or high categories with

respect to their position relative to the respective sample median.[6] Participants with high PCE are significantly more likely to allocate money to a responsible fund in the investment game than those with low PCE ($\Delta_{PCE} = 0.0605,\ p < 0.01$). Moreover, we find that participants with a high level of altruism are more likely to invest responsibly ($\Delta_{Altruism} = 0.0306,\ p < 0.01$).

Figure 2 compares the average percentages invested responsibly, again across individuals with low and high PCE and altruism. Confirming our expectations, participants with high PCE (altruism) allocate significantly higher percentages in the investment game to responsible assets than those with low PCE (altruism) ($\Delta_{PCE} = 0.0942,\ p < 0.01$, $\Delta_{Altruism} = 0.0306,\ p < 0.01$).

These first unconditional tests thus suggest that values and beliefs affect responsible invest decisions. It might be that our participants' values and beliefs are overstated, however, because participants intend to present themselves favorably (Levitt and List (2007)). We address this concern by employing an alternative measure of social preferences. Previous studies use experimental games and questionnaires to measure how much individuals give back (e.g., Riedl and Smeets (2017); Nilsson (2009); Wins and Zwergel (2016)). In our experimental design, we obtain an accurate measure of how much participants give back with how much they want to donate. As we explain in Section 2.1, participants' donations have direct consequences for their potential compensation. Figure 3 compares the investment allocations of those participants who do not donate relative to those who donate.

In line with our earlier results, those individuals who donate are significantly more likely to invest responsibly ($\Delta_{Choice} = 0.1012,\ p < 0.01$), and allocate more to responsible assets ($\Delta_{Percentage} = 0.0279,\ p < 0.05$) than participants who do not donate to charity. We report a concise breakdown of all of the discussed differences in the appendix in Table B2. These findings provide convincing evidence for the important role of personal values and beliefs in responsible investment decisions.

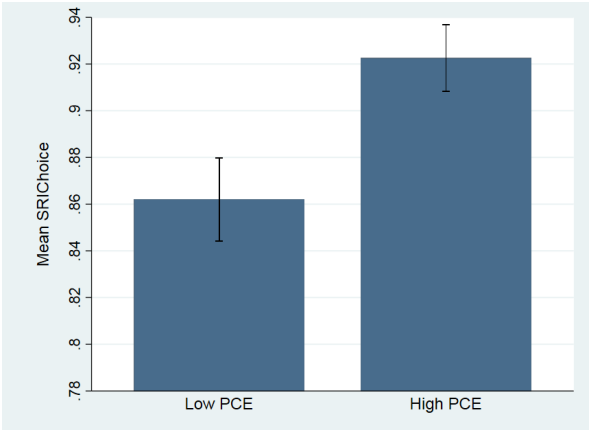
Manipulations and Socially Responsible Investment Decisions

Next, we investigate the impact the four experimental manipulations have on participants' investment decisions. In Figure 4 we report the average fraction of participants who choose to invest responsibly (SRIChoice) and in Figure 5 the average percentages invested responsibly in the investment game (PercentageSRI) across the manipulations. In both figures, we assess the licensing manipulation in Panel (a), the image concern manipulation in Panel (b), the label manipulation in Panel (c), and the manipulation of the investment

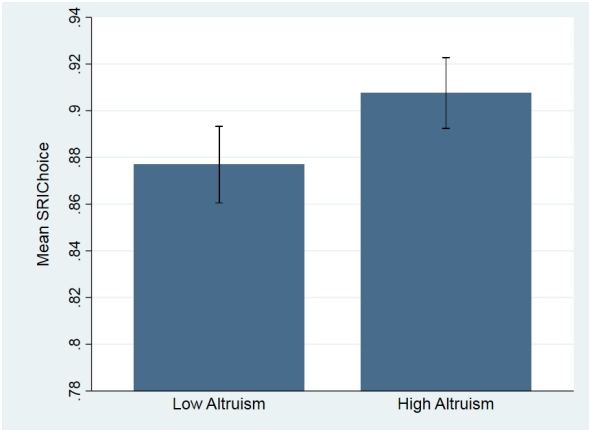
[6] We acknowledge that this classification is rather arbitrary, yet argue that in doing so, we follow a conservative approach. In unreported results, we confirm our findings also for a more strict distinction using upper and lower quartiles, respectively. These results are available from the authors upon request.

Figure 1: Values, Beliefs, and Socially Responsible Investment Choice

(a) PCE



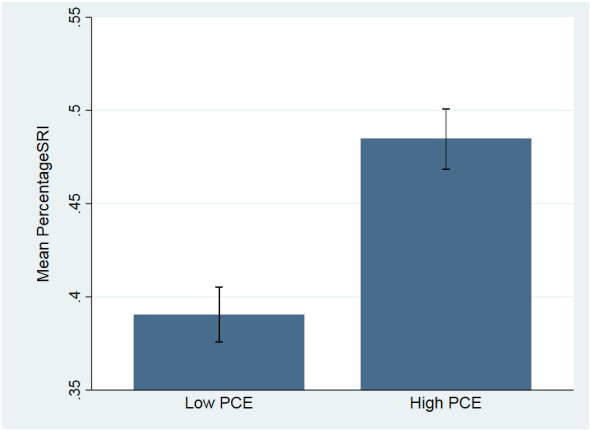
(b) Altruism



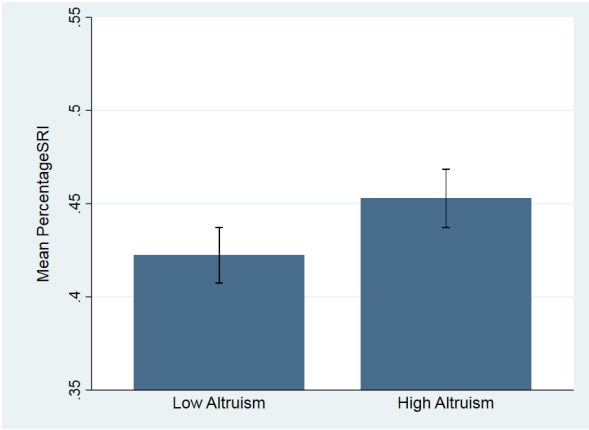
Note: This figure shows the average fraction of participants investing responsibly. Panel (a) distinguishes between participants with low and high beliefs in social responsibility (perceived consumer effectiveness, see Nilsson (2008) and Brodback et al. (2019)), whereas Panel (b) distinguishes between participants with low and high altruism. Error bars indicate 95%-confidence intervals.

Figure 2: Values, Beliefs, and Socially Responsible Investment Allocations

(a) PCE



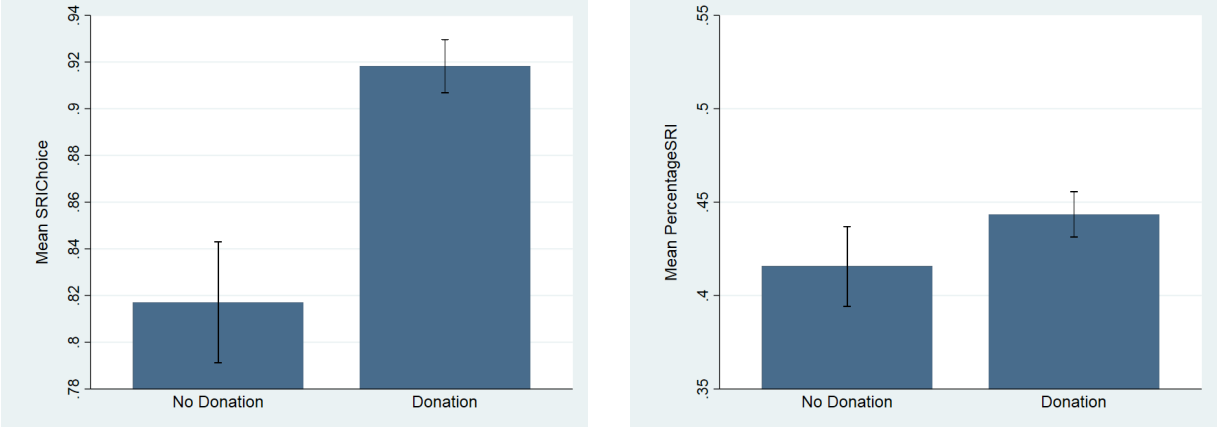
(b) Altruism



Note: This figure shows the average percentage of responsible investments. Panel (a) distinguishes between participants with low and high beliefs in social responsibility (perceived consumer effectiveness, see Nilsson (2008) and Brodback et al. (2019)), whereas Panel (b) distinguishes between participants with low and high altruism. Error bars indicate 95%-confidence intervals.

Figure 3: Donations and Socially Responsible Investment Decisions

(a) Donations and SRIChoice (b) Donations and PercentageSRI



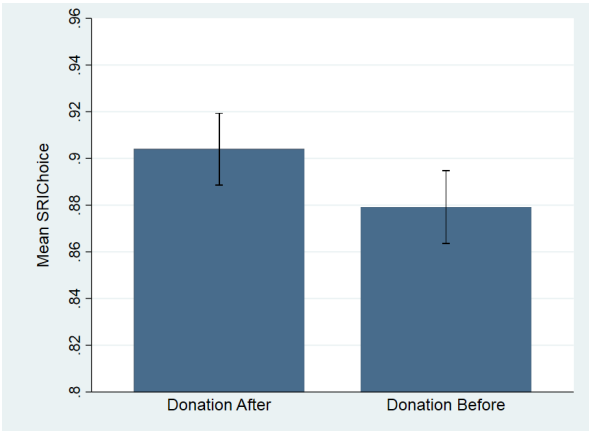
Note: This figure compares socially responsible investment allocations across participants who donate and those who do not donate in the field experiment. We show the average fraction of participants investing responsibly in Panel (a) and in Panel (b) the average percentage of responsible investments. Error bars indicate 95%-confidence intervals.

universe in Panel (d). A concise breakdown of all of the discussed differences is included in the appendix in Table B3.

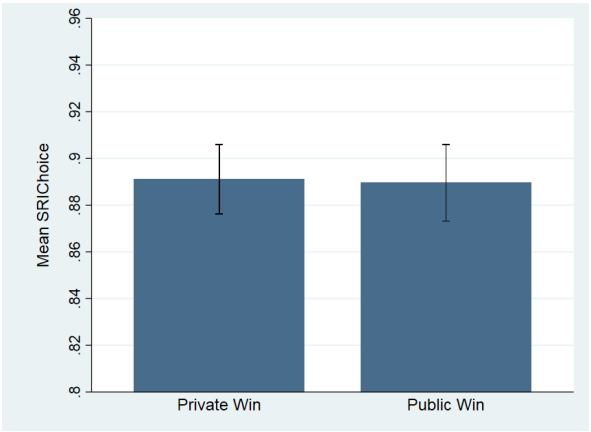
We find that the possibility to donate a fraction of the potential prize prior to the investment game significantly *lowers* the propensity to invest responsibly ($\Delta_{Choice} = -0.0248,\ p < 0.05$). This finding suggests that moral licensing might impact investment decisions. In line with our expectations, it seems that by being exposed to this manipulation, participants feel comfortable to act less pro-socially in the investment game. Interestingly, participants who could donate before instead of after the investment game have a slightly higher average percentage invested responsibly (see Figure 5, Panel (a)), yet this difference is insignificant ($\Delta_{Percentage} = 0.0120,\ p = 0.26$). We believe this is the first time licensing effects have been documented in an investment context. We revisit the licensing effect below to better understand what causes participants to act this way. Public image concerns do not seem to matter for our participants. Both the propensity for responsible investments, as well as the overall responsible portfolio percentage do not differ significantly when we introduce image concerns. The presence of an ethical label for a socially responsible mutual fund has a meaningful effect on the choice to invest, but also the percentage invested responsibly. Both variables of interest increase by approximately 2 percentage points when a responsible fund has an ethical label. These differences are statistically significant at the 10% level. Our results further suggest that the investment universe has a strong effect on portfolio allocations. We document a 12.28 percentage points higher propensity to invest responsibly when only two instead of five funds are available to invest in. Similarly, the percentage invested responsibly increases from 29.3% to 57.3% when

Figure 4: Manipulations and Socially Responsible Investment Choice

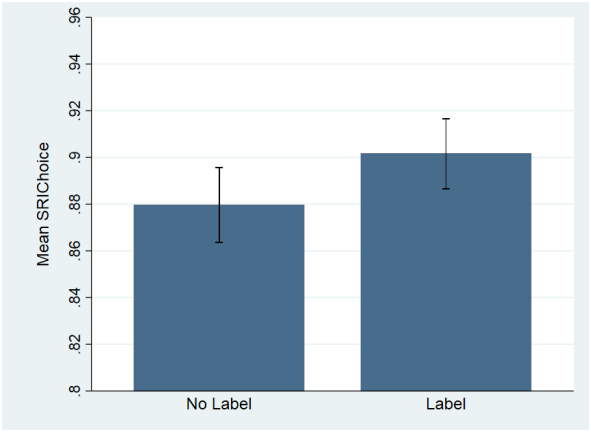
(a) Licensing



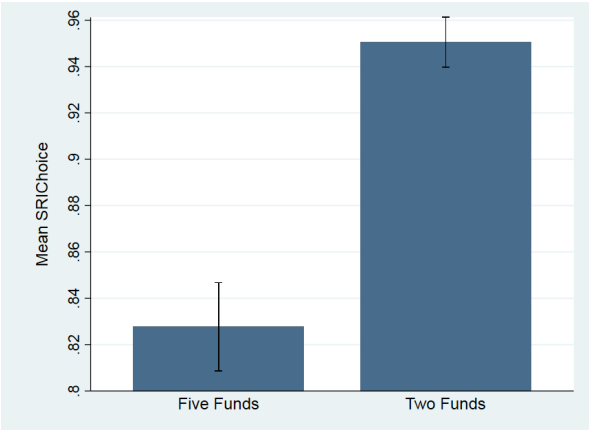
(b) Image Concerns



(c) Label



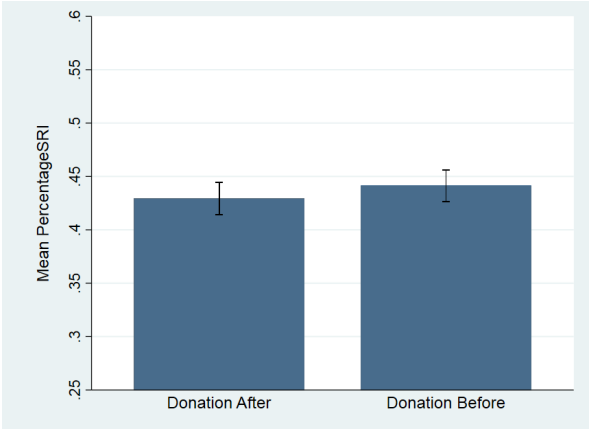
(d) Investment Universe



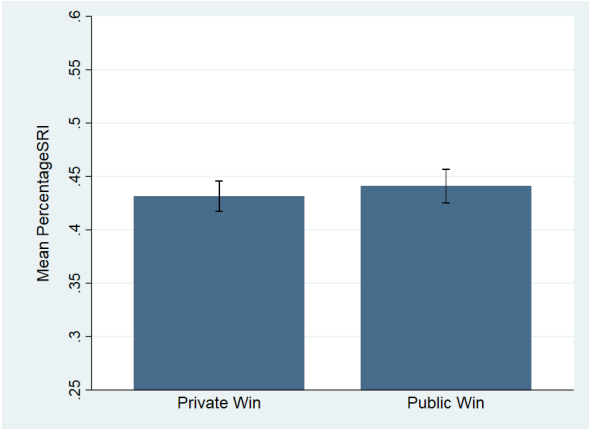
Note: This figure shows how the experimental manipulations affect participants' investment decisions. Panel (a) presents results of the first manipulation which is a pro-social frame that we induce by varying whether the possibility to donate parts of the prize occurs before or after the investment allocation. Panel (b) presents results of the second manipulation which introduces public image concerns by varying if an article about the winner of the prize and her portfolio allocation will be published after the winner is drawn. Panel (c) presents results of the third manipulation which varies whether the responsible fund receives an ethical label or not. Panel (d) presents results of the fourth manipulation which varies whether participants have five or two funds as investment universe. Error bars indicate 95%-confidence intervals.

Figure 5: Manipulations and Socially Responsible Investment Allocations

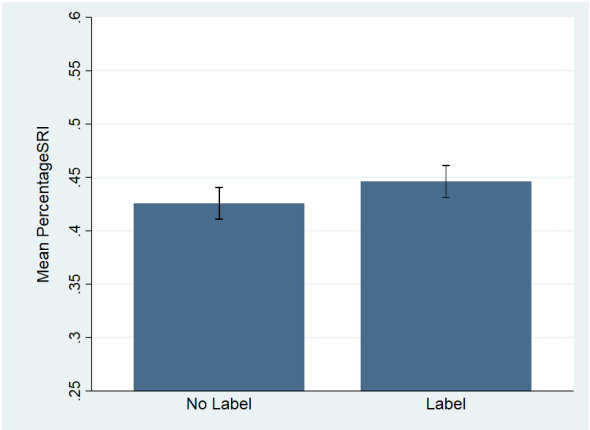
(a) Licensing



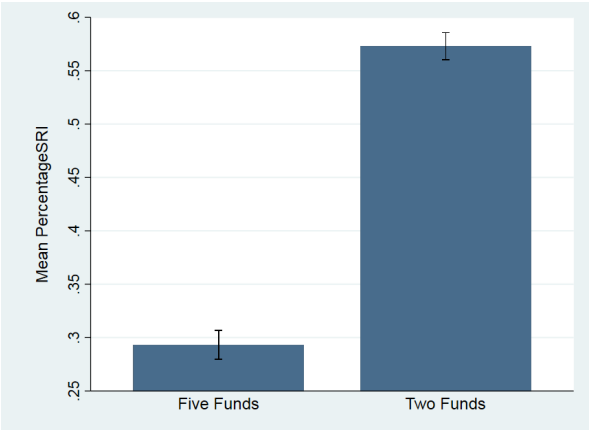
(b) Image Concerns



(c) Label



(d) Investment Universe



Note: This figure shows how the experimental manipulations affect participants' investment allocations. Panel (a) presents results of the first manipulation which is a pro-social frame that we induce by varying whether the possibility to donate parts of the prize occurs before or after the investment allocation. Panel (b) presents results of the second manipulation which introduces public image concerns by varying if an article about the winner of the prize and her portfolio allocation will be published after the winner is drawn. Panel (c) presents results of the third manipulation which varies whether the responsible fund receives an ethical label or not. Panel (d) presents results of the fourth manipulation which varies whether participants have five or two funds as investment universe. Error bars indicate 95%-confidence intervals.

participants face an investment universe consisting of two instead of five mutual funds. Note that both of these percentages are statistically significantly different from a naive 1/N strategy at the 1% level. Consequently, the participants do not seem to merely naively diversify in the investment game among available assets, but rather incorporate their personal values and beliefs into this investment decision.

Taken together, our unconditional findings show that how socially responsible mutual funds are presented might have drastic implications for portfolio choice. Changes in presentation format and whether funds are endorsed by a label can significantly increase SRI holdings. In turn, we provide evidence that socially responsible investments might be negatively affected by situational context: Our results show that adverse effects might occur when a pro-social framing induces investors to feel licensed and thus refrain from responsible investing.

For a more comprehensive analysis of the determinants of socially responsible investments, we proceed with regression analyses. Specifically, we estimate:

$$\begin{aligned} Socially\ Responsible\ Investment_i = \alpha_i + \beta_1 DonBefore_i + \beta_2 ImageConcernPublic_i \\ + \beta_3 Label_i + \beta_4 NbrFundTwo_i + \lambda_i X_i + \epsilon_i \quad (1) \end{aligned}$$

where $Socially\ Responsible\ Investment_i$ is defined as either participant i's decision to invest responsibly (SRIChoice) in a Logit setup or participant i's percentage invested responsibly (PercentageSRI) in an ordinary least-squares (OLS) setup, respectively. $DonBefore_i$ is a dummy variable accounting for the effect of the pro-social framing we introduce to elicit moral licensing. The variable takes on a value of one if a participant had the possibility to donate prior to the investment game. $ImageConcernPublic_i$ is a dummy variable taking a value of one if the participant is informed that the winner's portfolio is publicly announced on the financial institution's website – hence potentially introducing image concerns. $Label_i$ takes on a value of one if the socially responsible fund has an ethical label and zero otherwise. With the last dummy variable, $NbrFundTwo_i$, we measure whether participants face an investment universe of two or five funds. Correspondingly, the variable takes on a value of one if participants choose among two funds in the investment game. The vector X_i consists of a variety of controls, such as scales to assess altruistic values and the perceived effectiveness of social responsibility, the aggregated amount participants donate to charity, demographic variables, a financial literacy score, and a measure of present-bias (see also section 2.2).[7]

Table 2 reports estimation results for participants' responsible investment decisions (as

[7] In the following, we report results only for those participants with no missing items in their questionnaires. Note that several participants did for example not disclose their wealth levels or indicated to have "No opinion" on the performance of socially responsible relative to conventional investments. We show in Tables B6 and B7 in the appendix that our results are qualitatively similar for the reduced subset of participants who completely filled in all items of the questionnaire.

Table 2: Determinants of Socially Responsible Investment Decisions

	(1) SRIChoice	(2) PercentageSRI
DonBefore	-0.339***	0.009
	(0.123)	(0.009)
ImageConcernPublic	-0.072	0.006
	(0.122)	(0.009)
Label	0.193	0.019**
	(0.122)	(0.009)
NbrFundTwo	1.449***	0.280***
	(0.139)	(0.009)
Altruism	0.018	0.001
	(0.074)	(0.006)
PCE	0.220***	0.026***
	(0.065)	(0.005)
Controls	Yes	Yes
Model	Logit	OLS
(Pseudo) R^2	0.129	0.291
Observations	3092	3092

Robust standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: This table contains estimation results of Logit and OLS regression specifications according to Equation 1. The dependent variables are SRIChoice, a dummy taking a value of one if the participant allocated money to an SRI fund, and PercentageSRI, which measures the proportion of the overall investment allocation a participant invests into SRI, respectively. DonBefore, ImageConcernPublic, Label, and NbrFundTwo are dummy variables to account for the experimental manipulations. DonBefore is equal to 1 if a participant can donate before the investment game. ImageConcernPublic is equal to 1 if a participant learns about a public announcement of their allocation. Label is equal to 1 if the responsible fund is endorsed by an ethical label and NbrFundTwo is equal to 1 if a participant only faces two funds to invest in. Altruism assesses participants' altruistic values. PCE is the perceived consumer effectiveness of social responsibility and measures whether a participant believes socially responsible behavior to be feasible. We control for a variety of personality characteristics and demographic variables, as discussed in Section 2.2. The interested reader is referred to the comprehensive Tables B4 and B5 in the appendix, where we report the complete set of regression estimates.

measured by the binary variable SRIChoice) in column (1) and for participants' socially responsible investment allocations (as measured by PercentageSRI) in column (2). In line with results from the unconditional univariate tests, we find a highly significant negative influence of the licensing manipulation on SRIChoice in column (1). We do not find a significant relation for the percentage invested responsibly. These results show that participants who were able to donate before their investment allocations are significantly *less* likely to invest into the responsible fund subsequently. They potentially feel licensed to behave less pro-socially following the experimental manipulation and thus completely refrain from responsible investments. When we consider public image concerns, we do not obtain significant results for both specifications. It seems that, at least in our sample, public image concerns are not a determinant of socially responsible investments. Whether a responsible fund is labeled or not has no influence on SRIChoice in our sample. We do however find that an ethical label corresponds to higher percentages invested responsibly, and this relationship is significant at the 5% level. We provide corroborative, robust evidence for our univariate finding that the investment universe has a significant impact on socially responsible investment decisions. When only two funds are available, this translates into more socially responsible investments across both specifications reported in Table 2. All coefficients are statistically significant at the 1% level, suggesting that the way mutual funds are presented strongly influences investment decisions. We do not find a significant relation between altruistic values and our two measures of socially responsible investment decisions in the regressions. For beliefs in the effectiveness of social responsibility, as measured by PCE, coefficients in both estimations are positive and significant at the 1% level.

Values, Beliefs, and Experimental Manipulations

So far, we have investigated how the experimental manipulations affect investment decisions across the full sample of participants. Based on our findings, we intend to substantiate the role personality characteristics have for responsible investment decisions. Particularly, we are interested in disentangling whether there are differences in how participants respond to the experimental manipulations. Therefore, we conduct additional regression analyses for subsamples of participants with high and low PCE and for those participants who did not donate.[8]

In Table 3, we report estimation results for the full sample of participants in column (1) for reasons of comparison. We further report results for subsets of participants who are included in the upper half of PCE in column (2), in the lower half of PCE in column

[8] Again, we acknowledge that this classification is rather arbitrary. In unreported results, we confirm our findings also for a more strict distinction using upper and lower quartiles, respectively. These results are available from the authors upon request. As altruism did not show to be significantly related to socially responsible investment decisions in the regressions, we conservatively elicit pro-social preferences through participants' decision to donate instead.

Table 3: Do Values and Beliefs affect Socially Responsible Investment Decisions?

	Dependent variable: SRIChoice			
	(1)	(2)	(3)	(4)
DonBefore	-0.339***	-0.442**	-0.265	0.315
	(0.123)	(0.218)	(0.171)	(0.205)
ImageConcernPublic	-0.072	-0.265	0.107	-0.002
	(0.122)	(0.211)	(0.171)	(0.197)
Label	0.193	-0.175	0.417**	0.072
	(0.122)	(0.207)	(0.169)	(0.198)
NbrFundTwo	1.449***	1.144***	1.517***	1.752***
	(0.139)	(0.239)	(0.185)	(0.222)
Altruism	0.018	0.131	-0.037	-0.112
	(0.074)	(0.132)	(0.097)	(0.107)
PCE	0.220***	0.285	0.223**	0.294***
	(0.065)	(0.356)	(0.109)	(0.098)
Controls	Yes	Yes	Yes	Yes
Pseudo R^2	0.129	0.084	0.173	0.166
Observations	3092	1354	1456	853

Robust standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: This table contains estimation results of Logit regression specifications according to Equation 1. The dependent variable is SRIChoice, a dummy taking a value of one if the participant allocated money to an SRI fund. We report results for the full sample in column (1), and in column (2) and (3) for subsamples of participants who are in the upper or lower half of PCE, respectively. In column (4), we report results only for those participants who decided not to donate. DonBefore is equal to 1 if a participant can donate before the investment game. ImageConcernPublic is equal to 1 if a participant learns about a public announcement of their allocation. Label is equal to 1 if the responsible fund is endorsed by an ethical label and NbrFundTwo is equal to 1 if a participant only faces two funds to invest in. Altruism assesses participants' altruistic values. PCE is the perceived consumer effectiveness of social responsibility and measures whether a participant believes socially responsible behavior to be feasible. We control for a variety of personality characteristics and demographic variables, as discussed in Section 2.2. The interested reader is referred to the comprehensive Table B4 in the appendix, where we report the complete set of regression estimates.

(3), and for participants who did not donate in column (4). As we have discussed above, we provide evidence of licensing effects for socially responsible investments – as a consequence of being able to donate before the investment game, our participants are less likely to invest responsibly. We argue that this result is indicative of a saturation of individual social responsibility. To further investigate this claim, we assess the licensing effect for participants who have relatively high or relatively low beliefs in the effectiveness of social responsibility. Our subsample results reported in columns (2) and (3) show that licensing only affects participants with high PCE. This finding is interesting for several reasons. First, participants with high PCE seem to face a moral dilemma of socially responsible behavior which ultimately results in moral licensing. We find in unreported results that participants with high PCE are more altruistic and donate significantly more than those with low PCE. Our results suggest that these participants might thereby reach a saturation of doing good. By being able to donate before investing responsibly, participants with high PCE might feel that they have already done enough good for the moment and are hence negatively affected by the experimental manipulation. Note that this finding does not contradict the overall higher altruistic values of individuals with high PCE. Altruistic values are typically regarded as long-lasting and constant over time (Schwartz (1992); Stern (2000)). At the same time, licensing effects typically occur within a short period, which is why we argue that an individual's personal limit or saturation of social responsibility is reached (Carlsson et al. (2014); Conway and Peetz (2012)). While our participants with high PCE are generally more altruistic and give more of their potential prize to charity, they are also more likely to reach their personal limit of doing good. Participants with low PCE, however, are not subject to licensing effects. These findings are particularly noteworthy because the manipulation alone has no impact on the amount of donations. In unreported results, we find no significant difference in overall donations between participants who first faced the investment game or the donations, respectively. Nonetheless, the pure act of being able to donate entices participants to be less likely to invest responsibly. Consequently, our results show that moral licensing is also an important consideration for socially responsible investments. In column (4), we find a positive coefficient of DonBefore for the subsample of participants that opted not to donate. This finding signals that individuals who were able to but decided against behaving pro-socially before the investment game might be more likely to invest responsibly subsequently. With a p-value of 0.121, this coefficient is not significant at conventional levels, however. We revisit this unexpected result below when we look at the percentage invested responsibly.

When we consider public image concerns, we do not obtain significant results. Generally, our results indicate a negative influence of the manipulation on the decision to invest responsibly, as reported in column (1) of Table 3. This negative influence might signal adverse effects for socially responsible investments. Upon further investigation, we

find that participants with relatively high PCE seem to be responsible for this effect, as evident from column (2). One could argue that for these participants intrinsic motives are more important – a publication of their choices might hence crowd out social responsibility (Brodback et al. (2019)). With a p-value of 0.209, this result is far from statistical significance, however. It might be that the prestige associated with doing good is more prevalent in private interactions than through the publication of a news article. One form investors could privatize the prestige associated with SRI is by talking about their investments (Riedl and Smeets (2017)).

Whether a responsible fund is labeled or not only influences one subset of participants in our sample. We find a positive, statistically significant effect on SRIChoice for participants with low PCE, reported in column (3), while the coefficients are insignificant in the remaining estimations. Participants with low beliefs in the effectiveness of social responsibility thus seem to profit from endorsements via labels. As the perceived effectiveness also serves as material driver for how socially responsible products are used (Lin and Chang (2012)), an ethical label signals quality and trustworthiness and thus endorses the investment product to those participants with relatively low PCE. For participants with high PCE an ethical label seems to have no particular benefits, however. Lin and Chang (2012) find that individuals who believe in the effectiveness of green consumer products, such as eco-friendly sanitizers or detergents, actually use it as intended. We cautiously interpret this evidence as suggestive of a nudging effect these ethical labels might have for socially responsible investment products. Participants with relatively high beliefs in the effectiveness of social responsibility do not require additional endorsements via labels. If an investor has a relatively high PCE, this nudge is not necessary – rather, her intrinsic motivation determines her choice to invest responsibly. For an investor with low PCE, however, an ethical label provokes trust and thereby serves as a nudge for socially responsible investment behavior (Nilsson (2008); Bassen et al. (2018); Thaler and Sunstein (2008); Døskeland and Pedersen (2016)).

We provide corroborative, robust evidence for our univariate finding that the investment universe has a significant impact on socially responsible investment decisions. An investment universe of two funds increases the likelihood of socially responsible investments across all specifications reported in Table 3. All coefficients are statistically significant at the 1% level, suggesting that the way mutual funds are presented strongly influences investment decisions.

To complete the assessment of whether there are differences in how participants respond to the experimental manipulation, we turn our attention to the percentages invested responsibly. As before, we report in column (1) of Table 4 results for the full sample of participants for reasons of comparison. In columns (2) and (3), we report results for subsets of participants who are included in the upper or lower half of PCE, and in column (4) for participants who opted not to donate.

Table 4: Do Values and Beliefs affect Socially Responsible Investment Allocations?

	Dependent variable: PercentageSRI			
	(1)	(2)	(3)	(4)
DonBefore	0.009	0.016	-0.003	0.050**
	(0.009)	(0.014)	(0.013)	(0.020)
ImageConcernPublic	0.006	0.000	0.016	-0.005
	(0.009)	(0.015)	(0.013)	(0.019)
Label	0.019**	0.009	0.029**	0.021
	(0.009)	(0.014)	(0.013)	(0.019)
NbrFundTwo	0.280***	0.283***	0.275***	0.284***
	(0.009)	(0.015)	(0.013)	(0.019)
Altruism	0.001	-0.001	0.003	-0.008
	(0.006)	(0.009)	(0.008)	(0.011)
PCE	0.026***	0.062**	0.009	0.041***
	(0.005)	(0.024)	(0.009)	(0.010)
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.291	0.251	0.288	0.247
Observations	3092	1354	1456	853

Robust standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: This table contains estimation results of OLS regression specifications according to Equation 1. The dependent variable is PercentageSRI, which measures the proportion of the overall investment allocation a participant invests into SRI. We report results for the full sample in column (1), and in column (2) and (3) for subsamples of participants who are in the upper or lower half of PCE, respectively. In column (4), we report results only for those participants who decided not to donate. DonBefore is equal to 1 if a participant can donate before the investment game. ImageConcernPublic is equal to 1 if a participant learns about a public announcement of their allocation. Label is equal to 1 if the responsible fund is endorsed by an ethical label and NbrFundTwo is equal to 1 if a participant only faces two funds to invest in. Altruism assesses participants' altruistic values. PCE is the perceived consumer effectiveness of social responsibility and measures whether a participant believes socially responsible behavior to be feasible. We control for a variety of personality characteristics and demographic variables, as discussed in Section 2.2. The interested reader is referred to the comprehensive Table B5 in the appendix, where we report the complete set of regression estimates.

For the licensing manipulation our results provide two interesting insights. First, we do not find a significant relation between the possibility of donating prior to the investment game and the percentage invested responsibly. This result in turn implies that participants who are subject to the experimental manipulation feel licensed to completely refrain from responsible investments, as we find above for SRIChoice. Second, we identify in column (4) a *positive* coefficient of DonBefore on the percentage invested responsibly, significant at the 5% level. Participants who had the possibility to, but decided not to donate allocate a significantly higher percentage to socially responsible funds subsequently. It seems that a feeling of guilt or remorse translates into compensatory behavior to account for the previously possible, yet unrealized charitable contributions.

As for public image concerns, we again cannot find any significant relations. We interpret this result as supportive of image concerns for SRI arising rather in private than in public settings (Riedl and Smeets (2017)).

So far, we have seen that when a responsible fund has an ethical label, this corresponds to higher percentages invested responsibly. In line with the results for SRIChoice, this effect stems from individuals with low PCE of social responsibility, as reported in column (3) of Table 4. Our results show that for participants with low PCE an ethical label relates positively to the likelihood to invest, as well as the percentage invested responsibly.

Confirming the results for socially responsible investment choice above, we find the investment universe to play a significant role for investment allocations. When only two funds are available, this translates into higher percentages invested responsibly across all specifications reported in Table 4. All of the coefficients are statistically significant at the 1% level.

4 Conclusion

This paper investigates the motivations for socially responsible investment decisions. Our field experiment setup allows us to assess participants' allocations to mutual funds in an investment game. To the best of our knowledge, we are the first to show that licensing effects also occur in an investing context. These licensing effects imply a lower propensity to invest responsibly after individuals were able to do good via donations. When we separate our participants based on their respective perceived effectiveness of social responsibility, we find that only individuals with relatively high PCE are subject to licensing. As these individuals are more altruistic and donate more money to charity in our experiment, it seems that they are saturated by how much good they have already done for the day. Individuals with relatively low PCE are not subject to licensing. Rather, they are less likely to invest responsibly unless socially responsible assets are endorsed by an ethical label. Moreover, we find that the presentation format plays a significant role for investment allocations. When the investment universe is restricted to two instead of

five funds, this translates into a higher likeliness to invest, as well as higher percentages invested responsibly. While this result is to be expected per se, we further show that the percentages significantly differ from naive diversification. It seems that participants rely on intrinsic motivations such as personal values and beliefs to determine their investment allocations.

The main limitation of this paper is that we can only assess investment allocations made in the investment game and not actual investor holdings. We mitigate this potential caveat by incentivizing participants to reveal their desired preferences for socially responsible investments. Particularly, we assure that participants' investment decisions are directly tied to their potential compensation. We thus learn about participants' investment decisions on social responsibility when real money is at stake.

Our findings have several practical implications for the design and advertisement of socially responsible investment products. First, our results show that situational context is a material determinant of SRI. A too strong pro-social framing can evoke moral licensing, which negatively affects responsible investment decisions. As this potential saturation of social responsibility only occurs for individuals with relatively high perceived effectiveness of social responsibility, it remains an open question how financial institutions can counteract this negative externality. As a consequence, it becomes essential for financial institutions to better know their clients. Surveys represent a promising approach to better understand clients' personality characteristics and, ultimately, their preferences for social responsibility. It might be necessary to appeal to the intrinsic motivations of individuals, while at the same time trying to refrain from a too strong pro-social framing. Appealing to prospective investors' previous generosity might evoke licensing effects which negatively affect SRI holdings. In addition, we find that individuals who had the chance for, but decided against charitable behavior prior to their investment allocations engage in compensatory behavior. It seems that a feeling of remorse elicits higher allocations to socially responsible assets. Second, in order to encourage more responsible investments, our results suggest that financial institutions should facilitate the way SRI is advertised. To attract a larger responsible investor base, financial advisers should limit the amount of funds they present as recommendation. Our results suggest that at least for individuals who believe that socially responsible behavior is not very effective, ethical labels serve as drivers of trust and signal quality. As higher beliefs in SRI lead to more investments, fund prospectuses should highlight the impact and effectiveness of responsible investment products.

5 Bibliography

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes 50*(2), 179–211.

Ariely, D., A. Bracha, and S. Meier (2009). Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially. *The American Economic Review 99*(1), 544–555.

Barsky, R. B., F. T. Juster, M. S. Kimball, and M. D. Shapiro (1997). Preference Parameters and Behavioral Heterogeneity: An Experimental Approach in the Health and Retirement Study. *The Quarterly Journal of Economics 112*(2), 537–579.

Bassen, A., K. Gödker, F. Lüdeke-Freund, and J. Oll (2018). Climate Information in Retail Investors' Decision-Making: Evidence From a Choice Experiment. *Organization & Environment 15*, 1–21.

Beal, D. J., M. Goyen, and P. Philips (2005). Why Do We Invest Ethically? *The Journal of Investing 14*(3), 66–78.

Bearden, W. O., R. B. Money, and J. L. Nevins (2006). A measure of long-term orientation: Development and validation. *Journal of the Academy of Marketing Science 34*(3), 456–467.

Bénabou, R. and J. Tirole (2006). Incentives and Prosocial Behavior. *The American Economic Review 96*(5), 1652–1678.

Bénabou, R. and J. Tirole (2010). Individual and Corporate Social Responsibility. *Economica 77*(305), 1–19.

Benartzi, S. and R. H. Thaler (2001). Naive Diversification Strategies in Defined Contribution Saving Plans. *The American Economic Review 91*(1), 79–98.

Benartzi, S. and R. H. Thaler (2007). Heuristics and Biases in Retirement Savings Behavior. *Journal of Economic Perspectives 21*(3), 81–104.

Blanken, I., N. van de Ven, and M. Zeelenberg (2015). A Meta-Analytic Review of Moral Licensing. *Personality & Social Psychology Bulletin 41*(4), 540–558.

Brodback, D., N. Guenster, and D. Mezger (2019). Altruism and Egoism in Investment Decisions. *Review of Financial Economics 37*(1), 118–148.

Brodback, D., N. Guenster, and S. Pouget (2019). The Valuation of Corporate Social Responsibility - An Experiment. *Working Paper*.

Camerer, C. F. (2015). The promise and success of lab-field generalizability in experimental economics: A critical reply to Levitt and List. In G. R. Fréchette and A. Schotter (Eds.), *Handbook of Experimental Economic Methodology*, pp. 249–295. New York, NY: Oxford University Press.

Carlsson, F., O. Johansson-Stenman, and P. K. Nam (2014). Social preferences are stable over long periods of time. *Journal of Public Economics 117*, 104–114.

Catlin, J. R. and Y. Wang (2013). Recycling gone bad: When the option to recycle increases resource consumption. *Journal of Consumer Psychology 23*(1), 122–127.

Charness, G., U. Gneezy, and B. Halladay (2016). Experimental methods: Pay one or pay all. *Journal of Economic Behavior & Organization 131*, 141–150.

Clot, S., G. Grolleau, and L. Ibanez (2014). Smug Alert! Exploring self-licensing behavior in a cheating game. *Economics Letters 123*(2), 191–194.

Conway, P. and J. Peetz (2012). When Does Feeling Moral Actually Make You a Better Person? Conceptual Abstraction Moderates Whether Past Moral Deeds Motivate Consistency or Compensatory Behavior. *Personality & Social Psychology Bulletin 38*(7), 907–919.

Cornelissen, G., M. R. Bashshur, J. Rode, and M. Le Menestrel (2013). Rules or Consequences? The Role of Ethical Mind-Sets in Moral Dynamics. *Psychological Science 24*(4), 482–488.

Costa, P. T. and R. R. McCrae (1992). *Revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO-FFI): Professional manual.* Odessa, FL: Psychological Assessment Resources, Incorporated.

DellaVigna, S., J. A. List, and U. Malmendier (2012). Testing for Altruism and Social Pressure in Charitable Giving. *The Quarterly Journal of Economics 127*(1), 1–56.

Derwall, J., K. Koedijk, and J. Ter Horst (2011). A tale of values-driven and profit-seeking social investors. *Journal of Banking & Finance 35*(8), 2137–2147.

Dohmen, T., A. Falk, D. Huffman, U. Sunde, J. Schupp, and G. G. Wagner (2011). Individual Risk Attitudes: Measurement, Determinants, and Behavioral Consequences. *Journal of the European Economic Association 9*(3), 522–550.

Dorfleitner, G. and S. Utz (2014). Profiling German-speaking socially responsible investors. *Qualitative Research in Financial Markets 6*(2), 118–156.

Døskeland, T. and L. J. T. Pedersen (2016). Investing with Brain or Heart? A Field Experiment on Responsible Investment. *Management Science 62*(6), 1632–1644.

Eckel, C. C. and P. J. Grossman (1998). Are Women Less Selfish Than Men? Evidence from Dictator Experiments. *The Economic Journal 108*(448), 726–735.

Ellingsen, T. and M. Johannesson (2008). Pride and Prejudice: The Human Side of Incentive Theory. *The American Economic Review 98*(3), 990–1008.

Fama, E. F. and K. R. French (2007). Disagreement, tastes, and asset prices. *Journal of Financial Economics 83*(3), 667–689.

Friedrichsen, J. and D. Engelmann (2018). Who cares about social image? *European Economic Review 110*, 61–77.

Geczy, C. C., R. F. Stambaugh, and D. Levin (2005). Investing in Socially Responsible Mutual Funds. *SSRN Working Paper* (416380).

Gino, F. and J. D. Margolis (2011). Bringing ethics into focus: How regulatory focus and risk preferences influence (Un)ethical behavior. *Organizational Behavior and Human Decision Processes 115*(2), 145–156.

Glac, K. (2009). Understanding Socially Responsible Investing: The Effect of Decision Frames and Trade-off Options. *Journal of Business Ethics 87*, 41–55.

Goetzmann, W. N. and A. Kumar (2008). Equity Portfolio Diversification. *Review of Finance 12*(3), 433–463.

Guenster, N. (2012). Performance Implications of SR Investing: Past versus Future. In H. K. Baker and J. R. Nofsinger (Eds.), *Socially Responsible Finance and Investing*, pp. 443–454. Hoboken, NJ: John Wiley & Sons, Inc.

Gutsche, G., A. Köbrich León, and A. Ziegler (2016). On the relevance of psychological motives, values, and norms for socially responsible investments: An econometric analysis. *Joint Discussion Paper Series in Economics (Marburg) 41*.

Gutsche, G. and B. Zwergel (2016). Information barriers and SRI market participation: Can sustainability and transparency labels help? *Joint Discussion Paper Series in Economics (Marburg) 24*.

Hong, H. and M. Kacperczyk (2009). The price of sin: The effects of social norms on markets. *Journal of Financial Economics 93*(1), 15–36.

Hong, H. and L. Kostovetsky (2012). Red and blue investing: Values and finance. *Journal of Financial Economics 103*(1), 1–19.

Huberman, G. and W. Jiang (2006). Offering versus Choice in 401(k) Plans: Equity Exposure and Number of Funds. *The Journal of Finance 61*(2), 763–801.

INSEE (2017). Household income, consumption and savings per broad category between 2011 and 2015: Insee Références, édition 2017.

Jackson, D. N. (1994). *Jackson Personality Inventory: Revised Manual*. Port Huron (MI): Sigma Assessment Systems.

Jansson, M. and A. Biel (2011). Motives to engage in sustainable investment: A comparison between institutional and private investors. *Sustainable Development 19*(2), 135–142.

Johnson, J. A. (2014). Measuring thirty facets of the Five Factor Model with a 120-item public domain inventory: Development of the IPIP-NEO-120. *Journal of Research in Personality 51*, 78–89.

Jordan, J., E. Mullen, and J. K. Murnighan (2011). Striving for the Moral Self: The Effects of Recalling Past Moral Actions on Future Moral Behavior. *Personality & Social Psychology Bulletin 37*(5), 701–713.

Junkus, J. C. and T. C. Berry (2010). The demographic profile of socially responsible investors. *Managerial Finance 36*(6), 474–481.

Keough, K. A., P. G. Zimbardo, and J. N. Boyd (1999). Who's Smoking, Drinking, and Using Drugs? Time Perspective as a Predictor of Substance Use. *Basic and Applied Social Psychology 21*(2), 149–164.

Khan, U. and R. Dhar (2006). Licensing Effect in Consumer Choice. *Journal of Marketing Research 43*(2), 259–266.

Kumar, A., J. K. Page, and O. G. Spalt (2011). Religious beliefs, gambling attitudes, and financial market outcomes. *Journal of Financial Economics 102*(3), 671–708.

Laibson, D. (1997). Golden Eggs and Hyperbolic Discounting. *The Quarterly Journal of Economics 112*(2), 443–477.

Langer, T. and C. R. Fox (2005). Biases in Allocation Under Risk and Uncertainty: Partition Dependence, Unit Dependence, and Procedure Dependence. *SSRN Working Paper* (757787).

Laury, S. K. (2005). Pay One or Pay All: Random Selection of One Choice for Payment. *SSRN Working Paper* (894271).

Levitt, S. D. and J. A. List (2007). What Do Laboratory Experiments Measuring Social Preferences Reveal about the Real World? *Journal of Economic Perspectives 21*(2), 153–174.

Lin, Y.-C. and C.-c. A. Chang (2012). Double Standard: The Role of Environmental Consciousness in Green Product Usage. *Journal of Marketing 76*(5), 125–134.

Lintner, J. (1965). The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets. *The Review of Economics and Statistics 47*(1), 13–37.

Lönnqvist, J.-E., M. Verkasalo, G. Walkowitz, and P. C. Wichardt (2015). Measuring individual risk attitudes in the lab: Task or ask? An empirical comparison. *Journal of Economic Behavior & Organization 119*, 254–266.

Markowitz, H. (1952). Portfolio Selection. *The Journal of Finance 7*(1), 77–91.

Mazar, N. and C.-B. Zhong (2010). Do Green Products Make Us Better People? *Psychological Science 21*(4), 494–498.

McCrae, R. R., P. T. Costa, and T. A. Martin (2005). The NEO-PI-3: A More Readable Revised NEO Personality Inventory. *Journal of Personality Assessment 84*(3), 261–270.

Merritt, A. C., D. A. Effron, and B. Monin (2010). Moral Self-Licensing: When Being Good Frees Us to Be Bad. *Social and Personality Psychology Compass 4*(5), 344–357.

Milfont, T. L. and V. V. Gouveia (2006). Time perspective and values: An exploratory study of their relations to environmental attitudes. *Journal of Environmental Psychology 26*(1), 72–82.

Miller, D. T. and D. A. Effron (2010). Chapter Three - Psychological License: When it is Needed and How it Functions. In M. P. Zanna and J. M. Olson (Eds.), *Advances in Experimental Social Psychology*, Volume 43, pp. 115–155. Academic Press.

Monin, B. and D. T. Miller (2001). Moral Credentials and the Expression of Prejudice. *Journal of Personality and Social Psychology 81*(1), 33–43.

Nevins, J. L., W. O. Bearden, and R. B. Money (2007). Ethical Values and Long-term Orientation. *Journal of Business Ethics 71*(3), 261–274.

Nilsson, J. (2008). Investment with a Conscience: Examining the Impact of Pro-Social Attitudes and Perceived Financial Performance on Socially Responsible Investment Behavior. *Journal of Business Ethics 83*(2), 307–325.

Nilsson, J. (2009). Segmenting socially responsible mutual fund investors: The influence of financial return and social responsibility. *International Journal of Bank Marketing 27*(1), 5–31.

OECD (2017). OECD National Accounts Statistics.

Pedersen, E. R. and P. Neergaard (2006). Caveat Emptor – Let the Buyer Beware! Environmental Labelling and the Limitations of 'Green' Consumerism. *Business Strategy and the Environment 15*(1), 15–29.

Peifer, J. L. (2010). Morality in the financial market? A look at religiously affiliated mutual funds in the USA. *Socio-Economic Review 9*(2), 1–25.

Prelec, D. and G. F. Loewenstein (1998). The Red and the Black: Mental Accounting of Savings and Debt. *Marketing Science 17*(1), 4–28.

Riedl, A. and P. Smeets (2017). Why Do Investors Hold Socially Responsible Mutual Funds? *The Journal of Finance 72*(6), 2505–2550.

Sachdeva, S., R. Iliev, and D. L. Medin (2009). Sinning Saints and Saintly Sinners: The Paradox of Moral Self-Regulation. *Psychological Science 20*(4), 523–528.

Sahm, C. R. (2012). How Much Does Risk Tolerance Change? *The Quarterly Journal of Finance 2*(4), 12500201–125002038.

Schueth, S. (2003). Socially Responsible Investing in the United States. *Journal of Business Ethics 43*(3), 189–194.

Schwartz, S. H. (1992). Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries. *Advances in Experimental Social Psychology 25*, 1–65.

Sharpe, W. F. (1964). Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk. *The Journal of Finance 19*(3), 425–442.

Simon, H. A. (1993). Altruism and Economics. *The American Economic Review 83*(2), 156–161.

Slawinski, N., J. Pinkse, T. Busch, and S. B. Banerjee (2017). The Role of Short-Termism and Uncertainty Avoidance in Organizational Inaction on Climate Change. *Business & Society 56*(2), 253–282.

Snyder, M. (1974). Self-Monitoring of Expressive Behavior. *Journal of Personality and Social Psychology 30*(4), 526–537.

Snyder, M. and S. Gangestad (1986). On the Nature of Self-Monitoring: Matters of Assessment, Matters of Validity. *Journal of Personality and Social Psychology 51*(1), 125–139.

Statista (2019). France: Median age of the population from 1950 to 2050 (in years).

Stern, P. C. (2000). Toward a Coherent Theory of Environmentally Significant Behavior. *Journal of Social Issues 56*(3), 407–424.

Stern, P. C., T. Dietz, T. Abel, G. Guagnano, and L. Kalof (1999). A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism. *Human Ecology Review 6*(2), 81–97.

Strathman, A., F. Gleicher, D. S. Boninger, and C. S. Edwards (1994). The Consideration of Future Consequences: Weighing Immediate and Distant Outcomes of Behavior. *Journal of Personality and Social Psychology 66*(4), 742–752.

Strotz, R. H. (1955). Myopia and Inconsistency in Dynamic Utility Maximization. *The Review of Economic Studies 23*(3), 165–180.

Thaler, R. H. (1981). Some empirical evidence on dynamic inconsistency. *Economics Letters 8*(3), 201–207.

Thaler, R. H. and S. Benartzi (2004). Save More Tomorrow™: Using Behavioral Economics to Increase Employee Saving. *Journal of Political Economy 112*(1), S164–S187.

Thaler, R. H. and C. R. Sunstein (2008). *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New Haven, CT: Yale University Press.

Tiefenbeck, V., T. Staake, K. Roth, and O. Sachs (2013). For better or for worse? Empirical evidence of moral licensing in a behavioral energy conservation campaign. *Energy Policy 57*, 160–171.

van der Ven, H. (2015). Correlates of rigorous and credible transnational governance: A cross–sectoral analysis of best practice compliance in eco–labeling. *Regulation & Governance 9*(3), 276–293.

van Rooij, M., A. Lusardi, and R. Alessie (2011). Financial literacy and stock market participation. *Journal of Financial Economics 101*(2), 449–472.

Wang, T. and P. Bansal (2012). Social Responsibility in New Ventures: Profiting From a Long–Term Orientation. *Strategic Management Journal 33*(10), 1135–1153.

Wiesel, M., K. O. R. Myrseth, and B. Scholtens (2016). Social Preferences and Socially Responsible Investing: A Survey of U.S. Investors. *University of St Andrews Working Papers in Responsible Banking & Finance*, 1–28.

Wins, A. and B. Zwergel (2016). Comparing those who do, might and will not invest in sustainable funds: A survey among German retail fund investors. *Business Research 9*(1), 51–99.

Zimbardo, P. G. and J. N. Boyd (1999). Putting Time in Perspective: A Valid, Reliable Individual-Differences Metric. *Journal of Personality and Social Psychology 77*(6), 1271–1288.

Zimbardo, P. G., K. A. Keough, and J. N. Boyd (1997). Present Time Perspective as a Predictor of Risky Driving. *Personality and Individual Differences 23*(6), 1007–1023.

Appendix

A Questionnaire

[Author's translation of French Questionnaire]
Dear Sir or Madam,
IDEI researchers, in partnership with LCL (Le Crédit Lyonnais, a major French bank [The Authors]), are conducting a survey as part of a scientific project. Participation in this survey will take you about 15 minutes.
The objective is to publish a research article on the perception of investment funds in an international scientific journal.
Naturally, the accuracy and sincerity of your answers are crucial to the quality of the final results. You can abandon the questionnaire at any time. In this case, the answers will not be taken into account for the study. All data obtained will be kept confidential and we guarantee anonymized analyses.
To thank you for devoting a few minutes of your time to this survey, we will draw lots among all questionnaires that are fully completed and validated before October 5, 2014 at midnight to win a prize of 5,000€.
[Manipulation whether allocation is publicly announced on institution's website]

1. Donation [Manipulation whether before or after investment allocation]

In the event that you are drawn to receive the 5,000€ prize at stake, you have the option of giving part of it to Non-Governmental Organizations (NGOs).
Please tell us how much you would like to donate to each of the following institutions (You can also choose not to donate anything)!

1 *Institutions*

WWF	€
Wikimedia Foundation	€
CARE	€
Transparency International	€
Total	€

2. Investment Allocation [Manipulation whether 2 or 5 funds shown and whether SRI fund has ethical label]

If you completely fill in this questionnaire, you will participate in a random draw to win a prize of €5,000 that can be invested in funds marketed by LCL (or others if you are not an LCL customer). Please specify, in the box next to each fund, the proportion of your potential prize that you would like to invest in it. The "Total" box at the bottom of the page shows you the sum of the proportions invested and must be 100%. All the funds offered have a competitive financial performance objective and a correspondingly relatively high risk profile. Only one person will be drawn and will actually receive the €5,000 prize.
Please Note: These are existing funds. To learn more, click on the links to obtain the fund's prospectuses or consult the Internet.

1 *All funds available*

Amundi Patrimoine EPA (consult prospectus)	%
LCL Actions Euro (consult prospectus)	%
LCL Actions Développement Durable Euro* (consult prospectus)	%
LCL Actions France (consult prospectus)	%
LCL OPCIMMO (consult prospectus)	%
Total	%

2 *Only 2 funds available*

Amundi Patrimoine EPA (consult prospectus)	%
LCL Actions Euro (consult prospectus)	%
LCL Actions Développement Durable Euro* (consult prospectus)	%
LCL Actions France (consult prospectus)	%
LCL OPCIMMO (consult prospectus)	%
Total	%

3. Discount Rates

Now, we ask you to choose between different potential gains. You will not receive the earnings you choose, but it is important for our study that you make your decisions as if you will receive those earnings. Please indicate for each of the following decisions, whether you would prefer the smallest payment in the near future or the largest payment later.

1 *If you had a choice, would you prefer to receive:*

10€ now ❒ *or* 11€ tomorrow ❒

2 *If you had a choice, would you prefer to receive:*

500€ now ❒ *or* 550€ tomorrow ❒

3 *If you had a choice, would you prefer to receive:*

10€ in one year ❒ *or* 11€ in one year plus one day ❒

4 *If you had a choice, would you prefer to receive:*

500€ in one year ❒ *or* 550€ in one year plus one day ❒

4. Investment Knowledge / Financial Literacy

1 *Suppose you have 100 euros on an account that offers an interest rate of 20%. After 5 years, how much will you have in total in this account?*

- ❒ More than 200€
- ❒ Exactly 200€
- ❒ Less than 200€
- ❒ No opinion

2 *A friend of yours inherits 10,000 euros today. His brother will inherit 10,000 euros in 3 years. Who gets the biggest inheritance?*

- ❒ My friend
- ❒ His brother
- ❒ There is no difference between the two
- ❒ No opinion

3 *If interest rates increase, the value of a bond should:*

- ❒ Decrease
- ❒ Increase
- ❒ Remain stable
- ❒ No opinion

5. Personality and Beliefs

To what extent do you agree with each of the statements below?

1 *Every consumer can have a positive effect on society by buying products sold by socially responsible companies.*

Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree

2 *It is useless for the individual consumer to do anything about pollution.*

Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree

3 *It does not matter what I do, since the actions of a single person do not have an effect on the problems of our societies.*

Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree

4 *When I buy products, I try to reflect how their use will affect the environment and other consumers.*

Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree

To what extent do you agree with each of the statements below?

		Rather true	Rather false
5	*I can only argue for ideas I already believe.*	❒	❒
6	*I find it hard to imitate the behavior of other people.*	❒	❒
7	*I guess I put on a show to impress or entertain people.*	❒	❒
8	*When I am uncertain how to act in a social situation, I look to the behavior of others for cues.*	❒	❒
9	*I can make impromptu speeches even on topics about which I have almost no information.*	❒	❒
10	*I am not particularly good at making other people like me.*	❒	❒
11	*I would probably make a good actor.*	❒	❒
12	*I will not change my opinions (or the way I do things) in order to please someone or to win their favor.*	❒	❒
13	*At parties and social gatherings, I do not attempt to do or say things that others will like.*	❒	❒
14	*I'm not always the person I appear to be.*	❒	❒
15	*In a group of people I am rarely the center of attention.*	❒	❒

To what extent do you agree with each of the statements below?

16	*I have a good word for everyone.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
17	*I turn my back on others.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
18	*I love to help others.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
19	*I anticipate the needs of others.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
20	*I am indifferent to the feelings of others.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
21	*I take no time for others.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
22	*I look down on others.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
23	*I am concerned about others.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree

	To what extent do you agree with each of the statements below?								
24	*I seek danger.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
25	*I will never make a high-risk investment.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
26	*I take risks.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
27	*I would never go hang-gliding or bungee-jumping.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
28	*I am looking for adventure.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
29	*I avoid dangerous situations.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
30	*My financial situation is comfortable.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
31	*My income allows me to live pleasantly.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
32	*Socially responsible investments can help to preserve the environment.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
33	*I have a good knowledge of socially responsible investments.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
34	*There is an overabundance of information to consider when mixing social responsibility and investments.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
35	*Socially responsible investments can help to improve society.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree
36	*Socially responsible investment funds are less risky than conventional investment funds.*								
	Fully disagree	❒ 1	❒ 2	❒ 3	❒ 4	❒ 5	❒ 6	❒ 7	Fully agree

	You would invest in a socially responsible investment fund…
37	*...to have an impact and improve corporate behavior.*
	Fully ❒ ❒ ❒ ❒ ❒ ❒ ❒ Fully disagree 1 2 3 4 5 6 7 agree
38	*...not to be complicit in inappropriate behavior.*
	Fully ❒ ❒ ❒ ❒ ❒ ❒ ❒ Fully disagree 1 2 3 4 5 6 7 agree
	What do you think of the financial performance of socially responsible funds compared to conventional funds?
39	*Within 1 year*
	❒ ❒ ❒ ❒ ❒ ❒ 1 2 3 4 5 No opinion "Inferior" "Identical" "Superior"
40	*Within 10 years*
	❒ ❒ ❒ ❒ ❒ ❒ 1 2 3 4 5 No opinion "Inferior" "Identical" "Superior"
41	*Within 30 years*
	❒ ❒ ❒ ❒ ❒ ❒ 1 2 3 4 5 No opinion "Inferior" "Identical" "Superior"
42	*If you already own socially responsible investment funds, what is the fraction of these funds in your overall portfolio?*
	❒ ❒ ❒ ❒ ❒ ❒ ❒ ❒ ❒ ❒ ❒ 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
43	*Ideally, what would be the fraction of socially responsible investments you would like to have?*
	❒ ❒ ❒ ❒ ❒ ❒ ❒ ❒ ❒ ❒ ❒ 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
	6. Demographics
1	*What is your gender?*
	❒ male ❒ female
2	*What is your age?*
	_____ years
3	*What is your level of education?*
	_____
4	*What is your current occupation?*
	_____
5	*Please indicate your level of wealth (real estate and financials) in €.*
	_____ €
6	*What is your approximate amount of savings in €?*
	_____ €
	Participation in the Investment Game
	Thank you for your participation. If you would like to participate in the investment game and get a chance to win 5,000€, please enter your personal data below.
	First name
	_____
	Last name
	_____
	E-Mail
	_____

B Additional Tables

Table B1: This table gives a comprehensive overview on participant characteristics and control variables.

Table B2: This table shows how values and beliefs affect socially responsible investment decisions.

Table B3: This table assesses how the four experimental manipulations affect socially responsible investment decisions.

Table B4: This table shows the results on socially responsible investment decisions (SRIChoice) for four different specifications. We report results for (1) the full sample, a subsample of participants who we classify in the (2) upper half or (3) lower half of PCE, and (4) a subsample of participants who decided not to donate. The table further reports coefficients for all control variables.

Table B5: This table shows the results on socially responsible investment percentages (PercentageSRI) for four different specifications. We report results for (1) the full sample, a subsample of participants who we classify in the (2) upper half or (3) lower half of PCE, and (4) a subsample of participants who decided not to donate. The table further reports coefficients for all control variables.

Table B6: This table shows the results on socially responsible investment decisions for a subset of individuals who reported their wealth, education, profession, and SRI return perceptions compared to conventional assets for robustness. Note that the observations reduce as a consequence. Again, we report results for (1) the full sample, a subsample of participants who we classify in the (2) upper half or (3) lower half of PCE, and (4) a subsample of participants who decided not to donate.

Table B7: This table shows the results on socially responsible investment percentages for a subset of individuals who reported their wealth, education, profession, and SRI return perceptions compared to conventional assets for robustness. Note that the observations reduce as a consequence. Again, we report results for (1) the full sample, a subsample of participants who we classify in the (2) upper half or (3) lower half of PCE, and (4) a subsample of participants who decided not to donate.

Table B1: Participant Characteristics

Measure	Value	#	%
Gender	Female	1180	38.2
	Male	1912	61.8
Age	<20	72	2.3
	20-40	1515	49.0
	41-60	1085	35.1
	>60	420	13.6
Wealth	<50,000	1122	36.3
	50,000-200,000	623	20.2
	200,001-350,000	548	17.7
	350,001-500,000	328	10.6
	>500,000	374	12.1
	No answer	97	3.1
Education	Apprenticeship	137	4.4
	Baccalaureat	395	12.8
	University Degree	1592	51.5
	Other	968	31.3
Occupation	Employee	1087	35.1
	Executive	1226	39.7
	Retiree	414	13.4
	Other	365	11.8
Present Bias	Disc10	532	17.2
	Disc500	169	5.5
Overall Donations	< 100	1020	33.0
	100-1000	1678	54.3
	1001-4999	266	8.6
	5000	128	4.1
InvestQuiz	0	375	12.1
	1-2	2215	71.6
	3	502	16.2

Table B1 – continued from previous page

Measure	Value	#	%
Financial Situation	Rather Negative	1181	38.2
	Rather Positive	1911	61.8
RiskSeeking	Rather Not	984	31.8
	Neutral	1772	57.3
	Rather Yes	336	10.9
SRIhelpsS	Rather Not	287	9.3
	Rather Yes	2805	90.7
SRIhelpsE	Rather Not	338	10.9
	Rather Yes	2754	89.1
KnowledgeSRI	Rather Bad	2108	68.2
	Rather Good	984	31.8
OverabSRI	Rather Wrong	662	21.4
	Rather True	2430	78.6
SRIRisk	Lower	1954	63.2
	Higher	1138	36.8
SRIimpact	Rather Not	374	12.1
	Rather Yes	2718	87.9
SRIcomplice	Rather Not	589	19.0
	Rather Yes	2503	81.0
SRIperfOne	Less	1137	36.8
	About the same	907	29.3
	More	251	8.1
	No opinion	797	25.8

Table B1 – continued from previous page

Measure	Value	#	%
SRIperfTen	Less	360	11.6
	About the same	777	25.1
	More	1186	38.4
	No opinion	769	24.9
SRIperfThirty	Less	251	8.1
	About the same	329	10.6
	More	1609	52.0
	No opinion	903	29.2

Note: This table shows individual characteristics of the 3,092 participants. # refers to the absolute number of participants in a category. % is the amount of participants in this category relative to the total sample. Baccalaureat is the French matriculation examination required to enroll at a university. Disc10 (500) are dummy variables taking a value of 1 if the participant is present-biased, i.e., prefers immediate over delayed consumption of €10 (€500). Overall Donations is the aggregate sum of how much of the prize a participant donates to charity. InvestQuiz refers to the amount of correct answers (out of three) to a short form of questions derived from van Rooij et al. (2011). Financial Situation is a self-reported indication of how content participants are with their financial situation. RiskSeeking determines whether a participants can be classified as risk-seeking based on the IPIP representation of the Jackson (1994) Personality Inventory. SRIhelpsS and SRIhelpsE are the participant's assessments whether investing responsibly helps to improve society or allows to preserve the environment, respectively. KnowledgeSRI measures the participant's knowledge about SRI. OverabSRI is the participant's agreement to the statement that investing responsibly requires an overabundance of information to consider. SRIrisk is the participant's risk perception of SRI relative to conventional investments. SRIimpact and SRIcomplice assess the motivations for responsible investments. SRIperfOne/Ten/Thirty are the participant's return perceptions of SRI relative to conventional investments over one/ten/thirty years, respectively. Note that some items were recoded to ease legibility. Section 2.2 discusses the respective items with appropriate references to the questionnaire.

Table B2: Values, Beliefs, and Responsible Investment Allocations

	SRIChoice		
		Difference	t-statistic
Low PCE	0.8620		
High PCE	0.9225	0.0605	5.1669
Low Altruism	0.8770		
High Altruism	0.9076	0.0306	2.6770
No Donation	0.8171		
Donation	0.9183	0.1012	8.1291
	PercentageSRI		
		Difference	t-statistic
Low PCE	0.3905		
High PCE	0.4847	0.0942	8.4556
Low Altruism	0.4222		
High Altruism	0.4528	0.0306	2.7752
No Donation	0.4156		
Donation	0.4435	0.0279	2.3216

Note: This table shows how participants' socially responsible investment decisions are affected by their values and beliefs. The binary variable SRIChoice (upper panel) indicates whether an participant opts to invest into an SRI fund or not. PercentageSRI (lower panel) is the percentage (0-1) a participant invests into a socially responsible fund. Participants are classified as being in the low or high category with respect to their position relative to the respective sample median for perceived consumer effectiveness (PCE) and altruism. We further distinguish participants based on their decision to donate to charity. We report t-statistics of two-sided t-tests in column (4).

Table B3: Experimental Manipulations and Responsible Investment Decisions

	SRIChoice		
		Difference	t-statistic
Donation After	0.9039		
Donation Before	0.8791	-0.0248	-2.2022
Private Win	0.8911		
Public Win	0.8895	-0.0016	-0.1376
No Label	0.8796		
Label	0.9016	0.0220	1.9571
Five Funds	0.8277		
Two Funds	0.9505	0.1228	11.1405
	PercentageSRI		
		Difference	t-statistic
Donation After	0.4292		
Donation Before	0.4412	0.0120	1.1162
Private Win	0.4313		
Public Win	0.4411	0.0098	0.9102
No Label	0.4257		
Label	0.4462	0.0205	1.9117
Five Funds	0.2930		
Two Funds	0.5729	0.2799	29.5572

Note: This table shows how the experimental manipulations affect the two dependent variables. The binary variable SRIChoice (upper panel) indicates whether an individual opts to invest into an SRI fund or not. PercentageSRI (lower panel) is the percentage (0-1) a participant invests into a socially responsible fund. The first manipulation is a pro-social frame that we induce by varying whether the possibility to donate parts of the prize occurs before or after the investment allocation. With the second manipulation, we introduce public image concerns by varying if an article about the winner of the prize and her portfolio allocation will be published after the winner is drawn. The third manipulation varies whether the responsible fund receives an ethical label or not. Fourth, we manipulate whether participants have five or two funds as investment universe. We report t-statistics of two-sided t-tests in column (4).

Table B4: Determinants of Socially Responsible Investment Decisions

	Dependent variable: SRIChoice			
	(1)	(2)	(3)	(4)
DonBefore	-0.339***	-0.442**	-0.265	0.315
	(0.123)	(0.218)	(0.171)	(0.205)
ImageConcernPublic	-0.072	-0.265	0.107	-0.002
	(0.122)	(0.211)	(0.171)	(0.197)
Label	0.193	-0.175	0.417**	0.072
	(0.122)	(0.207)	(0.169)	(0.198)
NbrFundTwo	1.449***	1.144***	1.517***	1.752***
	(0.139)	(0.239)	(0.185)	(0.222)
Age (in years)	0.005	-0.003	0.010	0.010
	(0.005)	(0.008)	(0.007)	(0.008)
Gender (1=female)	0.582***	0.065	0.892***	0.692***
	(0.144)	(0.229)	(0.215)	(0.221)
Altruism	0.018	0.131	-0.037	-0.112
	(0.074)	(0.132)	(0.097)	(0.107)
PCE	0.220***	0.285	0.223**	0.294***
	(0.065)	(0.356)	(0.109)	(0.098)
Disc10	0.254	0.305	0.311	0.163
	(0.177)	(0.334)	(0.239)	(0.293)
Disc500	0.064	0.131	-0.179	0.713
	(0.307)	(0.539)	(0.416)	(0.581)
OverallDon	0.000**	0.000	0.000*	-
	(0.000)	(0.000)	(0.000)	-
InvestQuiz	-0.094	0.018	-0.200*	-0.131
	(0.078)	(0.131)	(0.110)	(0.122)
FinSit	-0.089**	-0.155**	-0.042	-0.089
	(0.042)	(0.067)	(0.062)	(0.066)
SRIShare	0.005	-0.005	0.009	0.000
	(0.006)	(0.008)	(0.009)	(0.008)
SRIObjective	0.011***	0.010***	0.015***	0.008**
	(0.003)	(0.004)	(0.005)	(0.004)
RiskSeeking	0.022	0.023	-0.017	-0.100
	(0.057)	(0.099)	(0.078)	(0.083)
SelfMon	0.219	0.357	0.316	0.636
	(0.337)	(0.616)	(0.464)	(0.536)
SRIhelpsS	0.030	-0.104	0.100	0.093
	(0.062)	(0.116)	(0.083)	(0.097)
SRIhelpsE	-0.026	0.103	-0.078	-0.128
	(0.062)	(0.100)	(0.084)	(0.103)
KnowledgeSRI	0.045	0.150*	-0.017	0.019
	(0.047)	(0.088)	(0.061)	(0.072)
OverabSRI	-0.103**	-0.047	-0.124**	-0.035
	(0.041)	(0.064)	(0.058)	(0.064)

Table B4 – continued from previous page

	(1)	(2)	(3)	(4)
SRIrisk	0.085**	0.086	0.074	0.066
	(0.040)	(0.070)	(0.057)	(0.063)
SRIimpact	0.100**	-0.023	0.146**	0.142*
	(0.049)	(0.099)	(0.063)	(0.075)
SRIcomplice	-0.013	-0.070	0.016	-0.080
	(0.039)	(0.071)	(0.053)	(0.064)
Constant	-0.579	-0.002	-0.904	-0.849
	(0.620)	(2.371)	(0.911)	(0.934)
Pseudo R^2	0.129	0.084	0.173	0.166
Observations	3092	1354	1456	853

Robust standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: This table contains estimation results of Logit regression specifications according to Equation 1. The dependent variable is SRIChoice, a dummy taking a value of one if the participant allocated money to an SRI fund. We report results for the full sample in column (1), and in column (2) and (3) for subsamples of participants who are in the upper or lower half of PCE, respectively. In column (4), we report results only for those participants who decided not to donate. DonBefore is equal to 1 if a participant can donate before the investment game. ImageConcernPublic is equal to 1 if a participant learns about a public announcement of their allocation. Label is equal to 1 if the responsible fund is endorsed by an ethical label and NbrFundTwo is equal to 1 if a participant only faces two funds to invest in. Age is participant age in years. Gender is a dummy equal to 1 if a participant is female. Altruism assesses a participant's altruistic values. PCE is the perceived consumer effectiveness and measures whether a participant believes socially responsible behavior to be feasible. Disc10(500) are dummy variables equal to 1 if a participant is present-biased, i.e., prefers immediate over delayed consumption of €10 (€500). OverallDon is the aggregate sum of how much a participant wants to donate to a charity. We do not include this control variable in column (4), because in this subsample, the donations always amount to zero. InvestQuiz refers to the amount of correct answers on a short financial literacy quiz. FinSit is a self-reported indication of how content a participant is with her financial situation. SRIShare and SRIObjective are the participant's current and ideal SRI holdings. RiskSeeking determines whether a participant can be classified as risk-seeking. SelfMon is the score on a scale that assesses participant's self-monitoring following Snyder (1974); Snyder and Gangestad (1986). SRIhelpsS and SRIhelpsE are the participant's assessments whether investing responsibly helps to improve society or the environment, respectively. KnowledgeSRI measures participant's knowledge about SRI – higher values indicate better knowledge. OverabSRI is the participant's agreement to the statement that investing responsibly requires an overabundance of information to consider. SRIrisk is the participant's risk perception of SRI – higher values indicate that the participant perceives SRI to be less risky than conventional investments. SRIimpact and SRIcomplice assess the participant's motivations for responsible investments.

Table B5: Determinants of Socially Responsible Investment Allocations

	Dependent variable: PercentageSRI			
	(1)	(2)	(3)	(4)
DonBefore	0.009	0.016	-0.003	0.050**
	(0.009)	(0.014)	(0.013)	(0.020)
ImageConcernPublic	0.006	0.000	0.016	-0.005
	(0.009)	(0.015)	(0.013)	(0.019)
Label	0.019**	0.009	0.029**	0.021
	(0.009)	(0.014)	(0.013)	(0.019)
NbrFundTwo	0.280***	0.283***	0.275***	0.284***
	(0.009)	(0.015)	(0.013)	(0.019)
Age (in years)	-0.001***	-0.002***	-0.000	-0.001
	(0.000)	(0.001)	(0.000)	(0.001)
Gender (1=female)	0.035***	0.023	0.039***	0.048**
	(0.010)	(0.016)	(0.014)	(0.021)
Altruism	0.001	-0.001	0.003	-0.008
	(0.006)	(0.009)	(0.008)	(0.011)
PCE	0.026***	0.062**	0.009	0.041***
	(0.005)	(0.024)	(0.009)	(0.010)
Disc10	-0.004	0.006	-0.005	-0.021
	(0.012)	(0.020)	(0.017)	(0.028)
Disc500	0.030	0.011	0.029	0.069
	(0.022)	(0.033)	(0.032)	(0.042)
OverallDon	0.000**	0.000*	0.000	-
	(0.000)	(0.000)	(0.000)	-
InvestQuiz	-0.013**	-0.003	-0.019**	-0.010
	(0.005)	(0.008)	(0.007)	(0.011)
FinSit	-0.005	-0.002	-0.005	-0.006
	(0.003)	(0.005)	(0.005)	(0.007)
SRIShare	-0.000	-0.001	-0.000	-0.001
	(0.000)	(0.001)	(0.001)	(0.001)
SRIObjective	0.001***	0.001***	0.002***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
RiskSeeking	-0.015***	-0.016**	-0.013**	-0.017*
	(0.004)	(0.006)	(0.006)	(0.009)
SelfMon	-0.027	-0.012	-0.040	0.045
	(0.024)	(0.040)	(0.033)	(0.051)
SRIhelpsS	0.005	-0.001	0.011	0.012
	(0.005)	(0.008)	(0.008)	(0.011)
SRIhelpsE	-0.001	0.002	-0.004	-0.018*
	(0.005)	(0.008)	(0.007)	(0.010)
KnowledgeSRI	-0.003	-0.002	-0.007	-0.002
	(0.003)	(0.005)	(0.005)	(0.007)
OverabSRI	-0.011***	-0.006	-0.014***	-0.007
	(0.003)	(0.004)	(0.005)	(0.006)

Table B5 – continued from previous page

	(1)	(2)	(3)	(4)
SRIrisk	0.002	0.003	0.004	0.004
	(0.003)	(0.005)	(0.005)	(0.006)
SRIimpact	0.011***	0.009	0.011**	0.011
	(0.004)	(0.007)	(0.005)	(0.008)
SRIcomplice	0.001	0.001	-0.000	-0.006
	(0.003)	(0.005)	(0.004)	(0.006)
Constant	0.164***	-0.040	0.234***	0.134
	(0.052)	(0.169)	(0.082)	(0.106)
Adjusted R^2	0.291	0.251	0.288	0.247
Observations	3092	1354	1456	853

Robust standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: This table contains estimation results of OLS regression specifications according to Equation 1. The dependent variable is PercentageSRI, which measures the proportion of the overall investment allocation a participant invests into SRI. We report results for the full sample in column (1), and in column (2) and (3) for subsamples of participants who are in the upper or lower half of PCE, respectively. In column (4), we report results only for those participants who decided not to donate. DonBefore is equal to 1 if a participant can donate before the investment game. ImageConcernPublic is equal to 1 if a participant learns about a public announcement of their allocation. Label is equal to 1 if the responsible fund is endorsed by an ethical label and NbrFundTwo is equal to 1 if a participant only faces two funds to invest in. Age is participant age in years. Gender is a dummy equal to 1 if a participant is female. Altruism assesses a participant's altruistic values. PCE is the perceived consumer effectiveness and measures whether a participant believes socially responsible behavior to be feasible. Disc10(500) are dummy variables equal to 1 if a participant is present-biased, i.e., prefers immediate over delayed consumption of €10 (€500). OverallDon is the aggregate sum of how much a participant wants to donate to a charity. We do not include this control variable in column (4), because in this subsample, the donations always amount to zero. InvestQuiz refers to the amount of correct answers on a short financial literacy quiz. FinSit is a self-reported indication of how content a participant is with her financial situation. SRIShare and SRIObjective are the participant's current and ideal SRI holdings. RiskSeeking determines whether a participant can be classified as risk-seeking. SelfMon is the score on a scale that assesses participant's self-monitoring following Snyder (1974); Snyder and Gangestad (1986). SRIhelpsS and SRIhelpsE are the participant's assessments whether investing responsibly helps to improve society or the environment, respectively. KnowledgeSRI measures participant's knowledge about SRI – higher values indicate better knowledge. OverabSRI is the participant's agreement to the statement that investing responsibly requires an overabundance of information to consider. SRIrisk is the participant's risk perception of SRI – higher values indicate that the participant perceives SRI to be less risky than conventional investments. SRIimpact and SRIcomplice assess the participant's motivations for responsible investments.

Table B6: Socially Responsible Investment Decisions for Reduced Subsample

	Dependent variable: SRIChoice			
	(1)	(2)	(3)	(4)
DonBefore	-0.542***	-0.875***	-0.326	-0.123
	(0.158)	(0.297)	(0.217)	(0.281)
ImageConcernPublic	-0.112	-0.248	0.135	-0.072
	(0.155)	(0.295)	(0.213)	(0.263)
Label	0.089	-0.412	0.366*	-0.092
	(0.153)	(0.284)	(0.218)	(0.255)
NbrFundTwo	1.416***	1.158***	1.528***	1.752***
	(0.177)	(0.332)	(0.237)	(0.300)
Age (in years)	0.004	-0.006	0.005	0.015
	(0.007)	(0.013)	(0.011)	(0.012)
Gender (1=female)	0.519***	-0.102	1.071***	0.583*
	(0.191)	(0.298)	(0.310)	(0.315)
Altruism	0.038	0.193	-0.017	-0.072
	(0.095)	(0.179)	(0.124)	(0.152)
PCE	0.221***	0.017	0.162	0.332**
	(0.083)	(0.483)	(0.142)	(0.136)
Disc10	0.456*	0.096	0.629*	0.282
	(0.248)	(0.419)	(0.336)	(0.445)
Disc500	-0.110	0.849	-0.924**	0.696
	(0.355)	(0.860)	(0.434)	(0.710)
OverallDon	0.000	0.000	0.000	-
	(0.000)	(0.000)	(0.000)	-
InvestQuiz	-0.187*	-0.050	-0.237*	-0.288*
	(0.105)	(0.184)	(0.141)	(0.172)
FinSit	-0.062	-0.130	-0.034	-0.046
	(0.060)	(0.110)	(0.080)	(0.098)
SRIShare	0.004	-0.002	0.006	0.000
	(0.006)	(0.009)	(0.009)	(0.010)
SRIObjective	0.014***	0.019***	0.015**	0.010
	(0.004)	(0.005)	(0.007)	(0.007)
RiskSeeking	-0.071	0.037	-0.195**	-0.194
	(0.074)	(0.135)	(0.097)	(0.120)
SelfMon	0.284	0.234	0.587	0.555
	(0.426)	(0.810)	(0.590)	(0.744)
SRIhelpsS	-0.048	-0.248	0.042	0.070
	(0.077)	(0.153)	(0.105)	(0.134)
SRIhelpsE	-0.030	0.194	-0.159	-0.145
	(0.075)	(0.122)	(0.104)	(0.141)
KnowledgeSRI	0.085	0.137	0.032	0.081
	(0.061)	(0.113)	(0.080)	(0.100)
OverabSRI	-0.055	-0.094	-0.027	0.006
	(0.051)	(0.076)	(0.075)	(0.091)

Table B6 – continued from previous page

	(1)	(2)	(3)	(4)
SRIrisk	0.103**	0.167*	0.064	0.030
	(0.050)	(0.088)	(0.069)	(0.088)
SRIimpact	0.098	-0.057	0.186**	0.122
	(0.064)	(0.139)	(0.075)	(0.107)
SRIcomplice	-0.024	-0.019	-0.005	-0.116
	(0.049)	(0.085)	(0.068)	(0.083)
SRIperfOne	-0.135	-0.250	-0.175	-0.188
	(0.097)	(0.171)	(0.130)	(0.183)
SRIperfTen	0.312**	0.339	0.408**	0.695***
	(0.126)	(0.225)	(0.182)	(0.256)
SRIperfThirty	-0.058	-0.166	-0.029	-0.218
	(0.088)	(0.174)	(0.118)	(0.176)
Wealth	0.004	0.009	0.029	-0.026
	(0.030)	(0.049)	(0.042)	(0.046)
University Degree	0.186	0.330	0.031	0.069
	(0.174)	(0.330)	(0.232)	(0.281)
Executive	0.035	-0.443	0.275	-0.224
	(0.176)	(0.319)	(0.240)	(0.284)
Pseudo R^2	0.143	0.141	0.192	0.200
Observations	2039	894	956	533

Robust standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: This table contains estimation results of Logit regression specifications according to Equation 1. The number of observations reduces because we include only those participants who disclosed their wealth levels or SRI return perceptions. The dependent variable is SRIChoice, a dummy taking a value of one if the participant allocated money to an SRI fund. We report results for the full sample in column (1), and in column (2) and (3) for subsamples of participants who are in the upper or lower half of PCE, respectively. In column (4), we report results only for those participants who decided not to donate. DonBefore is equal to 1 if a participant can donate before the investment game. ImageConcernPublic is equal to 1 if a participant learns about a public announcement of their allocation. Label is equal to 1 if the responsible fund is endorsed by an ethical label and NbrFundTwo is equal to 1 if a participant only faces two funds to invest in. Age is participant age in years. Gender is a dummy equal to 1 if a participant is female. Altruism assesses a participant's altruistic values. PCE is the perceived consumer effectiveness and measures whether a participant believes socially responsible behavior to be feasible. Disc10(500) are dummy variables equal to 1 if a participant is present-biased, i.e., prefers immediate over delayed consumption of €10 (€500). OverallDon is the aggregate sum of how much a participant wants to donate to a charity. We do not include this control variable in column (4), because in this subsample, the donations always amount to zero. InvestQuiz refers to the amount of correct answers on a short financial literacy quiz. FinSit is a self-reported indication of how content a participant is with her financial situation. SRIShare and SRIObjective are the participant's current and ideal SRI holdings. RiskSeeking determines whether a participant can be classified as risk-seeking. SelfMon is the score on a scale that assesses participant's self-monitoring following Snyder (1974); Snyder and Gangestad (1986). SRIhelpsS and SRIhelpsE are the participant's assessments whether investing responsibly helps to improve society or the environment, respectively. KnowledgeSRI measures participant's knowledge about SRI – higher values indicate better knowledge. OverabSRI is the participant's agreement to the statement that investing responsibly requires an overabundance of information to consider. SRIrisk is the participant's risk perception of SRI – higher values indicate that the participant perceives SRI to be less risky than conventional investments. SRIimpact and SRIcomplice assess the participant's motivations for responsible investments. SRIperfOne/Ten/Thirty are the participant's return perceptions of SRI relative to conventional investment for one, ten, or thirty years. Higher values indicate that the participant believes SRI outperforms. Wealth is measured via a self-reported scale. The dummy variables University Degree and Executive take on a value of 1 if the participant has a university degree or reports to be occupied in a leading position.

Table B7: Socially Responsible Investment Allocations for Reduced Subsample

	Dependent variable: PercentageSRI			
	(1)	(2)	(3)	(4)
DonBefore	0.006	0.005	0.007	0.032
	(0.011)	(0.017)	(0.016)	(0.025)
ImageConcernPublic	-0.002	-0.005	0.010	-0.001
	(0.011)	(0.017)	(0.016)	(0.023)
Label	0.009	-0.010	0.027*	-0.001
	(0.011)	(0.017)	(0.016)	(0.024)
NbrFundTwo	0.275***	0.284***	0.262***	0.275***
	(0.011)	(0.017)	(0.016)	(0.024)
Age (in years)	-0.001*	-0.002***	-0.000	-0.000
	(0.000)	(0.001)	(0.001)	(0.001)
Gender (1=female)	0.030**	0.004	0.050**	0.039
	(0.013)	(0.019)	(0.020)	(0.027)
Altruism	0.000	-0.000	0.001	-0.011
	(0.006)	(0.010)	(0.009)	(0.011)
PCE	0.027***	0.037	0.022*	0.042***
	(0.006)	(0.029)	(0.011)	(0.012)
Disc10	-0.010	-0.006	-0.017	-0.069*
	(0.015)	(0.024)	(0.021)	(0.036)
Disc500	0.042	0.062	0.028	0.085*
	(0.027)	(0.038)	(0.040)	(0.049)
OverallDon	0.000**	0.000**	0.000	-
	(0.000)	(0.000)	(0.000)	-
InvestQuiz	-0.008	0.005	-0.015*	-0.003
	(0.006)	(0.010)	(0.009)	(0.013)
FinSit	-0.003	0.004	-0.005	0.001
	(0.004)	(0.007)	(0.006)	(0.009)
SRIShare	-0.000	-0.001	-0.000	-0.000
	(0.000)	(0.001)	(0.001)	(0.001)
SRIObjective	0.002***	0.002***	0.002***	0.001**
	(0.000)	(0.000)	(0.000)	(0.001)
RiskSeeking	-0.016***	-0.014*	-0.020***	-0.016
	(0.005)	(0.008)	(0.007)	(0.011)
SelfMon	-0.000	0.001	-0.002	0.092
	(0.029)	(0.046)	(0.041)	(0.060)
SRIhelpsS	0.005	-0.003	0.013	0.007
	(0.007)	(0.010)	(0.009)	(0.013)
SRIhelpsE	-0.006	-0.002	-0.014*	-0.021*
	(0.006)	(0.010)	(0.009)	(0.012)
KnowledgeSRI	-0.001	-0.003	-0.006	0.003
	(0.004)	(0.006)	(0.006)	(0.008)
OverabSRI	-0.008**	-0.008*	-0.007	-0.006
	(0.004)	(0.005)	(0.006)	(0.008)

Table B7 – continued from previous page

	(1)	(2)	(3)	(4)
SRIrisk	0.006	0.010*	0.007	0.006
	(0.004)	(0.005)	(0.005)	(0.007)
SRIimpact	0.013***	0.011	0.014**	0.017*
	(0.005)	(0.008)	(0.006)	(0.009)
SRIcomplice	0.002	0.003	0.001	-0.007
	(0.003)	(0.005)	(0.005)	(0.007)
SRIperfOne	-0.002	0.000	-0.009	-0.006
	(0.007)	(0.010)	(0.010)	(0.015)
SRIperfTen	0.004	0.003	0.010	0.004
	(0.009)	(0.013)	(0.014)	(0.023)
SRIperfThirty	0.003	0.003	0.003	0.009
	(0.007)	(0.011)	(0.011)	(0.017)
Wealth	-0.001	-0.001	-0.001	-0.005
	(0.002)	(0.003)	(0.003)	(0.004)
University Degree	-0.008	-0.005	-0.010	-0.011
	(0.012)	(0.019)	(0.018)	(0.026)
Executive	0.009	-0.013	0.021	-0.011
	(0.013)	(0.020)	(0.018)	(0.027)
Adjusted R^2	0.310	0.297	0.280	0.259
Observations	2039	894	956	533

Robust standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: This table contains estimation results of OLS regression specifications according to Equation 1. The number of observations reduces because we include only those participants who disclosed their wealth levels or SRI return perceptions. The dependent variable is PercentageSRI, which measures the proportion of the overall investment allocation a participant invests into SRI. We report results for the full sample in column (1), and in column (2) and (3) for subsamples of participants who are in the upper or lower half of PCE, respectively. In column (4), we report results only for those participants who decided not to donate. DonBefore is equal to 1 if a participant can donate before the investment game. ImageConcernPublic is equal to 1 if a participant learns about a public announcement of their allocation. Label is equal to 1 if the responsible fund is endorsed by an ethical label and NbrFundTwo is equal to 1 if a participant only faces two funds to invest in. Age is participant age in years. Gender is a dummy equal to 1 if a participant is female. Altruism assesses a participant's altruistic values. PCE is the perceived consumer effectiveness and measures whether a participant believes socially responsible behavior to be feasible. Disc10(500) are dummy variables equal to 1 if a participant is present-biased, i.e., prefers immediate over delayed consumption of €10 (€500). OverallDon is the aggregate sum of how much a participant wants to donate to a charity. We do not include this control variable in column (4), because in this subsample, the donations always amount to zero. InvestQuiz refers to the amount of correct answers on a short financial literacy quiz. FinSit is a self-reported indication of how content a participant is with her financial situation. SRIShare and SRIObjective are the participant's current and ideal SRI holdings. RiskSeeking determines whether a participant can be classified as risk-seeking. SelfMon is the score on a scale that assesses participant's self-monitoring following Snyder (1974); Snyder and Gangestad (1986). SRIhelpsS and SRIhelpsE are the participant's assessments whether investing responsibly helps to improve society or the environment, respectively. KnowledgeSRI measures participant's knowledge about SRI – higher values indicate better knowledge. OverabSRI is the participant's agreement to the statement that investing responsibly requires an overabundance of information to consider. SRIrisk is the participant's risk perception of SRI – higher values indicate that the participant perceives SRI to be less risky than conventional investments. SRIimpact and SRIcomplice assess the participant's motivations for responsible investments. SRIperfOne/Ten/Thirty are the participant's return perceptions of SRI relative to conventional investment for one, ten, or thirty years. Higher values indicate that the participant believes SRI outperforms. Wealth is measured via a self-reported scale. The dummy variables University Degree and Executive take on a value of 1 if the participant has a university degree or reports to be occupied in a leading position.