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# Investor Valuation for Socially Responsible Assets: A Willingness to Pay Experiment\*

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### Abstract

We present an experimental study of investors' willingness to pay for socially responsible assets. In our initial public offering experiment, various assets share identical financial risk-return profiles but differ in the intensity and timing of societal benefits, represented by charitable donations. We find that subjects value societal benefits positively and prefer a positive correlation between financial returns and these societal benefits. We offer implications for the design of corporate social responsibility policies and for the pricing of responsible assets.

JEL Classification: A13, C91, G41

**Keywords:** Socially Responsible Investing, Investment Decisions, ESG Preferences, Experimental Finance

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### 1 Introduction

According to Bénabou and Tirole (2010), Corporate social responsibility (CSR) refers to actions that go beyond legal obligations in the pursuit of social interest. Some CSR actions, referred to as strategic CSR by Baron (2001), are beneficial for profits: in such win-win situations, both shareholders and society as a whole benefit. Other CSR actions reduce profits to benefit stakeholders via societal benefits (Kitzmueller and Shimshack (2012) refer to these actions as not-for-profit CSR; Bénabou and Tirole (2010), refer to them as delegated philanthropy). In both cases, the question that arises is whether shareholders value the societal benefits generated by CSR.

This question is of particular relevance given the significant development of Socially Responsible Investing (SRI) in today's financial markets. SRI enables investors to incorporate non-financial values in their investment decisions. In 2022, SRI represents roughly \$8.4 trillion or around one eighth of the total assets under management in the US (US SIF, 2022). However, this question is challenging to address from an empirical point of view, as it is difficult to identify in the field whether investors choose or value SRI for non-financial considerations related to CSR or because they expect to improve their portfolios' risk-return tradeoff.<sup>1</sup>

This paper proposes a willingness to pay experiment to study whether investors value societal benefits, keeping constant financial performance. Our experiment features initial public offerings of several assets which have identical financial payoffs. The assets' payoffs are presented as lotteries with two states: one good state, with a high financial payoff, and one bad state, with a low financial payoff. Both states are equally likely. Responsible assets additionally trigger a societal benefit. We introduce this societal benefit in our experiment via a donation to a charity (Baron, 2007; Bénabou and Tirole, 2010). We select three well-known charities - Greenpeace, the Red Cross, and Transparency International - to represent environmental, social and governance issues, respectively. In the basic setup of our experiment, the donation of the responsible asset is similar in the good and bad state. To test whether the correlation with future financial payoffs has an influence

The literature suggests that both pecuniary and pro-social motives for investing exist in the field. On the one hand, Riedl and Smeets (2017) and Bauer et al. (2021) show that social preferences are a primary determinant of the decisions to invest in responsible mutual funds and to have more sustainable pension savings. Similarly, Barber et al. (2021) provide evidence that institutional investors invest in impact funds despite the fact that these funds earn lower returns than traditional venture capital funds.

On the other hand, Døskeland and Pedersen (2016) find that individual investors are primarily motivated by financial considerations to invest in responsible funds. In addition, it seems that individual and institutional investors expect to earn higher returns and reduce portfolio risk by incorporating climate risk and investing more responsibly (Hartzmark and Sussman, 2019; Krüger et al., 2020). Corroborating this evidence, the signatories of the United Nations Principles of Responsible Investment, who are institutional investors representing \$103.4tn of global assets under management, commit to incorporating environmental, social and governance (ESG) issues in their investment process because they "believe that ESG issues can affect the performance of investment portfolios" (UNPRI website, About us: What are the Principles for Responsible Investment?).

on preferences for social responsibility, we compare subjects' willingness to pay when the donation only takes place in the bad state or in the good state, while keeping the expected donation constant. To measure whether subjects display increasing marginal utility from doing good, we introduce a highly responsible asset with an expected donation that is twice as large as the baseline donation. This allows us to test how individuals evaluate large compared to small levels of expected societal benefits.

To infer investor willingness to pay for the various types of societal responsibility, assets are auctioned off using a Becker et al. (1964) mechanism that induces truth-telling under some conditions. Because our experimental design ensures identical risk-return expectations for all assets, pecuniary motives cannot explain potential differences in asset prices. Moreover, by construction, subjects' choices matter for their compensation: stating an inflated or deflated willingness to pay for an asset results in a lower expected compensation. Experimental instructions clearly indicate that the donation is actually made to the respective charity if and only if the related assets are issued. Thus, subjects know their decisions have an impact.

After the experiment, we present subjects with a questionnaire to measure their personality traits and gain a better understanding of the psychological drivers that motivate people to invest responsibly. Specifically, we measure altruism (Brodback et al., 2019; Schwartz, 1992), long-term orientation (Bearden et al., 2006; Flammer and Bansal, 2017; Slawinski et al., 2017), religious values (Kumar et al., 2011; Peifer, 2010), political engagement (Bolsen et al., 2014; Dawes et al., 2011; Fowler, 2006), and the perceived effectiveness of doing good (Brodback et al., 2019; Nilsson, 2008, 2009).

Using the experimental methodology allows us to circumvent two major difficulties faced by empirical studies on CSR and SRI. First, it allows us to control investors' expectations on assets' financial payoffs and thereby to identify the willingness to pay for their impact on society. Second, it enables us to exogenously vary the level and timing of the societal benefits.

We run our experiment with 453 subjects. Our main analyses focus on a sample of 242 sophisticated individuals.<sup>2</sup> We find that the willingness to pay for socially responsible assets is higher than for conventional assets and increases linearly in an asset's societal benefit. For an asset with a donation of  $\in$ 20 in each state, which represents 40% of the expected financial payoff of  $\in$ 50, the premium compared to the conventional asset is  $\in$ 5.01. For an asset with a donation of  $\in$ 40 in each state, which represents 80% of the expected

We define sophisticated subjects as those who do not bid more than the expected value for the conventional asset. Unsophisticated subjects who bid more than the expected value could be viewed as risk lovers but, since they constitute around 45% of our sample, it appears more likely that they were not able to fully master the Becker et al. (1964) mechanism, despite our best efforts.

financial payoff, the premium increases to  $\leq 10.73.^3$  This suggests that subjects' marginal utility from doing good is constant. However, although subjects are willing to pay more for the responsible asset than for the conventional one, the magnitude of the premium is substantially smaller than the expected amount of the donation. This indicates that subjects do not internalize the entire level of the societal benefit generated by the asset.<sup>4</sup>

In addition, we find that subjects' willingness to pay for societal benefit strongly depends on the correlation between this benefit and the financial payoff. Subjects are willing to pay significantly more for assets which donate only in the good state than for assets that donate only in the bad state. For assets with an expected donation of &20, the asset that donates only in the good state shows a significantly positive premium of &5.73 compared to the conventional asset. In contrast, the asset that donates only in the bad state shows a premium of only &2.55. Thus, although both assets have the same expected donation, their valuation difference is &3.18.<sup>5</sup> Subjects' preference for an asset which only donates in a good state corresponds to correlation seeking behavior; see the study of mutivariate preferences by Richard (1975), Epstein and Tanny (1980), and Eeckhoudt et al. (2007). Moreover, such behavior suggests that subjects' utility function is non-separable in wealth and societal benefits.<sup>6</sup>

The rest of the paper proceeds as follows. Section 2 offers a literature review and explains our contributions. We present the experimental setup in Section 3. Section 4 formulates theoretical predictions and main hypotheses. Section 5 presents the experimental assets and the study implementation. We report descriptive statistics and results in Section 6, followed by Section 7 where we discuss practical implications. Finally, we conclude in Section 8.

### 2 Literature Review and Contributions

Our work is related to experimental and survey studies on socially responsible investing that analyze who invests responsibly (Brodback et al., 2019; Dorfleitner and Utz, 2014;

The magnitude of the societal benefit we chose in the experiment is in line with the estimates offered by Allcott et al. (2023): as shown in their Figure 7 displaying corporate social impact per dollar of revenue for twelve industries in the US, profits can be of the same order of magnitude as environmental externalities.

We can put a number on the parameter of internalization, denoted  $\alpha_I$ , in Dewatripont and Tirole (2023)'s model: this parameter reflects the willingness of investors to accept a reduction in their return in proportion  $\alpha_I$  of the amount of the societal benefit, denoted W. Our experiment suggests that this parameter  $\alpha_I$  is around 20-25%.

The lower valuation for responsible asset we document suggests that social benefits do not act as a hedge for poor financial returns.

When we consider all subjects, both sophisticated and unsophisticated, we still find that societal benefits are positively valued and that there is a preference for positive correlation. Two differences compared to the results based on the sophisticated sample alone are that preferences for societal benefits appear convex and that subjects seem to dislike the responsible asset that delivers societal benefits in the bad state. However, since all premia are negative for unsophisticated subjects, we do not emphasize these results but report them in the Appendix.

Gutsche and Ziegler, 2019; Nilsson, 2009), why people invest responsibly (Brodback et al., 2019; Glac, 2009; Gutsche and Ziegler, 2019; Riedl and Smeets, 2017), how differential information affects responsible investing (Barreda-Tarrazona et al., 2011; Døskeland and Pedersen, 2016; Lewis and Mackenzie, 2000; Pasewark and Riley, 2010; Webley et al., 2001; Martin and Moser, 2016; Crifo et al., 2015) and willingness-to-pay for hypothetical socially responsible funds (Gutsche and Ziegler, 2019).

We contribute to this literature in two ways. First, we present a novel and incentivized experimental design that elicits an individual's willingness to pay for responsible assets. By ensuring that conventional and responsible assets have identical risk-return trade-offs, we learn how much an individual is willing to pay for social responsibility, independent of its potential impact on financial performance. With otherwise identical assets, we therefore circumvent any effects that pecuniary motives would have on the valuation of assets. Such endeavor is extremely difficult to pursue with naturally-occurring data. Our paper thus allows to advance our understanding of whether non-financial values affect investment decisions and asset prices. Doing so, we offer empirical evidence on the existence of an investor taste for ESG, a factor included in various influential theoretical papers studying the pricing of responsible assets (see, e.g., Fama and French (2007); Pástor et al. (2021); Pedersen et al. (2021)).

Second, by varying the timing of occurrence of an asset's social responsibility, we learn about whether the state of the economy has an impact on how much an individual is willing to pay for a responsible asset. At the same time, it allows us to elicit individual's multivariate risk attitudes for wealth and "doing good". To the best of our knowledge, our paper is the first to empirically investigate preferences for correlation between risks on wealth and on pro-social benefits such as donations. Such preferences for correlation have been theoretically studied in three seminal papers by Richard (1975), Epstein and Tanny (1980) and Eeckhoudt et al. (2007). There is a growing theoretical literature dealing with higher order risk preferences within the domain of health and wealth (Rey and Rochet, 2004; Lee, 2005; Kakolyris, 2017; Crainich et al., 2017; Attema et al., 2019), inter-temporal consumption and savings decisions (Leland, 1978; Bommier, 2005; Andersen et al., 2018), inequality (Atkinson and Bourguignon, 1982), labor (Eaton and Rosen, 1980; Tressler and Menezes, 1980), energy policy (Keeney, 1977) and international relations (O'Neill, 2001). Our experimental results are useful to better calibrate these theoretical models. Another domain of application is related to climate change. In his study on the ecological discount rate, Gollier (2010) shows that preferences for correlation govern the willingness to invest in the environment: this willingness is decreasing in the rate of economic growth if and only if the representative agent is correlation-averse. Our paper suggests that agents are

Our study is also related to experimental studies on IPOs and different auction mechanisms (Goswami et al., 1996; Zhang, 2009; Bonini and Voloshyna, 2013; Füllbrunn et al., 2020; Almeida and Leal, 2015), while these studies do not focus on socially responsible assets.

correlation-seeking and this has implications for the ecological discount rate.

In concurrent and complementary work, Bonnefon et al. (2019) propose an experiment to study how subjects bid for risk-free assets that generate positive or negative externalities. They find that subjects' bids reflect a sizeable portion of the externalities generated by the assets, both for the positive and the negative cases, even when subjects' choices have no consequences. In a related paper, Heeb et al. (2023) use a field experiment approach and show that the size of environmental externalities does not affect the fees that people are willing to pay to invest in sustainable funds. We complement the work of Bonnefon et al. (2019) and Heeb et al. (2023) by explicitly modelling risky assets and by investigating whether the correlation between cash flows and externalities affects asset valuation.

Our study also speaks to the link between the level of the societal benefit generated by an asset and the responsibility premium. Our result that investor valuation for responsible assets increases linearly with societal benefits is in line with the result offered by Bonnefon et al. (2019). These results are at odd with the findings of Heeb et al. (2023) and thus call for more experiments.

In another related study, Humphrey et al. (2020) design an experiment to understand how externalities influence individuals' capital allocation between a risky asset and cash. This study features two treatments in which a sum which equals the payoff earned by the subject on the risky asset is donated to, or deducted from, an amount of money offered to a non-profit organization. Results show that negative externalities, but not positive externalities, matter for capital allocations. We complement this work by focusing on asset valuation and by studying whether the size and the timing of externality affects valuation.<sup>9</sup>

Our paper is also related to the experimental literature on giving and risk. Brock et al. (2013) set up an experiment on the dictator game to study whether risk influences pro-social behavior. Their design includes six tasks. The last one is closest to our set up. It features dictators who are asked to allocate risk between themselves and a recepient. In our set up too, investors' bidding behavior affects the likelihood that a societal benefit materializes. However, the game of Brock et al. (2013) does not feature financial assets per se or their pricing. Moreover, the recipient is another player in the experiment. We thus believe that our set up that studies the willingness-to-pay for risky assets with consequences for ESG issues is better suited to study socially responsible investments. Finally, Brock et al. (2013) does not study what happens when the level of correlation between the lotteries of the dictator and of the recipient changes. Cettolin et al. (2017) study whether risk preferences influence giving propensity when the giver is facing risk or

<sup>&</sup>lt;sup>8</sup> See also Crumpler and Grossman (2008).

A recent paper by Duchene et al. (2022) extends our analysis by studying the trilemma between expected returns, risk and societal impacts.

not. Cappelen et al. (2013) study the fairness of allocations affected by risk. Exley (2016) investigates individuals' preferences for risk on money for themselves and on donations to a charity. She finds that subjects decide to invest less of their own money to generate donations for a charity that are risky than to generate payoffs for themselves with the same level of risk. Fahle and Sautua (2021) study the interplay between giving behavior and loss aversion. These papers do not vary the type and timing of the donation which are the main focuses of our study.

# 3 Experimental Design

In our experiment, subjects are presented with five different assets  $A_k$  where  $k \in \{1, ..., 5\}$ . We set up assets as lotteries whose returns depend on the future state of the economy (Plott and Sunder, 1982; Gneezy and Potters, 1997). The state can be good, denoted by h, in which case the asset payoff is high; or the state can be bad, denoted by l, in which case the asset payoff is low. Figure 1 shows the assets we use in our baseline experiment. The conventional asset  $A_1$ , which contains no responsibility component, offers a financial payoff of 100 experimental currency units in state h and zero in state l. Both states occur with the same probability,  $\frac{1}{2}$ . This simple structure ensures that participants can easily form expectations. It is straightforward to compute the expected financial payoff which equals 50.

### [Figure 1 about here.]

To incorporate responsibility in our experimental setting, we follow Bénabou and Tirole (2010). They define corporate social responsibility as the fact that firms act in the interest of their stakeholders and society on a voluntary basis and beyond their legal obligations. Within CSR, they define delegated philanthropy as "a channel for the expression of citizen values" (Bénabou and Tirole, 2010, p. 10). The firm engages in CSR on behalf of stakeholders (investors, customers...) to do good for society. In our experiment, we set up a firm's societal externality as a donation to a charity. The donation reflects Bénabou and Tirole (2010)'s idea of delegated philanthropy. If participants purchase the asset, a donation will be made on their behalf. For the donation, we select well-known charities that reflect the environmental, social, and governance dimensions that are common in responsible investing. As we indicate later in the discussion section, we view donations as a metaphor for more general societal impacts that firms have when they operate, e.g., environmental or social externalities.

We design four different responsible assets  $A_k$ , where  $k \in \{2, ..., 5\}$ . The distribution of financial payoffs for these responsible assets is identical to the one for the conventional asset  $A_1$ . We thus ensure that pure financial considerations do not affect differently participants' willingness to pay for the conventional and responsible assets. Responsible

assets can trigger a donation in the good state and/or in the bad state. We define the donation of asset  $A_k$  in the good state h as  $g_{h,A_k}$ . The donation in the bad state l is  $g_{l,A_k}$ . For asset  $A_2$ , we have  $g_{h,A_2} = g_{l,A_2} = 20$ . For asset  $A_3$ , we have  $g_{h,A_3} = 0$  and  $g_{l,A_3} = 40$ . For asset  $A_4$ , we have  $g_{h,A_4} = 40$  and  $g_{l,A_4} = 0$ . And for asset  $A_5$ , we have  $g_{h,A_5} = g_{l,A_5} = 40$ . We chose these particular values for the donations because, as shown in the next section, they allow us to draw inferences about subjects' preferences for donations. Remark that the expected level of donation is the same for assets  $A_2$ ,  $A_3$ , and  $A_4$ , and that it is twice as large for asset  $A_5$ . Figure 1 shows the structure of the responsible assets' financial payoffs and donations.

We request participants to state their willingness to pay for each experimental asset. To try and induce truthful revelation of the maximum amount a subject is ready to pay to buy a given asset, we use Becker, DeGroot, and Marschak (BDM) mechanism (Becker et al., 1964). For a given purchase decision of a given asset  $A_k$ , participants are endowed with 100 experimental currency units, which they can use to make a bid denoted  $b_{A_k}$ . The benchmark price  $p_{A_k}$ , at which a transaction may occur, is randomly determined using a uniform distribution between the lowest and highest potential financial payoffs. Each integer in this interval is equally likely. A transaction occurs, and thus the given asset is issued, at the benchmark price  $p_{A_k}$  if and only if a participant's bid  $b_{A_k}$  is larger than or equal to the benchmark price  $p_{A_k}$ . Individuals' choices thus matter and a donation is made only if the participant is willing to pay a sufficiently high price. We consider the BDM mechanism as a metaphor for an initial public offering mechanism.

# 4 Hypotheses

Pro-social preferences Several strands of literature suggest that human behavior displays other-regarding preferences. A large body of work shows that people – depending on their personality characteristics – donate time and money to improve the lives of others (Andreoni and Vesterlund, 2001; Andreoni et al., 2003, 2017; Carpenter and Myers, 2010; DellaVigna et al., 2012; Eckel and Grossman, 1996, 1998, 2003; DellaVigna et al., 2013; Smeets et al., 2015). Similarly, the marketing literature suggests that consumers are willing to pay price premia for products that are associated with a pro-social component. These products can be more environmentally friendly, such as organic products, or related to better labor working conditions, such as fair trade products (Casadesus-Masanell et al., 2009; Elfenbein and McManus, 2010; Gneezy et al., 2010; Loureiro and Lotade, 2005; Tully and Winer, 2014). To test these insights, we set up the following null hypothesis:

H1: The willingness to pay is the same for responsible assets as for the conventional asset.

This first hypothesis is equivalent to  $b_{A_k} = b_{A_1}$ , where  $k \in \{2, ..., 5\}$ . A rejection of this hypothesis with  $b_{A_k} > b_{A_1}$  would indicate that investors display pro-social preferences.

Preference for correlation Despite having important asset pricing consequences, research on investors' preferences for societal externalities that accrue in different future economic times is scarce. To formulate our next hypothesis, we rely on research in management and social psychology. A recent article by Morewedge et al. (2016) investigates "emotional hedging", the fact of betting against a desirable outcome. Sports fans and supporters of US presidential candidates were offered a payment should their favored team or candidate lose. If a financial payment could be a substitute for the desirable outcome, a participant should hedge against the bad outcome. In contrast to this prediction, Morewedge et al. (2016) find that participants were reluctant to hedge as they felt it was disloyal to bet against their team or candidate.

Another stream of research suggests that individuals' generosity increases with their well-being (Cunningham, 1979). A related phenomenon is the "warm-glow of success" according to which people who have succeeded at a task are more generous; see Isen (1970), Isen et al. (1973), Isen and Levin (1972) and Harada (1983). Studies that investigate longitudinal panel data confirm this effect and suggest that happy individuals are more inclined to volunteer (Thoits and Hewitt, 2001) or donate to a charity (Boenigk and Mayr, 2016; Wang et al., 2008). One caveat in the application of these insights to our framework is that the warm-glow of success refers to ex-post donations, i.e., donations after the state of happiness is realized, while, in our experiment, participants assess outcomes ex-ante.

In light of these insights, we propose the following null hypothesis:

H2: The willing to pay for responsible assets is identical whether the societal benefit occurs in the good or in the bad state.

Hypothesis H2 is equivalent to  $b_{A_4} = b_{A_3}$ . Hypothesis H2 is related to multivariate risk preferences, a concept originally introduced by Richard (1975) and studied by Epstein and Tanny (1980) and Eeckhoudt et al. (2007). Hypothesis H2 would hold if individuals are correlation neutral. If it is rejected with  $b_{A_4} < b_{A_3}$ , individuals would display correlation aversion and donations would act as a hedge against financial losses, in spirit of emotional hedging. If hypothesis H2 is rejected with  $b_{A_4} > b_{A_3}$ , individuals would display correlation seeking preferences. To the best of our knowledge, no other work in the experimental literature studies correlation risk preferences within the domain of charity, donations or

The literature that deals with socially responsible investing and corporate social responsibility during crisis focuses on the relation between corporate social responsibility and future financial performance (see Lins et al. (2017), Muller and Kräussl (2011) and Nofsinger and Varma (2014), for the great financial crisis, and Albuquerque et al. (2020) for the Covid-19 crisis).

responsible investing.

Curvature of pro-social preferences DellaVigna et al. (2012) and Null (2011) suggest that the shape of pro-social preferences varies with the motivation for giving. When pro-sociality is driven by pure altruism, preferences should be close to linear. On the other hand, warm glow motives would be better characterized by a function with diminishing marginal increments. Given these various motivations, an individual's utility from giving could be either linear or concave. This leads us to posit the following null hypothesis:

H3: The willingness to pay for responsible assets is linearly related to the level of societal benefits.

Hypothesis H3 is equivalent to  $b_{A_5} - b_{A_2} = b_{A_2} - b_{A_1}$  and might be consistent with pure altruistic motives. A rejection of hypothesis H3 with  $b_{A_5} - b_{A_2} \le b_{A_2} - b_{A_1}$  could be related to warm glow motives.<sup>11</sup>

# 5 Experimental Implementation

### 5.1 Practical Set-Up

Our experiment is computer-based. To avoid order effects, assets are presented in random order. To represent a variety of societal externalities, we select Greenpeace, the Red Cross, and Transparency International as charities that receive the donations. These charities cover the three domains of responsible investing, namely environmental, social and governance dimensions, respectively. When they face the responsible assets, participants read a brief mission statement taken from each charity's website. Further, a logo of the respective charity signals to which cause an asset may donate. We do so to ensure that individuals understand which good cause is associated with a given asset. We only expect a positive premium for the responsible asset if participants understand and care about the good cause and, in addition, trust the selected charities (Bennett, 2003). We thus use charities that are well-known and well-respected at the time of the study.

Each responsible asset  $A_k$ , with  $k \in \{2, ..., 5\}$ , is implemented with each charity, in random order. Moreover, each asset  $A_k$ , with  $k \in \{1, ..., 5\}$ , is faced twice by each participant. This enables us to filter out some noise. In total, every participant makes 26 decisions: for the conventional asset  $A_1$ , there are 2 replications; for the responsible assets  $A_k$ , with  $k \in \{2, ..., 5\}$ , there are 4 types of asset for each of the 3 charities with 2

<sup>&</sup>lt;sup>11</sup> In Appendix B, we show how our hypotheses are related to various preference characteristics in an expected utility framework.

replications each.

In Figures 2 to 4, we display examples of screenshots from the experiment with responsible asset  $A_2$ . After observing this screen, participants were asked for the maximum price they would be willing to pay for the asset, i.e., their bid.

[Figure 2 about here.]

[Figure 3 about here.]

[Figure 4 about here.]

We recruited participants from a German university's experimental subject pool that allows students from all disciplines to sign up. We have a relatively diverse sample structure with around 54% of business and economics students. The experiment lasted on average 35 minutes per session. Instructions were read aloud by the experimenter before the start of the experiment. Each participant had a written copy of the instructions available. We conducted 7 sessions with 143 subjects on November 26-29, 2018. Unexpectedly, we observed that 21 participants, i.e., 14.68% of our sample, reported an average willingness to pay (hereafter, WTP) of 100 or 0 for the conventional asset. We interpreted these bids as irrational. This suggested to us that some participants did not fully understand the instructions. As a consequence, the instructions were slightly revised and we moreover included a pen and paper quiz to be taken by every participant before the start of the experiment. Participants received immediate feedback on their quizzes by the experimenter. In particular, the new instructions emphasize more clearly how compensation relates to the participant's willingness to pay for an asset. To do so, we presented two exemplary persons and discussed their variable payment in three scenarios, in which the randomly determined price varies. With the pen and paper quiz, we tried to make sure that participants understood how their bids and the randomly determined prices of assets determine their potential compensation. We conducted 7 additional sessions with 159 subjects who faced the new instructions on December 11, 2018 and January 16, 2019. With the new instructions, the fraction of subjects with average WTP of 100 or 0 for the conventional asset was reduced to 7.55%. In our regression analyses, we control for the use of the new instructions. Both versions of the instructions as well as the pen and paper quiz are displayed in Appendix D.1 to D.4.

We ran additional sessions to assess the robustness of our results. To check if there is a particular role played by the zero payout in the bad state and if inequity aversion drives our results, we introduce two additional types of experimental assets with the same expected payoffs and donations, but different payoffs in the good and bad states. In each robustness experiment, we first repeat our baseline experimental assets  $A_k$  with  $k \in \{1, ..., 5\}$ , as depicted in Figure 1.

To account for the fact that the zero payout in the bad state may affect subjects' choices, we introduce a new type of assets that provides a financial payoff of 90 and 10 in the good and in the bad state, respectively. We denote these assets as  $A_{1k}$  with  $k \in \{1, ..., 5\}$ . This enables us to avoid the zero payout, achieving the same average payoff, and maintaining a similar level of volatility.

The second new type of experimental assets enables us to study whether our results are affected by subjects' dislike for inequitable outcomes between themselves and the charity in the bad state. While keeping the expected payoffs and donation constant, the financial payoff in the good and bad state now amounts to 60 and 40, respectively. We denote these assets as  $A_{2k}$  with  $k \in \{1, ..., 5\}$ .

We conduct 30 rounds of bidding (for each of the 3 types,  $A_k$ ,  $A_{1k}$ , and  $A_{2k}$ , there are 5 assets and 2 replications). For these additional sessions, to keep the experiment's duration reasonable, we exclusively use donations to the Red Cross: we were concerned that participants might lose attention if we present them with more than 30 rounds of bidding. We run these additional experiments with a new sample of 151 participants on December 2-3, 2019 and January 8-9, 2020.

Our entire sample includes 453 participants. In this entire sample, 45% of participants in our experiment bid more than  $\leq$ 50 for the conventional asset  $A_1$ . While these participants could be classified as risk-lovers, the typical proportion of risk-lovers is only around 10%, according to Holt and Laury (2002). We thus interpret the high proportion of participants willing to pay more than  $\leq$ 50 for asset  $A_1$  as a sign of misunderstanding of the BDM mechanism. To focus on participants who are more likely to have understood the BDM mechanism, our main analysis is based on the subsample of participants who bid on average  $\leq$ 50 or less for the conventional asset. Additionally, there are 7 participants with an extreme average WTP of  $\leq$ 0 for the conventional asset. As indicated before, it is unlikely that these participants understood the experiment, so we also exclude them from our sample.

As a result, our main empirical analyses are performed on a subsample of 242 participants. Additional analyses are performed on the full sample and various other subsamples, and are presented in the Appendix.

# 5.2 Incentive Compatibility

All participants received a fixed payment of €10 as a show-up fee, which is the typical hourly wage for a student job in Germany. The incentive compatible variable payment relies on the BDM mechanism which we introduced in section 3. In order to elicit willingness to pay, we offer a variable payment, on top of the fixed payment, to only 10% of participants, randomly selected.<sup>12</sup> These 10% of participants are then paid out

See Charness et al. (2016), Dohmen et al. (2011), Laury (2005), and Vrecko and Langer (2013) for recent evidence on the appropriateness of this procedure.

according to one randomly determined investment decision. For their payout, we exchange 1 experimental currency unit for  $1 \in \mathbb{C}$ . That is, every participant received a fixed payment for participation in addition to a  $\frac{1}{10}$  chance to receive the attractive variable payment from one randomly chosen replication. The monthly available net income (after payment of unavoidable expenses) of a typical German student amounts to  $\in 215$  (Statista, 2017). With an overall payment, i.e., a fixed plus variable payment, that can sum up to more than  $\in 200$ , compensation in our experiment may represent a substantial amount for student participants. These high amounts make incentives more salient while keeping the expected payout for the experimenter at a reasonable level.

Participants who were randomly selected to receive the variable payment rolled dice to determine which decision and state of the world matter for their payment. Winning participants earned an average variable compensation of  $\in 119.62$ . The overall (i.e., fixed plus variable) average payout per participant amounts to  $\in 19.51$ . Note that by design, the variable payout can be zero at the least and does not result in a loss.

### 5.3 Participant Characteristics

[Table 1 about here.]

Table 1 shows descriptive statistics for the 242 participants in our main sample. We observe that 44.6% of participants are female. As expected given that participants are students, the median age is relatively low, between 21 and 23 years. Regarding educational achievements, 54.5% obtained the "Abitur" (the German matriculation examination) and 34.7% report to have a Bachelor's degree. An assessment of self-reported monthly net income reveals that the majority of participants (and their parents, respectively) have more than 500€ (and 3500€, respectively) available. Such a relatively comfortable economic situation is also reflected in the low rate of participants, around 14%, who receive the German government-funded student grant Bafög.

### 6 Results

### 6.1 Hypothesis Testing

[Table 2 about here.]

We depict participants' average willingness to pay for all of our experimental assets in Table 2. To filter out noise, we average the stated WTP across replications and charities. Participants' WTP for all assets ranges from  $\in$ 42 to  $\in$ 53.

[Figure 5 about here.]

These data are displayed in Figure 5. In the top panel, we show the average WTP for asset  $A_1$  to  $A_5$ . In the bottom panel of Figure 5, we plot the average premia of the responsible assets over the conventional asset  $A_1$  which we compute as:  $b_{A_k} - b_{A_1}$ , where k = 2, ..., 5. We observe a positive premium for each of the responsible assets, from  $A_2$  to  $A_5$ . This suggests that investors do take into account societal impacts when they value financial assets.

For the remainder of the paper, we focus on average premia of responsible assets over the conventional asset. We assess the statistical significance of average absolute Euro premia with t-tests. This is adequate because we use a within-subject design.

### [Table 3 about here.]

Results are in Table 3. We assess the statistical significance of premia for assets  $A_k$ ,  $k \in \{2, ..., 5\}$ , over  $A_1$ .

All asset premia are positive and statistically significant. For asset  $A_2$ , there is a notable premium of  $\in 5.01$  with respect to asset  $A_1$ . Asset  $A_3$  in which a donation occurs only in the bad state shows a premium of  $\in 2.55$ . However, when donations occur in the good state, the premium for asset  $A_4$  increases to  $\in 5.73$ . The "high-responsibility" asset  $A_5$  commands the highest premium of approximately  $\in 10.73$ . On average, the premium for all socially responsible assets, denoted as "Premium  $A_{2,\dots,5}$ ", is  $\in 6.01$ . Thus, we reject Hypothesis H1 stating that the valuation of financial assets does not depend on the associated societal benefits: socially responsible assets are valued more than conventional assets.

To evaluate Hypothesis H2 which deals with a potential preference for correlation between financial payoffs and societal benefits, we analyze "Premium  $A_4 - A_3$ ". This premium represents the average difference in willingness to pay between assets  $A_4$  and  $A_3$ . As shown in Table 3, it is positive at  $\in 3.19$  and statistically significant. Contrary to Hypothesis H2 that posits no preference for correlation, this result suggests that participants are willing to pay significantly more for an asset that donates in good rather than in bad economic times, all else being equal. This demonstrates that individuals tend to prefer a positive correlation between wealth and donations.

Finally, we examine "Premium H3", calculated as the difference between  $(b_{A_5} - b_{A_2})$ , the change in bid when the expected donation increases from 20 to  $\in 40$ , and  $(b_{A_2} - b_{A_1})$ , the change in bid when the expected donation increases from 0 to  $\in 20$ . This premium is  $\in 0.70$  but is statistically insignificant. This suggests that preferences are linear in the amount of donations to a good cause, which is consistent with the findings of Bonnefon et al. (2019) and supports Hypothesis H3.

### 6.2 Determinants of Premia for Responsible Assets

As an exploratory investigation, we conduct regression analyses to examine how psychological traits and social characteristics affect the willingness to pay for responsible assets compared to conventional assets. This allows us to determine whether the scales used in the literature to measure these individual characteristics are able to predict the premia for responsible assets. Appendix F displays the correlation matrix between the individual characteristics we consider.

We estimate the following equation using ordinary least squares:

$$Premium A_{ki} = \alpha + \beta_1 Altruis m_i + \beta_2 Egois m_i + \beta_3 PE Donation s_i + \beta_4 Risk Aversion_i + \lambda X_i + \epsilon_i,,$$
(1)

where  $Altruism_i$  represents participant i's perceived importance of 4 items: equality, social justice, protecting the environment, and unity with nature. The  $Egoism_i$  construct consists of 5 items related to authority, social power, wealth, ambition, and success. These two variables are constructed based on the survey proposed by Schwartz (1992).  $PE\ Donations_i$  is participant i's perceived effectiveness of donations.  $Risk\ Aversion_i$  is self-reported on a 7-point Likert scale. The vector  $X_i$  includes other explanatory variables (long-term orientation, religiousness, political engagement, perceived effectiveness of doing good, risk and return perceptions of SRI relative to conventional investments, etc.) and a dummy variable indicating whether the participant faced the new instructions. For a detailed discussion of all the variables, see Appendix A.

Estimation results of Equation 1 are presented in Table 4. Since we standardize all independent variables, the regression constants correspond to the unconditional averages reported in Table 3.

### [Table 4 about here.]

In Panel A of Table 4, Column (1) shows that the *Egoism* variable negatively affects premia for responsible assets in our experiment. In contrast, the variable *Altruism* seems to have no impact on these premia. We also find that perceived effectiveness of donations is positively associated with premia for responsible assets. Column (2) suggests that risk aversion is negatively associated with the preference for positive correlation. Finally, Column (3) indicates that our main explanatory variables are not associated with the shape of preferences for donations.

Panel B of Table 4 indicates that the findings regarding the premium sensitivity generally hold for individual responsible assets. We notice, however, that asset  $A_4$  seems somehow different from the other responsible assets: it is the only one which valuation is negatively affected by risk aversion (and that is not significantly affected by egoism or by perceived effectiveness of donations). The link between risk aversion and the preference

for correlation thus appears to stem from the sensitivity of asset  $A_4$ 's valuation to risk aversion. This suggests that risk averse participants dislike the perceived increase in risk when financial payoffs and societal benefits are positively correlated.

Appendix F provides the coefficient estimates for all the other explanatory variables we include in our regressions.<sup>13</sup>

### 6.3 Effects of Wealth

Even though we find a positive average premium for responsible assets compared to the conventional asset, one might wonder whether this positive premium would exist in a market equilibrium given that wealthy but selfish investors could absorb part of the premium by speculating against it.<sup>14</sup> We shed light on this question by examining the impact of wealth on the willingness to pay for responsible assets compared to the conventional asset.

To do so, we compute the average premium across responsible assets on four subsamples created based on participants' personal income ranges as used in the post-experiment survey: 0-&349, &350-&499, &500-&649, &650 and above. Table 5 shows that the average premia are positive and statistically significant for three of the four income categories. These findings suggest that a positive premium for responsible assets may arise at equilibrium in financial markets because individuals' willingness to tradeoff some financial returns for social benefits appears to be shared across wealth levels.

There is some level of heterogeneity between the responsible asset premia in the various wealth groups. In the intermediary wealth groups, we observe both the largest and the lowest premia. The premia in the lowest and the highest wealth group appear similar. If this exploratory analysis proves robust, it could have implications for the way SRI funds cater to different types of investors.

[Table 5 about here.]

### 6.4 Robustness

We conduct several tests to check the robustness of our main findings. In this section, we provide an overview of these robustness analyses. The tables can be found in Appendix C.1 - C.6.

In Tables not reported in the paper but available upon request, we show that our results are similar if we use the first component of the related variables as a proxy for religiosity, for political engagement and for perceived effectiveness of donations and socially responsible investments.

Arbitrage by selfish and deep-pocketed investors would be limited if these investors are risk averse. At market equilibrium, arbitrage would thus diminish but not eliminate the responsibility premium, as shown for example in Pástor et al. (2021) or in Gollier and Pouget (2022).

Unreported results show that a significantly positive premium for asset  $A_5$  exists at all personal income levels. Overall, all fifteen individual responsible asset premia we can compute, four by income category, are positive and eleven are statistically significant.

As discussed above, we have revised the instructions of the experiment for approximately half of the subjects. To test whether our results are sensitive to this revision, we run our analyses on the subset of participants who faced the new instructions, see Appendix C.1. The results suggest that the Euro premia are of similar magnitude and statistical significance compared to the full sample. We thus confirm that our results are not driven by the fact that some subjects faced different instructions.

To test whether our findings depend on the way we measure premia between responsible and conventional assets' valuation, we repeat our main analyses using percentage premia as dependent variable, see Appendix C.2. Results are identical to the case in which we use absolute premia.

We next test whether the order of experimental assets affected participants' willingness to pay, see Appendix C.3. In the experiment, we randomize whether participants first see the conventional asset or a responsible asset, and the number of participants in these two subsamples happens to be equal. We show that our main results hold in the subsample of participants who first face a conventional asset and those who first face a responsible asset respectively. We also show that the differences in premia between these two subsamples are not statistically significant. We thus conclude that there is no order effect.

In Appendix C.4, we investigate whether the fact that participants face every asset twice results in learning effects that could ultimately influence individual's willingness to pay. We find that premia for responsible assets are significantly higher in the second turn, except for asset  $A_3$ . Despite this difference, our results hold both for bids in the first and in the second turn. We thus conclude that learning effects do not impact our findings.

In Appendix C.5, we examine the impact of aversion to zero payoff and inequity aversion on individuals' WTP. In our main analyses, we used the average premium of asset  $A_i$  across the three treatments. In this section, we include two dummy variables in the regressions to indicate if the asset's donations are 90/10 or 60/40 in the two states, respectively. We also control for individual fixed effects. This approach results in a total of  $160 + 82 \times 3 = 406$  observations, that is, 160 participants in the 100/0 treatment and 82 participants who experience all three treatments. The results indicate that aversion to zero payoff and inequity aversion do not significantly impact our results.

Finally, in Appendix C.6, we examine the potential impact of participants' misunderstanding on their WTP by running regressions using the full sample of 453 subjects, including those who on average bid  $\in 0$  or more than  $\in 50$  for the conventional asset. Two of our main results are valid in the full sample. On the one hand, the premium for assets  $A_4$  and  $A_5$  as well as the average premium  $A_{2,4,5}$  are positive and significant. On the other hand, the difference between premia  $A_4$  and  $A_3$  is positive and significant. Hypotheses H1 and H2 thus appear rejected as is the case in the sample with sophisticated participants. The results that are different in the full sample compared to the sample of sophisticated participants are twofold. First, the premium for  $A_2$  becomes insignificant,

and the premium for  $A_3$  becomes negative (Table C.6, Panel A). Second, preferences for donations appear to be convex. However, we do not emphasize the results on the full sample because it is affected by the behavior of unsophisticated participants: as shown in Table C.6, Panel B, they pay less for all responsible assets than for the conventional asset.

# 7 Discussion and Implications

Our experimental design can be interpreted literally: our set up enables one to better understand how investors value corporate donations (see, for example, the papers by Morgan and Tumlinson (2019); Navarro (1988); Brammer and Millington (2005, 2008) on the topic). However, we favor two alternative interpretations in which donations are viewed as an analogy for the externalities generated by CSR policies or as an analogy for CSR expenditures. <sup>16,17</sup>

In the first interpretation, the donation is viewed as representing an externality that is directly impacting society.<sup>18</sup> In this externality interpretation, the proceeds from issuing assets are invested in a project (not described in the experiment) that generates both a financial cash flow and a societal externality. The project could for example be the construction of a renewable power plant that would avoid the use of fossil fuels to generate power. If financed thanks to the issuance of financial assets, this project would generate cash flows and would also avoid carbon emissions, hence generating a positive environmental externality.<sup>19</sup> This situation would entail a positive correlation between financial cash flows and societal externalities: when the renewable power plant is called to produce energy, it both creates financial cash flows and avoids carbon emissions.<sup>20</sup>

In this externality interpretation, our main finding, that a responsible asset generating an extra-financial benefit in bad times suffers from a valuation discount, has implications

In our setting, CSR externalities or CSR expenditures are fixed for a given asset, viewed as being issued to finance a given firm. We thus perform a cross-sectional analysis comparing the valuation of assets with different levels and timing of societal benefits. It would be very interesting to study the endogenous decision to implement CSR policies. We leave this for future research.

These two interpretations are somewhat speculative. In future work, it would be interesting to investigate whether one can find empirical support. For example, after an experiment, an end-of-study questionnaire where participants can express themselves about how they view these charity donations could be helpful.

This interpretation is adopted for example by a contemporaneous study by Bonnefon et al. (2019) who use a framework similar in spirit to ours and use the term externality to refer to the donation.

<sup>&</sup>lt;sup>19</sup> In future research, it could be interesting to set up an experiment that explicitly includes a project that generates an externality, for example, that depends on the size of the project. Behavior might be different when the link between the firm's project and its externalities is more explicit.

An example of a negative correlation between financial cash flows and societal benefits is offered by a given company's project to set up a team of consultants. When consultants are busy working for the company's clients, they generate cash flows for the company. When they are idle, if allowed by the company, they can work pro bono to help other organizations or citizens, thereby generating a positive social externality.

for the design of CSR policies and the pricing of responsible assets. First, it suggests that it would be beneficial for firms to design socially responsible policies such that they generate extra-financial benefits that have a positive correlation with the return of the market portfolio or with the financial returns of its investors. For example, in the context of corporate climate action, this would be the case of a carbon capture policy that would generate more societal benefits when the firm is producing more and hopefully makes a larger profit, i.e., in good economic conditions. Second, it suggests that, to empirically study the link between asset prices and societal externalities/impact, it is important to control for the correlation between the extra-financial benefits produced by firms and their investors' financial returns.

In the second interpretation, the donation represents an investment in CSR that will produce societal impacts at a later date, i.e., when the donation actually translates into benefits for society thanks to the action of the recipient NGOs. Here, the donation/CSR investment is viewed as coming from a reduction in the asset's financial cash flows paid by the firm to investors. Along this interpretation, our main experimental finding has implications for the design of CSR policies. It suggests that investors evaluate more positively CSR investments that are planned to occur in good rather than in bad financial times, other things being equal. This provides an avenue for an empirical analysis of the timing of CSR expenditures that could be interesting to develop in future research.

Two features of our experimental design call for a more extensive discussion: the use of the BDM mechanism and the link between societal benefits and future financial performance. On the one hand, the BDM mechanism is known to be difficult for subjects to understand, especially when no feedback is provided (Cason and Plott, 2014). Subjects' misunderstanding of the mechanism could affect the results we observe in our experiment. We therefore focus on the subjects who do not bid more than the expected value of the asset when there is no societal benefit. However, in future experiments, it could be interesting to check the validity of our findings. For example, one could measure participants' cognitive ability, that has been showed to be positively associated with trading performance (Corgnet et al., 2018), and test whether our results hold for participants with high cognitive ability.

On the other hand, despite the fact that instructions explicitly stated that each replication of the experiment was independent from previous replications, some subjects might have wrongly believed that there was a link between the societal benefit generated by an asset and its financial payoffs in future replications. Even if it is always difficult to control that subjects perfectly understand the instructions, one could test whether, in future experiments, participants understand that, in our design, the societal performance at a given round of the experiment is independent from future financial performance. Moreover, one could also design a novel experiment in which, instead of being independent, current societal benefits could be used as a signal of future financial payoffs. Varying the

level of correlation between these two variables would enable the study of investors' ability to use CSR as a signal for future financial performance. Such an experiment could be interesting and relevant for practice. It is left for future research.

A limitation of our study is that the evaluation of a firm's ESG involvement in our experimental setting diverges from its assessment in the corporate world. ESG rating agencies assess companies based on a wide array of internal practices, including production processes, supply chain management, labor practices, and product safety. These ratings are designed to gauge how well a firm manages its own policies and practices rather than its engagement with external entities like charitable organizations. Often, charitable donations are not factored into ESG ratings, as agencies focus on internal governance and sustainability practices. Furthermore, there is substantial evidence indicating that firms often use charitable donations strategically to exert corporate political influence (Bertrand et al., 2020). This strategic use of charity highlights a disconnect between experimental measurements of ESG and real-world applications, where firms might prioritize different aspects of social responsibility based on strategic interests rather than genuine ESG principles. Therefore, while we believe our experiment design provides valuable insights, it may not fully capture the multifaceted nature of ESG practices in the corporate landscape and might thus not be easily generalized to real-world situations.<sup>21</sup>

### 8 Conclusion

This paper studies whether investors value the societal impact of assets in which they invest. This issue is important because it is at the core of socially responsible investing, an industry that has witnessed a strong development in the recent past. It is also important for firms to better understand how their Corporate Social Responsibility policies affect their cost of capital.

We propose a laboratory experiment that enables us to identify the willingness to pay for risky assets with different levels and timing of societal impacts. In the experiment, assets, if they are issued, generate a financial cash flow, received by subjects, and also a donation, sent to a well-established charity. This donation is meant to enable participants in the experiment, in their capacity of investors, to have a societal impact. We vary the amount of expected donation: it can be null, low or high. This enables us to study whether investors care about societal benefits of the assets in which they invest and whether marginal utility for donation is constant or not. We also vary the timing of the donation: it can occur when the financial payoff is high or when it is low. This enables us to measure subjects' preferences for correlation between financial payoffs and societal impacts. Truthful revelation of the willingness to pay is incentivized via a Becker-DeGroot-Marschak mechanism. At the individual level, we relate the willingness to pay

We thank an anonymous referee for helping us clarify these points.

to various psychological and social characteristics measured via questionnaires.

Our main findings are threefold. First, individuals value the societal impact embedded in financial assets. Second, subjects prefer when financial cash flows and societal impacts are positively correlated. Third, responsible assets' valuation appears linear in the level of expected societal benefit.

Our experiment could be extended in various dimensions. For example, it could be interesting to study the valuation of assets with risky negative societal impacts and to study how investors react to changes in the variance of the societal impacts. This is left for future research.

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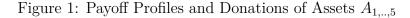
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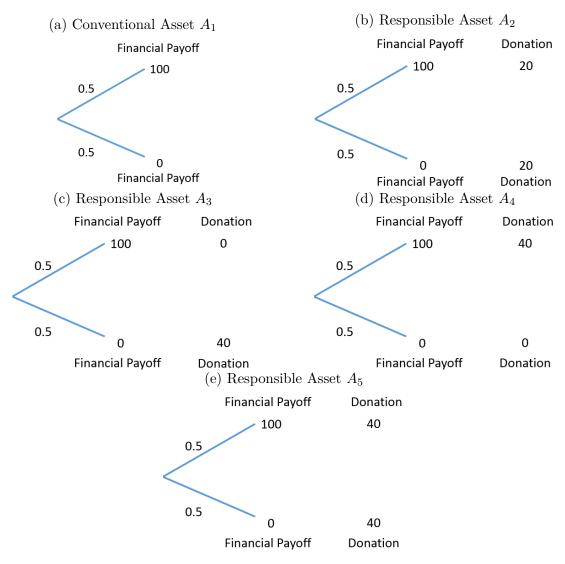
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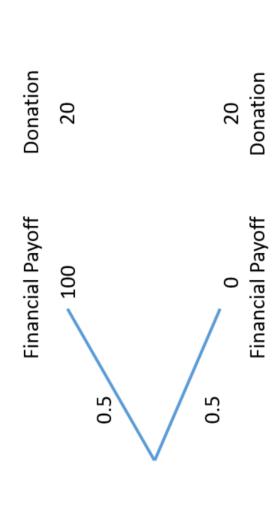


Note: This figure shows payoff profiles and donations of the assets  $A_{1,...,5}$ . There are two states that can occur with equal probabilities 0.5, respectively. The financial payoff in the good state is 100 experimental currency units and the financial payoff in the bad state is zero experimental currency units. To model social responsibility, a donation of  $g_{h,A_k}$  in the good state and  $g_{l,A_k}$  in the bad state is made to a charity.

Figure 2: Screenshot of Experimental Asset Implementation



The International Committee of the Red Cross (ICRC) is an impartial, neutral and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. The ICRC also endeavours to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles. (Source: Red Cross Website)



Please indicate your maximum payment for the above asset that donates to the charity Red Cross!

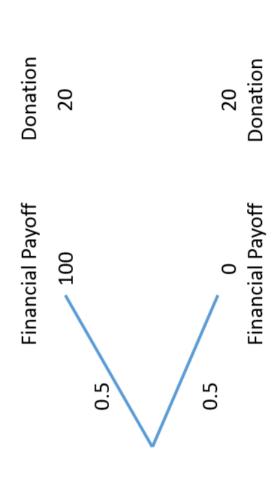
(between 0 and 100)

Note: This figure exemplarily shows the responsible asset A<sub>2</sub> which offers a donation of 20 in both states of the economy to the Red Cross in our experimental environment.

Figure 3: Screenshot of Experimental Asset Implementation

# The asset below includes a donation to: GREENPEACE

for a green and peaceful future. Greenpeace's goal is to ensure the ability of the earth to nurture life in all its diversity. That means we want to protect biodiversity in all Greenpeace is an independent campaigning organisation, which uses peaceful, creative confrontation to expose global environmental problems, and develop solutions forms, prevent pollution and abuse of the earth's ocean, land, air and fresh water, end all nuclear threats, and promote peace, global disarmament and non-violence. (Source: Greenpeace Website)



Please indicate your maximum payment for the above asset that donates to the charity Greenpeace!

(between 0 and 100)

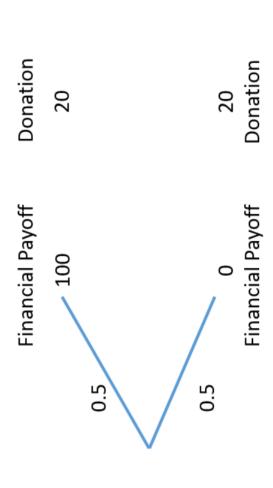
Note: This figure exemplarily shows the responsible asset  $A_2$  which offers a donation of 20 in both states of the economy to Greenpeace in our experimental environment.

Figure 4: Screenshot of Experimental Asset Implementation

# TRANSPARENCY INTERNATIONAL

The asset below includes a donation to:

corruption. Through chapters in more than 100 countries and an international secretariat in Berlin, we are leading the fight against corruption to turn this vision into with governments, businesses and citizens to stop the abuse of power, bribery and secret deals. As a global movement with one vision, we want a world free of From villages in rural India to the corridors of power in Brussels, Transparency International gives voice to the victims and witnesses of corruption. We work together reality. (Source: Transparency International Website)

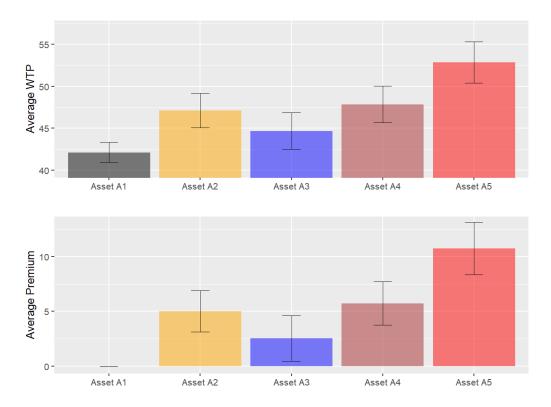


Please indicate your maximum payment for the above asset that donates to the charity Transparency **International!** 

(between 0 and 100)	

Note: This figure exemplarily shows the responsible asset A<sub>2</sub> which offers a donation of 20 in both states of the economy to Transparency International in our experimental environment.

Figure 5: Average WTP and Premium per Asset



Note: Average willingness to pay in Euro for assets  $A_1$  to  $A_5$  (upper panel) and premia of responsible assets  $A_2$  to  $A_5$  over the conventional asset  $A_1$  (lower panel). The error bar shows 95% confidence interval. The sample includes 242 participants who constitute the sample with sophisticated subjects.

Table 1: Participant Characteristics

Measure	Value	#	%
Gender	Female	108	44.6%
	Male	134	55.4%
Age	<21	35	14.4%
	21-23	111	45.8%
	24-26	68	28.1%
	>26	28	11.6%
			~
Education	Apprenticeship	4	1.6%
	Abitur	132	54.5%
	Bachelor	84	0 7 0
	Master	11	4.5%
	Other	11	4.5%
T	.9.40	F-1	01 107
Income	<349	51	21.1%
	350-499	50	20.6%
	500-649	54	
	>650	87	35.9%
Family Income	<1499	17	7.0%
ranniy income	1500-3499	54	22.3%
	3500-6000	114	47.1%
	>6000	57	23.5%
	<i>&gt;</i> 0000	01	20.070
Bafög	Yes	34	14.1%
Č	No	208	85.9%

Note: This table shows demographic characteristics of the 242 participants who constitute the sample with sophisticated subjects. # refers to the absolute number of participants in a category. % is the amount of participants in this category relative to the total sample.

<sup>&</sup>quot;Abitur" is the German matriculation examination required to enroll at a university. "Bafög" is a German government-funded student loan with eligibility dependent on parent income.

Table 2: Summary Statistics for Assets  ${\cal A}_1$  to  ${\cal A}_5$ 

	mean	$\operatorname{sd}$
Average WTP $A_1$	42.12	9.33
Average WTP $A_2$	47.13	16.25
Average WTP $A_3$	44.67	17.16
Average WTP $A_4$	47.85	17.11
Average WTP $A_5$	52.84	19.40

Note: This table shows mean and standard deviation of the willingness to pay (WTP) for asset  $A_1$  to  $A_5$ , averaged across turns and charities, respectively. It is based on the sample of 242 sophisticated participants.

Table 3: Mean Asset Premia to Assess Hypotheses 1-3

	mean	t-statistic
Premium $A_2$	5.01***	5.27
Premium $A_3$	2.55**	2.40
Premium $A_4$	5.73***	5.71
Premium $A_5$	10.73***	8.81
Premium $A_{2,\dots,5}$	6.01***	6.61
Premium $A_4 - A_3$	3.19***	2.65
Premium $H3$	0.70	0.60

Note: This table shows premia of responsible assets in absolute terms. It is based on the sample of 242 sophisticated participants. "Premium  $A_2$ " to "Premium  $A_5$ " are the average Euro premia of responsible assets  $A_2$  to  $A_5$  over the conventional asset  $A_1$ , respectively. "Premium  $A_2,...,5$ " is the average premium of all responsible assets over the conventional asset. "Premium  $A_4 - A_3$ " is the difference in WTP between  $A_4$  and  $A_3$  that is required to assess Hypothesis  $H_2$ . "Premium  $H_3$ " is defined as  $(b_{A_5} - b_{A_2}) - (b_{A_2} - b_{A_1})$  and allows to assess Hypothesis  $H_3$ , as outlined in Appendix B.3. We report t-statistics of two-sided one-sample t-tests that test whether the mean of the respective premium is equal to zero.

Table 4: Willingness to Pay for Social Responsibility and Personal Characteristics

		Panel A				
	(1)		(2)	(3)		
	Premium	$A_{2,3,4,5}$ Prem	$\lim A_4 - A_3$	Premium H3		
Constant	6.005*	**	3.187***	0.701		
	(0.89)	1)	(1.206)	(1.166)		
Altruism	1.150	6	0.780	-1.250		
	(1.13)	1)	(1.531)	(1.480)		
Egoism	-2.367		0.516	1.012		
	(1.100	0)	(1.489)	(1.439)		
PE Donations	$2.942^{\circ}$	**	-2.615	-1.720		
	(1.318)	5)	(1.780)	(1.720)		
Risk Aversion	-0.69	8	-2.833**	-0.556		
	(0.948)	8)	(1.283)	(1.240)		
Other Variable	es YES	3	YES	YES		
Adjusted $\mathbb{R}^2$	0.03'	7	-0.003	-0.005		
		Pa	nel B			
	(1)	(2)	(3)	(4)		
	Premium $A_2$	Premium $A_3$	Premium $A_4$	Premium $A_5$		
Constant	5.012***	2.548**	5.735***	10.726***		
	(0.948)	(1.065)	(0.979)	(1.175)		
Altruism	1.454	0.366	1.146	1.659		
	(1.203)	(1.352)	(1.243)	(1.492)		
Egoism	-2.162*	-2.255*	-1.739	-3.311**		
	(1.169)	(1.314)	(1.209)	(1.451)		
PE Donations	2.917**	3.676**	1.060	4.114**		
	(1.398)	(1.571)	(1.445)	(1.734)		
Risk Aversion	0.006	0.289	-2.544**	-0.543		
	(1.008)	(1.133)	(1.042)	(1.250)		
Other Variables	YES	YES	YES	YES		
Adjusted $R^2$	0.006	-0.007	0.049	0.068		

Robust standard errors in parentheses

Note: This table contains estimation results of OLS regression with premia of responsible over conventional assets as dependent variables. It is based on the sample of 242 sophisticated participants. Altruism and Egoism assess an individual's values. The variable PE Donations measures an individual's perception of the effectiveness of donations. Risk Aversion is assessed via a self-reported seven-point Likert scale. The other variables are discussed in Appendix A. All independent variables are standardized to allow for an unconditional assessment of the premium via the constant.

<sup>\*</sup> p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

Table 5: Average Premium on Responsible Assets by Income Level

Premium $A_{2,\dots,5}$	Mean	t-statistic	Observations
Income < 350	6.30***	3.45	51
Income $350 - 499$	11.09***	5.83	50
Income $500 - 649$	2.59	1.36	54
Income $> 649$	5.03***	3.22	87

Note: This table shows the average premium on responsible assets (Premium  $A_{2,\dots,5}$ ) across different income levels. It is based on the sample of 242 sophisticated participants that is divided into four subsamples according to participants' income level. The income levels are self-reported in the survey after the experiment. We report t-statistics of two-sided one-sample t-tests for whether the mean of Premium  $A_{2,\dots,5}$  is equal to zero.

# Appendix

# A Measurement of Variables

In Section 6.2, we control for a range of psychological and demographic characteristics in the regressions. These characteristics are measured through a questionnaire after the experiment. This questionnaire is displayed in Appendix E.

Previous research based on surveys and holding data suggests that social preferences are an important determinant of the decision to invest responsibly.<sup>22</sup> We follow Brodback et al. (2019) and utilize items from the Schwartz (1992) value inventory to measure participants' altruistic and egoistic values. These items are very commonly used in value research (Lindeman and Verkasalo, 2005; Parks-Leduc et al., 2015). As recommended by Schwartz (1992, p. 17), participants rate on an 8-point Likert scale ranging from "Not important at all" to "Of supreme importance" to what extent the respective items represent "a guiding principle in their life." We select 9 of the overall 56 items in the Schwartz (1992) value inventory; see Appendix E, items 1.1 – 1.9, taken from Brodback et al. (2019). To measure egoism, we select 5 of these 9 items: authority, social power, wealth, ambition, and success. To measure altruism, we use the remaining 4 items: equality, social justice, protecting the environment, and unity with nature. Brodback et al. (2019) show that the egoism and altruism scales measure different variables and are internally consistent.

With items 2.1 – 2.5, we elicit investment knowledge as well as risk and return expectations of socially responsible investments (hereafter, SRI).<sup>23</sup> We ask our participants to assess their investment knowledge on a 5-point scale ranging from "Very poor" to "Very good." Participants next report how long they have been investing with options ranging from "Not at all" to "More than 10 years." Participants then indicate whether they have heard about SRI before this experiment.<sup>24</sup> Items 2.4 and 2.5 inquire about an assessment of the risk and performance of SRI in comparison to conventional investments. Participants indicate their perceptions of the risk of SRI on a 5-point Likert scale ranging from "A lot less risky" to "A lot more risky". Additionally, they rate their return perceptions of SRI compared to conventional investments on a 5-point Likert scale ranging from "Much higher" to "Much lower".

See Brodback et al. (2019); Gutsche et al. (2016); Nilsson (2009); Wiesel et al. (2016); Riedl and Smeets (2017). There is no clear consensus in the literature on how to assess social preferences and the aforementioned articles have, e.g., relied on self-reported donations or reciprocal behavior in experimental games to proxy for social preferences.

See van Rooij et al. (2011); Riedl and Smeets (2017); Dorfleitner and Utz (2014); Nilsson (2008).

To understand the intuition behind responsible investments, a brief definition is provided at the beginning of the second part of the questionnaire. The definition is obtained from the 2017 annual report of Forum Nachhaltige Geldanlagen, "an association promoting sustainable investment in Germany, Austria and Switzerland", similar to the US SIF. The report is available online at https://www.forum-ng.org/images/stories/Publikationen/fng\_marktbericht\_2017\_online.pdf.

Next, participants have to assess the effectiveness of doing good.<sup>25</sup> In Appendix E, items 2.6 – 2.9, we utilize a scale for perceived effectiveness of doing good based on Nilsson (2008, 2009)'s perceived consumer effectiveness. To adapt the scale to our context, we additionally word items to fit charitable contributions instead of investments in SRI. Our scales are thus similar to the perceived social impact scale in Riedl and Smeets (2017), yet cover a broader impact of doing good. Participants indicate their agreement on a 7-point Likert scale to statements such as "By contributing to a charity (investing in SRI) every individual can have a positive effect on the environment", "Every person has the power to influence social problems by contributing to a charity (investing in SRI)", "It does not matter if I donate to a good cause (invest in SRI) since one person acting alone cannot make a difference", and "It is useless for the individual to contribute to charities doing anything about pollution (to the reduction of pollution with investments in SRI)."

Previous research finds that long-term orientation is generally linked to a higher ability to account for negative consequences in later times (D'Alessio et al., 2003; Keough et al., 1999) and has been linked to better stakeholder relations and increased shareholder value (Flammer and Bansal, 2017; Wang and Bansal, 2012). In order to elicit an individual's long-term orientation, we use the Bearden et al. (2006) scale. This scale has been shown to be reliable across different cultures. Participants rate their agreement on 7-point Likert scales to eight items such as "I plan for the long term", "I value a strong link to my past", or "Traditional values are important to me" (Appendix E, items 3.1 – 3.8).

Further, we gather standard demographic items as control variables.  $^{26}$  The first control variable is gender (item 4.1). Item 4.2 records age. Participants then self-report their marital status among "single, married, divorced, and widowed" and indicate whether they have children and, if so, how many (items 4.3-4.4). Item 4.5 collects information on participants' education. Items 4.6-4.8 gather income data, distinguishing between participants' self-reported monthly net income and their family's monthly net income. Additionally, participants are asked whether they receive BAföG.  $^{27}$ 

SRI may be related to religiousness (Statman, 2005; Williams, 2007).<sup>28</sup> It is thus important to control for religiousness, which we assess with a self-rated assessment of religiousness (on a 7-point scale) and the frequency of church-attendance in a typical year (items 4.11 and 4.13).

SRI has evolved into a multifaceted class of investments - nowadays, labor standards

This assessment follows the rationale that an individual is more likely to engage in pro-social behavior if she thinks this is effective and will ultimately make a difference (Brodback et al., 2019; Nilsson, 2008; Stern et al., 1999).

See Dorfleitner and Utz (2014); Junkus and Berry (2010); Schueth (2003); McLachlan and Gardner (2004); Nilsson (2008); Williams (2007).

<sup>&</sup>lt;sup>27</sup> BAföG is a German government-funded student loan with eligibility dependent on parent income.

Religion affects socially responsible investments (Kumar et al., 2011; Peifer, 2010) as well as charitable contributions (Bekkers and Wiepking, 2011; Brooks and Lewis, 2001; Eckel and Grossman, 2003; Low et al., 2007).

and political orientation are also relevant for investors.<sup>29</sup> It is thus necessary to control for political engagement, which we assess via self-reported items. Participants indicate whether they are members of a political party, participated in the last vote, and assess their political interest on a 1-7 scale (Appendix E, items 4.12, 4.14 and 4.15).

We finally ask subjects to self-assess their risk-aversion on a 7-point Likert scale<sup>30</sup>, which is presented in Appendix E, item 4.16.

# B Theoretical Predictions

To interpret our experimental data, we set up a theoretical model based on expected utility theory. We consider a framework in which the utility from wealth and from doing good are potentially non-separable. We denote an individual's utility function by U(w, g), with w her level of wealth and g the level of social benefit. We assume that an agent's utility increases with wealth, i.e.,  $\frac{\partial U}{\partial w} > 0$ . A participant maximizes her expected utility with respect to her bid  $b_{A_k}$ . The maximization problem is given by

$$\max_{b_{A_k}} \mathbb{E}\left[U\left(w,g\right)\right] = \int_0^{100} \frac{1}{100} \left(\mathbb{1}_{b_{A_k} \ge p_{A_k}} \left[\frac{1}{2}U\left(200 - p_{A_k}, g_{h,A_k}\right) + \frac{1}{2}U\left(100 - p_{A_k}, g_{l,A_k}\right)\right] + \mathbb{1}_{b_{A_k} < p_{A_k}} U\left(100, 0\right)\right) dp_{A_k}.$$
(2)

If the bid  $b_{A_k}$  exceeds the randomly determined price  $p_{A_k}$  of an experimental asset  $A_k$ , that is  $b_{A_k} \geq p_{A_k}$ , a transaction occurs. With probability  $\frac{1}{2}$  the economy is either in the good or the bad state. In the good state h the subject's utility depends on the initial endowment plus the financial payoff of the lottery minus the randomly determined price  $p_{A_k}$  of the asset  $(200-p_{A_k})$ , and on the donation in the good state  $(g_{h,A_k})$ . In the bad state l, the financial payoff of the lottery is zero, hence the price  $p_{A_k}$  of the asset is subtracted from the initial endowment  $(100-p_{A_k})$ , and the subject's utility further depends on the donation in the bad state  $(g_{l,A_k})$ . If the participant's bid  $b_{A_k}$  is lower than the randomly determined price  $p_{A_k}$  of the asset, that is  $b_{A_k} < p_{A_k}$ , there is no transaction. In this case, the participant's utility depends solely on her initial endowment of 100. Indeed, when there is no transaction, the asset is not issued and, thus, there is neither a financial payoff nor a social benefit.

See Edmans (2011); Edmans et al. (2023); Hong and Kostovetsky (2012). Previous literature further shows that political engagement relates to overall pro-social behavior (Bolsen et al., 2014; Dawes et al., 2011; Fowler, 2006).

See Charness et al. (2013), Dohmen et al. (2011), Lönnqvist et al. (2015), Vrecko and Langer (2013)

Rearranging Equation (2) leads to

$$\max_{b_{A_k}} \mathbb{E}\left[U\left(w,g\right)\right] = \int_0^{b_{A_k}} \frac{1}{100} \left[\frac{1}{2}U\left(200 - p_{A_k}, g_{h,A_k}\right) + \frac{1}{2}U\left(100 - p_{A_k}, g_{l,A_k}\right)\right] dp_{A_k} + \int_{b_{A_k}}^{100} \frac{1}{100} U\left(100, 0\right) dp_{A_k}.$$
(3)

The first-order condition for a participant maximizing her utility with respect to her bid  $b_{A_k}$  is

$$\frac{1}{100} \left[ \frac{1}{2} U \left( 200 - b_{A_k}, g_{h, A_k} \right) + \frac{1}{2} U \left( 100 - b_{A_k}, g_{l, A_k} \right) \right] - \frac{1}{100} U \left( 100, 0 \right) = 0. \tag{4}$$

The second-order condition follows from taking the derivative of Equation (4) and reads as:

$$\frac{1}{100} \left[ -\frac{1}{2} U' \left( 200 - b_{A_k}, g_{h, A_k} \right) - \frac{1}{2} U' \left( 100 - b_{A_k}, g_{l, A_k} \right) \right] < 0, \tag{5}$$

which confirms that we observe a maximum.

## B.1 Hypothesis 1

H1: The willingness to pay is the same for responsible assets as for the conventional asset.

To make the link between this hypothesis and preferences in our expected utility framework, we study the optimal willingness to pay for the conventional asset  $A_1$  and for the responsible asset  $A_2$ . The first-order condition shown in Equation (4) indicates that the willingness to pay for asset  $A_1$  is such that:

$$U(100,0) = \frac{1}{2}U(200 - b_{A_1}^*, 0) + \frac{1}{2}U(100 - b_{A_1}^*, 0), \tag{6}$$

Likewise, for asset  $A_2$ , we have:

$$U(100,0) = \frac{1}{2}U(200 - b_{A_2}^*, 20) + \frac{1}{2}U(100 - b_{A_2}^*, 20). \tag{7}$$

Our hypothesis H1, that is  $b_{A_2}^* = b_{A_1}^*$ , is thus equivalent to:

$$U(200 - b, 20) + U(100 - b, 20) = U(200 - b, 0) + U(100 - b, 0),$$
(8)

which we rearrange as

$$U(200 - b, 20) - U(200 - b, 0) = U(100 - b, 0) - U(100 - b, 20),$$
(9)

and then rewrite using integrals to yield

$$\int_0^{20} \left[ \frac{\partial U}{\partial g} \left( 200 - b, g \right) + \frac{\partial U}{\partial g} \left( 100 - b, g \right) \right] dg = 0.$$
 (10)

We thus have that:  $b_{A_2}^* = b_{A_1}^* \iff \mathbb{E}(\frac{\partial U}{\partial g}) = 0$ . Hypothesis H1 is thus equivalent to saying that utility does not vary with donations, on average. The alternative hypothesis that  $b_{A_2}^* > b_{A_1}^*$  is equivalent to U(200-b,20) + U(100-b,20) > U(200-b,0) + U(100-b,0) and to  $\mathbb{E}(\frac{\partial U}{\partial g}) > 0$ , that is, utility increases with donations, on average. The same results and reasonning apply for the other responsible assets  $A_k$ , with  $k \in \{3,4,5\}$ .

## B.2 Hypothesis 2

H2: The willing to pay for responsible assets is identical whether the societal benefit occurs in the good or in the bad state.

To make the link between this hypothesis and preferences in our expected utility framework, we study the optimal willingness to pay for the responsible assets  $A_3$  and  $A_4$ . The first-order condition shown in Equation (4) indicates that the willingness to pay for asset  $A_3$  is such that:

$$U(100,0) = \frac{1}{2}U(200 - b_{A_3}^*, 0) + \frac{1}{2}U(100 - b_{A_3}^*, 40). \tag{11}$$

For  $A_4$ , we have:

$$U(100,0) = \frac{1}{2}U(200 - b_{A_4}^*, 40) + \frac{1}{2}U(100 - b_{A_4}^*, 0). \tag{12}$$

Our hypothesis H2, that is  $b_{A_3}^* = b_{A_4}^*$ , is thus equivalent to:

$$U(200 - b, 0) + U(100 - b, 40) = U(200 - b, 40) + U(100 - b, 0).$$
(13)

Rearranging and building the integral leads to the following equivalent form:

$$U(200 - b, 0) - U(200 - b, 40) = U(100 - b, 0) - U(100 - b, 40)$$

$$\Leftrightarrow \int_{40}^{0} \left[ \frac{\partial U}{\partial g} (200 - b, g) - \frac{\partial U}{\partial g} (100 - b, g) \right] dg = 0.$$
(14)

Integrating on the financial payoffs w yields:

$$\int_{40}^{0} \int_{100-b}^{200-b} \frac{\partial^{2} U}{\partial w \partial g} (w, g) \, dw dg = 0$$

$$\Leftrightarrow -\int_{0}^{40} \int_{100-b}^{200-b} \frac{\partial^{2} U}{\partial w \partial g} (w, g) \, dw dg = 0.$$
(15)

We thus have that:  $b_{A_3}^* = b_{A_4}^* \iff \mathbb{E}(\frac{\partial^2 U}{\partial w \partial g}) = 0$ . In this case, utility is separable in wealth and donations. Hypothesis H2 is equivalent to saying that the cross-derivative of utility is null on average. Agents with a preference for correlation exhibit  $b_{A_3}^* < b_{A_4}^*$ , which is equivalent to U(200-b,0) + U(100-b,40) < U(200-b,40) + U(100-b,0) and to  $\mathbb{E}(\frac{\partial^2 U}{\partial w \partial g}) > 0$ , that is, the cross-derivative of utility is on average positive. This result is a reminiscence of the insights offered by Richard (1975), Epstein and Tanny (1980) and Eeckhoudt et al. (2007). Remark that we could reject H2 if subjects were correlation averse in which case we would have  $\mathbb{E}(\frac{\partial^2 U}{\partial w \partial g}) < 0$ .

# B.3 Hypothesis 3

H3: The willingness to pay for responsible assets is linearly related to the level of societal benefits.

Hypothesis H3 is equivalent to  $(b_{A_5}^* - b_{A_2}^*) = (b_{A_2}^* - b_{A_1}^*)$ . To make the link between this hypothesis and preferences for donations, we construct the first-order condition for asset  $A_5$  following Equation (4):

$$U(100,0) = \frac{1}{2}U(200 - b_{A_5}^*, 40) + \frac{1}{2}U(100 - b_{A_5}^*, 40). \tag{16}$$

Our hypothesis H3 is equivalent to:

$$U(200 - b, 40) + U(100 - b, 40) - (U(200 - b, 20) + U(100 - b, 20)) = U(200 - b, 20) + U(100 - b, 20) - (U(200 - b, 0) + U(100 - b, 0)),$$
(17)

which we can rewrite as

$$U(200 - b, 40) - U(200 - b, 20) + U(100 - b, 40) - U(100 - b, 20) =$$

$$U(200 - b, 20) - U(200 - b, 0) + U(100 - b, 20) - U(100 - b, 0).$$
(18)

This is equivalent to:

$$\int_{0}^{20} \frac{\partial U}{\partial g} (200 - b, g + 20) \, dg + \int_{0}^{20} \frac{\partial U}{\partial g} (100 - b, g + 20) \, dg = 
\int_{0}^{20} \frac{\partial U}{\partial g} (200 - b, g) \, dg + \int_{0}^{20} \frac{\partial U}{\partial g} (100 - b, g) \, dg.$$
(19)

Rearranging, we get:

$$\int_{0}^{20} \left[ \frac{\partial U}{\partial g} \left( 200 - b, g + 20 \right) - \frac{\partial U}{\partial g} \left( 200 - b, g \right) + \frac{\partial U}{\partial g} \left( 100 - b, g + 20 \right) - \frac{\partial U}{\partial g} \left( 100 - b, g \right) \right] dg = 0$$

$$\Leftrightarrow \int_{0}^{20} \left[ \int_{0}^{20} \frac{\partial^{2} U}{\partial g^{2}} \left( 200 - b, g \right) dg + \int_{0}^{20} \frac{\partial^{2} U}{\partial g^{2}} \left( 100 - b, g \right) dg \right] dg = 0.$$
(20)

This reasoning shows that:  $(b_{A_5}^* - b_{A_2}^*) = (b_{A_2}^* - b_{A_1}^*) \iff \mathbb{E}(\frac{\partial^2 U}{\partial g^2}) = 0$ . Hypothesis H3 is thus equivalent to saying that the second derivative of utility with respect to donations is on average zero. The alternative hypothesis  $(b_{A_5}^* - b_{A_2}^*) < (b_{A_2}^* - b_{A_1}^*)$  is equivalent to  $\mathbb{E}(\frac{\partial^2 U}{\partial g^2}) < 0$ .

# C Appendix to Section 6.4

# C.1 Analysis of Subsamples

Table C.1: Mean Asset Premia to Assess Hypotheses 1-3 - New Instructions Subsample

	mean	t-statistic
Premium $A_2$	4.16***	3.95
Premium $A_3$	1.50	1.23
Premium $A_4$	4.44***	4.03
Premium $A_5$	10.02***	7.46
Premium $A_{2,\dots,5}$	5.03***	5.01
Premium $A_4 - A_3$	2.93**	2.06
Premium H3	1.69	1.37

Note: This table shows premia of responsible assets in absolute terms for 173 participants corresponding to the subset of participants who faced the new instructions in the sample of sophisticated participants. "Premium  $A_2$ " to "Premium  $A_5$ " are the average Euro premia of responsible assets  $A_2$  to  $A_5$  over the conventional asset  $A_1$ , respectively. "Premium  $A_2,...,5$ " is the average premium of all responsible assets over the conventional asset. "Premium  $A_4 - A_3$ " is the difference in WTP between  $A_4$  and  $A_3$  that is required to assess Hypothesis H2. "Premium H3" is defined as  $(b_{A_5} - b_{A_2}) - (b_{A_2} - b_{A_1})$  and allows to assess Hypothesis H3, as outlined in Appendix B.3. We report t-statistics of two-sided one-sample t-tests that test whether the mean of the respective premium is equal to zero.

# C.2 Percentage Premia

Table C.2.1: Mean Percentage Premia to Assess Hypotheses 1-3

	mean	t-statistic
Premium $A_2$	0.15***	5.66
Premium $A_3$	0.10***	3.16
Premium $A_4$	0.16***	5.99
Premium $A_5$	0.30***	8.49
Premium $A_{2,\dots,5}$	0.18***	6.70
Premium $A_4 - A_3$	0.06**	2.10
Premium $H3$	0.01	0.40

Note: This table shows percentage premia of responsible assets over the conventional asset  $A_1$ . It is based on the sample of 242 sophisticated participants. "Premium  $A_2$ " to "Premium  $A_5$ " are the average percentage premia of responsible assets  $A_2$  to  $A_5$  over the conventional asset  $A_1$ , respectively. "Premium  $A_2,...,5$ " is the average percentage premium of all responsible assets over the conventional asset. "Premium  $A_4 - A_3$ " is the difference in WTP between  $A_4$  and  $A_3$  that is required to assess Hypothesis  $H_2$ . "Premium  $H_3$ " is defined as  $(b_{A_5} - b_{A_2}) - (b_{A_2} - b_{A_1})$  and allows to assess Hypothesis  $H_3$ , as outlined in Appendix B.3. We report t-statistics of two-sided one-sample t-tests that test whether the mean of the respective premium is equal to zero.

Table C.2.2: Mean Percentage Premia to Assess Hypotheses 1-3 - New Instructions Subsample

	mean	t-statistic
Premium $A_2$	0.12***	4.43
Premium $A_3$	0.06**	1.99
Premium $A_4$	0.13***	4.44
Premium $A_5$	0.28***	7.87
Premium $A_{2,\dots,5}$	0.15***	5.52
Premium $A_4 - A_3$	0.07**	1.94
Premium H3	0.03	1.05

Note: This table shows percentage premia of responsible assets over the conventional asset  $A_1$  for 173 participants corresponding to the subset of participants who faced the new instructions in the sample of sophisticated participants. "Premium  $A_2$ " to "Premium  $A_5$ " are the average percentage premia of responsible assets  $A_2$  to  $A_5$  over the conventional asset  $A_1$ , respectively. "Premium  $A_2,...,5$ " is the average percentage premium of all responsible assets over the conventional asset. "Premium  $A_4 - A_3$ " is the difference in WTP between  $A_4$  and  $A_3$  that is required to assess Hypothesis H2. "Premium H3" is defined as  $(b_{A_5} - b_{A_2}) - (b_{A_2} - b_{A_1})$  and allows to assess Hypothesis H3, as outlined in Appendix B.3. We report t-statistics of two-sided one-sample t-tests that test whether the mean of the respective premium is equal to zero.

# C.3 Pro-Social Framing

Table C.3: Does the Order of Assets Impact the Willingness to Pay?

	$A_1$ first (1)	t-statistic (2)	$A_{2,\dots,5}$ first (3)	t-statistic (4)	Difference (5)	t-statistic (6)
Premium $A_2$	4.51***	3.47	5.52***	3.96	1.01	0.53
Premium $A_3$	1.70	1.20	3.40**	2.14	1.70	0.78
Premium $A_4$	5.03***	3.75	6.44***	4.30	1.40	0.69
Premium $A_5$	10.73***	6.43	10.73***	6.02	0.00	0.00
Premium $A_{2,\dots,5}$	5.49***	4.48	6.52***	4.85	1.03	0.55
Premium $A_4 - A_3$	3.34**	2.04	3.04*	1.71	-0.30	-0.13
Premium $H3$	1.71	1.05	-0.31	-0.19	-2.02	-0.94

Note: This table shows premia of responsible assets in absolute terms. It is based on the sample of 242 sophisticated participants, divided into two subsamples: one with 121 participants who first see the conventioal asset  $A_1$  (Column (1) and (2)), the other with 121 participants who first see a responsible asset (Column (3) and (4)). In Column (2) and (4), we report t-statistics of two-sided one-sample t-tests that test whether the mean of the respective premium is equal to zero. In Column (5), we compute the difference in respective average premia between two subsamples. Column (6) presents t-statistics from two-sided one-sample t-tests that assess whether the mean difference is equal to zero. "Premium  $A_2$ " to "Premium  $A_5$ " are the average Euro premia of responsible assets  $A_2$  to  $A_5$  over the conventional asset  $A_1$ , respectively. "Premium  $A_2$ ,..., $a_1$ " is the average premium of all responsible assets over the conventional asset. "Premium  $A_4 - A_3$ " is the difference in WTP between  $A_4$  and  $A_3$  that is required to assess Hypothesis  $A_1$ , as outlined in Appendix B.3.

# C.4 Learning

Table C.4: Do Repeated Evaluations of Assets Impact the Willingness to Pay?

	Turn 1 (1)	t-statistic (2)	Turn 2 (3)	t-statistic (4)	Difference (5)	t-statistic (6)
Premium $A_2$	4.15***	3.89	5.88***	5.36	1.73*	1.67
Premium $A_3$	1.94*	1.66	3.16**	2.57	1.22	1.09
Premium $A_4$	4.61***	4.39	6.86***	5.54	2.26**	2.03
Premium $A_5$	9.52***	7.56	11.93***	8.57	2.40**	2.27
Premium $A_{2,\dots,5}$	5.05***	5.18	6.96***	6.52	1.90**	2.03
Premium $A_4 - A_3$	2.67**	2.24	3.71***	2.66	1.04	1.08
Premium $H3$	1.23	0.87	0.17	0.13	-1.06	-0.73

# C.5 Aversion to Zero Payoff and Inequity Aversion

Table C.5.1: Willingness to Pay for Social Responsibility and Personal Characteristics - Additional Treatments

	(1) Premium $A_2, A_{12}, A_{22}$	(2) Premium $A_3, A_{13}, A_{23}$	(3) Premium $A_4, A_{14}, A_{24}$	$(4)$ Premium $A_5, A_{15}, A_{25}$
Altruism	0.95	0.11	12.65	16.25
	(23.09)	(22.65)	(22.90)	(23.90)
Egoism	13.96	17.12	28.79	38.27
	(27.87)	(27.34)	(27.64)	(28.85)
PE Donations	3.39	19.95	-6.98	2.71
	(14.58)	(14.30)	(14.46)	(15.09)
Risk Aversion	8.50	-22.50	28.07	13.92
	(31.76)	(31.15)	(31.49)	(32.87)
Treatment $90/10$	1.87	1.98	0.41	2.10
	(1.66)	(1.63)	(1.65)	(1.72)
Treatment $60/40$	2.60	0.90	0.27	2.07
	(1.66)	(1.63)	(1.65)	(1.72)
Other Variables	YES	YES	YES	YES
Individual Fixed Effects	YES	YES	YES	YES
Adjusted $\mathbb{R}^2$	0.30	0.46	0.37	0.54

Robust standard errors in parentheses

Note: This table contains estimation results of OLS regression with premia of responsible over conventional assets  $A_1$ ,  $A_{11}$ , or  $A_{21}$  as dependent variables. The sample includes 406 observations, with 160 participants in the 100/0 treatment and 82 participants who experience all three treatments. All 242 participants belong to the sample with sophisticated subjects. Altruism and Egoism assess an individual's values. The variable PE Donations measures an individual's perception of the effectiveness of donations. Risk Aversion is assessed via a self-reported seven-point Likert scale. Treatment 90/10 is a dummy which equals 1 if the financial payoff of asset is 90 and 10 in the two states. Treatment 60/40 is a dummy which equals 1 if the financial payoff of asset is 60 and 40 in the two states. The other variables are discussed in Appendix A. Individual fixed effects are controlled in each regression. All independent variables are standardized to allow for an unconditional assessment of the premium via the constant.

<sup>\*</sup> p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

Table C.5.2: Willingness to Pay for Social Responsibility and Personal Characteristics - Additional Treatments II

	(1) Premium $A_{2,,5}$ , $A_{12,,15}$ , $A_{22,,25}$	(2) Premium $A_4 - A_3$ , $A_{14} - A_{13}$ , $A_{24} - A_{23}$	(3) Premium $H3_{100/0}$ , $H3_{90/10}$ , $H3_{60/40}$
Altruism	7.49	12.54	14.36
	(20.67)	(19.06)	(31.34)
Egoism	24.53	11.67	10.36
	(24.94)	(23.00)	(37.84)
PE Donations	4.77	-26.93**	-4.07
	(13.05)	(12.03)	(19.79)
Risk Aversion	7.00	50.57*	-3.08
	(28.42)	(26.21)	(43.11)
Treatment $90/10$	1.59	-1.57	-1.65
	(1.48)	(1.37)	(2.25)
Treatment 60/40	1.46	-0.62	-3.13
	(1.48)	(1.37)	(2.25)
Other Variables	YES	YES	YES
Individual Fixed Effects	YES	YES	YES
Adjusted $\mathbb{R}^2$	0.41	0.64	0.13

Robust standard errors in parentheses

Note: This table contains estimation results of OLS regression with premia of responsible over conventional assets  $A_1$ ,  $A_{11}$ , or  $A_{21}$  as dependent variables. The sample includes 406 observations, with 160 participants in the 100/0 treatment and 82 participants who experience all three treatments. All participants belong to the sample with sophisticated subjects. Altruism and Egoism assess an individual's values. The variable PE Donations measures an individual's perception of the effectiveness of donations. Risk Aversion is assessed via a self-reported seven-point Likert scale. Treatment 90/10 is a dummy which equals 1 if the financial payoff of asset is 90 and 10 in the two states. Treatment 60/40 is a dummy which equals 1 if the financial payoff of asset is 60 and 40 in the two states. The other variables are discussed in Appendix A. Individual fixed effects are controlled in each regression. All independent variables are standardized to allow for an unconditional assessment of the premium via the constant.

<sup>\*</sup> p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

# C.6 Participants' Misunderstanding

Table C.6: Mean Asset Premia to Assess Hypotheses 1-3 - Participants' Misunderstanding

Panel A		
	t-statistic	
Premium $A_2$	-0.22	-0.25
Premium $A_3$	-3.71***	-3.93
Premium $A_4$	1.61*	1.88
Premium $A_5$	4.78***	4.64
Premium $A_{2,\dots,5}$	0.62	0.74
Premium $A_{2,4,5}$	2.06**	2.43
Premium $A_4 - A_3$	5.33***	6.08
Premium $H3$	5.22***	4.90

Panel B: WTP for unsophisticated subjects

	mean	t-statistic
Premium $A_2$	-7.65***	-5.75
Premium $A_3$	-12.08***	-8.42
Premium $A_4$	-4.24***	-3.30
Premium $A_5$	-3.80**	-2.57
Premium $A_{2,\dots,5}$	-6.94***	-5.63
Premium $A_{2,4,5}$	-5.23***	-4.15
Premium $A_4 - A_3$	7.84***	6.11
Premium $H3$	11.51***	6.85

Note: This table shows premia of responsible assets in absolute terms. The upper panel includes all 453 participants, while the bottom panel includes 204 unsophisticated participants, i.e., participants who bid more than  $\in$ 50 on average for asset  $A_1$ . "Premium  $A_2$ " to "Premium  $A_5$ " are the average Euro premia of responsible assets  $A_2$  to  $A_5$  over the conventional asset  $A_1$ , respectively. "Premium  $A_{2,...,5}$ " is the average premium of all responsible assets over the conventional asset. "Premium  $A_{2,4,5}$ " is the average premium of assets  $A_2$ ,  $A_4$ , and  $A_5$  over the conventional asset  $A_1$ . "Premium  $A_4 - A_3$ " is the difference in WTP between  $A_4$  and  $A_3$  that is required to assess Hypothesis  $H_2$ . "Premium  $H_3$ " is defined as  $(b_{A_5} - b_{A_2}) - (b_{A_2} - b_{A_1})$  and allows to assess Hypothesis  $H_3$ , as outlined in Appendix B.3. We report t-statistics of two-sided one-sample t-tests that test whether the mean of the respective premium is equal to zero.

# **D** Instructions

#### D.1 Initial Instructions

Dear Student,

Welcome to our experiment. We would like to thank you in advance for your participation.

Our experiment is fully computer-based and divided into **three sections**. In **section 1**, you will receive an introduction and explanations of our experimental environment. It is strictly required that you carefully read and comprehend all instructions. We will provide examples in section 1 to help you understand the setup of our experiment. Please raise your hand if you have any questions or if you encounter any problems during the experiment – the experimenter will immediately come and assist you.

In section 2, you will take part in the actual experiment, wherein you are presented with investment decisions over 26 rounds. In each of the 26 rounds, you will have to state your willingness-to-pay (WTP) for several investment products. An investment is risky and will yield one out of two possible outcomes with equal probability (50% probability of occurrence of either the good or the bad state). Of course you do not know in advance which outcome will be realized. You will receive an endowment of 100 units out of which you can state your WTP for the respective assets in each round. Decisions that you have made in previous rounds will not affect later rounds. That is, in every investment decision of section 2, you will have 100 units available. It is crucial that you pay attention to the WTP because it has a direct influence on your potential variable compensation.

**Section 3** is a concluding questionnaire. Please answer all questions carefully. Your answers will be treated anonymously and they will be used for research-purposes only. No third party will obtain access to your answers at any time whatsoever!

You will receive a fixed payment of 10 € for participating in the experiment. In addition to that, every participant has a 10% chance of being compensated depending on the choices they make in the experiment in section 2.

Specifically, this variable remuneration will be based on your stated willingness-to-pay for **one randomly selected** decision in the experiment. Therefore, it is in your best interest to think thoroughly about all answers that you give in this experiment and carefully state your willingness-to-pay for each asset. We will randomly determine which of your answers counts for the variable remuneration. A more detailed explanation of the exact payment rules will be given shortly.

Please note that you are not allowed to talk to fellow students during the experiment or to look at other peoples' screens. A violation of these rules will cause an immediate exclusion **without pay** from the experiment. During the experiment, the use of the internet or personal devices (cellphones, pocket calculators, etc.) is not allowed.

Please raise your hand if you have any questions during the experiment. The experimenter will immediately come and assist you. Do you have any questions at this time?

#### **Experimental setup and variable remuneration**

In addition to the 10 €show-up fee, each participant has a 10% chance to receive a variable remuneration upon completing this experiment. The variable remuneration is based on one of your answers (randomly determined) in the experiment. In 26 rounds, we will present different assets that might be similar. When you start the experiment, you will find an example to familiarize yourself with the setup. The assets have the following outcome profile. With equal probability (i.e., 50%), an asset will either be in the good state or the bad state of the world. The asset payoff in the good state of the world will always be 100 units and 0 units in the bad state.

There are assets that include a donation to a good cause. For these assets, a donation will be made to a charity. Further details on the amount of the donation and its recipient will be available to you. For you as an investor, all assets have identical financial payoffs and only differ with respect to the donation. The assets and charities are randomized across participants, yet every participant faces all of the assets. You are asked to enter the maximum amount you are willing to pay for each asset. We will then randomly determine a price for each asset. A transaction (i.e., an investment) will only take place at the randomly determined price if the willingness-to-pay you stated is equal to or larger than the randomly determined price.

We will determine randomly whether you are among the 10% that will receive the variable remuneration and which of your choices counts for the variable remuneration. In this case, you will receive the payoff of the selected decision in units with a 1:1 conversion in Euro. It is therefore in your best interest to state your **maximum willingness-to-pay (WTP) for each asset** because otherwise, there might be no transaction and you cannot benefit from the outcomes.

The following table gives an overview of the investment situation for various examples:

<b>Determined Price</b>	Your stated WTP	You pay
10	45	10
20	45	20
30	45	30
40	45	40
50	45	No transaction
60	45	No transaction
70	45	No transaction
80	45	No transaction
90	45	No transaction
100	45	No transaction
62	10	No transaction
62	20	No transaction
62	30	No transaction
62	40	No transaction
62	50	No transaction
62	60	No transaction
62	70	62
62	80	62
62	90	62
62	100	62

If the transaction takes place at the respective determined price (i.e. your stated WTP is equal to or larger than the determined price), this will be directly reflected in your payoff. The determined price will be deducted from your endowment to reflect the investment in the asset. With equal probability, we either observe the good or bad state of the world. Then, we determine your payoff accordingly, taking into account your WTP and the outcome of the asset. We will actually donate the specified amount to the charity when the asset includes a donation and publish contribution receipts in our showcase.

#### D.2 Revised Instructions

Dear Students,

Welcome to our experiment. We would like to thank you in advance for your participation.

Our experiment is divided into **three sections**. In **section 1**, you will receive an introduction into the experimental environment and get acquainted with the setup. Please raise your hand if you have any questions or if you encounter any problems during the experiment. In **section 2**, you will take part in the actual experiment, wherein you indicate your willingness-to-pay for several assets. **Section 3** is a concluding questionnaire. Please answer all questions carefully. Your answers will be treated anonymously and they will be used for research-purposes only. No third party will obtain access to your answers at any time whatsoever!

You will receive a fixed payment of 10 € for participating in the experiment. Please note that you are not allowed to talk to fellow students during the experiment or to look at other peoples' screens. A violation of these rules will cause an immediate exclusion without pay from the experiment. During the experiment, the use of the internet or personal devices (cellphones, pocket calculators, etc.) is not allowed.

#### Experimental setup and variable remuneration

When you start the experiment, you will find an exemplary asset to familiarize yourself with the setup. Over 26 rounds, we will then present different assets that might be similar.

In each round, you have 100 units available, your financial "endowment". Decisions that you have made in previous rounds will not affect your endowment for later rounds. That is, for every decision, you will have an endowment of 100 units available.

The assets have a 50% chance of paying out 100 units and a 50% chance of paying out 0 units. That is, the payout of an asset is with equal probability, just like in a coin-toss, either 100 or 0. The expected payout of all assets therefore amounts to 50 units. Some assets include a donation to a charity next to their regular payout. Further details on the amount of the donation and its recipient will be available to you. For you as participant, all assets have identical financial payouts and only differ with respect to the donation. The assets and charities are randomized across participants, yet every participant faces all of the assets. You are required to enter the maximum amount you are willing to pay for each asset, your "maximum payment".

For 10% of the participants, we pay an additional variable remuneration with a 1:1 conversion in Euro for one randomly determined asset. For this asset, a price between 0 and 100 will be randomly determined. If your maximum payment is greater than or equal to this "randomly determined price", you buy the asset. If your maximum payment is less than the randomly determined price, you do not buy the asset.

Should the randomly selected asset for your variable remuneration include a donation, we will actually donate the amount to the charity and publish contribution receipts in our showcase.

In a nutshell, there are two possibilities for your variable remuneration:

1. Your maximum payment is **greater than or equal to** the randomly determined price: You buy the asset

Your variable remuneration = Endowment – randomly determined price + asset payout

2. Your maximum payment is **less than** the randomly determined price: You do not buy the asset

Your variable remuneration = Endowment

The following table gives an overview of the variable remuneration in two examples:

	Endowment	Your maximum Payment	Randomly determined Price	Buy?	Variabl	e Remuneration
			30	Yes	70	+ 50% chance of 100
Person 1	100	30	55	No	100	-
			70	No	100	-
			30	Yes	70	+ 50% chance of 100
Person 2	100	60	55	Yes	45	+ 50% chance of 100
			70	No	100	-

This table depicts variable remuneration for two exemplary persons that each have an endowment of 100 units.

- Person 1 always has a maximum payment of 30 units for the asset. If the randomly determined price of the asset is 30, Person 1 buys the asset. As variable remuneration, Person 1 therefore receives 70 units (100 Endowment 30 randomly determined price) and has a 50% chance to receive the asset payout of 100 units. A randomly determined price of 55 is greater than the maximum payment of Person 1. As a consequence, Person 1 does not buy the asset and only receives the endowment of 100 as variable remuneration. For a randomly determined price of 70, Person 1 will also not buy the asset and the variable remuneration is again 100.
- Person 2 always has a maximum payment of 60 units for the asset. If the randomly determined price of the asset is 30, Person 2 buys the asset. As variable remuneration, Person 2 therefore receives 70 units (100 Endowment 30 randomly determined price) and has a 50% chance to receive the asset payout of 100 units. If the randomly determined price is 55, Person 2 therefore receives 45 units (100 endowment 55 randomly determined price) and has a 50% chance to receive the asset payout of 100 units. A randomly determined price of 70 is greater than the maximum payment of Person 2. As a consequence, Person 2 does not buy the asset and only receives the endowment of 100 as variable remuneration.

# D.3 Revised Instructions (in German)

Liebe Studierende,

willkommen zu unserem Experiment. Wir danken Ihnen im Voraus für Ihre Teilnahme.

Dieses Experiment wird in **drei Abschnitten** durchgeführt. In **Abschnitt 1** erhalten Sie eine Einführung in die experimentelle Umgebung und lernen den experimentellen Aufbau kennen. Bitte heben Sie Ihre Hand, wenn Sie Fragen haben oder bei der Teilnahme am Experiment auf Probleme stoßen. In **Abschnitt 2** wird das eigentliche Experiment durchgeführt in welchem Sie angeben, wie viel Sie bereit sind für verschiedene Anlagen oder Anlagegüter zu bezahlen. **Abschnitt 3** umfasst einen abschließenden Fragebogen, den Sie bitte sorgfältig beantworten. Ihre Antworten werden ausschließlich anonym und für wissenschaftliche Zwecke ausgewertet. Kein Dritter wird zu irgendeinem Zeitpunkt Zugriff auf Ihre Daten haben!

Sie erhalten eine Aufwandsentschädigung in Höhe von 10 €für Ihre Teilnahme am Experiment. Bitte beachten Sie, dass jeglicher Kontakt zu anderen Studierenden oder das "Abgucken" von anderen Bildschirmen nicht erlaubt sind. Ein Verstoß gegen diese Regeln führt zum sofortigen Ausschluss vom Experiment ohne jegliche Vergütung. Während des Experiments sind der Gebrauch des Internets oder persönlicher Geräte (Mobiltelefone, Taschenrechner, etc.) nicht gestattet.

#### Experimenteller Aufbau und variable Vergütung

Zu Beginn des Experiments sehen Sie ein exemplarisches Anlagegut, um mit dem Aufbau vertraut zu werden. Danach präsentieren wir Ihnen in 30 Runden verschiedene Anlagegüter, die sich ähnlich sein können.

In jeder Runde haben Sie 100 Geldeinheiten zur Verfügung, Ihre finanzielle "Ausstattung". Frühere Entscheidungen beeinflussen nicht Ihre Ausstattung in späteren Runden. Das bedeutet, dass Ihnen für jede Anlageentscheidung 100 Geldeinheiten zur Verfügung stehen.

Die Anlagegüter haben mit 50-prozentiger Wahrscheinlichkeit eine hohe Auszahlung und mit 50-prozentiger Wahrscheinlichkeit eine niedrige Auszahlung. Das heißt, die Auszahlung der Anlagegüter ist mit gleicher Wahrscheinlichkeit, wie bei einem Münzwurf, entweder hoch oder niedrig. Im Verlaufe des Experiments variieren die hohen und niedrigen Auszahlungen. Die erwartete Auszahlung aller Anlagegüter beträgt allerdings stets 50 Geldeinheiten. Einige Anlagegüter beinhalten neben Ihrer regulären Auszahlung eine Spende an eine Wohltätigkeitsorganisation. Weitere Details bezüglich Höhe und Empfänger der Spende sind jeweils angegeben. Für Sie als Teilnehmer bieten alle Anlagegüter eine identische erwartete Auszahlung und unterscheiden sich lediglich bezüglich der Spende. Die Anlagegüter und Wohltätigkeitsorganisationen sind für alle Teilnehmer identisch, werden Ihnen jedoch in zufällig bestimmter Reihenfolge gezeigt. Für jedes Anlagegut müssen Sie angeben, wie viel Sie dafür maximal zahlen würden. Dies ist dann Ihre "maximale Zahlung".

Wir zahlen 10% der Teilnehmer eine zusätzliche variable Vergütung in Euro zum Wechselkurs 1:1 für ein zufällig ermitteltes Anlagegut aus. Für dieses Anlagegut wird per Zufallsprinzip ein Preis zwischen 0 und 100 ermittelt. Ist die von Ihnen angebotene maximale Zahlung größer oder gleich diesem "zufällig ermittelten Preis", kaufen Sie das Anlagegut. Ist die von Ihnen angebotene maximale Zahlung kleiner als der zufällig ermittelte Preis, findet kein Kauf statt.

Sollte das bei Ihrer variablen Vergütung zufällig ausgewählte Anlagegut eine Spende beinhalten, wird der angegebene Betrag der Wohltätigkeitsorganisation gespendet, wenn Sie das Anlagegut kaufen. In diesem Fall veröffentlichen wir eine Spendenquittung in unserem Schaukasten.

Zusammengefasst gibt es für Ihre variable Vergütung zwei Möglichkeiten:

 Ihre angebotene maximale Zahlung ist größer oder gleich dem zufällig ermittelten Preis: Sie kaufen das Anlagegut

Ihre Vergütung = Ausstattung – Zufällig ermittelter Preis + Auszahlung des Anlageguts

 Ihre angebotene maximale Zahlung ist kleiner als der zufällig ermittelte Preis: Sie kaufen das Anlagegut nicht

Ihre Vergütung = Ausstattung

Die nachfolgende Tabelle veranschaulicht die variable Vergütung in zwei Beispielen:

	Ausstattung	Ihre maximale Zahlung	Zufällig ermittelter Preis	Kauf?	Variable Vergütung			
Person 1	100	30	30	Ja	70	+ 50% Chance auf hohe oder niedrige Auszahlung		
			55	Nein	100	-		
			70	Nein	100	-		
		0 60	30	Ja	70	+ 50% Chance auf hohe oder niedrige Auszahlung		
Person 2	100		55	Ja	45	+ 50% Chance auf hohe oder niedrige Auszahlung		
			70	Nein	100	-		

In der Tabelle sehen Sie zwei Beispielpersonen, die jeweils eine Ausstattung von 100 Geldeinheiten haben.

- Person 1 bietet immer 30 Geldeinheiten als maximale Zahlung für das Anlagegut. Bei einem zufällig ermittelten Preis des Anlageguts von 30 kauft Person 1 das Anlagegut. Als Vergütung erhält Person 1 daher 70 Geldeinheiten (100 Ausstattung 30 zufällig ermittelter Preis) und hat eine 50-prozentige Wahrscheinlichkeit entweder die hohe oder niedrige Auszahlung des Anlageguts zu erhalten. Bei einem zufällig ermittelten Preis von 55 übersteigt dieser die angebotene maximale Zahlung von Person 1. Daher kauft Person 1 in diesem Fall das Anlagegut nicht und erhält lediglich die Ausstattung von 100 als Vergütung. Für einen zufällig ermittelten Preis von 70 findet ebenfalls kein Kauf statt und die Vergütung beträgt wiederum 100.
- Person 2 bietet immer 60 Geldeinheiten als maximale Zahlung für das Anlagegut. Bei einem zufällig ermittelten Preis des Anlageguts von 30 kauft Person 2 das Anlagegut. Als Vergütung erhält Person 2 daher 70 Geldeinheiten (100 Ausstattung 30 zufällig ermittelter Preis) und hat eine 50-prozentige Wahrscheinlichkeit entweder die hohe oder niedrige Auszahlung des Anlageguts zu erhalten. Bei einem zufällig ermittelten Preis von 55 erhält Person 2 daher 45 Geldeinheiten (100 Ausstattung 55 zufällig ermittelter Preis) und hat eine 50-prozentige Wahrscheinlichkeit entweder die hohe oder niedrige Auszahlung des Anlageguts zu erhalten. Bei einem zufällig ermittelten Preis von 70 übersteigt dieser die angebotene maximale Zahlung von Person 2. Daher kauft Person 2 in diesem Fall das Anlagegut nicht und erhält lediglich die Ausstattung von 100 als Vergütung.

# D.4 Quiz

Note: Answers (marked in gray) not visible to subjects

# Quiz

Below, you find three scenarios that put you in a similar situation as in the experiment. For each scenario, you have to indicate what variable payment you would receive as participant.

Just as in the experiment, you have an endowment of 100 units for each decision. You only buy an asset if your maximum payment is greater than or equal to the randomly determined price of the asset.

If your maximum payment is greater than or equal to the randomly determined price of the asset, you buy the asset and receive

Variable Payment = Endowment - Randomly determined Price + Asset Payout

If your maximum payment is less than the randomly determined price of the asset, you do not buy the asset and receive

Variable Payment = Endowment

#### Scenario 1

Imagine an asset has a randomly determined price of 60 and a payout of 100. Your endowment is 100.

How much do you receive as variable payment if your maximum payment for this asset is:

a)	30?	(100 Endowment = 100, No buy)
b)	50?	(100 Endowment = 100, No buy)
c)	70?	(100 Endowment – 60 Price + 100 Payout = 140)
d)	100?	(100 Endowment – 60 Price + 100 Payout = 140)

#### Scenario 2

Imagine your maximum payment for an asset is 60 and you have an endowment of 100. How much do you receive as variable payment if the asset has a payout of 0 and a randomly determined price of:

#### Scenario 3

Imagine an asset has a randomly determined price of 100 and a payout of 0. Your endowment is 100. What is your variable payment if your maximum payment is:

a)	30?	(100 Endowment = 100, No buy)
b)	50?	(100 Endowment = 100, No buy)
c)	70?	(100 Endowment = 100, No buy)
d)	100?	(100  Endowment - 100  Price + 0  Payout = 0)

We will now go over the results together to assure you have understood the variable payment.

# E Survey

	1. Values												
	How important are the following values to you as a guiding principle in life?												
1	Authority (the right to lead or command)												
	Not important at all	1	2	3	4	5	6	7	8	Of supreme importance			
2	Social power (control o	over of	thers, do	minanc	ce)								
	Not important at all	1	2	3	4	5	6	7	8	Of supreme importance			
3	Wealth (material posse	ssions	, money)										
	Not important at all	1	2	3	4	5	6	7	8	Of supreme importance			
4	Ambition (hard working	g, asp	iring)										
	Not important at all	1	2	3	4	5	6	7	8	Of supreme importance			
5	Success (achieving goa	ls)											
	Not important at all	1	2	3	4	5	6	7	8	Of supreme importance			
6	Equality (equal opport	unity f	or all)										
	Not important at all	1	2	3	4	5	6	7	8	Of supreme importance			
7	Social justice (correctin	ng inji	ıstice, ca	re for 1	the weak	t)							
	Not important at all	1	2	3	4	5	6	7	8	Of supreme importance			
8	Protecting the environm	nent (Į	oreservin	ig natu	re)								
	Not important at all	1	2	3	4	5	6	7	8	Of supreme importance			
9	Unity with nature (fitting	ig into	nature)										
	Not important at all	1	2	3	4	5	6	7	8	Of supreme importance			

	2. Investment know	wledge a	and belie	fs about	t social	ly respor	nsible in	vestn	nents (SRI)					
	"Socially responsible investment is the general term for sustainable, responsible, ethical, social, and environmental investment and all other investment processes, that take the influence of ESG (Environment, Social and Governance) criteria into account in their financial analysis." (Forum Nachhaltige Geldanlagen)  How would you rate your investment knowledge?													
1	How would you rate	e your in	ivestment	knowle	dge ?									
	Very poor □		Poor	A	verage		Good	-	Very good  ☐					
2	How long have you	been in	vesting?											
	□ not at	t all	□ 1 to	3 years		□ 5 to	10 years							
	□ up to	1 year	□ 3 to	5 years			e than 10	years						
3	Have you heard of sexperiment?	socially	responsił	ole inves	tments	(e.g, soci	ially resp	onsil	ole mutual fund	s) before this				
	No □	Yes												
4	How do you assess	the <b>risk</b>	of socia	lly respo	onsible	investmei	nts in co	mpari	ison to convent	ional ones?				
	A lot less risky □	Less risky	About sam		More risky □	A lot morisky								
5	How do you assess ones?	the <b>perj</b>	formance	of soci	ially res	sponsible	investm	ents ii	n comparison t	o conventional				
	Much lower □	Lower	About sam	1	Higher	Much higher								
	Please indicate belo	w your	level of a	greemer	nt with t	the follow	wing state	emen	ts.					
6	By contributing to a environment.	charity	(investin	g in SRI	!) every	individu	al can ho	ave a	positive effect (	on the				
	Strong disagr		2	3	4	5	6	7	Strongly agree					
7	Every person has th	e power	· to influe	nce soci	al prob	lems by o	contribui	ting to	a charity (inv	esting in SRI).				
	Strong disagr	ee 1	2	3	4	5	6	7	Strongly agree					
8	It does not matter if difference.	I donat	e to a god	od cause	e (invest	t in SRI) .	since one	e pers	on acting alon	e cannot make a				
	Strong								Strongly					
	disagr	ee 1	2	3	4	5	6	7	agree					
9	It is useless for the a pollution with inves			ribute to	charit	ies doing	g anythin	g abo	ut pollution (to	the reduction of				
	Strong disagr	-	2	3	4	5	6	7	Strongly agree					

	<b>3. Time Perspective</b> Read each item and, as honestly as you can, answer the question: 'How characteristic or true is this of me?'													
	Check the appropriate answer according to the scale below.													
1	Respect for tradition is important to me.													
	Strongly								Strongly					
	disagree	1	2	3	4	5	6	7	agree					
2	I plan for the long term													
	Strongly								Strongly					
	disagree	1	2	3	4	5	6	7	agree					
3	Family heritage is impo	ortant .	to me.											
	Strongly								Strongly					
	disagree	1	2	3	4	5	6	7	agree					
4	I value a strong link to	ту ра	st.											
	Strongly								Strongly					
	disagree	1	2	3	4	5	6	7	agree					
5	I work hard for success	in the	future.											
	Strongly								Strongly					
	disagree	1	2	3	4	5	6	7	agree					
6	I don't mind giving up t	oday's	fun for	success	in the f	future								
	Strongly								Strongly					
	disagree	1	2	3	4	5	6	7	agree					
7	Traditional values are	import	ant to m	ıe.										
	Strongly								Strongly					
	disagree	1	2	3	4	5	6	7	agree					
8	Persistence is importan	t to m	e.											
	Strongly								Strongly					
	disagree	1	2	3	4	5	6	7	agree					

	4. Demographics												
	<u> </u>												
1	Gender												
	□ male		female										
2	Age												
	years old												
3	Marital Status												
	☐ single ☐ married												
4	Do you have children (ij	f yes, ho	w many)?										
	□ no		,										
	□ yes	childre	en (please er	nter nur	nbe	er)							
5	What is your highest deg	gree of e	education?										
	<ul> <li>□ CSE (Hauptschulabschluss)</li> <li>□ GCSE (Mittlere Reife / Realschulabschluss)</li> <li>□ Graduate Degree</li> <li>□ Vocational Diploma (Fachabitur)</li> <li>□ Other:</li> <li>□ Apprenticeship</li> </ul>												
6	What is your monthly ne	et incom	e?										
	☐ up to 349€ ☐ 350€ to 499€	_	500€ to 64 more than										
7	What is your family's me	onthly n	et income?										
	□ up to 1.499€ □ 1.500€ to 3.499€		3.500€ to more than										
8	Do you receive BAföG?												
	□ no □ yes												
9	At which faculty are you	ı enrolle	d?										
10	Do you belong to a chur	rch or re	eligious con	nmunit	y?	If yes, p	lease s	pecify.					
	☐ Yes, catholic ☐ Yes, protestant ☐ Yes, muslim		Yes, ortho Yes, other No, under	r:	tion	ıal							
	Please indicate below yo	our level	of agreem	ent wit	h tl	he follo	wing st	atements					
11	I am a religious person.												
	Not at all								To a great extent				
		1	2 3	4		5	6	7					
12	I am interested in politic												
	Not at all	1	2 3	4		5	6	7	To a great extent				

13	13 Do you attend church? (If yes, how of	ten in a	typical	year?)			
	□ no						
	☐ yestimes per year						
14	14 Did you participate in the most recent	election	n?				
	□ no						
	□ yes						
15	15 Are you member of a political party?						
	□ no						
	□ yes						
16	16 To what degree would you consider y	ourself i	risk ave	rse?			
	Not risk averse □ □						Very
	at all 1 2	3	4	5	6	7	risk averse

# F Supplementary Tables

Table F1: Participant Characteristics

Measure	Value	#	%
Gender	Female	216	47.7
	Male	237	52.3
Age	<21	72	15.9
	21-23	194	42.8
	24-26	124	27.4
	>26	63	13.9
Education	Apprenticeship	13	2.8
	Abitur	258	56.9
	Bachelor	135	29.8
	Master	16	3.5
	Other	31	6.8
_	- 1-		
Income	<349	109	24.1
	350-499	91	20.1
	500-649	91	20.1
	>650	162	35.7
Family Income	<1499	30	6.6
·	1500-3499	114	25.1
	3500-6000	202	44.6
	>6000	107	23.6
Bafög	Yes	63	13.9
	No	390	86.1
Marital Status	Single	207	45.7
	Married	238	52.5
	Others	8	1.8
Investment know-how	Very Poor	65	14.3
	Poor	142	31.3
	Average	166	36.6
	Good	73	16.1
	Very Good	7	1.5

Table F1 – continued from previous page

Measure	Value	#	%
Investment Time	None	338	74.6
	<1 year	39	8.6
	1-3 years	32	7.1
	3-5 years	26	5.7
	5-10 years	13	2.9
	>10 years	5	1.1
SRI Awareness	No	224	49.4
	Yes	229	50.6
SRI Risk Perception	A lot less	12	2.6
ord reak rereception	Less	169	37.3
	About the same	173	
	More	99	21.8
	A lot more	0	0.0
SRI Return Perception	A lot less	26	5.7
offi feetain i ereeption	Less	262	
	About the same	98	
	More	67	14.8
	A lot more	0	0.0
Church Visits (p.a.)	0	226	49.9
Church visits (p.a.)	1-5	170	37.5
	6-10	28	6.2
	>10	29	6.4
	>10	23	0.4
Election Participation	No	31	6.8
	Yes	422	93.2
Political Party	No	419	92.5
_ = ===================================	Yes	34	7.5

Note: This table shows individual characteristics of the 453 participants. # refers to the absolute number of participants in a category. % is the amount of participants in this category relative to the total sample. "Abitur" is the German matriculation examination required to enroll at a university. "Bafög" is a German government-funded student loan with eligibility dependent on parent income.

Table F2: Summary Statistics

	mean	$25^{\mathrm{th}}$	median	$75^{\rm th}$	std. dev.	min	max
Altruism	6.20	5.50	6.50	7.25	1.32	1.00	8.00
Egoism	5.03	4.20	5.00	6.00	1.17	1.40	8.00
PE Donations	5.25	4.50	5.50	6.00	1.11	1.00	7.00
PSE	5.38	4.75	5.50	6.00	1.00	1.00	7.00
LTO	4.23	3.50	4.25	5.00	1.09	1.25	7.00
Religiousness	2.83	1.00	2.00	4.00	1.80	1.00	7.00
Political Interest	5.27	5.00	5.00	6.00	1.37	1.00	7.00
Risk Aversion	4.08	3.00	4.00	5.00	1.30	1.00	7.00

Note: This table complements Table F1 and reports summary statistics for several control variables. The sample includes 242 participants who constitute the sample with sophisticated subjects. Altruism and Egoism assess an individual's values on Likert scales ranging from 1 to 8. PE Donations (PSE) is the perceived effectiveness of donations (SRI) and measures whether an individual believes her engagement in donations (SRI) to be feasible, on a Likert scale ranging from 1 to 7. LTO measures an individual's long-term orientation on a scale (1-7). Religiousness and Political Interest are the individual's self-reported levels of Religiousness and Political Interest, respectively, on scales ranging from 1-7. Risk Aversion is the individual's self-assessment on a scale ranging from "Not risk averse at all" (1) to "Very risk averse" (7).

Table F3: Correlation between Individual Characteristics

	Altmism	H moism	OE:	Religionenese	Church	Church Visite(n.a.)	Interest	Election	Political Party	PE	DG.
	ALU UISIII	LEGOISIII	0 17	rengionsiless	Arremance	v isits(p.a.)	r Ollteres	r articipation	raity	Dollations	101
Altruism	1.00										
Egoism	-0.32	1.00									
LTO	-0.06	0.28	1.00								
Religiousness	0.06	0.11	0.25	1.00							
Church Attendance	0.00	0.02	80.0	0.51	1.00						
Church Visits (p.a.)	0.03	0.00	0.04	0.54	0.44	1.00					
Interest Politics	-0.00	0.10	-0.04	-0.01	0.02	0.06	1.00				
Election Participation	0.02	-0.17	0.09	-0.07	0.02	0.01	0.16	1.00			
Political Party	-0.10	0.03	0.07	0.01	0.07	0.16	0.30	0.07	1.00		
PE Donations	0.45	-0.09	0.03	0.15	0.10	0.11	0.02	0.00	-0.10	1.00	
PSE	0.37	-0.09	-0.03	0.00	0.04	-0.09	0.02	0.00	-0.10	0.66	1.00
Gender	-0.29	90.0	-0.05	-0.18	-0.05	-0.04	0.20	0.14	0.14	-0.14	-0.14
Age	-0.00	-0.26	-0.16	-0.18	-0.29	-0.16	0.01	0.14	-0.03	-0.04	0.05
Marital Status	0.16	-0.04	-0.02	0.00	-0.03	0.08	0.09	0.16	0.01	0.09	0.10
Income	-0.02	0.02	0.03	0.00	-0.07	-0.01	0.15	0.14	0.06	-0.02	0.04
Family Income	-0.04	0.16	0.08	-0.02	0.17	-0.00	0.14	-0.03	0.04	-0.03	-0.03
Bafoeg	0.04	0.02	0.04	0.01	-0.23	-0.06	-0.05	-0.02	-0.03	0.00	90.0
Risk Aversion	-0.09	0.12	0.09	0.05	0.04	0.03	0.10	0.01	0.01	-0.03	-0.07
SRI Return Perception	90.0	0.03	0.04	0.07	-0.01	-0.07	-0.06	-0.15	0.00	0.04	90.0
SRI Risk Perception	-0.14	0.09	-0.03	-0.02	0.04	0.07	-0.02	0.06	0.05	90.0-	-0.14
SRI Awareness	-0.02	0.02	-0.04	-0.12	0.00	-0.04	0.31	0.05	0.07	0.01	0.07
Inv Time	-0.14	0.13	0.01	90.0-	-0.02	-0.07	0.17	0.07	0.09	0.01	-0.01
InvKH	-0.24	0.35	0.13	0.01	0.01	-0.01	0.17	-0.03	0.12	-0.05	-0.05

Note: This table shows correlation between individual characteristics. All variables are standardized. The measurement of variables is discussed in Appendix A. The sample includes 242 participants who constitute the sample with sophisticated subjects.

Table F4: Correlation between Individual Characteristics (continued)

	Gender	Age	Marital Status	Income	Family Income	Bafoeg	Risk Aversion	SRI Return Perception	SRI Risk Perception	SRI Awareness	Inv Time	InvKH
Gender	1.00											
Age	0.05	1.00										
Marital Status	-0.10	0.13	1.00									
Income	0.04	0.17	0.15	1.00								
Family Income	0.10	-0.27	-0.02	0.03	1.00							
Bafoeg	-0.12	-0.01	80.0	0.11	-0.39	1.00						
Risk Aversion	-0.01	-0.09	-0.10	0.04	0.02	0.05	1.00					
SRI Return Perception	-0.15	-0.12	0.03	-0.05	-0.06	0.15	90.0	1.00				
SRI Risk Perception	-0.01	-0.10	0.03	-0.00	-0.06	-0.02	0.04	0.18	1.00			
SRI Awareness	0.26	0.14	90.0	0.05	0.09	-0.04	0.10	-0.06	-0.03	1.00		
Inv Time	0.28	0.17	0.12	0.13	0.09	-0.07	0.05	-0.06	-0.01	0.28	1.00	
InvKH	0.31	-0.06	0.03	0.12	80.0	0.13	0.24	-0.02	0.04	0.28	0.50	1.00

Note: This table shows correlation between individual characteristics. All variables are standardized. The measurement of variables is discussed in Appendix A. The sample includes 242 participants who constitute the sample with sophisticated subjects.

Table F5: Willingness to Pay for Social Responsibility and Personal Characteristics - Complete Table

	(1)	(2)	(3)	(4)
	Premium $A_2$	Premium $A_3$	Premium $A_4$	Premium $A_5$
Constant	5.01***	2.55**	5.74***	10.73***
	(0.95)	(1.07)	(0.98)	(1.18)
Altruism	1.45	0.37	1.15	1.66
	(1.20)	(1.35)	(1.24)	(1.49)
Egoism	-2.16*	-2.26*	-1.74	-3.31**
	(1.17)	(1.31)	(1.21)	(1.45)
LTO	-0.75	-0.74	1.00	0.70
	(1.08)	(1.22)	(1.12)	(1.34)
Religiousness	-0.72	-0.15	0.32	-1.50
	(1.32)	(1.49)	(1.37)	(1.64)
Church Attendance	1.66	-0.56	1.59	0.78
	(1.36)	(1.52)	(1.40)	(1.68)
Church Visits (p.a.)	-0.54	0.07	-0.18	-0.83
	(1.24)	(1.39)	(1.28)	(1.54)
Interest Politics	1.62	0.67	0.55	2.43*
	(1.10)	(1.23)	(1.13)	(1.36)
Election Participation	-0.14	0.16	-0.29	-0.07
	(0.24)	(0.27)	(0.25)	(0.30)
Political Party	-0.86	-0.19	2.13	0.16
	(3.53)	(3.96)	(3.65)	(4.37)
PE Donations	2.92**	3.68**	1.06	4.11**
	(1.40)	(1.57)	(1.45)	(1.73)
PSE	-1.97	-0.44	-0.16	-0.83
	(1.35)	(1.52)	(1.40)	(1.68)
Gender	0.85	0.99	-0.92	-0.43
	(1.01)	(1.14)	(1.05)	(1.26)
Age	$0.29^{'}$	-0.59	$0.82^{'}$	-1.75
	(1.17)	(1.31)	(1.21)	(1.45)
Marital Status	-0.28	-0.10	-0.30	-1.17
	(1.00)	(1.12)	(1.03)	(1.23)
Income	-0.88	-0.22	-2.21**	-2.10*
	(1.01)	(1.14)	(1.05)	(1.26)
Family Income	0.19	0.22	1.01	1.09
	(1.13)	(1.27)	(1.17)	(1.40)
Bafoeg	1.70	-0.21	4.85*	3.06
	(2.79)	(3.14)	(2.89)	(3.46)
Risk Aversion	0.01	0.29	-2.54**	-0.54
	(1.01)	(1.13)	(1.04)	(1.25)
SRI Return Perception	-0.40	-0.70	-0.80	-2.09*
	(1.02)	(1.15)	(1.05)	(1.26)
SRI Risk Perception	-0.66	0.01	-0.76	-0.66
	(1.02)	(1.14)	(1.05)	(1.26)
SRI Awareness	-0.98	-0.63	0.50	-0.45
	(1.05)	(1.18)	(1.08)	(1.30)
Inv Time	-0.24	0.43	1.16	1.65
	(1.19)	(1.34)	(1.23)	(1.47)
InvKH	0.36	-0.35	-0.92	-0.76
	(1.31)	(1.47)	(1.35)	(1.62)
New Instructions	-0.60	-0.64	-1.45**	-0.61
	(0.64)	(0.71)	(0.66)	(0.79)
Adjusted $\mathbb{R}^2$	0.01	-0.01	0.05	0.07

Robust standard errors in parentheses

Note: This table contains estimation results of OLS regression with premia of responsible over conventional assets as dependent variables. The sample includes 242 participants who constitute the sample with sophisticated subjects. Altruism and Egoism assess an individual's values. The variable PE Donations measures an individual's perception of the effectiveness of donations. Risk Aversion is assessed via a self-reported seven-point Likert scale. LTO measures an individual's longterm orientation. Religiousness, Church Attendance and Church visits (p.a.) are the individual's self-reported level of Religiousness, whether one attends church (dummy variable), and how often (absolute value) in a typical year. Interest Politics, Election Participation and Political Party are the self-reported interest in politics, whether the individual took part in the most recent election, and is a member of a political party, respectively. PSE measures the individuals' perception of the effectiveness of SRI. Gender is a dummy variable equal to one when the individual is female. Age is measured in years. Marital Status is a dummy variable equal to one for married individuals. Income, and Family Income are measured via self-reported scales. Bafoeg is a dummy variable taking a value of one if the individual is a recipient of this German government-funded student loan. SRI Return (Risk) Perception is the individual's return (risk) perception of SRI relative to conventional investments. SRI Awareness is a dummy variable equal to one if an individual has heard of SRI before. Inv Time and InvKH assess are the individual's self-reported investment time and investment know-how. New Instructions is a dummy variable that takes the value 1 when participants face the new instructions. All independent variables are standardized to allow for an unconditional assessment of the premium via the constant.

<sup>\*</sup> p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

Table F6: Willingness to Pay for Social Responsibility and Personal Characteristics - Complete Table II

	(1)	(2)	(3)
	Premium $A_{2,3,4,5}$	Premium $A_4 - A_3$	Premium H3
Constant	6.01***	3.19***	0.70
	(0.89)	(1.21)	(1.17)
Altruism	1.16	0.78	-1.25
	(1.13)	(1.53)	(1.48)
Egoism	-2.37**	0.52	1.01
	(1.10)	(1.49)	(1.44)
LTO	0.05	1.75	2.20*
	(1.02)	(1.38)	(1.33)
Religiousness	-0.51	0.47	-0.05
	(1.24)	(1.68)	(1.63)
Church Attendance	0.87	2.15	-2.54
	(1.28)	(1.73)	(1.67)
Church Visits (p.a.)	-0.37	-0.24	0.24
	(1.17)	(1.58)	(1.53)
Interest Politics	1.32	-0.12	-0.81
	(1.03)	(1.40)	(1.35)
Election Participation	-0.09	-0.45	0.21
	(0.23)	(0.30)	(0.29)
Political Party	0.31	2.32	1.87
	(3.32)	(4.49)	(4.34)
PE Donations	2.94**	-2.62	-1.72
	(1.32)	(1.78)	(1.72)
PSE	-0.85	0.29	3.11*
	(1.27)	(1.72)	(1.66)
Gender	0.12	-1.90	-2.12*
	(0.95)	(1.29)	(1.25)
Age	-0.31	1.41	-2.34
	(1.10)	(1.49)	(1.44)
Marital Status	-0.46	-0.20	-0.61
_	(0.94)	(1.27)	(1.22)
Income	-1.35	-1.99	-0.34
D 11 *	(0.95)	(1.29)	(1.25)
Family Income	0.63	0.79	0.72
D 6	(1.06)	(1.44)	(1.39)
Bafoeg	2.35	5.06	-0.35
D: 1 A :	(2.63)	(3.55)	(3.43)
Risk Aversion	-0.70	-2.83**	-0.56
CDID ( D ):	(0.95)	(1.28)	(1.24)
SRI Return Perception	-1.00	-0.09	-1.29
CDI Diele Demonstre	(0.96)	(1.30)	(1.25)
SRI Risk Perception	-0.52	-0.77	0.65
CDI A	(0.96)	(1.30)	(1.25)
SRI Awareness	-0.39	1.14	(1.20)
Inv Time	(0.98)	(1.33)	(1.29)
mv 1 mie	0.75 $(1.12)$	0.73	2.14
InvKH	-0.42	(1.51) $-0.58$	(1.46) $-1.47$
1111 IX 11			
New Instructions	(1.23) $-0.82$	(1.66) -0.80	$(1.61) \\ 0.59$
NEW HISH UCHOHS	(0.60)	(0.81)	(0.78)
- C			
Adjusted $R^2$	0.04	-0.00	-0.01

Robust standard errors in parentheses

Note: This table contains estimation results of OLS regression with premia of responsible over conventional assets as dependent variables. The sample includes 242 participants who constitute the sample with sophisticated subjects. Altruism and Egoism assess an individual's values. The variable PE Donations measures an individual's perception of the effectiveness of donations. Risk Aversion is assessed via a self-reported seven-point Likert scale. LTO measures an individual's longterm orientation. Religiousness, Church Attendance and Church visits (p.a.) are the individual's self-reported level of Religiousness, whether one attends church (dummy variable), and how often (absolute value) in a typical year. Interest Politics, Election Participation and Political Party are the self-reported interest in politics, whether the individual took part in the most recent election, and is a member of a political party, respectively. PSE measures the individuals' perception of the effectiveness of SRI. Gender is a dummy variable equal to one when the individual is female. Age is measured in years. Marital Status is a dummy variable equal to one for married individuals. Income, and Family Income are measured via self-reported scales. Bafoeg is a dummy variable taking a value of one if the individual is a recipient of this German government-funded student loan. SRI Return (Risk) Perception is the individual's return (risk) perception of SRI relative to conventional investments. SRI Awareness is a dummy variable equal to one if an individual has heard of SRI before. Inv Time and InvKH assess are the individual's self-reported investment time and investment know-how. New Instructions is a dummy variable that takes the value 1 when participants face the new instructions. All independent variables are standardized to allow for an unconditional assessment of the premium via the constant.

<sup>\*</sup> p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01