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Sustainability Preferences: The Role of Beliefs

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Abstract

To formally evaluate how investors trade off financial returns with non-pecuniary motives in socially responsible investments (SRIs), we need reliable measures of return expectations. This study elicits beliefs about sustainable asset performance in a field survey experiment. We show that unincentivized Likert-scale belief measures fail to predict allocation decisions, while return expectations based on two incentivized methods are positively influenced by sustainability labels and meaningfully correlate with investment choices. Our findings highlight the importance of proper belief elicitation in understanding SRI motives, and caution institutions against relying solely on survey responses to infer investor preferences in contexts involving non-pecuniary considerations.

Keywords: Socially Responsible Investment, Expectations, ESG, Belief Elicitation, Survey Experiment

JEL Classifications: C90, G40, G50

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1 Introduction

Socially responsible investments (SRIs) have gained prominence in the midst of ongoing discussions about sustainability issues such as climate change, stakeholder benefits, and corporate accountability. Notably, environmental, social, and governance (ESG) factors have increasingly attracted a tremendous amount of capital and investors' attention.[1] Despite this rise in attention, the literature to date has not converged on an explanation for investors' willingness to sacrifice financial performance to have a more sustainable portfolio. An important unresolved issue in this matter is whether investors perceive high-ESG labels to be associated with superior future financial performance. The literature has provided divergent answers using different methods, sample respondents and time periods. In this study, our aim is to bridge this gap by comparing the results based on different elicitation methods in a field survey experiment with actual investors. In this way we obtain expectations closer to what investors truly believe. This can both address the debate regarding investors' motives behind SRI behavior and shed light on implementation of sustainability preference measurements in practice.

A number of factors could drive the rise in sustainable investments, such as institutional investors' supply of these funds and retail investors' pursuit of non-pecuniary aspects. Alternatively, (retail) investors may perceive high-ESG performance as a signal for better future financial performance, which may be true or not. This paper does not address the institutional investors' perspective.[2] Instead, we focus on the retail investor's perspective. A large literature recently found evidence that attributes SRI behavior of retail investors to their social preferences. That is to say, the non-pecuniary aspect they pursue could be simply contributing to the environment or the society. For instance, Riedl and Smeets (2017) find a positive correlation between retail investors' ESG investments and their social preference measured in a trust game. Bauer et al. (2021) find pension participants are willing to add a UN Sustainability Development Goal (SDG) to their pension funds' portfolio strategy even at the cost of financial performance, and show that their survey measure of social preference drives this result. Heeb et al. (2023) document a higher willingness to pay for assets with positive environmental impact. Humphrey et al. (2021) show that social preferences influence both investment decision and beliefs in an experiment. Similarly, several other studies (e.g., Barreda-Tarrazona et al., 2011; Apostolakis et al., 2018; Gutsche and Ziegler, 2019; Rossi et al., 2019; Gutsche et al., 2023) have shown supportive evidence for the social preference explanation of sustainable investment. Alternatively, there can be other preference-based explanations. Balbaa et al. (2025) show in an experiment that the non-pecuniary aspects pursued by retail investors

[1] To put this into perspective, one-third of the 51.4 trillion dollars in total US assets under professional management were using sustainable investing strategies as of 2021 (EUROSIF, 2021).

[2] For instance, institutional investors, such pension funds, face institutional constraints in terms of their ESG integration strategies. See e.g. Hartzmark and Sussman (2019) for a discussion about this. Several other papers investigate green portfolio tilt among institutional investors, such as Ferreira and Matos (2008); Starks et al. (2017); Nofsinger et al. (2019); Choi et al. (2020); Bolton and Kacperczyk (2021); Starks (2023); Bolton et al. (2024).

could just be to follow some social norm, so they may not care about the actual impact as social preference theories would suggest.

However, retail investors often balance ESG factors with financial performance considerations (e.g., Edmans, 2023) in making SRI decisions. The evidence to date varies greatly on whether investors expect a higher or a lower return from ESG assets. Giglio et al. (2025) find in a survey with a large sample of US investors that there is heterogeneity in return expectations towards high ESG assets, but on average they expect ESG underperformance. Riedl and Smeets (2017) elicit return expectations using Likert scale questions among Dutch retail investors. They find that most of them expect lower returns from SRI funds compared with conventional funds and argue that such investors are prepared to sacrifice financial gains to pursue SRI. In contrast, using a slightly different design of Likert scale questions among MBA students and MTurk workers in the US, Hartzmark and Sussman (2019) find a perception among investors that funds with high sustainability ratings are likely to generate a higher return and carry a lower risk compared to conventional funds. The empirical result in (Gantchev et al., 2024) seems to be more in line with the latter result, because they find that funds flow into high ESG funds, but only those with higher past returns. Furthermore, in the BNP Paribus 2019 ESG Global Survey, 60% respondents expect ESG portfolios to outperform.[3] Interestingly, Bauer et al. (2021) find that almost half of their sample had no idea and more than 40% expected higher or equal performance from higher sustainability strategies compared to lower ones. These discrepancies could be due to different sample respondents (investor classes or countries), different time periods (so the actual financial performances vary), or different methodologies adopted.[4] Given the short time series of ESG asset performance, it is also difficult to judge whether these funds and strategies outperform or underperform conventional assets. Moreover, the answer to this question would have a lot of geographical and temporal variations.[5] Therefore, it is also reasonable to observe heterogeneity of return expectations.

The question remains, for a given sample of respondents (potentially with their different information sets) and time period, whether we can reliably measure their return expectations towards ESG. Moreover, it is unclear which elicitation method we should use. It is necessary to understand whether investors are willing to forego financial returns to pursue sustainability goals or whether they are driven by unrealistic return expectations. This is also a practical challenge faced by financial institutions and regulatory initiatives. The EU taxonomy (European Commission, 2021) as well as the Markets in

[3]See `https://securities.cib.bnpparibas/app/uploads/sites/3/2019/08/esg-global-survey-en-2019.pdf`.

[4]For some additional evidence about the financial expectation heterogeneity, see e.g., Battalio and Mendenhall (2005); Branch and Evans (2010); Eusepi and Preston (2011).

[5]The literature has documented different empirical patterns, either positive (e.g., Kempf and Osthoff, 2007; Edmans, 2011; Khan et al., 2016; In et al., 2017), negative (e.g., Zerbib, 2019; Feldhütter et al., 2024; Barber et al., 2021; Liang et al., 2022; Jeffers et al., 2024) or zero (e.g., Larcker and Watts, 2020; Flammer, 2021) expected return differences between green assets relative to brown or neutral ones; other studies find different patterns over time (e.g., Pástor et al., 2022; Caramichael and Rapp, 2024).

Financial Instruments Directive (MiFID II) and Insurance Distribution Directive (IDD) recently, require insurance and investment advisors to collect information on their clients' sustainability preferences.

In this paper, we conduct a formal investigation of return expectations for ESG funds by comparing different elicitation methods and their correspondence with incentivized investment allocations. The aim is to find return expectations that are closer to investors' true beliefs. This is accomplished through a field survey experiment among Dutch index fund investors, collecting data on their beliefs, preferences, as well as their allocations of investments between an ESG fund and a conventional fund. We partnered with a Dutch asset management firm that offers a range of index fund products, including some ESG products, and conducted the experiment with their retail clients.

We use three methods to elicit return expectations. First, we use a version of the unincentivized Likert scale. This question asks participants to assess the expected returns of ESG funds relative to conventional funds (as in Riedl and Smeets, 2017). Second, to check the validity of expectations obtained from the first method, we adopt the choice matching method (e.g., Prelec, 2004; Cvitanić et al., 2019), designed to measure unverifiable truth (in our case, investors' true beliefs about future ESG fund returns) in an incentive-compatible way. The advantage of this method is that we could ask the expectation question in a Likert scale format, but then add incentives to it. And the outcome is a belief measure that is both incentivized and qualitative. And third, to further validate the results from the first two methods, we use a decision-theoretic choice-based approach, called the exchangeability method, or bisection method (e.g., Ramsey, 1926; Chew and Sagi, 2006; Baillon, 2008). This method elicits the median of investors' subjective return belief distribution toward an asset. It is robust to variations in risk attitudes, nonlinear probability weighting, and source dependence (see e.g., Hossain and Okui, 2013; Baillon, 2008; Abdellaoui et al., 2011; Schlag et al., 2015; Jiao, 2020). It has also been adopted to assess inflation expectations recently (Goldfayn-Frank et al., 2024). This method is incentivized, cardinal, and allows for an unambiguous interpretation of the belief data. To implement this method, we select a fund with a high ESG rating, anonymize it, and elicit beliefs under two conditions: under the first, we disclose its high ESG rating, while under the second, we conceal it. All other information (such as the fund's historical returns) remains consistent across both conditions. This design can reveal whether investors associate the high ESG rating with financial performance.

We find that on average our participants tended to understate their return expectations for ESG funds compared to conventional funds when responding to the unincentivized question, while the same group of subjects reported higher return expectations associated with a high ESG rating in both incentivized methods. Specifically, in response to the unincentivized question, 51.2% of participants expected ESG funds to financially underperform conventional funds, while only 28.5% anticipated ESG funds to outperform. This is consistent with some studies that use the same unincentivized Likert scale ques-

tion (e.g., Riedl and Smeets, 2017; Sultana et al., 2018). Conversely, in the incentivized choice matching method, 44.1% of the participants predict ESG funds to outperform non-ESG funds and 36.5% expect the reverse. This discrepancy is likely not driven by the question format, as question format was the same between our Likert scale method and choice matching. Moreover, the exchangeability method corroborates the findings from the choice matching method. Based on the exchangeability method, investors predict a fund with a high ESG rating would produce a 3.3% higher median return over a 1-year horizon than the same fund without that rating information. Remarkably, participants who indicated that ESG funds would underperform in the unincentivized question reported a 5.8% higher return expectation for the fund with a high ESG rating relative to one without known rating in the exchangeability method.

Even though we could not tell what represents investors' true beliefs, we do document additional evidence that gave us some confidence that at least beliefs based on the incentivized methods were closer to true beliefs. We show that the beliefs from the incentivized methods correlate significantly and meaningfully with ESG investment decisions. To do so, we introduced a lottery at the end of the survey, with a reward of €400 investment credits for two randomly drawn participants who complete the survey. Assuming they would win the prize, participants had to allocate this amount between two products offered by our collaborating fund: one with a strong emphasis on sustainability, and the other an index fund tracking a weighted blend of three MSCI indexes. Both funds are categorized under the same risk level and have similar management fees (0.5% vs. 0.4%). The participants were told that this allocation would be implemented if they were to win the prize. Our findings indicate that beliefs about the financial performance of the ESG fund elicited by both incentivized methods are significantly and positively correlated with allocations to the ESG product. However, we cannot identify a significant relationship between allocations and return expectations of ESG funds obtained through the question of the unincentivized Likert scale.

Our study contributes to assessing investors' true expectations towards sustainable assets, which is a crucial step in understanding their SRI behavior. Without a good understanding of expectations, one cannot infer whether investors are willing to sacrifice financial performance for more ESG integration. In theoretical attempts to price sustainable assets (Pástor et al., 2021; Pedersen et al., 2021; Avramov et al., 2022; Zerbib, 2022), it has been an assumption that investors derive utility from some non-pecuniary aspects of sustainable assets. However, if SRI is to a large extent driven by beliefs, but not preferences, then these theories need to be re-assessed or updated.

In a broader sense, we contribute to a rising literature in finance, that emphasizes the importance of beliefs in determining investment decisions. Investor beliefs are a necessary input in micro-founded asset pricing models where investors maximize expected utility and need to form a subjective probability distribution of future states (see e.g., Barberis et al., 2018; Jin and Sui, 2022; Liao et al., 2022), and numerous models explain asset pricing

patterns by relying on heterogeneous expectations (see e.g., Martin and Papadimitriou, 2022). Manski (2004) advocates using surveys to understand market participants' expectations about equity returns and risk. A recently rising literature attempts to investigate different expectation formation patterns of individual investors, such as extrapolation (Da et al., 2021), cued recall (Jiang et al., 2024), and over-reaction (Bordalo et al., 2022). In a large scale survey with retail investors, Giglio et al. (2021) demonstrate that beliefs play an important role in portfolio decisions. The similar importance of beliefs in household investment decisions was also found from Dutch data in Lee et al. (2015). Recently Andries et al. (2025) both experimentally identify the importance of beliefs in influencing investment allocations. They show that one may misinterpret investment behavior if beliefs and the information set are not taken into account. In another experiment, Grosshans et al. (2023) document that buying decisions are more belief-driven than selling decisions. When it comes to ESG investment, return considerations also account for a significant part of sustainable investment decisions (e.g., Siemroth and Hornuf, 2023; Hornuf et al., 2024).

Methodologically, we contribute to the measurement of return expectations in survey methods. In the experimental economics literature, a wide range of methods have been proposed and adopted to measure beliefs.[6] However, due to constraints in the field, most experimental/survey studies in the SRI literature still use unincentivized Likert scales (e.g., Riedl and Smeets, 2017; Hartzmark and Sussman, 2019; Baker et al., 2022; Heeb et al., 2023). The advantage of Likert scale questions lies in their simplicity as survey data need to be collected relatively quickly from a large number of participants. However, the method has also been questioned. For instance, Manski (2004) advocates for the use of subjective probabilities over Likert scales and other non-cardinal measures to assess expectations to better align with the principles of economic theories. There are at least two primary issues with Likert scales. First, the answers may not be comparable across or within individuals (e.g., Wallsten et al., 1986). For example, respondents may interpret terms like "performance" and "social impact" in the context of sustainable investment differently. Likewise, answer options such as "much lower, a bit lower, the same, a bit higher, or much higher" may not be uniformly understood. Many factors, such as respondents' cultural background, could potentially lead to difficulty in the aggregation of answers (e.g., Lee et al., 2002; Heine et al., 2002; Wu and Leung, 2017). Even within the same individual, interpretations can vary across different contexts. Second, the coarseness of the answer options limits the information contained in the answers. Typically, Likert scale qualitative options fail to capture the nuances of the underlying perceptions or expectations.

A further difficulty in eliciting return expectations is the potential that such expectations could be distorted by preferences. Taking belief elicitation about ESG funds' return as an example, investors may overstate their expected returns due to wishful thinking

[6]For a review of various formal belief elicitation methods, see e.g., Trautmann and van de Kuilen (2015), Charness et al. (2021).

or desirability bias (e.g., Seybert and Bloomfield, 2009; Mayraz, 2011; Caplin and Leahy, 2019; Engelmann et al., 2024). If investors have already invested in ESG funds, overstating expectations would confirm their correct investment decision, or aligns with their social preferences. For instance, in an incentivized lab experiment, Humphrey et al. (2021) find that social preferences can influence how investors process information to update their beliefs, which subsequently leads to biased expectations. Specifically, subjects are significantly more pessimistic about investment outcomes when the investment is linked to negative social externalities despite the objective prospects of the investment. Balbaa et al. (2025) find norm-following preferences, rather than social preferences, can also distort beliefs. Yet another confounding issue specific to the ESG factor is image concern and social desirability bias (Grimm, 2010; Bénabou and Tirole, 2006; Bauer and Smeets, 2015). This can potentially lead investors to understate return expectations for ESG funds, because doing so suggests that they invest in ESG funds not just for the money. Our result is more consistent with image concern than wishful thinking, as our participants underreport their return expectations toward ESG assets in the unincentivized Likert scale relative to the incentivized methods.[7] Therefore, relying solely on unincentivized belief elicitation methods could systematically bias results about investors' expectations of the financial performance related to ESG. And this bias could be a general problem in belief elicitations when the decision-maker potentially has systematic motivational biases.

It is important to understand investors' true motives behind sustainable investing also because institutions base their ESG-related portfolio strategy on clients' sustainability preferences. How these preferences are measured, whether the measure is reliable, and whether there are sources of bias for this measure all matter a lot in practice. As previously mentioned, many institutional investors are required to measure sustainability preferences of clients. However, these regulations are not clear about the definition of sustainability preference, nor about the methodology that should be implemented (let alone the transparent reporting on these surveys). This has led to significant heterogeneity in implementation. For instance, in the Dutch pension fund industry, some adopt simple survey questions about social preferences, some use focused groups, and yet others still do nothing.[8] The survey questions simply ask whether clients would like to take sustainability into account, and the minimum portfolio weight they want invest with sustainability considerations.[9] Moreover, institutions sometimes convey biased signals which can distort investors expectations towards ESG assets. For instance, many financial institutions

[7]Admittedly, incentives can both alleviate and aggravate image concerns, as respondents face a trade-off between gains in ego utility and losses in belief reward. Attractive rewards can lure agents to give up image concern. Alternatively, agents who have strong enough image concerns can also see the incentivized question as a better opportunity to prove their positive image. However, our results seem to be more consistent with the former.

[8]See another example in: `https://amwatch.com/article14504907.ece`.

[9]See e.g., the implementation of Clarkson Securities AS in Norway (`https://www.clarksons.com/media/mqyhixgm/sustainability-preferences-cs-as-2024.pdf`), and suggestions from Morningstar to financial advisors (`https://www.morningstar.com/en-ca/lp/cfr-client-sustainability-preferences`).

write very positively about the financial performance of ESG assets when marketing some products, creating an illusory rosy outlook for ESG investing among the general public. Therefore, asking ESG investment choice in a survey without understanding where it comes from can be dangerous, as portfolio strategies based on it can also be biased. Once the biased beliefs are corrected, preferences towards ESG may reverse.[10]

We do not claim that the return expectations elicited from the choice matching method and the exchangeability method are necessarily the true beliefs of investors. However, we think they are closer to what investors truly believe, compared with our unincentivized Likert scale result. This is because, on the one hand, the two incentivized methods give consistent answers even though they employ different question format and use different incentivization methods. The choice matching method is using the same relative comparison question format as in the unincentivized Likert scale, whereas the exchangeability method elicits beliefs separately for the high ESG label and for the no ESG label. The choice matching method incentivizes the prediction of others' choices and based on matching group, whereas the exchangeability method incentivizes through binary lottery choices. On the other hand, these two methods' results are more in line with incentivized allocation to sustainable assets. Even though we do not have a rational benchmark for this incentivized allocation, this belief alignment is crucial given the overwhelming evidence in the recent literature that beliefs matter for investment decisions (see e.g., Giglio et al., 2021, as previously reviewed). Moreover, financial institutions need a measure that correlates well with investors' intended investment decisions, so that they can design investment strategies based on clients' true preferences.

Before proceeding, we would like to emphasize a few important issues. First, even though we find that the two incentivized belief elicitation methods, but not the unincentivized Likert scale, provide consistent results that are more correlated with allocation decisions, we do not claim the effect is simply due to incentivization of the belief question. This is because the incentive is not the only difference between our three methods. Other differences include question format, time spent on the question, etc.[12] That said, the consistency and superior performance of incentivized methods are consistent with the literature that shows that incentivized methods tend to produce more accurate results than their unincentivized counterparts (e.g., Gächter and Renner, 2010; Wang, 2011; Trautmann and van de Kuilen, 2015). Second, we do not claim that our specific finding of return expectations based on our Dutch index fund investor sample is generalizable, as our research question is not to find out an average investor's return expectation towards ESG

[10]CalPERS, the largest public pension fund in the US, offers a good example. In 2001, it divested from tobacco. When their pension participants learned that this translated into billions of forgone gains, the board voted against any further divestment.[11] See e.g., `https://www.ft.com/content/c9430eb5-201c-46e8-a10d-d9c098c9d4b4` and `https://www.nytimes.com/2016/04/06/business/dealbook/calpers-rethinking-policy-banning-investment-in-tobacco-stocks.html`. Many factors could have led to this situation. The initial divestment was probably mainly out of ethical considerations, but people were either unaware or holding biased views about financial performance.

[12]Meanwhile, in Section 3.2 our evidence in the choice matching method also suggests procedural differences, such as time spent, should not be the driver of difference in results.

funds. Of course, index fund investors are not just unrepresentative, but actually form a very special group of investors who are generally more sophisticated and well-educated.

When assessing our specific return expectation results, readers should bear in mind the lack of representativeness of our sample and their beliefs. However, one also needs to take into account of their sophistication, as well as the fact that beliefs could be the result of what they observe or experience in real markets, and of the result of some marketing campaigns of financial institutions. Note that when we conducted our experiment (summer of 2023), ESG funds in general were performing well in the first half of 2023, but they just finished a year of significant under-performance in 2022, although the longer term performance was fine since 2010.[13] Given this information set, and the tremendous uncertainty surrounding ESG financial performance, return expectations in any direction could be rationalized. So we also do not claim which belief was rational or correct.

Taken together, our findings demonstrate the importance of picking the right belief elicitation method in a sustainable investment context, and the pivotal role of return expectations in forming investors' sustainability preferences. These could inform asset pricing theories, as well as practical implementation in financial institutions. Understanding whether SRI choices are preference- or belief-driven can also help funds better tailor their investment strategies to cater their clients. The rest of the paper is organized as follows. Section 2 presents the design of our survey experiment. Section 3 contains our results. And finally, the paper is concluded in Section 4 with some discussions.

2 Study Design

In order to investigate investors' expectations for the financial performance associated with a high ESG rating, we conduct an online survey experiment among index fund investors who are clients of a Dutch asset management firm, Meesman Indexbeleggen. Meesman is an investment firm founded in 2005 that manages over one billion euros in assets and serves more than 30 thousand clients. Meesman specializes in passive investing and provides a variety of index funds, including a selection of ESG-index funds. Meesman has two types of investment funds: those without sustainability considerations (such as Equity Worldwide Total) and those with sustainability characteristics (such as Equity Responsible Future).

In this section, we first provide an overview of the survey structure. Subsequently, we explain the detailed methods used for belief elicitation. Finally, we elaborate on other key measurements, including participant demographics, investment experience, preferences, financial literacy, and other survey items.

[13] See analyses by financial advisors and investment banks, for instance, `https://www.netzeroinvestor.net/news-and-views/briefs/esg-funds-fall-behind-peers-in-short-term`.

2.1 Design Overview

The survey comprises four main modules. It starts with a consent form and a brief introduction to the survey's content as well as the associated incentives. We provide three types of rewards to encourage participation and careful decision-making. First, we randomly selected one participant from the first 100 who completed the survey to receive a cash reward of €200. Second, we randomly selected one participant from all who completed the survey to receive another cash reward of €200 plus any monetary incentives determined by their answers in the survey and luck. For this participant, we randomly selected a payoff-relevant module to determine payment.[14] Third, we randomly selected one participant from all who completed the survey to receive €400 Meesman investment credits that could only be allocated between two Meesman products.

The first module elicits participants' beliefs about financial performance. In this module, participants were randomly assigned under two conditions: whether they had information about the ESG rating (the ESG-Info condition) or did not (the No-ESG-Info condition). Participants under both conditions were presented with the same fund. The fund chosen for our study was a product offered by Meesman that had the highest ESG score among their investment offerings; they recommended rating it a "dark green" fund. Specifically, the fund tracked the MSCI World Custom ESG Index that encompassed around 1600 shares of large and medium-sized companies from 23 developed countries. This fund excluded companies that did not adequately take into account people, the environment, and good corporate governance. Participants were not told which fund was selected, but were given a description of the fund without any details that could identify it or its sustainability performance. Furthermore, participants under the ESG-Info condition received information indicating that the fund's ESG rating was dark green, representing the highest level of ESG and also simple explanations about the ESG concept. The No-ESG-Info condition was not exposed to any ESG-related information. Further, participants observed historical annual returns of the fund for six consecutive years, and we elicited their beliefs about the fund's future returns using the exchangeability method. One of the questions to identify beliefs was randomly selected to determine the participant's payment if this module was selected as payoff-relevant.

The second module mainly served as a distraction task between the first and third belief elicitation modules. Its main objective was to gauge participants' ambiguity attitudes, adapted from the method used in Dimmock et al. (2016). We provide a detailed explanation of this module in Section A.1 in the Appendix A.

In the third module, we examined the participants' expected returns from the ESG funds as opposed to conventional funds through an alternative incentivized approach known as the choice matching method (e.g., Cvitanić et al., 2019). Therefore, we could compare the results from two incentivized approaches with those acquired through the widely adopted unincentivized Likert scale approach. In this module, we randomly as-

[14] Out of the four modules, three are payoff-relevant.

signed participants to three distinct treatments, each featuring different incentive scenarios: No Incentive, Partial Incentive, and Full Incentive. If this module was selected to determine payment, participants would receive rewards in accordance with the incentive scenario they were assigned to.

The fourth module consisted of a set of survey questions.[15] It included unincentivized Likert scale questions concerning the comparison of sustainable funds to conventional ones in terms of both return and risk. In addition, participants were asked to express their perspectives on the impact of ESG investments, along with their preference for passive versus active investment strategies. This module also included questions about participants' financial background, financial literacy, and current financial situation. Furthermore, participants were asked to provide demographic information, such as their gender, age, and educational background.

At the end of the experiment, we added a lottery incentive. All participants were asked to make an investment allocation of €400 Meesman credits to one of the two Meesman products assuming that they would win the lottery. These two funds were: "Aandelen Wereldwijd Totaal" (Equity Worldwide Total), an index fund that tracks a market-weighted combination of three MSCI indexes, the MSCI World Custom ESG Index, the MSCI Emerging Markets Custom ESG Index, and the MSCI World Small Cap Custom ESG Low Carbon Index; "Aandelen Duurzame Toekomst" (Equity Sustainable Future), designed for investors seeking an index fund with a stronger focus on sustainability with global investments in stocks aligned with various sustainable themes. Both funds were categorized within the same risk-return spectrum. It was highlighted to participants that the management fee for Equity Worldwide Total was 0.4%, slightly lower than the 0.5% fee for Equity Sustainable Future. Participants received detailed information about these two funds, including links to further explanations of their compositions and country allocations. In addition, participants were also informed that their investment decisions would be implemented if they were selected to receive the credits.

2.2 Three Belief Elicitation Methods

In this section, we provide a detailed and comprehensive explanation of the three different belief elicitation methods used in the modules of our study.

2.2.1 The Unincentivized Likert Scale Question

We adopted a widely used format of the unincentivized Likert scale question from the literature (e.g., Riedl and Smeets, 2017; Baker et al., 2022; Heeb et al., 2023). All participants were asked to express their opinions on the statement: I expect that the returns of sustainable investment funds compared to less sustainable investment funds to be: 0 = I don't know, 1 = much lower, 2 = a bit lower, 3 = the same, 4 = a bit higher, 5 = much

[15] We did not randomize the order of modules. In Section 4 we shall discuss this point further.

higher. Admittedly, the unincentivized Likert scale question can also be implemented in different ways. For instance, Hartzmark and Sussman (2019) ask expectations for high and low ESG funds separately and find different results. The Likert scale question can also be designed in many other ways. We did not have any ex ante expectation regarding which format is superior. So we picked one that is widely used in the literature and in practice, and that is easier to implement.

2.2.2 The Choice Matching Method

To check the validity of results from the Likert scale question, we elicited participants' return expectations using the choice matching method. When asking respondents to assess the relative performance in general, it is difficult to assess whether they reveal what they truly believe.[16] The true subjective belief is therefore an unverifiable truth, just like beliefs about the probability that god exists, life quality, or customer satisfaction. Regarding the actual ESG funds' financial performance relative to conventional funds, there is no consensus even among researchers. Eliciting beliefs for an unverifiable truth in an incentive-compatible way has been a challenge. To achieve this and to make results comparable with the unincentivized Likert scale, we adopted the choice matching method (see e.g., Prelec, 2004; Cvitanić et al., 2019). Importantly, this method can use the same question as in the Likert scale question, but then additionally adds incentives to it, so that we can see how participants responded to the incentive under the same question format.

In the choice matching method, participants first answered a multiple-choice question (MCQ) that took the form of a Likert scale question. Subsequently, they engaged in an auxiliary task that asked them to predict the frequency of each answer being selected by all other participants. The incentives were contingent on two factors: their accuracy in the auxiliary prediction task (the prediction reward) and the performance of other participants whose MCQ answers were the same as their own (the matching reward) (e.g., Savage, 1971; Gneiting and Raftery, 2007; Cvitanić et al., 2019). Let us denote S_r the prediction reward calculated with a proper scoring rule for one participant r. $\overline{S}^{-r}$ represents the mean prediction reward of all other participants (excluding r) who chose the same MCQ option in the prediction task. A participant r was assigned a score of zero if there was any unselected option in the MCQ, that is, an option not chosen by at least one other participant besides r. Otherwise, participant r received a score $\lambda S_r + (1-\lambda)\overline{S}^{-r}$, where $\lambda \in (0, 1)$ denoted a predetermined weight factor. That is, the incentive received by participant r was a weighted average of their own prediction reward S_r and the average prediction reward of their matched participants $\overline{S}^{-r}$.

To implement this method and to compare the effect of different incentive schemes, in Module 3 we randomly assigned participants to three different treatments: the No Incentive, Partial Incentive, Full Incentive conditions. For all participants in these three

[16] This is unlike elicitation of return expectation for a specific asset during a specific future period, which can be unambiguously incentivized according to the actual realization.

conditions, the Likert scale question was to evaluate the financial performance of ESG funds relative to conventional funds. In particular, they had to choose an option that best reflected their opinion on the following statement: I expect that the returns of index mutual funds that exclude companies with a low ESG score compared to those that do not exclude companies with a low ESG score to be "Much lower," "A bit lower," "The same," "A bit higher," "Much higher," or "I don't know."[17]

In the No Incentive condition, participants were solely required to respond to the Likert scale question without any additional incentives. Once they provided their answers, they were asked to confirm their choices. If they were unsatisfied with their responses, they could modify them and provide their answers again. And these steps were consistent across all three treatments.

In the Partial Incentive condition, participants had to answer the same Likert scale question and make a prediction in the auxiliary prediction task. Specifically, they were asked to predict the percentage of other participants (excluding themselves) who selected options "The same," "A bit higher," or "Much higher" in the Likert scale question. Participants were compensated based on their accuracy in answering the prediction question. The maximum reward was set at €50. Then for every 1% deviation from the true percentage, there was a deduction of €5 from the maximum reward. Consequently, the possible payoff varied from €0 to €50. If the participant's prediction deviated by 10% or more, they received no prediction reward. In essence, the more accurate the prediction, the greater the reward. The participants initially answered the Likert scale question. Following this, they were presented with the prediction question and informed about the reward. Subsequently, they were allowed to modify their answer to the Likert scale question once before confirming.

In the Full Incentive condition, similar to the Partial Incentive treatment, participants began by answering both the Likert scale and the prediction question. Just like in the Partial Incentive treatment, they were informed about the prediction reward and additionally the matching reward. We match participants who made the same selection on the Likert scale question. The matching reward was the average prediction reward of all other participants in one's matched group. After learning about both rewards, participants were allowed to modify their answer to the Likert scale question once before confirming.

Therefore, the core idea of this method is to let participants think about others, and the method is incentive compatible under the assumption that participants believe that other people who choose the same as they do on the base question are of the same type as themselves, and therefore they would like to answer the base question truthfully to be matched with the correct type. Even though the base question of the choice matching method is of the same format as in the unincentivized Likert scale, there are a few differences apart from the incentives. For instance, under choice matching participants have more time to think. We try to control for this by letting participants even in the No

[17]Note that this is a slightly different question than in the unincentivized Likert scale, but in essence they are the same. This is to avoid participants to feel that they answer the same question twice.

Incentive condition to think more and to confirm their choice before proceeding.

2.2.3 The Exchangeability Method

Investors form subjective probabilistic belief distributions regarding the financial returns of funds. We use the exchangeability method to elicit investors' median return expectations for the selected fund in the first module. The method is based on Braithwaite (1931), Fellner (1961) and Baillon (2008), and was later adopted by Abdellaoui et al. (2011), Jiao (2020) and Goldfayn-Frank et al. (2024). We use this method to further check the validity of results from the other two methods.

The exchangeability method is based on the idea of splitting the state space into equally likely complementary events that are elicited through binary lottery choices (e.g., Baillon, 2008). Denote S_R as the state space that in our case represents the range of all possible returns of the fund. (E, x) is a binary prospect that yields payoff €x if the event E occurs, if $E \subset S_R$ occurs, and €0 otherwise. Suppose the probability of E equals $P(E)$, the agent's utility function is $u(x)$, and the agent has a probability weighting function $w(P)$. As the exchangeability method requires the agent to compare only the uncertainties from the same source, one weighting function is sufficient. Therefore, the expected utility of prospect (E, x) is presented by $w(P(E))u(x)$.

In order to elicit the median return belief, we need to find the point $r_{\frac{1}{2}}$ that divides the state space into two complementary events R_2^1 and R_2^2, such that the agent is indifferent between two prospects (R_2^1, x) and (R_2^2): $(R_2^1, x) \sim (R_2^2, x)$. Therefore, $r_{\frac{1}{2}}$ is the agent's median return belief, and we have $w(P(R_2^1))u(x) = w_A(P(R_2^2))u(x)$ which is equivalent to $P(R_2^1) = P(R_2^2)$. Figure 1 illustrates how the model above uses the exchangeability method to obtain a participant's median belief.

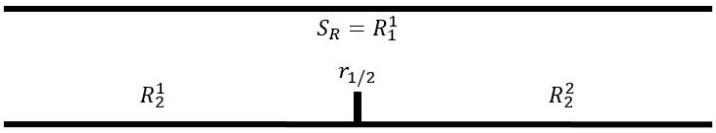


Figure 1: Decomposition of Return State Space

Note: This figure illustrates the procedure of eliciting a participant's median return belief.

To elicit each expectation of the median return, participants were asked to make five rounds of binary lottery choices to reach the desired precision level of 1.25%, which is the maximum possible distance between the elicited median and the actual one. In the task, we randomly selected six consecutive years from the fund's historical data and showed subjects annual returns over these six years. We then designed the lottery contingent on the seventh-year return. For instance, in the first round, participants chose between the following two lotteries:

- Lottery A: win €50 if the fund's return in the seventh year is equal to or greater than 0%, and €0 otherwise;

- Lottery B: win €50 if the fund's return in the seventh year is less than 0%, and €0 otherwise.

We calculated that the annual returns of the fund were bounded in $[-40\%, 40\%]$, but this was not disclosed to the participants. We simply used this information to compose the following lotteries. Choosing Lottery A in Round 1 indicated that the participant's median return expectation fell within the range of $[0\%, 40\%]$, and choosing Lottery B indicated the opposite. Suppose a participant chose Lottery A in Round 1. The next question then divided the range $[0\%, 40\%]$ further at the mid-point 20%, and the participants were asked to choose between two lotteries that yielded a reward depending on whether the seventh-year return was in $[0\%, 20\%]$ or $[20\%, \infty)$. We then repeated this process for a total of five rounds. The elicited median return expectation corresponded to the mid-point of the range selected for the lottery in the fifth round.

After these five rounds to elicit participants' median return expectations for the seventh year, we continued the process to investigate how they would update beliefs given either a positive or negative return information scenario. We showed participants a positive seventh-year return and a negative seventh-year return scenario in random order and elicited their median return expectations for the eighth year following the same procedure in the exchangeability method as explained above. Participants were informed that one of the two scenarios was real, and if this module was selected, only the real scenario would be selected to be payoff-relevant.

The exchangeability method offers multiple advantages over alternative approaches, such as circumventing the complications of differential risk attitudes, non-linear probability weighting, complex mathematics, and source dependence (e.g., Baillon, 2008; Schlag et al., 2015; Jiao, 2020). It also avoids the problem of participants' lack of statistical sophistication or that their stated probabilities of complementary events do not sum up to unity. Another advantage is that this method explicitly gives us the median return expectation, while other methods are not clear whether the elicited return is the mean, mode, or another measure on the subjective belief distribution.

2.3 Other Measures

Apart from the unincentivized Likert scale question above, Module 4 also contains measures of participants' demographic information such as gender, age, origin, educational background, occupation, and income. These questions came from the Netherlands Census and Statistics Netherlands. We also asked questions about their investment experience, such as years of investment experience, portfolio size, and monthly investments. Meanwhile, we elicited their social preferences, which included trust, positive and negative reciprocity, and altruism as in the Global Preference Survey (e.g., Falk et al., 2018). Another set of questions asked about their opinions, such as preferences between index and active ESG funds, sustainability risk, impact of ESG, preference in energy transition, and commitment to energy efficiency. Additionally, we assessed participants' financial literacy

through an incentivized question (received €50 from a lottery for correctly answering the question) focusing on the calculation of expected returns based on Kuhnen (2015). Table B.1 in the Appendix B provides details of the questions used in Module 4.

2.4 Procedure

Survey invitations were distributed to Meesman's clients along with the Meesman monthly newsletters. Almost all Meesman clients were subscribed to the newsletter and thus received the invitation. These invitations included a link to the survey, allowing clients to easily access and begin the survey with a simple click. The online survey was started on June 9, 2023, and it remained open to participants until August 31, 2023. Figure A.2 in the Appendix A graphically represents the number of participants in the survey, as well as those who took it following our subsequent reminders. In particular, at the initial launch, 408 participants started the survey, 134 of whom completed it. Following our two reminders, the total number of participants who started the survey rose to 901, with a total of 287 completing it. The average time to complete the survey was approximately 25 minutes. Additionally, the announcement of the survey's reward was made on October 30, 2023.

2.5 Sample Characteristics

Table 1 provides a comprehensive overview of the demographic information, preferences, and beliefs of our survey participants. Table B.1 in Appendix B has the definitions of the specific items outlined in Table 1. The demographic breakdown of the sample shows that 65.85% were male, with an average age of 44.26 years. Educational attainment was relatively high, with 37.98% holding a university degree and a further 29.97% possessing a college degree (HBO, Higher Vocational Education in the Netherlands). The majority, slightly over two-thirds, were employed in paid positions. The average monthly income among participants was €3853. Regarding portfolio size, slightly over 60% had portfolios under €50000. In terms of financial literacy, just over one-third of the participants correctly answered the question about calculating the expected returns.

When it comes to investment preferences, participants showed a higher inclination for ESG index funds as compared to active ESG funds. On sustainability, there was a general skepticism for the idea that less sustainable funds were riskier than sustainable ones. Participants generally believed that ESG funds positively affected society. Concerning fund performance, there was a tendency to believe that index funds outperformed active funds financially, while ESG funds underperformed compared to conventional funds.

The participants displayed altruistic tendencies, moderate levels of trust, and a strong inclination for positive reciprocity. In contrast, their propensity for negative reciprocity was weaker for themselves than for others. On average, they were willing to donate 14.65% (€146.54) of a €1000 windfall. Additionally, their interest in investing in energy

transition was moderate, and they strongly agreed that asset managers should actively engage in improving companies' energy efficiency.

Table 1: Summary Statistics

This table presents the summary statistics of participants in the survey. Table B.1 has the definitions of the variables. The lower number of observations in the ESG Return by the Likert scale and index Fund return questions is due to the exclusion of participants who responded with "I don't know."

	Mean	Median	SD	Obs.
Demographics				
Gender				287
Male	65.85%			
Female	34.15%			
Age	44.26	39	14.64	287
Origin				287
Dutch	91.99%			
Others	8.01%			
Investing Experience (year)				287
1-3	41.81%			
4-10	32.06%			
Above 10	26.13%			
Education				287
University	37.98%			
College	29.97%			
Lower than College	3.83%			
Other	28.22%			
Occupation				287
Paid Work	67.60%			
Other	32.40%			
Monthly Income	€3852.92	€4750	€1732.51	287
€0 to €3000	19.51%			
€3000 to €5000	40.42%			
Above €5000	38.33%			
Total Investment				287
€0 to €10K	29.27%			
€10K to €50K	31.01%			
Above €50K	39.72%			
Correct Expected Return Calculation	34.84%			287
Social Preferences				287
Altruism (1–7)	5.02	5	1.72	
Trust (1–7)	3.56	3	1.45	
Positive Reciprocity (1–7)	5.62	6	1.04	
Negative Reciprocity (Self) (1–7)	2.68	3	1.30	
Negative Reciprocity (Others) (1–7)	3.69	4	1.39	
Donation (1–1000)	146.54	100	190.80	
Energy Transition Preference (0–100)	49.66	50	30.40	
Energy Efficiency Engagement (1-7)	5.54	6	1.47	
Beliefs by Likert Scale				
ESG Return by Likert Scale (1–5)	2.74	2	0.97	282
Index Fund Return (1–5)	3.78	4	0.98	286
ESG Index Fund Preference (1–7)	4.75	5	1.47	287
Active ESG Fund Preference (1–7)	3.39	3	1.74	287
Sustainability Risk (1–7)	3.52	3	1.43	287
ESG Impact (1-7)	5.24	5	1.28	287

3 Results

This section presents our main findings in the following order: In Section 3.1, we first present the results from the unincentivized Likert scale question as a benchmark for comparison. Then in Section 3.2, we present the findings of the choice matching method, as this method is more closely related to Likert scale, using the same question format. As we will see, in response to the unincentivized Likert scale, most participants chose that ESG funds would underperform conventional funds, but the answers in the choice matching method, with full incentives, the pattern was the opposite. Then in Section 3.3, we present the median return expectations obtained using the exchangeability method, and compare them with the other two methods. This demonstrates consistency between the two incentivized methods, and their consistency with incentivized allocation to the sustainable fund is further shown in Section 3.4. Finally, Section 3.5 shows additional results regarding the heterogeneity of return expectations and the perception of the risk-return trade-off for ESG funds.

3.1 Return Expectations from the Unincentivized Likert Scale

We first present the results on return expectations from the unincentivized Likert scale method. This method qualitatively elicits participants' beliefs on the return of ESG funds relative to conventional funds.

Result 1: According to the unincentivized Likert scale method, the majority of participants expect sustainable funds to financially underperform conventional funds.

Figure 2 illustrates our findings from the unincentivized Likert scale method. Based on this method, the majority of participants (51.2%) expected that ESG funds financially underperform conventional funds (4.9% expecting much lower returns and 46.3% expecting a bit lower returns from ESG funds); 18.5% believed the returns would not differ between the two types of funds; 28.5% expected ESG funds to outperform conventional funds (26.8% expecting a bit higher returns and 1.7% expecting much higher returns); 1.7% expressed that they did not know the answer. Therefore, on average participants expected ESG funds to financially underperform conventional funds based on the unincentivized Likert scale. This finding is consistent with other studies using the same method (e.g., Renneboog et al., 2008; Riedl and Smeets, 2017; Giglio et al., 2021).

3.2 Return Expectations from the Choice Matching Method

The choice matching method offers the most direct comparison with the unincentivized Likert scale question because it also starts with a base question of the same format without incentive. Here is a summary of what we find based on this method.

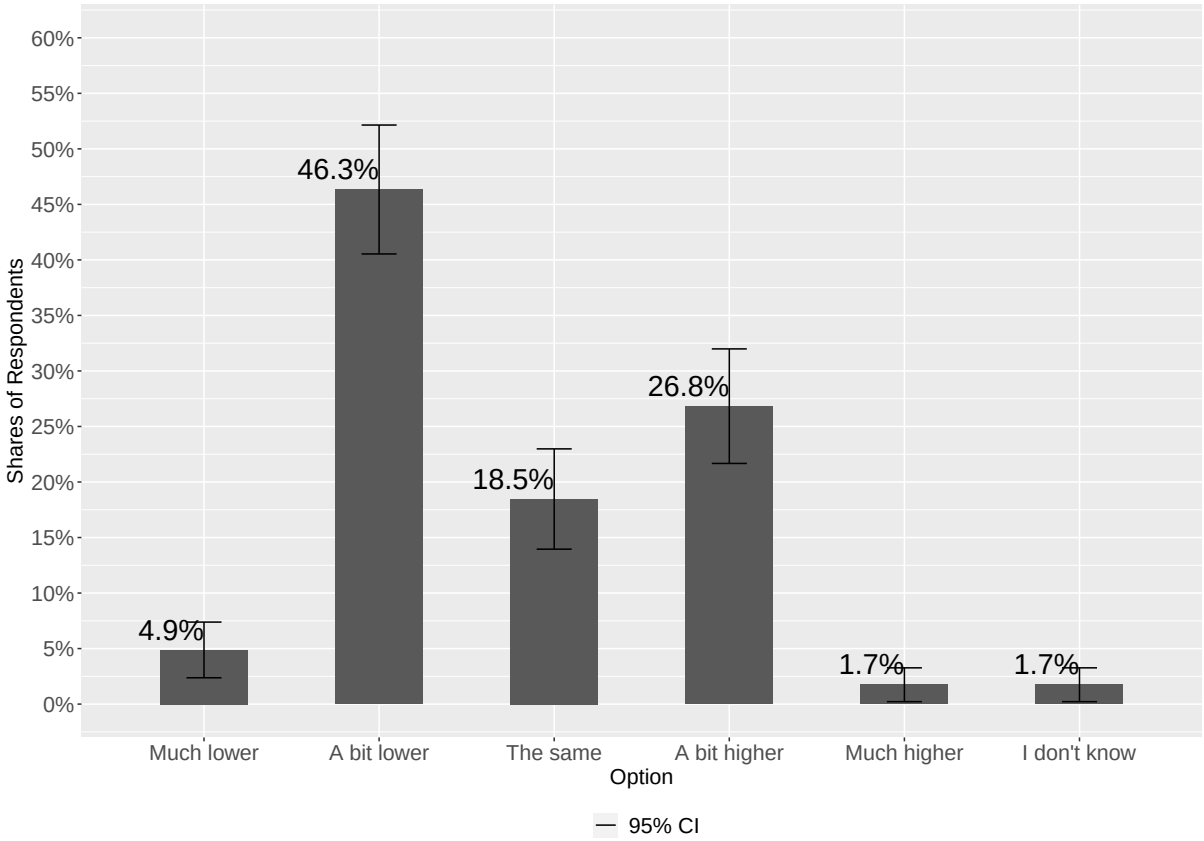


Figure 2: Expected Returns Using the Unincentivized Likert Scale Method

Note: This figure presents the distribution of participants' return expectations for ESG funds relative to conventional funds. The bars represent responses to the statement: "I expect that the returns of sustainable investment funds compared to less sustainable investment funds will be: (a) Much lower, (b) A bit lower, (c) The same, (d) A bit higher, (e) Much higher, (f) I don't know."

Result 2: Based on the choice matching method, the majority of participants expected ESG funds to financially outperform conventional funds. The incentives led them to adjust their return expectations for ESG funds upwards.

As indicated earlier, this method has three distinct conditions: No Incentive, Partial Incentive, and Full Incentive. Figure 3 illustrates the return expectations under these different incentive conditions: In the No Incentive condition, 32.4% of participants expected ESG funds to financially outperform conventional funds, while 40.2% believed the opposite. In the Partial Incentive condition (with only prediction incentive), 32.6% predicted outperformance of ESG funds; while 46.7% expected underperformance. These are reasonably consistent with the unincentivized Likert scale results. However, the matching incentive brought changes: adding the matching incentive shifted expectations to better ESG fund performance. In the Full Incentive condition (with both prediction and matching incentives), 44.1% anticipated ESG funds to outperform conventional funds; while 36.5% expected ESG underperformance.

Furthermore, the experimental module that implemented the choice matching method first posed the questions and then disclosed incentives while allowing subjects to modify

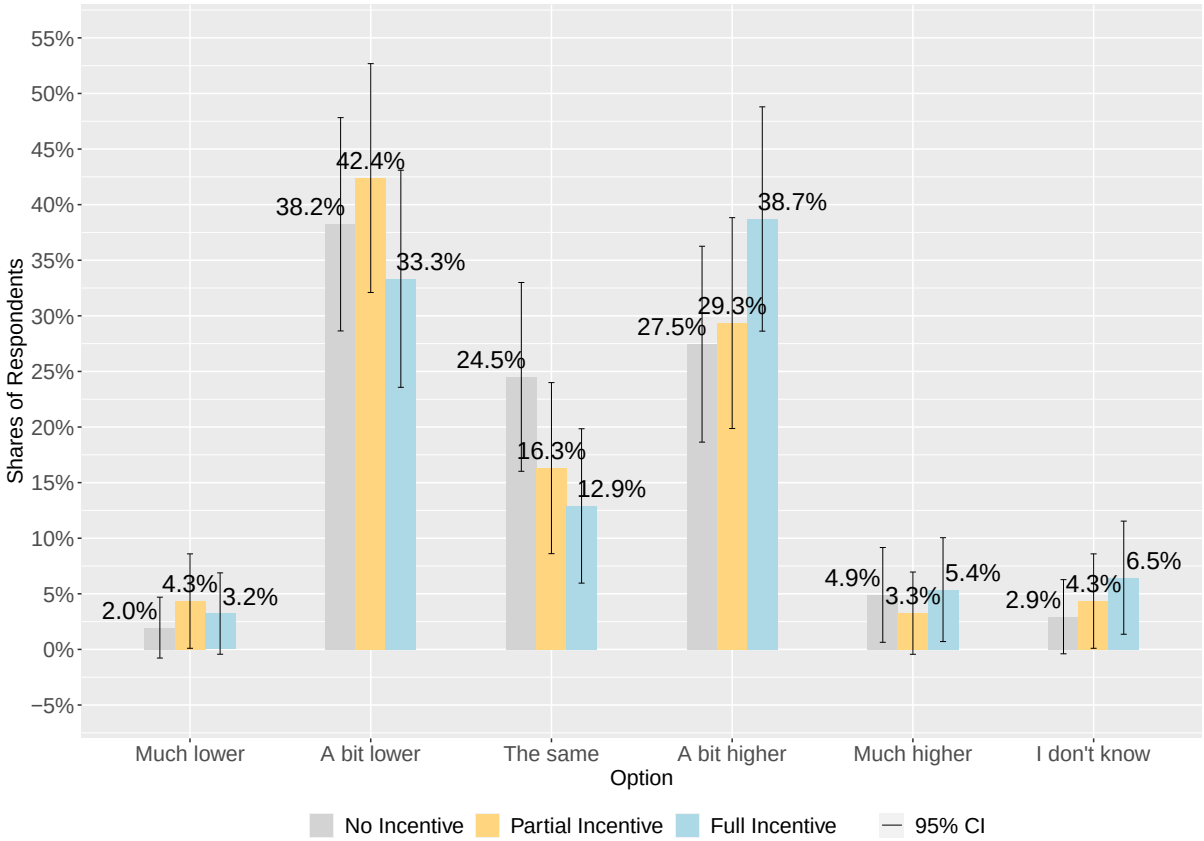


Figure 3: Return Expectation Distribution by Choice Matching Method

Note: This figure illustrates the distribution of return expectations for ESG funds among participants under the three incentive conditions. The bars represent participants' answers to the statement, "I expect that the returns of index mutual funds that exclude companies with a low ESG score, compared to index mutual funds that do not exclude companies with a low ESG score are: a. Much lower, b. A bit lower, c. The same, d. A bit higher, e. Much higher, f. I don't know." The grey bars represent answers under the No Incentive condition, the yellow bars illustrate answers under the Partial Incentive condition, and the blue bars indicate answers under the Full Incentive condition.

their answers after seeing those incentives. Doing so allowed us to investigate participants' reactions to incentives. Figure 4 illustrates the distribution of participants' modifications under the three incentive conditions. The grey bars on the left side depict participants' shifts from choosing higher returns for ESG funds to choosing lower returns (including changes from "Much higher" or "A bit higher" to "A bit lower" or "Much lower"). Conversely, the blue bars on the right side depict participants' shifts from a lower return for ESG funds to a higher return (including changes from "Much lower" or "A bit lower" to "A bit higher" or "Much higher").

Under the No Incentive condition, 4.9% of the participants modified their answers to a lower return, while 2.0% modified theirs to a higher return. However, this difference is not statistically significant ($p = 0.25$). Under the Partial Incentive condition, after observing the prediction incentive, 1.1% of the participants modified their answers to a lower return, while 2.2% modified them to a higher return (again insignificant difference, $p = 0.56$). Under the Full Incentive condition, after knowing the incentives, 4.3% of participants modified their answer to a lower return; in contrast, 11.8% modified it to a higher return. This difference is statistically significant ($p = 0.06$). These results indicate

a significant tendency among participants to adjust their return expectations for ESG funds from lower to higher than conventional funds when there is the matching reward in the choice matching method.

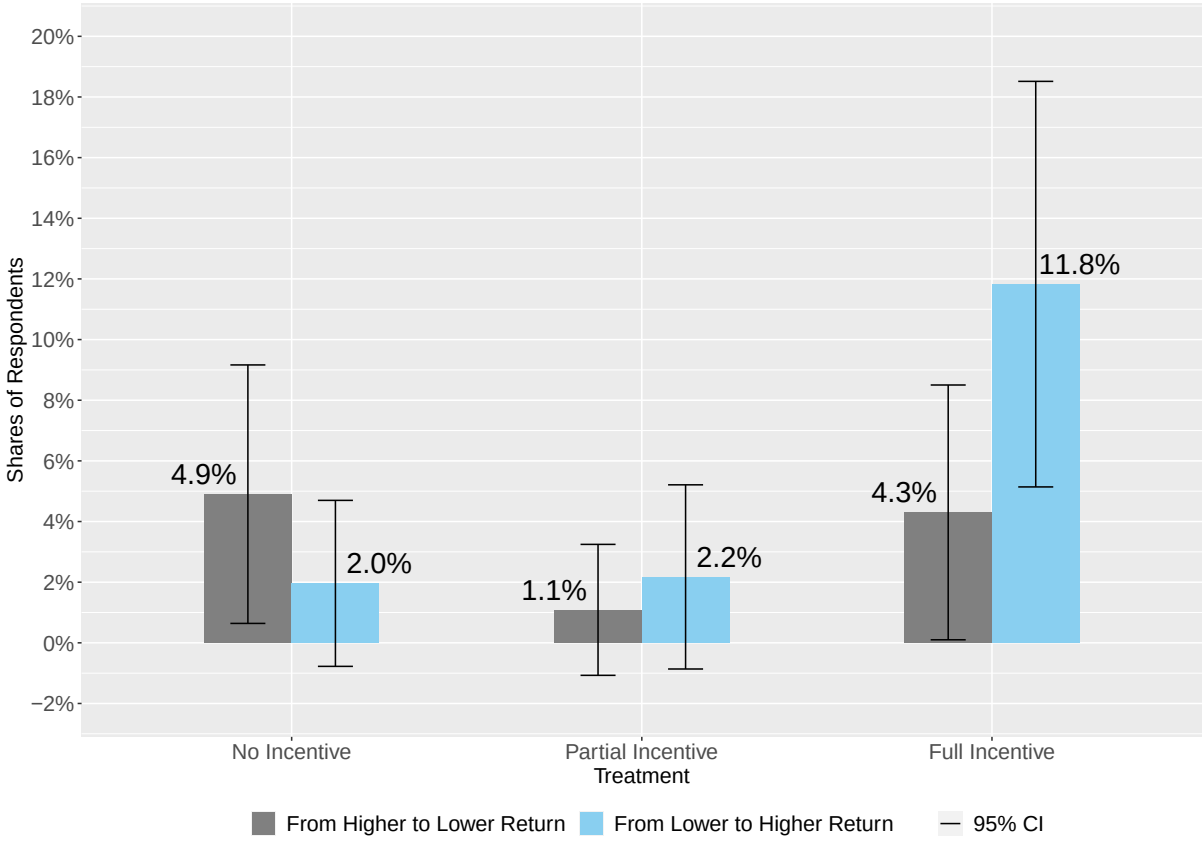


Figure 4: Return Expectation Modification by Choice Matching Method

Note: This figure depicts the distribution of modifications in return expectations for ESG funds across participants under the three incentive conditions. The bars illustrate the percentage of participants adjusting their return expectations within these conditions. The grey bars depict answers where participants shifted their return expectations from a higher return to a lower return compared to conventional funds. Conversely, the blue bars represent the answers where participants adjusted their return expectations from a lower return to a higher return relative to conventional funds.

To further show the modification behavior of participants, Table **??** presents the results from Logit regressions in which the belief modification is the dependent variable. We capture two types of modifications. One is a revision upward from the originally chosen level to any higher level (Column 1), and the other is modification from lower return expectations (either much lower or a bit lower) to higher (either a bit higher or much higher) (Column 2). In Column (1), participants under the Full Incentive condition are six times more likely ($exp(1.826) = 6.209$) to adjust upward compared to those under the No Incentive condition. Moreover, our findings in Column (2) show that the Full Incentive condition significantly increased the likelihood of modifying return expectations from lower to higher returns, while the Partial Incentive had no effect. Specifically, participants under the Full Incentive condition are almost 13 ($exp(2.560) = 12.94$) times more likely to adjust from lower to higher returns than those under the No Incentive condition.[18]

[18] Appendix A.8 further explores the modification patterns.

Table 2: Modification Direction in Choice Matching Method

This table presents the marginal effects derived from the binomial Logit regressions. In Column (1), the dependent variable has two distinct values: it is equal to one for upward shifts in the return expectation (raising their expectations from the originally chosen level to any higher level), and zero otherwise (expectation stayed the same or shifted downward). In Column (2), the dependent variable has two distinct values: it is equal to one for shifts from lower return expectations (either much lower or a bit lower) to higher (either a bit higher or much higher), and zero otherwise. The marginal effects of a Logit regression on the incentives of the three conditions are presented, with the No Incentive condition serving as the baseline. Participants who selected "I don't know" in the Likert scale question are excluded. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable:	
	Upward	*Lower to Higher*
	(1)	(2)
Partial Incentive	−0.594	0.119
	(1.276)	(1.308)
Full Incentives	1.826**	2.560**
	(0.927)	(1.036)
Demographics control	YES	YES
Preferences control	YES	YES
Observations	273	273
Log-Likelihood	−32.11	−34.11
AIC	116.22	120.22

One may suspect that these modification results were driven by allowing participants more time to think about the base question. However, it is important to note that different effects between only prediction incentive and full incentive, i.e. both prediction and matching incentive. Two incentive conditions were procedurally exactly the same: participants first provided an answer to the base question, given instructions of the incentives, and then given the chance to revise their answer to the base question. Even so, the prediction incentive did not lead to answers very different from the no incentive condition, but the significant revision only happened with full incentive. This alleviate the concern that it was the procedural difference between the choice matching method and the unincentivized Likert scale that led to result differences.

3.3 Return Expectations from the Exchangeability Method

Now we analyze participants' median return expectations for the same fund based on the exchangeability method by comparing the ESG-Info condition with the No-ESG-Info condition. We elicited three expectations: we presented participants with six years of historical annual returns and elicited the seventh-year return expectation, and then we presented a positive and a negative scenario and elicited the eighth-year return expectation.

Result 3: According to the exchangeability method, a high ESG rating leads to higher return expectations over a 1-year horizon under the ESG-Info condition compared to the No-ESG-Info condition, but not in subsequent belief updates.

Figure 5 presents the comparison of participants' median return expectations under both the ESG-Info and No-ESG-Info conditions, based on the three elicited median beliefs: the seventh-year return and the eighth-year return in a positive and a negative scenario. On average, participants who saw a high ESG rating under the ESG-Info condition expected higher financial returns relative to those in the No-ESG-Info condition for the same fund in the 1-year forecast horizon ($p = 0.05$). However, when either positive or negative return information was disclosed for the seventh year and participants were asked to forecast the eighth year, no statistically significant difference was observed between the two conditions.

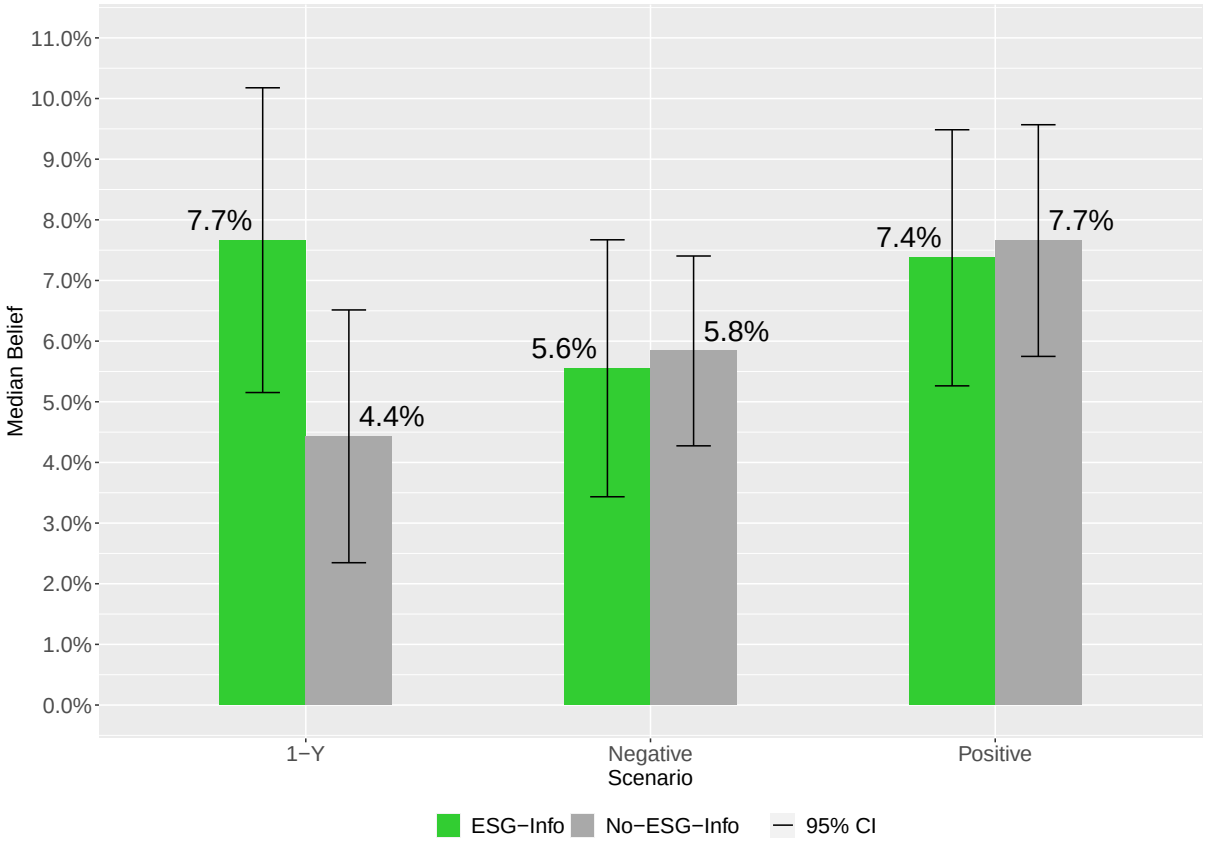


Figure 5: Median Return Expectation Comparison

Note: This figure illustrates the participants' return expectations for the fund with a known high ESG rating under the ESG-Info condition, contrasted with the same fund with an unknown ESG rating under the No-ESG-Info condition. The comparisons are presented separately for the 1-year ahead forecast of the seventh year and the negative and positive return scenarios to forecast the eighth year. The green bars depict answers under the ESG-Info condition, while the grey bars represent answers under the No-ESG-Info condition. The difference between the treatment groups in the 1-year horizon forecast is indicated by $p = 0.05$ in a two-sided t-test.

In Table 3, we use regressions to investigate the determinants of median return expectations. We conduct Ordinary Least Squares (OLS) regressions, with participants'

median return expectations obtained using the exchangeability method as the dependent variable. Our main independent variable is the binary treatment variable *High ESG Info*, which is equal to one for participants under the ESG-Info condition, and zero otherwise (the No-ESG-Info condition). We control for the measures of preferences and individual characteristics obtained from the end-of-experiment questionnaire.

Table 3: Expected Fund Return by Exchangeability Method

This table presents the the regression results of participants' return expectations for the fund in the survey. Columns (1), (2), and (3) correspondingly show the fund's one-year return expectation, negative scenario return expectation, and the positive scenario return expectation. The dependent variable is the median return expectation. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1 has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation		
	1-Y	Negative	Positive
	(1)	(2)	(3)
High ESG Info	3.321**	−0.668	−0.448
	(1.690)	(1.407)	(1.529)
Investing Experience	−2.792***	−0.250	−0.673
	(0.791)	(0.658)	(0.715)
Portfolio Size	0.001**	0.000	0.000
	(0.000)	(0.000)	(0.000)
Correct Return Calculation	0.691	−0.227	−0.366
	(1.841)	(1.533)	(1.666)
Sustainability Risk	0.966*	0.696	0.886*
	(0.586)	(0.487)	(0.530)
ESG Impact	−1.884**	−1.651**	−1.345*
	(0.793)	(0.660)	(0.717)
Negative Reciprocity (Others)	1.243*	0.926*	0.970
	(0.657)	(0.547)	(0.594)
Observations	287	287	287
R^2	0.175	0.090	0.116
Demographics control	YES	YES	YES
Preferences control	YES	YES	YES

Column (1) in Table 3 clearly shows that the high ESG rating label has a significantly positive effect on the median return expectations compared to no ESG information ($p = 0.05$). On average, participants' median annual return expectation is 3.32% higher when they know the fund has a high ESG rating compared to no ESG rating information. Columns (2) and (3) are the results from investigating the influence of a high ESG rating on participants' belief updating following the disclosure of positive or negative return scenarios. The high ESG rating does not yield a significant effect on participants' belief updating. We also test for the influence of their prior beliefs (specifically, their expectations for returns in the seventh year) on their belief updating in Table A.1 in the Appendix A. The results show that beliefs are sticky (a positive correlation between

prior and posterior) in both positive and negative scenarios, but more so in the positive scenario.

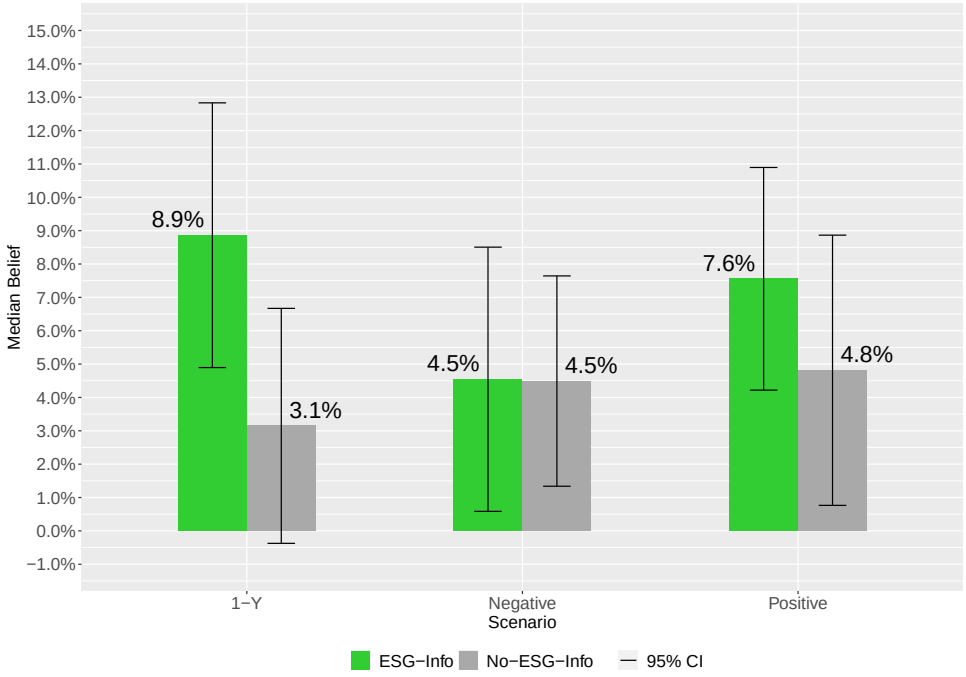
Further, participants' investment experience and their perceptions of sustainability risk and the social impact of ESG have a significant negative correlation with their return expectations. Specifically, every three more years of investment experience corresponds to a 2.79% reduction in the median annual return expectation. A one unit increase on the Likert scale in perceived sustainability risk and ESG social impact results in an increase of 0.97% and a decrease of 1.88%, respectively, in the median annual return expectations.

Before launching our field survey, we conducted an online experiment using student subjects to validate our survey instruments. There, despite the different sample, we find a similar positive effect of a high ESG rating on median return expectations in the 1-year horizon (10.8% under the ESG-Info condition vs. 8.0% under the No-ESG-Info condition, $p = 0.02$). Interestingly, we also find a significant effect in the negative return scenario. Specifically, beliefs are more resistant to (or respond less to) the negative signal when there is a high ESG rating versus no rating (7.0% under the ESG-Info condition vs. 4.8% under the No-ESG-Info condition, $p = 0.07$). See Figure A.3 in the Appendix A for details. The difference in belief updating, which might be due to sample characteristics such as investment experience and ESG knowledge, calls for future research.

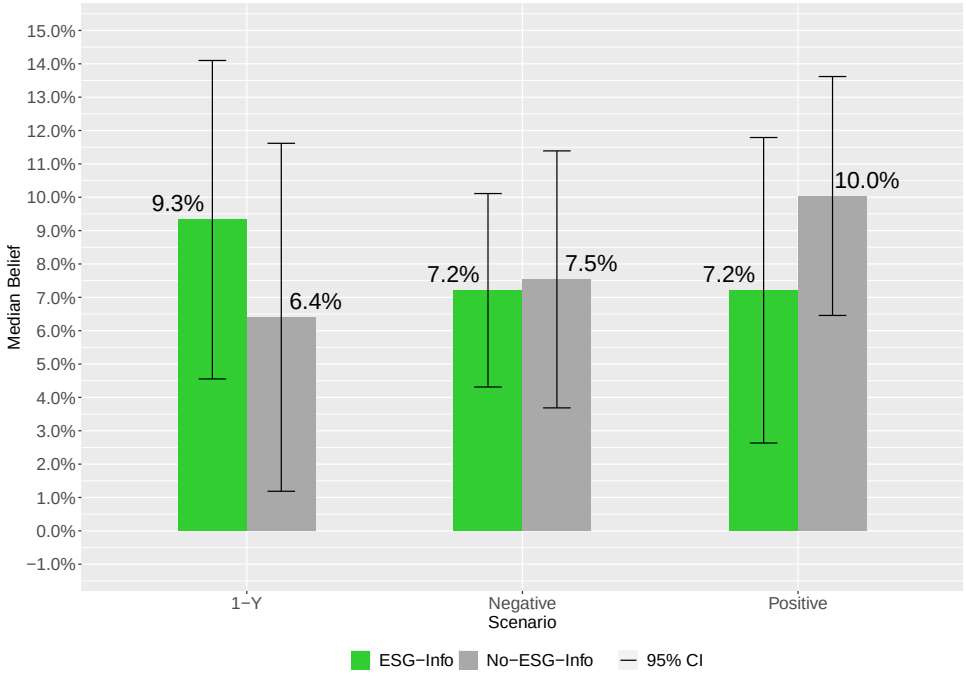
Next we compare the expectations from the exchangeability method to those from the unincentivized Likert scale method. First, Figure A.4 illustrates the distribution of return expectations based on the unincentivized Likert scale separately for participants in the ESG-Info condition and in the No-ESG-Info condition separately. This suggests that the randomization of participants into these two conditions in an earlier module did not significantly bias their answers in the unincentivized Likert scale question in the last module.

Further, we find participants' return expectations for ESG funds as elicited through the unincentivized Likert scale method are not completely compatible with those obtained through the exchangeability method. To show this difference, we conduct a subsample analysis. This analysis splits participants according to whether they said ESG funds would underperform or outperform conventional funds, and then compare their respective median beliefs on the fund's return elicited through the exchangeability method. Note that we only split participants into these two groups but not more subgroups according to their Likert scale answers, because different people might interpret the Likert scale options different, but their understanding of over- versus under-performance should reasonably be the same. Figure 6 shows this comparison between two methods.

In Figure 6, Panel (a) contains the participants who said ESG funds would financially underperform conventional funds in the Likert scale question, while Panel (b) contains the participants who reported the opposite. Each panel displays plots of their median return expectations, based on the exchangeability method, separately for the ESG-Info condition and the No-ESG-Info condition. Interestingly, participants who thought ESG



Panel (a): Median Belief of Investors Expressing Lower ESG Returns by Likert Scale



Panel (b): Median Belief of Investors Expressing Higher ESG Returns by Likert Scale

Figure 6: Median Belief by Subgroup

Note: This figure illustrates the comparisons of participants' median return expectations for the fund that come from the exchangeability method under the ESG-Info and No-ESG-Info conditions. Participants are categorized by their answers to the unincentivized Likert scale question regarding ESG funds' performance relative to conventional funds. The green bars depict the answers under the ESG-Info condition, while the grey bars represent the answers under the No-ESG-Info condition. Panel (a) displays the return expectations of participants who indicated that ESG funds financially underperform conventional funds in the unincentivized Likert scale question. Panel (b) displays the return expectations of participants who indicated that ESG funds financially outperform conventional funds in the unincentivized Likert scale question.

funds would underperform have 5.8% higher median return expectations when there is a high ESG rating compared to none in the 1-year horizon ($p = 0.03$). Panel (b) shows a similar pattern: participants who thought ESG funds would outperform also have higher median return expectations of 2.9% ($p = 0.40$) when there is a high ESG rating compared no rating information. Table A.2 in the Appendix A presents the regression results for the subsample analysis, which supports this observation. Table A.3 in the Appendix A shows the discrepancy between exchangeability method and unincentivized Likert scale through regressions. Return expectations for ESG funds measured by the unincentivized Likert scale method have a statistically insignificant correlation with the median return expectations obtained from the exchangeability method.

3.4 Investment Allocation

In this subsection, we present the results from our end-of-experiment incentivized allocation task between a conventional fund and a sustainable fund and examine how beliefs elicited in the experiment correlate with allocation decisions.

Result 4: Return expectations of ESG funds obtained from the two incentivized methods significantly and positively correlate with allocations to the ESG fund, but the answers to the unincentivized Likert scale question do not.

We conduct OLS analyses with the participants' amount allocated (out of €400) to the green fund as the dependent variable. Our main independent variables are return expectations obtained from the exchangeability method and the choice matching method. The results are presented in Table 4. Column (1) pertains to the ESG condition with beliefs obtained from the exchangeability method. Columns (2) through (6) use beliefs obtained from the choice matching method. Column (7) shows the beliefs obtained from the unincentivized Likert scale method.

In Column (1) of Table 4, we show that the participants' median return expectations for the ESG fund significantly and positively correlate with their allocation to the sustainable fund ($p = 0.07$). The coefficient for beliefs obtained via the exchangeability method is 1.620. This coefficient indicates that a one percentage point increase in the participants' beliefs about the annual return is associated with a €1.62 increase in the allocation to the green fund, which is 0.405% of the total €400 budget. In other words, taking into account the considerable heterogeneity in participants' beliefs and allocations, a one standard deviation increase in return expectations for the ESG fund leads to a 0.156 standard deviation increase in allocation to the sustainable fund, which is equivalent to €23.36 (or 5.85% of the total investment amount of €400). At the beginning of the choice matching method, participants evaluated the financial performance of ESG funds relative to conventional funds by answering the Likert scale question without any incentives or information about incentives. In Columns (2)-(5), these beliefs also do not significantly

correlate with the amount allocated to the green fund. However, in Column (6), only after the introduction of both incentives (prediction incentive and matching incentive) do the participants' return expectations for ESG funds significantly increase their allocation to the sustainable fund ($p = 0.042$). Specifically, a one unit increase (in the Likert scale answers) in return expectations for ESG funds relative to conventional funds results in approximately an €31.23 (equivalent to 7.81% of the total investment amount of €400) increase in the ESG fund's allocation. In Column (7), the return expectations from the unincentivized Likert scale question in the fourth module do not significantly correlate with the amount allocated to the sustainable fund.

Therefore, compared with the return expectations obtained from the unincentivized Likert scale method, those obtained through both of our incentivized methods consistently exert a positive influence on participants' allocations to the sustainable fund.

3.5 Additional Results

This subsection shows additional results along two dimensions: the heterogeneity of beliefs and risk perceptions. First, we observe significant heterogeneity in participants' median return expectations obtained from the exchangeability method due to differences in their demographic characteristics and financial statuses. Table 5 displays the participants' median return expectations that are summarized for different demographic and financial status subgroups respectively. In general, participants who are younger, employed, less educated, invest less, or have less investment experience are more inclined to expect that the fund with a high ESG rating financially outperforms the same fund when ESG rating is unknown. These findings are consistent with the literature (e.g., Giglio et al., 2025). For the respective complementary groups, no significant difference is observed between information conditions. Meanwhile, we do not find a significant gender effect. Participants whose monthly income aligns closely with the Netherlands' average gross monthly income (which was €2855 in 2023) expect that the fund with a high ESG rating significantly outperforms the same fund when ESG rating is unknown. A more detailed analysis is presented in Section A.9 of the Appendix A.

Moreover, we find that participants who believe low ESG funds come with higher risk also believe highly rated ESG funds will have higher returns. We elicited the participants' risk perception on ESG funds compared with conventional funds using the unincentivized Likert scale question based on Riedl and Smeets (2017).[19] Specifically, we asked participants their opinions on the following statement: Less sustainable investment funds carry more risk than sustainable investment funds. They could choose whether they "Totally disagree", "Disagree", "Fairly disagree", "Average", "Fairly agree", "Agree", or "Totally agree". We then analyzed the results with respect to this question in relation to their return expectations. In Figure 7, Panel (a) depicts the distribution of choices in the above

[19]Note that we could also elicit risk perceptions using the exchangeability method but that would make the survey much longer. We only did it in the pilot with students.

Table 4: Allocation on ESG Fund

This table displays the regressions of participants' allocation decisions in the ESG fund of the allocation task at the end of the survey. The ESG fund allocation refers to the amount allocated by participants in the allocation task of the survey. In Column (1), the ESG return belief is elicited using the exchangeability method. In Column (2), ESG return belief is elicited using the choice matching method in the No Incentive condition. In Column (3), ESG return belief is elicited at the outset without knowing incentives using the choice matching method in the partial incentive condition. In Column (4), the adjusted ESG return belief is utilized after the matching incentive is offered, as obtained through the choice matching method in the partial incentive condition. In Column (5), the ESG return belief is elicited at the outset without knowing the incentives using the choice matching method in the Full Incentive condition. In Column (6), adjusted ESG return belief is utilized after the matching incentive is offered, as obtained through the choice matching method in the Full Incentive condition. In Column (7), the ESG return belief is elicited using the non-incentivized Likert scale method in the fourth questionnaire module. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: ESG Allocation Amount						
	Exchangeability	*Choice Matching*					*Likert Scale*
		(No Incentive)	*(Partial Incentive)*		*(Full Incentive)*		
		Initial	Initial	Adjusted	Initial	Adjusted	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ESG Return Belief	1.620*	21.080	0.657	12.041	22.338	31.230**	13.600
	(0.892)	(17.250)	(17.478)	(17.555)	(14.999)	(15.070)	(9.297)
Male	−26.130	−68.750*	−54.120*	−49.928*	40.596	36.212	−20.930
	(19.410)	(40.110)	(29.991)	(29.964)	(26.507)	(30.397)	(15.100)
Education	−21.560**	−10.280	20.066	22.032	−31.490**	−34.182**	−11.510*
	(9.187)	(11.830)	(15.182)	(15.216)	(15.165)	(14.874)	(7.046)
Income	11.630***	2.880	9.625	8.394	9.375*	9.481*	4.837*
	(3.672)	(4.599)	(7.932)	(7.974)	(5.435)	(5.528)	(2.855)
Sustainability Risk	−15.340*	12.910	−20.794	−21.634	−16.103	−15.631	−3.440
	(8.294)	(11.090)	(14.318)	(14.277)	(11.774)	(11.671)	(6.423)
ESG Impact	17.010*	17.480	38.502**	36.297**	15.062	20.353	22.030***
	(9.966)	(14.160)	(16.904)	(16.948)	(19.119)	(18.729)	(8.085)
ESG Index	35.160***	28.360**	4.487	2.016	33.040*	38.137**	24.830***
Fund Preference	(10.660)	(14.080)	(14.783)	(14.925)	(17.018)	(16.342)	(7.888)
Demographics control	YES	YES	YES	YES	YES	YES	YES
Preferences control	YES	YES	YES	YES	YES	YES	YES
Observations	129	99	88	88	87	87	282
R^2	0.494	0.441	0.399	0.404	0.503	0.515	0.32

question for the entire sample. Overall, 28.9% of participants totally disagree (4.2%) or disagree (24.7%) with the statement, indicating they believe less sustainable funds to be riskier. Conversely, 10.4% of participants totally agree (1.7%) or agree (8.7%) with the statement, indicating less sustainable funds to be riskier, or sustainable funds to be less risky. The remaining 60.7% of participants had a moderate perception of risk concerning sustainable funds relative to less sustainable funds.[20] Linking this with the median return expectations from the exchangeability method, we explore how participants perceive the risk-return trade-off of highly rated ESG funds. Panel (b) presents the median return ex-

[20]We categorize participants who selected "Fairly disagree," "Average," or "Fairly agree" as having a moderate perception of risk regarding sustainable funds compared to less sustainable ones, reflecting an absence of strong and definitive opinions about the risks associated with sustainable investment funds.

Table 5: Median Beliefs by Demographics

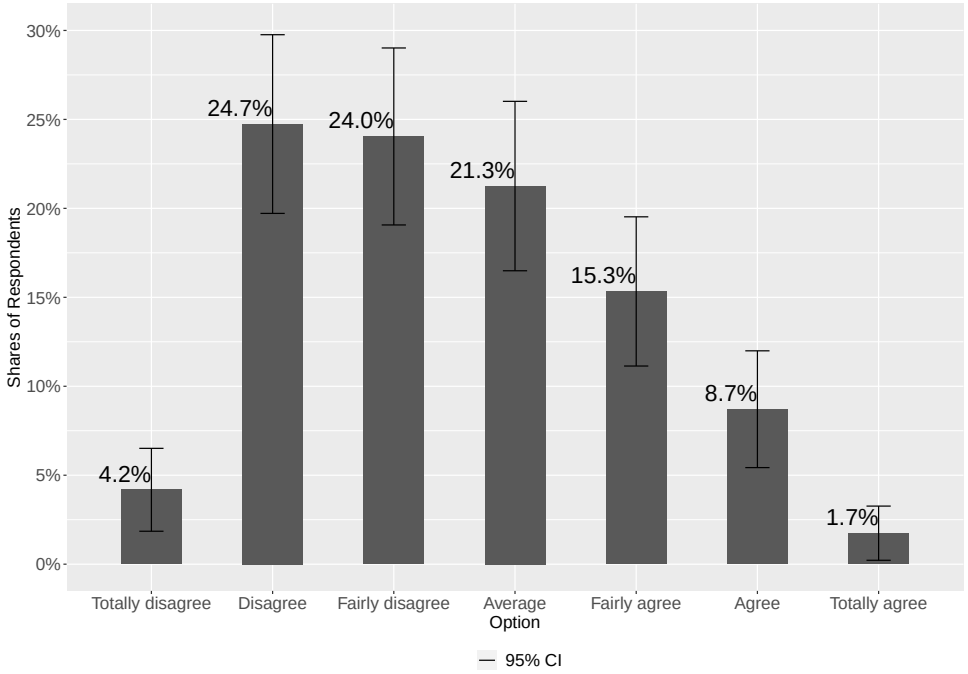
This table presents participants' median return expectations for the fund, comparing the ESG-Info condition with the No-ESG-Info condition, categorized by age, gender, total investment, income, investing experience, education, return calculation, and occupation. Columns (1), (2), and (3) present the participants' median return expectations for the fund in the ESG-Info condition for the one-year return expectation, negative scenario return expectation, and the positive scenario return expectation, respectively. Columns (4), (5), and (6) present participants' median return expectations for the fund in the No-ESG-Info condition for the one-year return expectation, negative scenario return expectation, and the positive scenario return expectation, respectively. Columns (7), (8), and (9) present the differences in median return expectations between the ESG-Info and No-ESG-Info conditions for one-year return expectation, negative scenario return expectation, and the positive scenario return expectation, respectively. Table B.1 has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	ESG Median Return Expectation (%)				Non-ESG Median Return Expectation (%)				ESG − Non-ESG (%)		
	1Y	Negative	Positive	N	1Y	Negative	Positive	N	1Y	Negative	Positive
	(1)	(2)	(3)		(4)	(5)	(6)		(7)	(8)	(9)
By Age											
≤ 40	9.470	7.159	7.879	66	6.417	6.083	8.361	90	3.053*	1.076	−0.482
41−50	9.150	5.550	7.950	25	−0.662	0.809	1.25	17	9.812*	4.741	6.700
51−60	5.662	1.250	7.426	17	1.902	4.946	9.076	23	3.760	−3.696	−1.650
61−70	2.596	5.096	3.558	13	2.361	10.139	8.472	18	0.235	−5.043	−4.915
> 70	0.625	2.188	7.500	8	4.750	6.50	7.500	10	−4.125	−4.313	0
By Gender											
Male	7.250	6.344	8.531	80	4.782	6.250	7.833	109	2.468	0.094	0.699
Female	7.750	3.806	4.750	45	3.750	5.083	7.417	45	4.000	−1.278	−2.667
By Total Investment											
< €10K	13.045	5.737	7.788	39	7.250	6.972	9.472	45	5.795**	−1.235	−1.684
€10K−€50K	8.824	8.456	8.824	34	1.523	4.114	6.659	55	7.301**	4.342	2.164
€50K−€100K	3.194	3.056	3.611	18	10.139	5.694	7.778	18	−6.944	−2.639	−4.167
€100K−€250K	2.981	3.173	5.481	13	4.083	5.417	8.750	15	−1.103	−2.244	−3.269
> €250K	3.350	4.350	8.450	25	1.85	7.95	5.85	25	1.500	−3.60*	2.600
By Income											
< €3K	4.167	3.333	4.750	30	5.927	4.879	7.782	31	−1.761	−1.546	−3.032
€3K−€5K	10.924	6.087	7.446	46	3.107	5.357	7.071	70	7.817***	0.730	0.374
€5K−€7.5K	8.182	8.182	8.182	22	6.731	7.212	7.500	26	1.451	0.970	0.682
> €7.5K	5.847	5.040	9.23	31	3.992	6.733	8.992	31	1.855	−1.694	0.242
By Investment Experience											
< 3years	12.215	5.461	7.303	57	6.091	5.179	9.187	63	6.124***	0.282	−1.884
3−6 years	10.000	8.958	9.167	24	4.297	6.328	6.875	32	5.703**	2.630	2.292
7−10 years	9.219	5.469	10.781	16	6.500	7.250	6.875	20	2.719	−1.781	3.906
>10 years	−2.969	3.203	4.453	32	1.134	5.785	6.366	43	−4.102	−2.582	−1.913
By Education											
Junior College or Lower	9.177	5.213	7.774	41	5.063	6.313	8.250	40	4.114	−1.099	−0.476
College	8.682	5.709	7.466	37	2.500	5.069	6.944	36	6.182*	0.640	0.522
University or Higher	5.71	5.71	6.985	51	4.970	5.945	7.683	82	0.741	−0.234	−0.698
By Return Calculation											
Correct	7.238	6.250	7.471	43	6.075	4.934	6.732	57	1.164	1.316	0.738
Wrong	7.878	5.203	7.326	86	3.502	6.349	8.181	101	4.375**	−1.146	−0.855
By Occupation											
Paid Work	8.947	6.081	7.879	89	5.369	6.226	7.107	105	3.578*	−0.145	0.772
Others	4.813	4.375	6.250	40	2.571	5.071	8.750	53	2.242	−0.696	−2.500

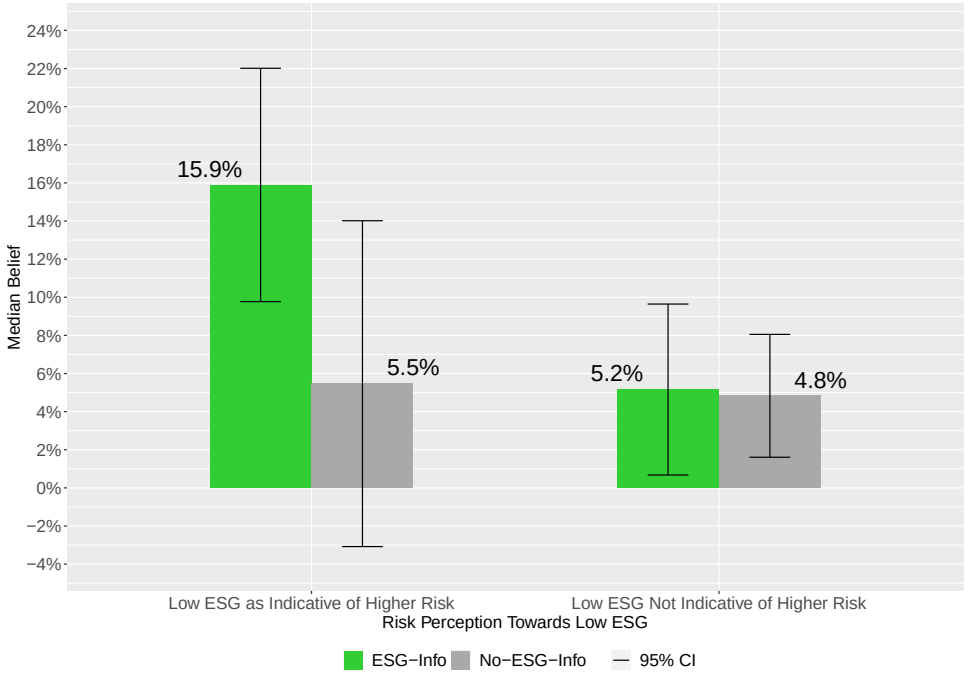
pectations of participants for the fund under the ESG-Info and No-ESG-Info conditions. Participants are categorized according to their risk perceptions, and their median return expectations are summarized respectively.[21] Our findings indicate that participants who tend to agree or totally agree with the idea that lower rated ESG funds carry higher risk also expect higher returns from the fund with a high ESG rating compared to the identical fund without ESG rating information (15.9% Vs. 5.5%, $p = 0.043$). These results indicate a negative correlation between perceived risks and expected returns in

[21] Our analysis specifically targets participants who expressed strong and definitive opinions about the risks associated with sustainable investment funds, namely those who selected "Totally disagree," "Disagree," "Agree," or "Totally agree" on the Likert scale question. When we add "Fairly agree" and "Fairly disagree", the difference still emerges but is less obvious.

the context of ESG-rated investments. On the other hand, those who disagreed or totally disagreed with the statement that lower rated ESG funds correlate with higher risk expect a similar return from the ESG fund and its counterpart with no ESG information (5.2% vs. 4.8%, $p = 0.904$). This expectation indicates participants tend to associate a lower expected return and higher risk with low/average rated ESG funds. These findings align with Hartzmark and Sussman (2019), who observe an inverse relationship between the expectations of risk and returns, which could be driven more by the affect heuristics than by rational analysis (e.g., Slovic et al., 2007). But because our analyses here are based on the Likert scale question about risk, we do not want to attach too much weight to these results, due to the limitations of this method.



Panel (a): Risk Perception of Non-ESG Funds Relative to ESG



Panel (b): Median Return Expectation Comparison by Risk Perception

Figure 7: Risk Perception Distribution and Return Expectation

Note: Panel (a) depicts the distribution of participants' perceived risk associated with less sustainable funds relative to sustainable funds in the entire participant sample. The bars illustrate participants' answers to the statement "Less sustainable investment funds carry more risk than sustainable investment funds: 1 = Totally disagree, 2 = Disagree, 3 = Fairly disagree, 4 = Average, 5 = Fairly agree, 6 = Agree, 7 = Totally agree." Panel (b) illustrates participants' median return expectations for the fund under the ESG-Info and No-ESG-Info conditions, categorized by their risk perceptions towards low ESG funds derived from their answers to the above statement in Panel (a). The green bars represent answers under the ESG-Info condition, while the grey bars represent answers under the No-ESG-Info condition.

4 Conclusion

In this study, we formally investigate index fund investors' return expectations for ESG funds through a field survey experiment. Our methods encompass both the widely used unincentivized Likert scale questions and two incentivized methods, namely the choice matching method and exchangeability method. This allows us to demonstrate a significant divergence in conclusions drawn from methods. Based on the unincentivized Likert scale method, we observe that the majority of participants expect that ESG funds will financially underperform relative to conventional funds. Conversely, when responding to the choice matching and exchangeability methods, investors report consistent beliefs that are in contrast with their beliefs from the unincentivized Likert scale. What gives us additional confidence that our two incentivized methods elicit beliefs closer to investors' true beliefs is that these beliefs also have a significant and meaningful effect on investors' incentivized allocation to a sustainable fund.[22]

Our study uncovers three crucial insights into the motivations behind SRIs and their implications for asset pricing. First, investors are likely to understate their return expectations for ESG funds in unincentivized Likert scale questions. The direction of the bias we uncover is consistent with the possibility that image concerns play a role when they answer these questions (either through social signaling or self-signaling). However, there can be other explanation, which can be explored by subsequent studies. This understatement could result in a systematic misunderstanding of investors' true motivations for SRI that lead to unreliable conclusions regarding how they trade off financial performances for sustainability, with the potential of exaggerating the role of ESG considerations in portfolio choice decisions.

Second, the significant influence of investors' return expectations on their allocations to SRIs underscores the importance of financial motivations in investment decisions related to SRIs. Therefore, return expectations play an important role in investors' decisions involving SRI. Even though there is no rational benchmark as to how much participants should allocate to the sustainable fund in our allocation task, the belief-decision consistency has both academic and practical implications. This resonates similar findings in the literature about the importance of beliefs in investment decisions both in a broader sense (e.g., Giglio et al., 2021; Andries et al., 2025) and more specific to sustainable investment decisions (e.g., Gantchev et al., 2024; Giglio et al., 2025). This points to the necessity of having precise and reliable measures of investors' return expectations for SRIs to accurately assess sustainability preferences, which is a combination of financial expectations and economic preferences (social preferences, risk preferences, ambiguity preferences, etc.). Without such measures, there is a risk of misinterpreting investors' true sustainability preferences, potentially leading to investment strategies that fail to accurately cater to their needs in balancing risk, return and social impact. Practically, knowing the rational

[22]However, we do not claim that beliefs elicited from our incentivized methods reflect exactly the true subjective beliefs.

benchmark is probably less relevant, but having a measure that correlate well with actual intended sustainable investment is usually more important.

Third, based on the results of our incentivized methods, investors may hold systematically optimistic beliefs on ESG funds, or generally assets with high ESG ratings. This could be the result of many factors, including observation of actual performance realization, as well as financial institutions' advertising. We do not claim that our result is representative of the average belief of investors, because our participants consist of a special group of Dutch index fund investors. But these index fund investors are relatively wealthier, well-educated and more sophisticated than the average investor. And our results using less sophisticated students are consistent with the field results. If the optimism of ESG financial performance is prevailing, it could lead to over-pricing of sustainable assets and market inefficiency. This also highlights the need for an understanding of the true driver of investments into high ESG assets, the discrepancies between investor expectations and the financial realities of ESG investments. They also call for policies that directly target investor expectations.

We would like to reiterate several cautions readers must bear in mind when interpreting our results. First, we do not claim the result difference between methods is purely driven by incentives. Even though the two incentivized methods offer consistent return expectations that are also more in line with allocation decisions, they are different from our Likert scale question in more ways than just the presence of incentive. However, the comparison of different incentive conditions in the choice matching method reveals that the matching reward, which is intended to incentivize truth telling in unverifiable multiple choice questions, indeed lead to significant upward revision of return expectation for ESG funds, but the simply the prediction incentive did not. At the same time, of course we also do not deny that there could be other designs of the unincentivized Likert scale question which give better responses, such as in (Hartzmark and Sussman, 2019).

Second, ideally we should have randomized the order of modules to avoid any spill-over effect between modules. However, this concern should be minimal due to several observations. On the one hand, spill-over typically leads to consistency, that is participants should choose in the same direction. But we find inconsistency between their answers in the choice matching, exchangeability methods and the unincentivized Likert scale. The choice matching module was after the exchangeability method, but when the base question came without incentives, the majority of people still chose that ESG funds would outperform. On the other hand, spill-over could also lead to fatigue in later modules. But this does not have a clear systematic prediction on how answers in later modules should be biased. As an additional evidence, we also used exactly the same unincentivized Likert scale questions in another field survey with a different sample of index fund investors at Meesman. There the question was not preceded by other belief elicitation modules, but we find results consistent with those reported in the current paper.[23]

[23]These results are available upon request.

Third, as previously pointed out, we do not claim that our directional result based on Dutch index fund investors is representative. Therefore, future research efforts can potentially investigate the heterogeneity across different investor classes in terms of expectations towards ESG financial performance, and in terms of the weight of return considerations in their SRI decisions.

Moreover, our survey study investigates the influence of high ESG funds compared with neutral or conventional funds. Future studies can adopt our method to explore return expectation reactions to negative ESG information, to investigate the symmetry in beliefs. Our study introduces an innovative approach by adapting incentivized laboratory experimental methods for accurately capturing investor beliefs through field surveys, and linking these beliefs to investment decisions in the SRI domain. We thus make a significant contribution to studies of belief elicitation surrounding SRI, as well as the broader investment decisions. We hope our method can also inform measurement and understanding of sustainability preferences of clients in practical settings.

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Internet Appendix

A Appendix A

A.1 Ambiguity Perception Elicitation

With the second module, we assess participants' domain-specific ambiguity attitudes, specifically by using an adapted version of the Ellsberg urns (e.g., Ellsberg, 1961) as proposed by Dimmock et al. (2016). In this module, every choice made by participants comes from an incentive.

As illustrated in Figure A.1, participants were tasked with choosing between two boxes, each containing exactly 100 balls labeled either with a positive sign (purple balls, indicating positive return funds) or a negative sign (orange balls, indicating negative return funds). Their choices were between an ambiguous Box U, with an undisclosed number of purple balls, and an unambiguous Box K, where the quantity of purple balls was clearly indicated. This decision involved up to five incentivized questions, each building on the previous answers and aimed at pinpointing the participant's threshold of indifference. If participants found no discernible difference between the two boxes, they could opt for the "I don't see the difference" choice and proceed to the next module. Furthermore, participants had the opportunity to win €100 if they were randomly selected for the reward and a purple ball was drawn from their chosen box.

You now have a chance to win **€100** with the guessing game below.

Your task is to choose between Box K and Box U, both of which contain 100 mutual funds with either a positive annual return in 2022 ("+" or greater than 0) or a negative annual return in 2022 ("—" or less than 0). The computer will randomly select a ball from the box you choose. You win 100 euros if an investment fund with a positive return ("+") is selected.

What is the difference between the two boxes?

Box K contains a precise mix of 100 mutual funds with positive returns ("+") and negative returns ("—"). For example, Box K below contains 50 mutual funds with a positive return ("+") and 50 mutual funds with a negative return ("—"). Note: The mix in Box K may be different for different questions (for example, 60 mutual funds with a positive return and 40 mutual funds with a negative return).

Box U contains 100 mutual funds randomly selected from all mutual funds on the market, so the precise mix of mutual funds with a positive return ("+") and a negative return ("—") is not known.

How do you choose?

Please indicate your preferred box below and we will select a mutual fund from the box of your choice.

If you find both boxes equally attractive, you may choose the option "I don't see the difference". Then the computer will randomly choose a box for you and select a mutual fund from it.

Remember: You win 100 euros if an investment fund with positive returns ("+") is selected. Think carefully about your choice.

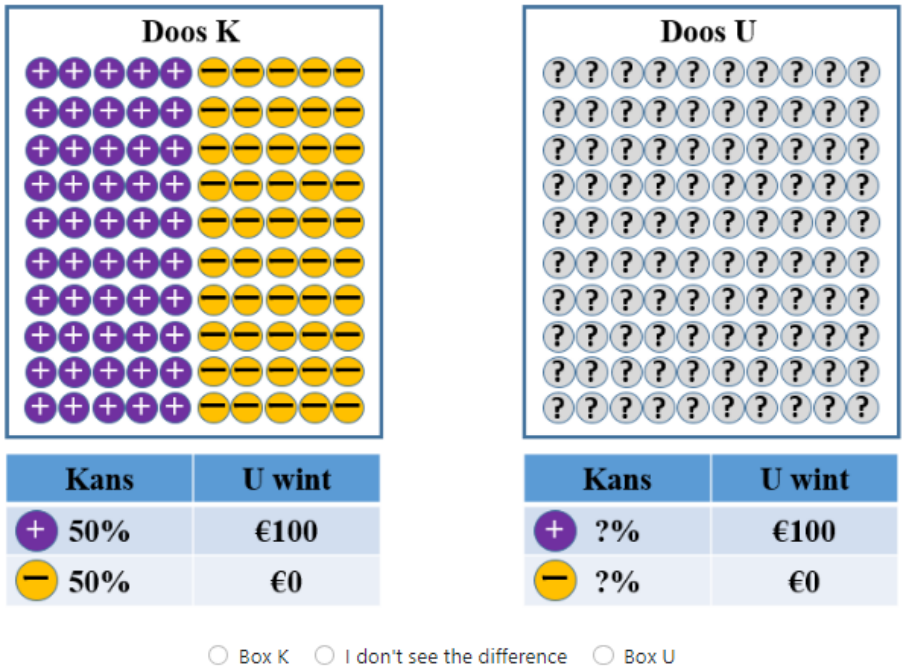


Figure A.1: An Exemplary Domain-specific Ambiguity Attitudes Elicitation Task

Note: This figure displays a screenshot depicting the task designed to elicit domain-specific ambiguity attitudes.

A.2 Participant Number

During the survey period from June 9 to August 31, 2023, we sent out two reminders on June 26 and August 23, 2023, respectively. After the two reminders and up to August

31, 2023, we had a total 901 participants who started the survey and 287 who completed it. The average completion time was approximately 25 minutes.

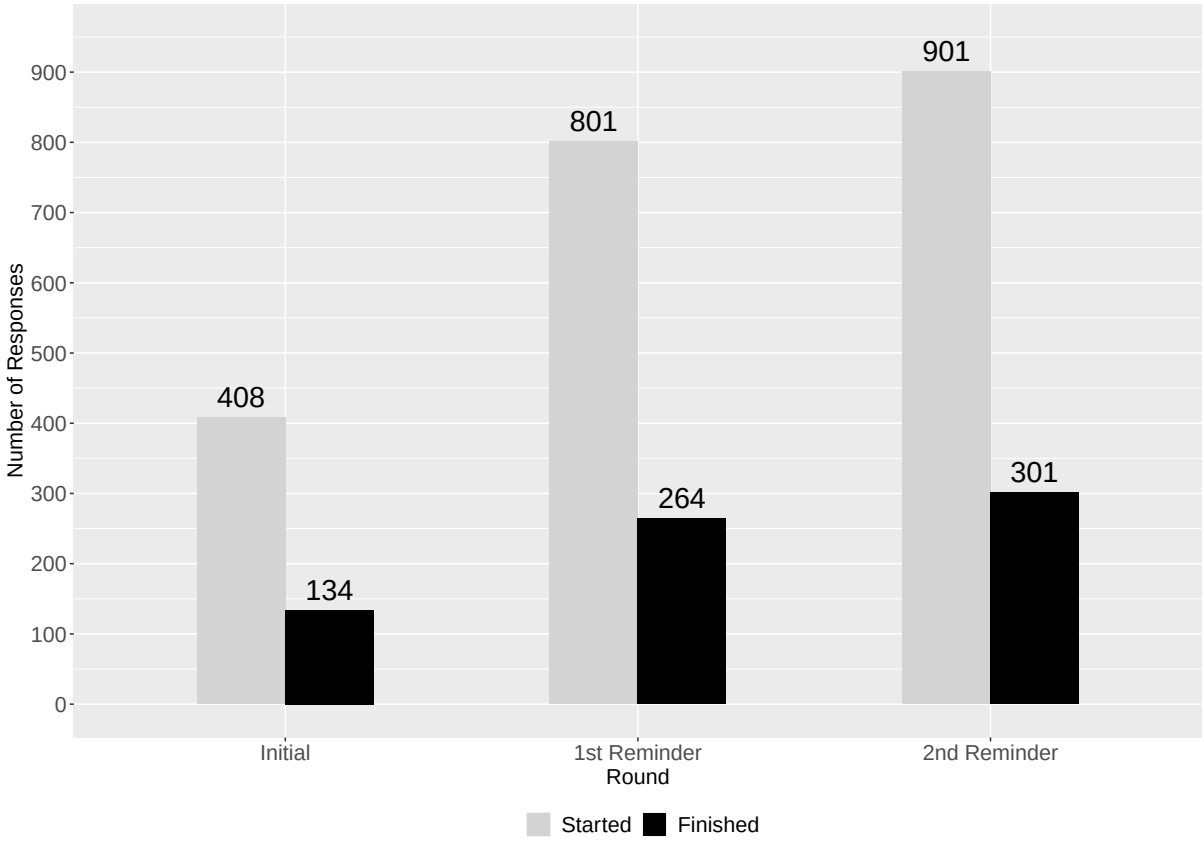


Figure A.2: Participant Number

Note: The figure presents the number of participants who started our survey and those who completed it over the period from June 9 to August 31, 2023.

A.3 Median Belief in Laboratory Experiment

The laboratory experiment was conducted at the Behavioral & Experimental Economics Laboratory (BEELab), School of Business and Economics, Maastricht University. The experiment had a total of 335 participants, comprising 59% females with an average age of 22 years (199 females and 136 males, aged between 19 and 36 years). The experiment was conducted in October and November of 2021. The No-ESG-Info condition included 171 subjects, with 61.4% being female; while the ESG-Info condition consisted of 164 subjects of which 58.5% were female. The majority of participants were students from economics and management (283 participants) or social sciences (20 participants) at the School of Business and Economics, Maastricht University. For our laboratory experiment, the fund rated as having the highest ESG was randomly selected from Morningstar. We implemented the same exchangeability method as in the field survey to assess participants' median beliefs about the fund's return in the forthcoming year, following observation of its returns in the previous six years.

Figure A.3 in the Appendix displays the participants' average median return expec-

tation about the fund under both the ESG-Info and No-ESG-Info conditions. Over both short-term (one-year) and long-term (three-year) investment horizons, the participants' median return expectation for the fund is significantly higher under the ESG-Info condition compared to the No-ESG-Info condition (2.8% and 1.9% higher respectively; $p = 0.02$ and $p = 0.08$). Further, we find that subjects' median belief is significantly higher under the ESG-Info condition compared to the No-ESG-Info condition when they observe a negative return of the fund in the previous year (2.2% higher; $p = 0.07$).

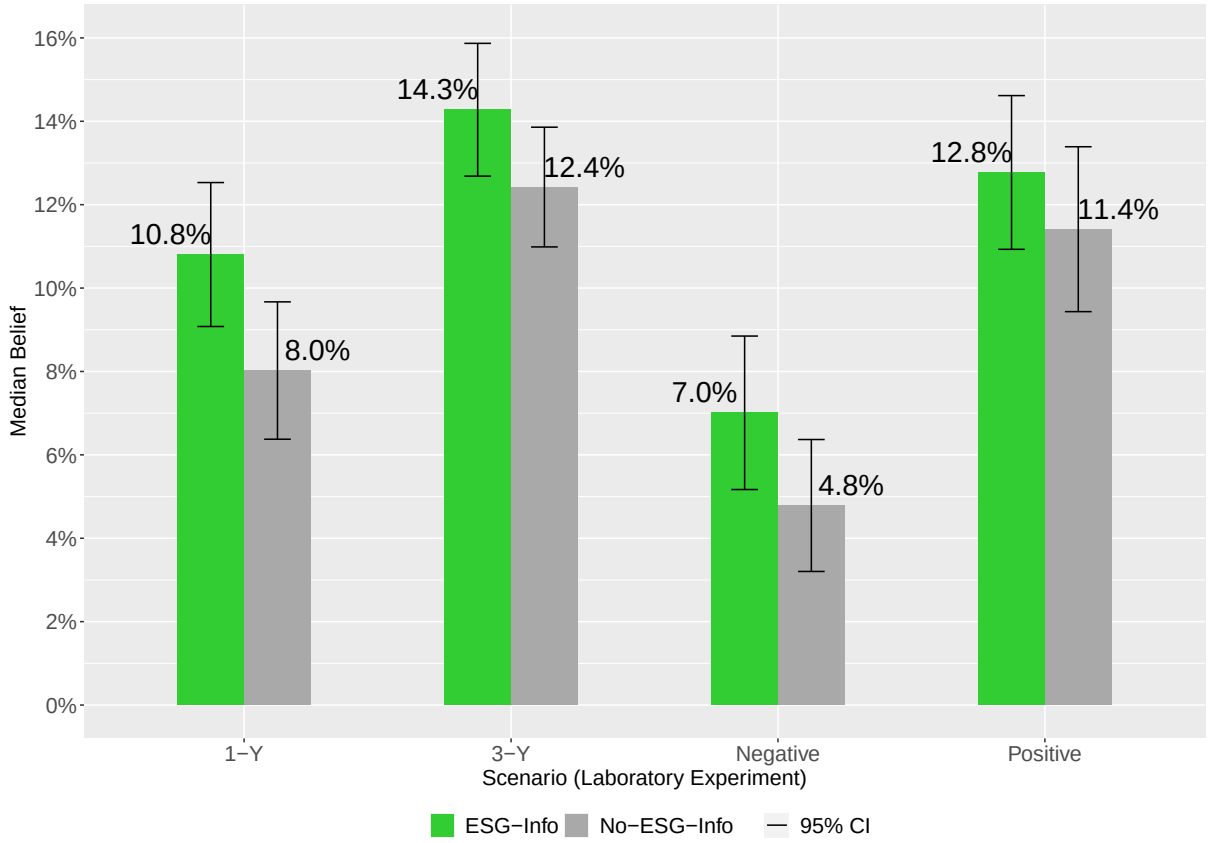


Figure A.3: Median Return Expectation Comparison in Laboratory Experiment

Note: This figure displays the plots of the comparisons of participants' median return expectation for the fund between the ESG-Info and No-ESG-Info conditions under the four scenarios, respectively (i.e., the 1-year and the 3-year investment horizons, a positive and a negative return in the previous year). The green bars depict answers under the ESG-Info condition, while the grey bars represent answers under the No-ESG-Info condition.

A.4 Belief Update

Participants may update their beliefs regarding the financial performance of the fund based on their prior beliefs after observing the realized return of the fund in the seventh year. In Table A.1, we show participants' belief updates by controlling for their prior beliefs.

Table A.1: Update of Beliefs by Controlling for Prior Belief

This table presents the regression results concerning participants update of their beliefs about the financial performance of the fund after observing its realized return in the previous year (7th year). The dependent variable is the median return expectation for the fund in the 8th year. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation Updating			
	Negative		Positive	
	(1)	(2)	(3)	(4)
High ESG Info	−1.615	−1.380	−1.840	−0.733
	(1.334)	(1.460)	(1.368)	(1.488)
Prior Return Expectation (7th-Year)	0.285***	0.302***	0.419***	0.500***
	(0.048)	(0.065)	(0.050)	(0.066)
High ESG Info ×		−0.037		−0.175*
Prior Return Expectation (7th-Year)		(0.093)		(0.095)
Investing Experience	0.546	0.530	0.497	0.424
	(0.634)	(0.636)	(0.650)	(0.648)
Correct Return Calculation	−0.424	-0.462	−0.656	−0.833
	(1.443)	(1.448)	(1.479)	(1.476)
Sustainability Risk	0.421	0.429	0.481	0.521
	(0.461)	(0.462)	(0.473)	(0.471)
ESG Impact	−1.114*	−1.117*	−0.556	−0.573
	(0.628)	(0.629)	(0.644)	(0.641)
Donation	−0.009**	−0.009**	−0.007*	−0.007*
	(0.004)	(0.004)	(0.004)	(0.004)
Observations	287	287	287	287
R^2	0.197	0.197	0.306	0.315
Demographics control	YES	YES	YES	YES
Preferences control	YES	YES	YES	YES

A.5 Subgroup Analysis: Median Belief Grouping by Return Expectation in Non-incentivized Likert Scale

The regressions reported in Table A.2 compare the median beliefs regarding the fund return among participants who express that ESG funds financially underperform conventional funds with those from the participants who express the opposite view—namely, that conventional funds financially underperform ESG funds. In the analysis, we examine the impact of a high ESG rating on participants' median beliefs on the fund return by categorizing participants based on their answers to ESG funds' financial performance in the non-incentivized Likert scale question.

Table A.3 shows the results for this question from regressions. Note that we exclude participants who selected "I don't know" in the Likert scale question. In Column (1), we regress their median return expectations from the exchangeability method under the ESG-Info condition on the belief obtained from the Likert scale method and other con-

Table A.2: Sub-group Analysis: Median Belief Grouping by Return Expectation in Non-incentivized Likert Scale

This table presents the regression analyses on participants' median beliefs regarding fund returns, elicited by the exchangeability method, across sub-group analyses. The median beliefs about the fund returns of participants who indicated that ESG funds financially underperform/outperform conventional funds in the non-incentivized Likert scale question are compared under both the ESG-Info and No-ESG-Info conditions. Columns (1), (2), and (3) examine the effect of information about the high ESG rating on participants' median beliefs, elicited by the exchangeability method, about the fund returns among those who stated that ESG funds financially underperform conventional funds in the non-incentivized Likert scale question. These columns correspond to the one-year return expectation, negative scenario return expectation, and positive scenario return expectation, respectively. Columns (4), (5), and (6) show the effect of information on the high ESG rating on participants' median beliefs, elicited by the exchangeability method, about the fund returns among those who stated that ESG funds financially outperform conventional funds in the non-incentivized Likert scale question. These columns also correspond to the one-year return expectation, negative scenario return expectation, and positive scenario return expectation, respectively. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's return expectation					
	ESG Underperforms Non-ESG (by Unincentivized Likert Scale)			*ESG Outperforms Non-ESG (by Unincentivized Likert Scale)*		
	1-Y	Negative	Positive	1-Y	Negative	Positive
	(1)	(2)	(3)	(4)	(5)	(6)
High ESG Rating	5.402*	−1.196	3.139	1.162	−0.296	−4.633
	(3.219)	(2.953)	(3.434)	(3.645)	(3.181)	(3.364)
Investing Experience	−2.113	−2.065	−1.824	−4.487**	−1.684	−2.755
	(1.614)	(1.481)	(1.722)	(2.153)	(1.879)	(1.987)
ESG Return by Likert Scale	−6.035	−1.608	−8.203	22.170**	−3.211	10.750
	(5.014)	(4.599)	(5.348)	(9.038)	(7.888)	(8.342)
Sustainability Risk	−1.930	−0.524	−0.187	0.631	−0.484	−2.152
	(1.188)	(1.090)	(1.267)	(1.376)	(1.201)	(1.270)
ESG Social Impact	−2.860**	−2.147*	−1.956	−1.488	−2.792	1.690
	(1.353)	(1.241)	(1.444)	(2.565)	(2.238)	(2.367)
ESG Investment Amount	0.008	0.020*	0.005	0.041**	0.010	−0.016
	(0.011)	(0.011)	(0.012)	(0.018)	(0.016)	(0.017)
Observations	98	98	98	59	59	59
R^2	0.320	0.325	0.230	0.603	0.372	0.460
Demographics control	YES	YES	YES	YES	YES	YES
Preferences control	YES	YES	YES	YES	YES	YES

trol variables. Our analysis indicates that the return expectations for ESG funds, as measured by the non-incentivized Likert scale method, have a negative and statistically insignificant correlation with the median return expectations obtained through the exchangeability method. This disparity underscores the inconsistency in the results from these two different belief elicitation methods when assessing participants' return expectations. Consistent with the findings presented in Column (1) of Table 3, Column (2) of Table A.3 confirms the robust and strong and positive influence of high ESG ratings on

participants' median return expectations for the fund. This impact is strong even after controlling for their answers to the non-incentivized Likert scale question regarding the comparison of financial performance between ESG and conventional funds.

Table A.3: Comparison Between Exchangeability Method and Likert Scale Method

This table presents the regression results of participants' return expectations for the fund in the survey. Column (1) provides the results for the correlation between respondents' return expectations about ESG funds obtained from the non-incentivized Likert scale question and those derived from the exchangeability method under the ESG-Info condition. Column (2) shows the participants' one-year median return expectations about the fund by controlling their return expectations elicited by the non-incentivized Likert scale question in the ESG-Info and No-ESG-Info conditions. Participants who expressed "I do not know" in the non-incentivized Likert scale question concerning the financial performance of ESG funds compared to conventional funds are excluded from the analysis. The dependent variable is the median return expectation identified by the exchangeability method. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation	
	1-Y	1-Y
	ESG-Info	ESG-Info and No-ESG-Info
	(1)	(2)
High ESG Rating Info		3.606**
		(1.688)
ESG Return by Likert Scale	−0.683	0.132
	(1.294)	(0.892)
ESG Knowledge	−0.007	
	(0.050)	
Investing Experience	−4.086***	−2.735***
	(1.256)	(0.785)
Investing Amount in Index Fund	0.001***	0.001**
	(0.000)	(0.000)
Correct Expected Return Calculation	−4.333	0.769
	(2.772)	(1.851)
Sustainability Risk	−0.848	−0.801
	(0.880)	(0.614)
ESG Impact	−1.763*	−1.912**
	(1.021)	(0.788)
Negative Reciprocity (Others)	1.608	1.371**
	(1.021)	(0.654)
ESG Investment Amount	0.016*	0.011*
	(0.010)	(0.006)
Observations	126	282
R^2	0.383	0.183
Demographics control	YES	YES
Preferences control	YES	YES

A.6 Subgroup Analysis: Likert Scale Responses by ESG-Info and No-ESG-Info Conditions

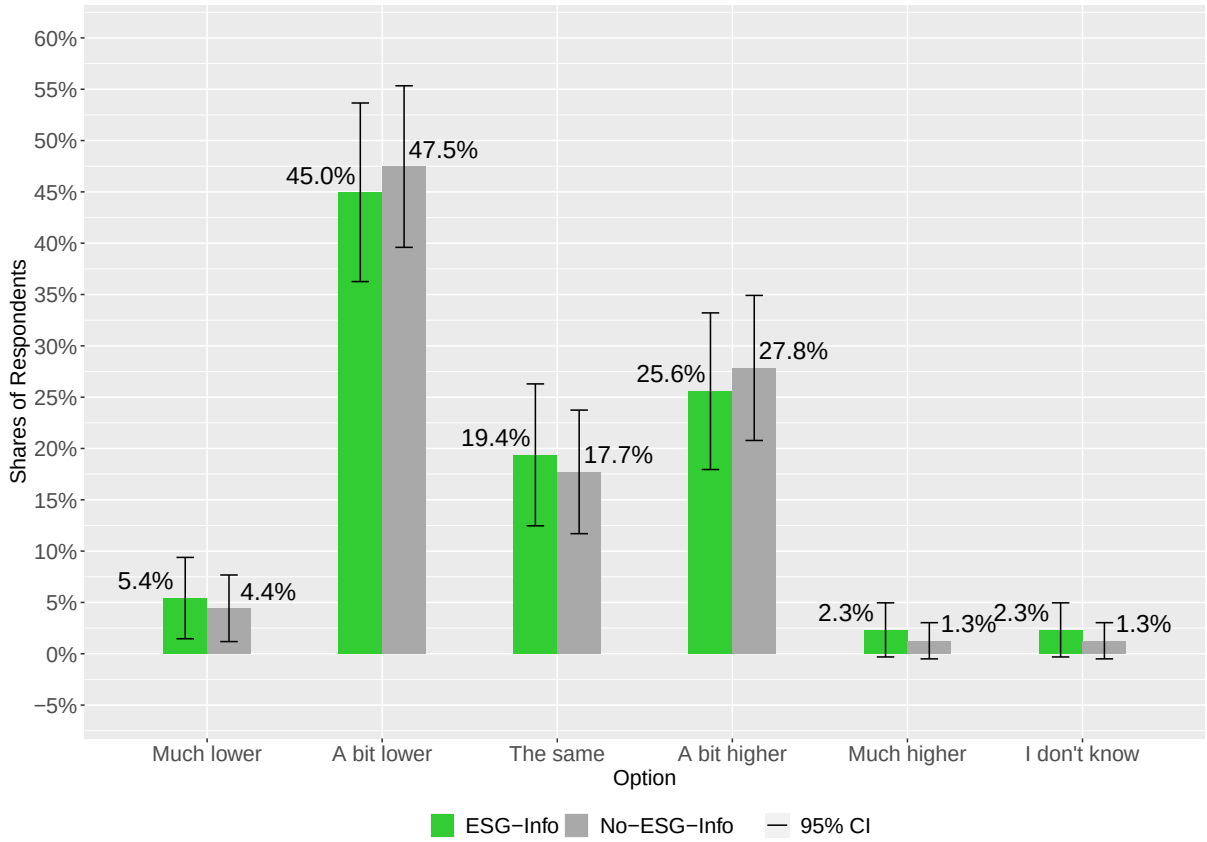


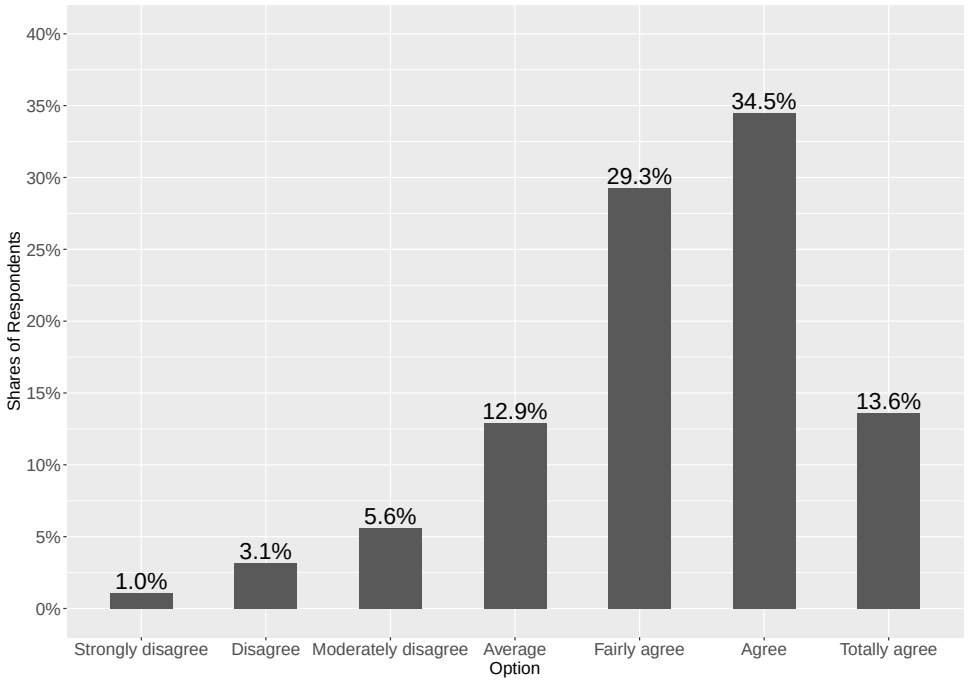
Figure A.4: Return Belief by Likert Scale

Note: This figure displays the distribution of return expectations obtained by asking participants the following question: "I expect that the returns of sustainable investment funds compared to less sustainable investment funds to be: a. Much lower, b. A bit lower, c. The same, d. A bit higher, e. Much higher, f. I don't know." The green bars depict answers under the ESG-Info condition, while the grey bars represent answers under the No-ESG-Info condition.

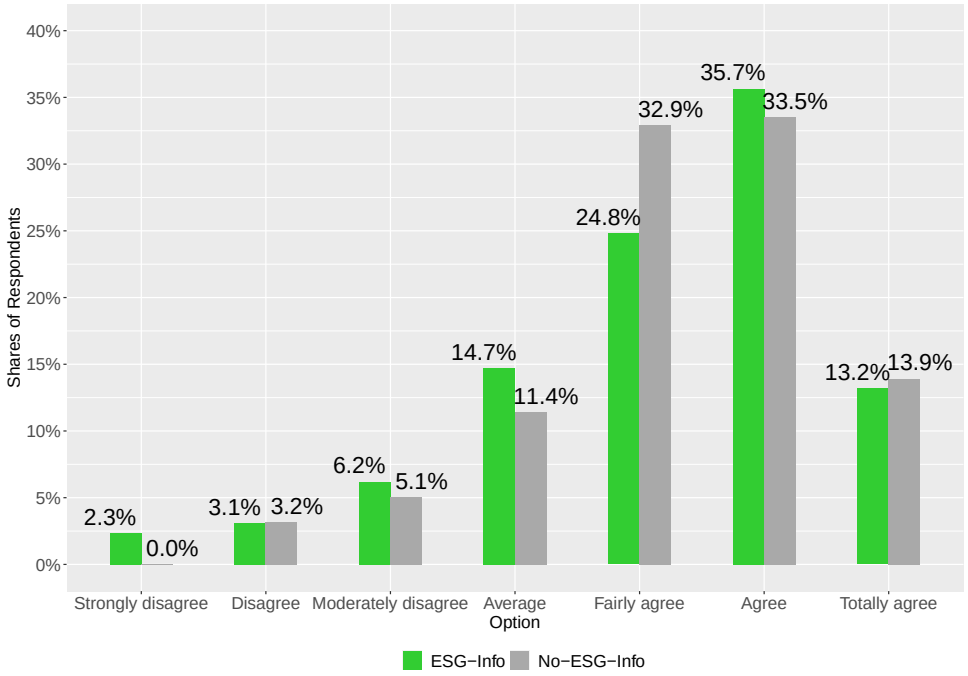
A.7 Subgroup Analysis: Median Belief Grouping by ESG Social Impact Expectations

Figure A.5 presents the distribution of participants' perceptions of ESG's positive social impact. The bars illustrate investor answers to the statement "Investment funds with ESG integration have a positive effect on society: 1 = Strongly disagree, 2 = Disagree, 3 = Moderately disagree, 4 = Average, 5 = Fairly agree, 6 = Agree, 7 = Totally agree." Panel (a) depicts the answers from the entire sample of participants. In panel (b), the green bars depict the answers under the ESG-Info condition, while the grey bars represent the answers under the No-ESG-Info condition.

Figure A.6 depicts a comparison of median beliefs on the fund return between participants who believe that ESG funds positively affect society and those who do not hold this belief.



Panel (a): All Sample Distribution



Panel (b): Comparison between Conditions

Figure A.5: ESG Social Impact Perception Distribution

Note: This figure presents the distribution of participants' perceptions of ESG positive social impact. The bars illustrate investor answers to the statement "Investment funds with ESG integration (environmental, social, governance) have a positive impact on society: 1 = Strongly disagree, 2 = Disagree, 3 = Moderately disagree, 4 = Average, 5 = Fairly agree, 6 = Agree, 7 = Totally agree." Panel (a) depicts the answers from the entire sample of participants. In panel (b), the green bars depict the answers from the ESG-Info condition, while the grey bars represent the answers from the No-ESG-Info condition.

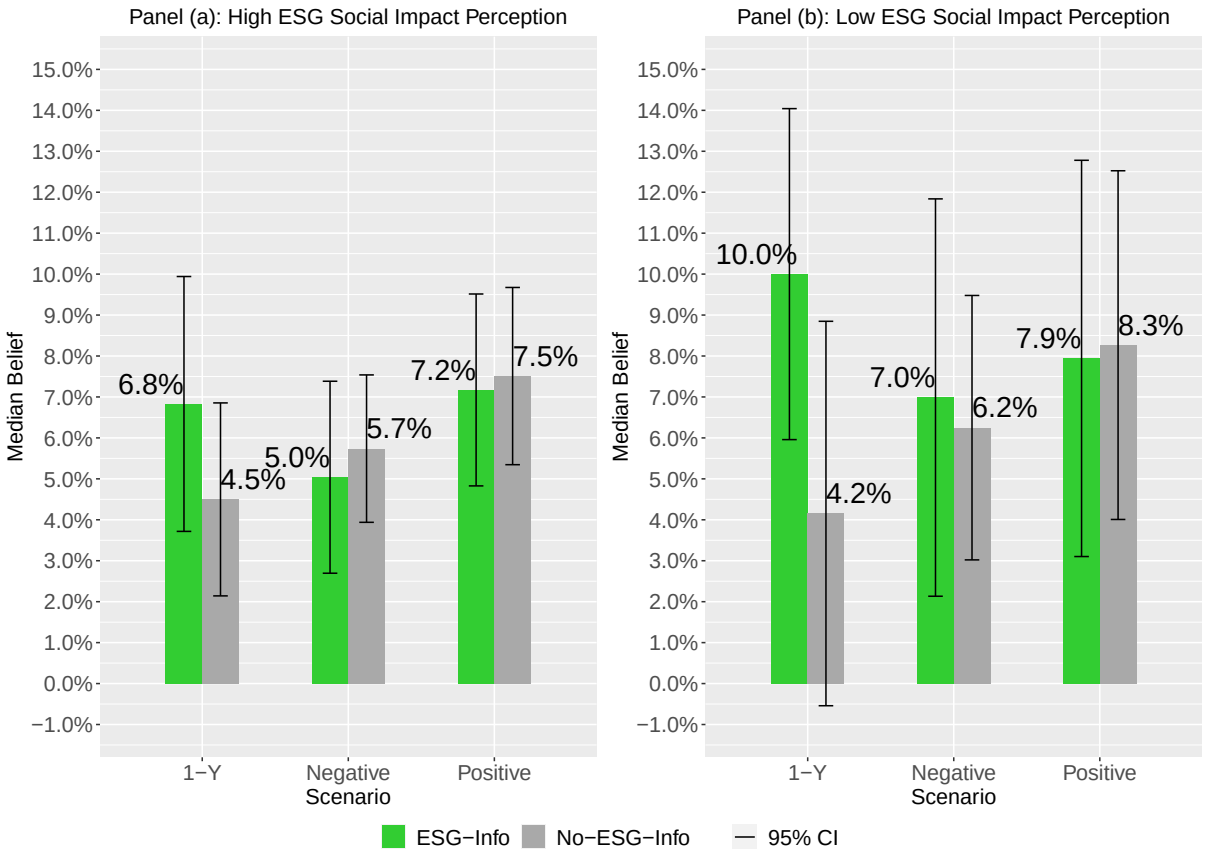


Figure A.6: Median Belief Comparison by ESG Impact Perception

Note: This figure illustrates the comparisons of participants' median beliefs on the fund return obtained from the exchangeability method under the ESG-Info and No-ESG-Info conditions as categorized by their answers to the non-incentivized Likert scale question regarding ESG's social impact. The green bars depict the answers under the ESG-Info condition, while the grey bars represent the answers under the No-ESG-Info condition. Panel (a) displays the median beliefs of participants who indicate that ESG funds have a positive social impact, while Panel (b) displays the median beliefs of participants who do not think that ESG funds have a positive social impact.

The regressions reported in Table A.4 compare the median beliefs on the fund return among participants who express that ESG funds have a positive social impact with those who do not hold this belief. We examine the impact of a known high ESG rating on participants' median beliefs on the fund return by categorizing them based on their perceptions of ESG's social impact in the non-incentivized Likert scale question.

A.8 Choice Matching Method: Upward Modification

Figure A.7 displays the patterns of modifications in expectations that are categorized as either upward or downward shifts under three different incentive conditions. The grey bars on the left side represent instances where participants decreased their expectations from their initial ones, indicating downward shifts. On the other hand, the blue bars on the right side illustrate instances where participants increased their expectations from their initial ones, indicating upward shifts. Overall, within the Full Incentive condition, there is no statistically significant difference observed between downward and upward return modifications ($p = 0.65$). However, the upward return modification observed under the

Table A.4: Sub-group Analysis: Median Belief by ESG Social Impact Perception

This table presents the regression analyses on participants' median beliefs regarding fund returns, elicited through the exchangeability method, using sub-group analyses. The median beliefs about the fund returns of participants who indicated that ESG funds have a positive social impact and those who indicated that ESG funds do not have a positive social impact are compared under both the ESG-Info and No-ESG-Info conditions. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's return expectation					
	High ESG Impact Perception			*Low ESG Impact Perception*		
	1-Y	Negative	Positive	1-Y	Negative	Positive
	(1)	(2)	(3)	(4)	(5)	(6)
High ESG Rating	2.854	−1.427	−0.556	10.470**	4.381	2.566
	(1.996)	(1.631)	(1.731)	(4.062)	(4.053)	(4.477)
Investing Experience	−2.473**	−0.483	−1.073	−0.958	1.972	4.349
	(0.895)	(0.731)	(0.776)	(2.125)	(2.121)	(2.343)
ESG Return by Likert Scale	1.095	1.251	0.652	0.903	3.627*	1.419
	(1.118)	(0.914)	(0.970)	(1.918)	(1.914)	(2.115)
Sustainability Risk	−0.894	−0.256	−0.501	1.605	−1.056	−0.093
	(0.714)	(0.583)	(0.619)	(1.779)	(1.776)	(1.961)
ESG Investment Amount	0.006	0.008	0.001	0.011	−0.005	0.004
	(0.007)	(0.006)	(0.006)	(0.018)	(0.018)	(0.020)
Observations	222	222	222	65	65	65
R^2	0.254	0.129	0.201	0.427	0.353	0.337
Demographics control	YES	YES	YES	YES	YES	YES
Preferences control	YES	YES	YES	YES	YES	YES

Full Incentive condition is significantly higher than those seen in both the No Incentive ($p = 0.006$) and Partial Incentive ($p = 0.026$) conditions.

A.9 Investor Belief Heterogeneity

In our analysis spanning from Table A.5 to Table A.12, we estimate the coefficients for participants' demographics by accounting for their preferences and the treatment of the high ESG rating. Our findings indicate a notable heterogeneity in participants' median beliefs about the fund return, which is significantly influenced by demographic factors.

Table A.5: Heterogeneity − Age

This table presents the coefficient estimates for age while controlling for participants' preferences and the information o the high ESG rating, instead of solely categorizing them based on demographics. The demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1 has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation		
	1-Y	Negative	Positive
	(1)	(2)	(3)
High ESG Rating Info	3.667**	−0.328	−0.257
	(1.709)	(1.370)	(1.522)
Age ∈ (40, 50]	−2.122	−2.066	−1.537
	(2.440)	(1.957)	(2.173)
Age ∈ (50, 60]	−3.384	2.334	1.224
	(2.484)	(1.992)	(2.212)
Age ∈ (60, 70]	−6.225**	2.037	−1.705
	(2.780)	(2.230)	(2.476)
Age > 70	−6.593*	−2.260	−1.024
	(3.613)	(2.898)	(3.218)
Observations	287	287	287
R^2	0.135	0.113	0.102
Demographics control	YES	YES	YES
Preferences control	YES	YES	YES

Table A.6: Heterogeneity − Gender

This table presents the coefficient estimates for gender while controlling for participants' preferences and information on the high ESG rating, instead of solely categorizing them based on demographics. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation		
	1-Y	Negative	Positive
	(1)	(2)	(3)
High ESG Rating Info	3.774**	−0.420	−0.198
	(1.714)	(1.367)	(1.505)
Male	0.964	0.838	1.866
	(1.430)	(1.140)	(1.255)
Observations	287	287	287
R^2	0.112	0.113	0.104
Demographics control	YES	YES	YES
Preferences control	YES	YES	YES

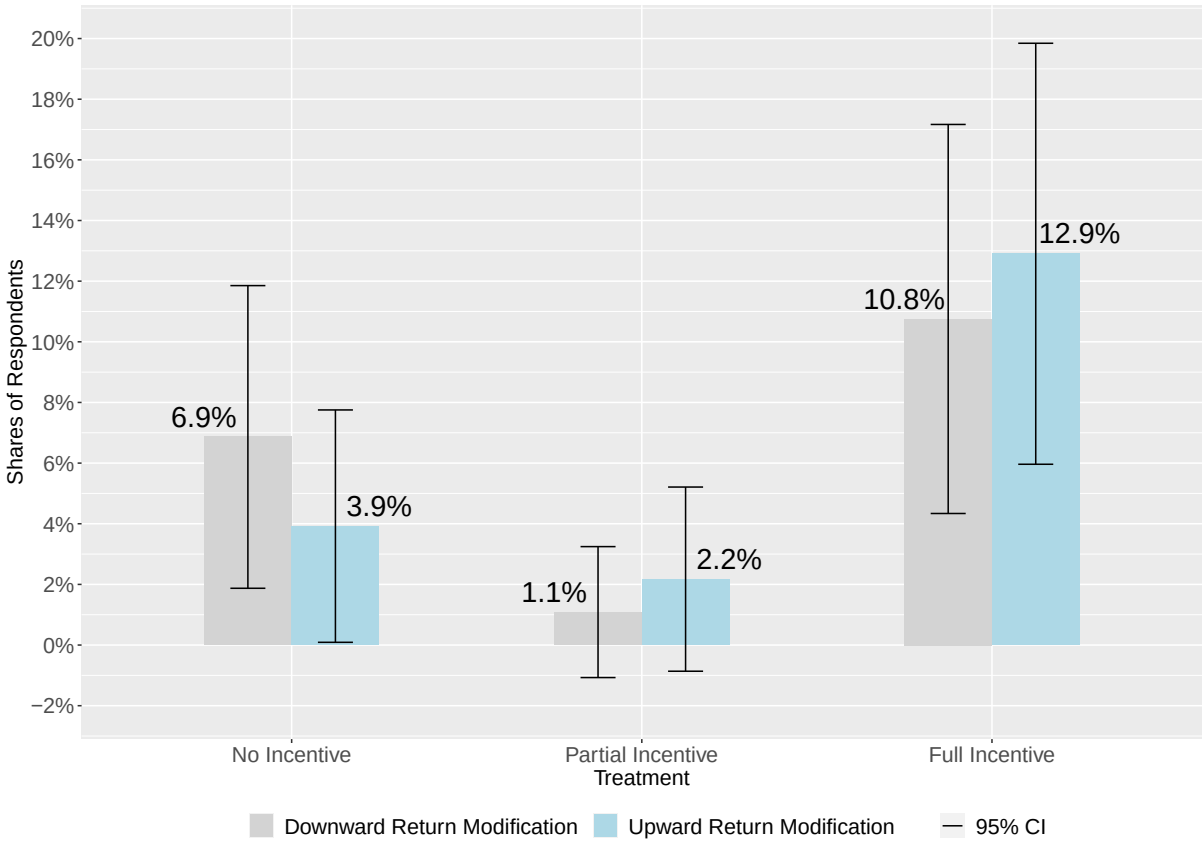


Figure A.7: Choice Matching Method: Upward and Downward Modification

Note: This figure depicts the distribution of modifications in return expectations for ESG funds across participants under the three incentive conditions in the choice matching method. The bars illustrate the percentage of participants adjusting their return expectations. The grey abars on the left side represent instances where participants made downward shifts in their expectations from their initial ones. On the other hand, the blue bars on the right side illustrate instances where respondents made upward shifts in their expectations from their initial ones.

Table A.7: Heterogeneity − Total Investment

This table presents the coefficient estimates for total investment while controlling for participants' preferences and information on the high ESG rating, instead of solely categorizing them based on demographics. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation		
	1-Y	Negative	Positive
	(1)	(2)	(3)
High ESG Rating Info	3.492**	−0.487	−0.383
	(1.698)	(1.372)	(1.516)
Total Investment ∈ (10K, 50K]	−4.474**	−0.489	−0.914
	(2.142)	(1.731)	(1.913)
Total Investment ∈ (50K, 100K]	−3.685	−2.593	−3.082
	(2.820)	(2.278)	(2.517)
Total Investment ∈ (100K, 250K]	−5.934**	−1.963	−1.330
	(3.039)	(2.455)	(2.713)
Total Investment > 250K	−7.154***	−0.585	−1.674
	(2.661)	(2.150)	(2.375)
Observations	287	287	287
R^2	0.139	0.104	0.102
Demographics control	YES	YES	YES
Preferences control	YES	YES	YES

Table A.8: Heterogeneity − Education

This table presents the coefficient estimates for the educational background while controlling for participants' preferences and information on the high ESG rating, instead of solely categorizing them based on demographics. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation		
	1-Y	Negative	Positive
	(1)	(2)	(3)
High ESG Rating Info	3.524**	−0.553	−0.501
	(1.721)	(1.375)	(1.518)
Education (College)	−1.566	0.096	−0.292
	(2.261)	(1.807)	(1.995)
Education (University Level or Above)	−2.229	−0.286	−1.022
	(1.991)	(1.591)	(1.757)
Observations	287	287	287
R^2	0.114	0.099	0.098
Demographics control	YES	YES	YES
Preferences control	YES	YES	YES

Table A.9: Heterogeneity − Investing Experience

This table presents the coefficient estimates for investing experience while controlling for participants' preferences and information on the high ESG rating, instead of solely categorizing them based on demographics. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation		
	1-Y	Negative	Positive
	(1)	(2)	(3)
High ESG Rating	3.218*	−0.511	−0.486
	(1.658)	(1.371)	(1.515)
Investing Experience ∈ (4, 6]	−1.439	1.645	−0.036
	(2.195)	(1.814)	(2.006)
Investing Experience ∈ (6, 10]	−2.101	−0.397	−0.243
	(2.634)	(2.177)	(2.407)
Investing Experience > 10	−9.316***	−0.870	−2.104
	(2.077)	(1.717)	(1.898)
Observations	287	287	287
R^2	0.177	0.105	0.101
Demographics control	YES	YES	YES
Preferences control	YES	YES	YES

Table A.10: Heterogeneity − Income

This table presents the coefficient estimates for income while controlling for participants' preferences and information on the high ESG rating, instead of solely categorizing them based on demographics. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation		
	1-Y	Negative	Positive
	(1)	(2)	(3)
High ESG Rating Info	3.884**	−0.426	−0.381
	(1.722)	(1.373)	(1.516)
Income ∈ (3K, 5K]	2.283	1.078	1.509
	(2.301)	(1.834)	(2.024)
Income ∈ (5K, 7.5K]	2.703	2.557	1.319
	(2.716)	(2.166)	(2.390)
Income > 7.5K	0.688	0.557	3.877
	(2.956)	(2.357)	(2.600)
Observations	287	287	287
R^2	0.116	0.104	0.104
Demographics control	YES	YES	YES
Preferences control	YES	YES	YES

Table A.11: Heterogeneity − Financial Literacy

This table presents the coefficient estimates for expected return calculation ability while controlling for participants' preferences and information on the high ESG rating, instead of solely categorizing them based on demographics. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation		
	1-Y	Negative	Positive
	(1)	(2)	(3)
High ESG Rating Info	3.710**	−0.508	−0.407
	(1.706)	(1.363)	(1.505)
Correct Return Calculation	1.884	0.139	−0.344
	(1.738)	(1.389)	(1.534)
Observations	287	287	287
R^2	0.114	0.099	0.096
Demographics control	YES	YES	YES
Preferences control	YES	YES	YES

Table A.12: Heterogeneity − Occupation

This table presents the coefficient estimates for employment status while controlling for participants' preferences and information on the high ESG rating, instead of solely categorizing them based on demographics. Demographic characteristics comprise the gender, age, education, investing experience, occupation, income, total investment, monthly investment, portfolio size, and financial literacy (measured by correct expected return calculation) of the participants. Preferences are altruism, trust, reciprocity, negative reciprocity (Self), negative reciprocity (Others), ESG index fund preference, active ESG fund preference, and donation. Table B.1has the definitions of the variables. Standard errors are reported in parentheses. The ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Fund's Return Expectation		
	1-Y	Negative	Positive
	(1)	(2)	(3)
High ESG Rating Info	3.579**	−0.530	−0.378
	(1.699)	(1.362)	(1.505)
Occupation (Paid work)	3.258*	0.685	−0.796
	(1.747)	(1.401)	(1.548)
Observations	287	287	287
R^2	0.122	0.100	0.097
Demographics control	YES	YES	YES
Preferences control	YES	YES	YES

A.10 Respondents' Risk Perceptions for a Lower ESG rating in Field Survey

To investigate participants' perceptions of the risk-return trade-off regarding ESG funds, we correlate their risk perceptions with their return expectations. These return expectations are obtained from the answers to the non-incentivized Likert scale question in section 2.3 of our study. Participants who selected "I don't know" in the Likert scale question are excluded from the sample in the analysis. Figure A.8 presents the correlation between the participants' return expectations and their perceptions of risk in relation to lower ESG rated funds. Our findings indicate that participants who perceive a low ESG rating as indicative of higher risk tend to expect a higher expected return for the fund rated highly compared to the one with no rating, according to the exchangeability method.

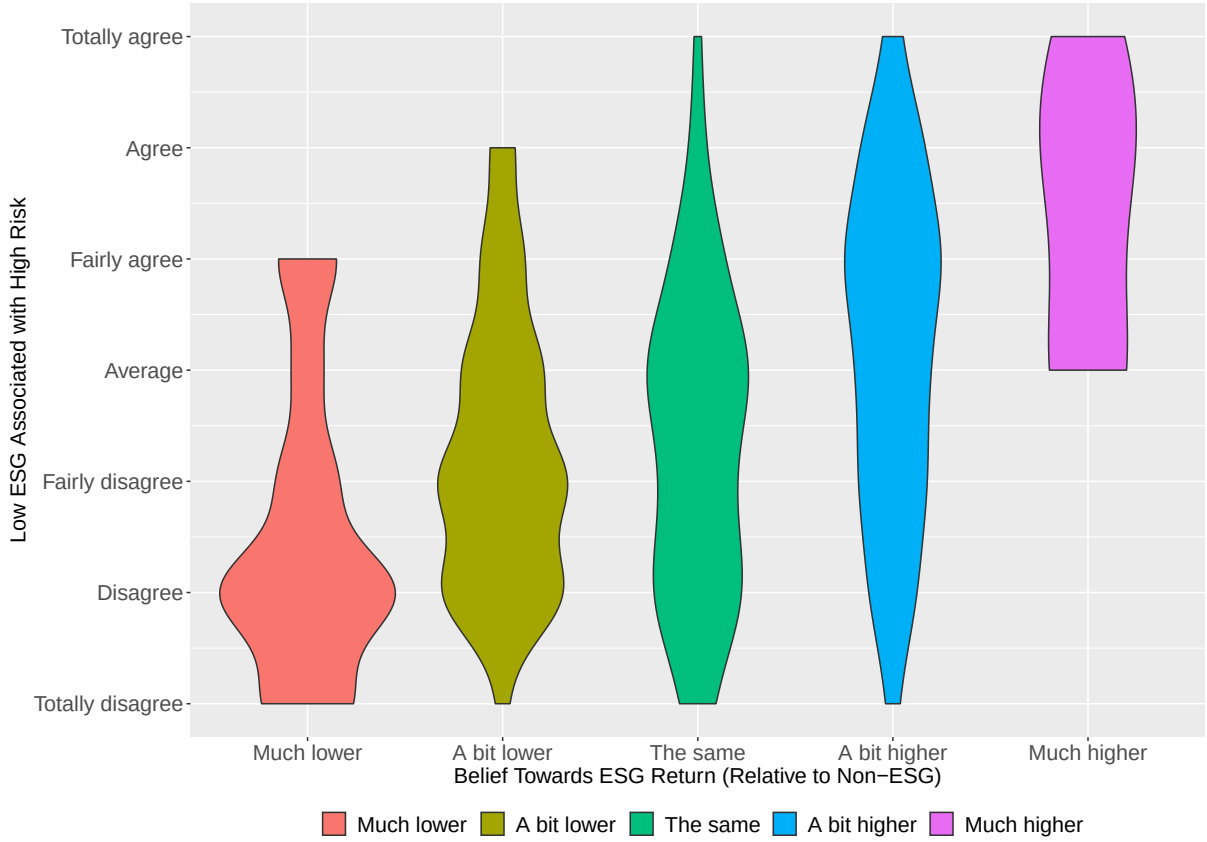


Figure A.8: Risk-return Perception towards ESG funds

Note: This figure depicts the correlation between participants' return expectations and their risk perceptions regarding lower rated ESG funds. Participants' return expectations are derived from the non-incentivized Likert scale question concerning the performance of ESG funds relative to conventional funds. The participants who selected "I don't know" in the Likert scale question are excluded from the sample in the analysis. Further, participants' risk perceptions of lower rated ESG funds are obtained from their answers to the statement "Less sustainable investment funds carry more risk than sustainable investment funds: 1 = Totally disagree, 2 = Disagree, 3 = Fairly disagree, 4 = Average, 5 = Fairly agree, 6 = Agree, 7 = Totally agree."

B Appendix B

Table B.1: Definitions of Variables

Variable	*Description*	*Measurement*
High ESG Info	Treatment of information on high ESG rating	In the ESG condition, information about the fund concerning the high ESG rating is provided, while in the non-ESG condition, no ESG-related information about the fund is offered
ESG Return Belief	The participant's answer to the question "I expect that the returns of index mutual funds that exclude companies with a low ESG score, compared to index mutual funds that do not exclude companies with a low ESG score:"	0, I do not know; 1, Much lower; 2, A bit lower; 3, The same; 4, A bit higher; 5, Much higher;
Male	Dummy variable for participants' gender	Equal to one if the participant reports being a man
Age	The participant's self-reported age	
Origin	The participant's answer to the question "Your origin:"	0, Dutch background; 1, First generation foreign, Western background; 2, First generation foreign, non-Western background; 3, Second generation foreign, Western background; 4, Second generation foreign, non-Western background; 5, Origin unknown, or part of the information unknown (missing values);
Investing Experience	The participant's answer to the question "Please state the number of years that you have experience with investing:"	0, no or less than 1 year; 1, 1 year − 3 years; 2, 4 years − 6 years; 3, 7 years − 10 years; 4, more than 10 years;
Income	The participant's answer to the question "Your personal gross monthly income in categories:"	0, No income; 1, 500 euros or less; 2, 501 euros to 1000 euros; 3, 1001 euros to 1500 euros;

Continued on next page

Table B.1 – *Continued from previous page*

Variable	***Description***	***Measurement***
Education	The participant's answer to the question "We request that you state your highest education:"	0, Primary school; 1, VMBO (Preparatory secondary vocational education, US: Junior High School); 2, HAVO/VWO (Higher General Secondary Education/Preparatory Scientific Education, US: Senior High School); 3, MBO (secondary vocational education, US: Junior College); 4, HBO (Higher Vocational Education, US: College); 5, WO (University); 6, Other; 7, Not (yet) completed education; 8, No education started yet;
ESG Knowledge	The participant's answer to the question "I think that my knowledge about ESG (Environment, Social, Governance: an English-language designation for investing with an eye for the environment, society and good corporate governance) in the investment context is better than ... of the respondents to this survey."	A value between 0% and 100%
Total Investment	The participant's answer to the question "How much money do you currently invest (in shares/mutual funds)?"	0, I'd rather not say; 1, 4999 euros or less; 2, 5000 euros to 9999 euros; 3, 10000 euros to 24999 euros; 4, 25000 euros to 49999 euros; 5, 50000 euros to 99999 euros; 6, 100000 euros to 249999 euros; 7, More than 250,000 euros;
Monthly Investment	The participant's answer to the question "How much do you invest on a monthly basis?"	0, 0; 1, 100 euros or less; 2, 101 euros to 300 euros; 3, 301 euros to 500 euros; 4, 501 euros to 1000 euros; 5, 1001 euros to 1500 euros; 6, 1501 euros to 2000 euros; 7, 2001 euros to 2500 euros; 8, 2501 euros to 3000 euros; 9, 3001 euros to 4000 euros; 10, 4001 euros to 5000 euros; 11, More than 5000 euros; 12, I'd rather not say;

Continued on next page

Table B.1 – *Continued from previous page*

Variable	***Description***	***Measurement***
Occupation	The participant's answer to the question "We request that you indicate your main occupation:"	1, Paid work; 2, Works or assists in the family business; 3, Independent professional, freelancer, or independent; 4, Job seeker due to loss of job; 5, New jobseeker; 6, Except for searching for work as a result of loss of job; 7, Goes to school or study; 8, Takes care of the household; 9, Is retired (voluntary), early pension, pension scheme; 10, Has (partial) incapacity for work; 11, Does unpaid work while using unemployment benefits; 12, Does volunteer work; 13, Does something else; 14, Is too young to have a job;
Portfolio Size	The participant's answer to the question "Suppose you have 10,000 euros in a savings account. You can leave this money in the savings account for the coming year and will then receive 5% interest with certainty. You will then receive 500 euros. Or you can invest the amount in an investment fund that tracks the performance of the stock market based on a stock index, with a 50% chance of a return of +40% (+4,000 euros) and a 50% chance of a return of −20% (-2,000 euros). Given this information, how much of the 10,000 euros will you invest in this equity investment fund?"	Investment Amount in the Index Fund
ESG Return by Likert Scale	The participant's answer to the question "I expect that the returns of sustainable investment funds compared to less sustainable investment funds:"	0, I do not know; 1, Much lower; 2, A bit lower; 3, The same; 4, A bit higher; 5, Much higher;
Index Fund Return	The participant's answer to the question "In general, I expect the returns of index mutual funds compared to active mutual funds to be:"	0, I do not know; 1, Much lower; 2, A bit lower; 3, The same; 4, A bit higher; 5, Much higher;
Trust	The participant's answer to the question "I assume that people only have the best intentions."	1, Totally disagree; 2, Disagree; 3, Fairly disagree; 4, Average; 5, Fairly agree; 6, Agree; 7, Totally agree;

Continued on next page

Table B.1 – *Continued from previous page*

Variable	***Description***	***Measurement***
Sustainability Risk	The participant's answer to the question "Less sustainable investment funds carry more risk than sustainable investment funds."	1, Totally disagree; 2, Disagree; 3, Fairly disagree; 4, Average; 5, Fairly agree; 6, Agree; 7, Totally agree;
ESG Impact	The participant's answer to the question "Investment funds with ESG integration (environmental, social, governance) have a positive impact on society."	1, Totally disagree; 2, Disagree; 3, Fairly disagree; 4, Average; 5, Fairly agree; 6, Agree; 7, Totally agree;
Positive Reciprocity	The participant's answer to the question "When someone does me a favor, I am willing to return the favor."	1, Totally disagree; 2, Disagree; 3, Fairly disagree; 4, Average; 5, Fairly agree; 6, Agree; 7, Totally agree;
Negative Reciprocity (Self)	The participant's answer to the question "If I am treated very unfairly, I will take revenge at the first opportunity, even if there are costs involved."	1, Totally disagree; 2, Disagree; 3, Fairly disagree; 4, Average; 5, Fairly agree; 6, Agree; 7, Totally agree;
Negative Reciprocity (Others)	The participant's answer to the question "I am willing to punish someone who treats others unfairly, even if it may come at a cost to myself."	1, Totally disagree; 2, Disagree; 3, Fairly disagree; 4, Average; 5, Fairly agree; 6, Agree; 7, Totally agree;
ESG Index Fund Preference	The participant's answer to the question "I would like to invest in an index investment fund that excludes companies that do not sufficiently take into account the environment, society, and corporate governance, even if this investment strategy is at the expense of the financial performance of the investment fund."	1, Totally disagree; 2, Disagree; 3, Fairly disagree; 4, Average; 5, Fairly agree; 6, Agree; 7, Totally agree;

Continued on next page

Table B.1 – *Continued from previous page*

Variable	***Description***	***Measurement***
Active ESG Fund Preference	The participant's answer to the question "I would like to invest in an actively managed investment fund that excludes companies that do not sufficiently take into account the environment, society, and corporate governance, even if this investment strategy is at the expense of the financial performance of the investment fund."	1, Totally disagree; 2, Disagree; 3, Fairly disagree; 4, Average; 5, Fairly agree; 6, Agree; 7, Totally agree;
Energy Transition Preference	The participant's answer to the question "To what extent are you prepared to invest part of your invested capital in an investment fund that focuses purely on companies that directly contribute to the energy transition (for example by devising solutions that lead to higher energy efficiency or the development of renewable energy)?"	A value between 0 and 100
Energy Efficiency Engagement	The participant's answer to the question "To what extent do you think it is important that asset managers address companies in their voting policy (voting at remote shareholder meetings) or their engagement policy (private dialogue with companies) on their energy efficiency and contribution to the energy transition?"	A value between 0 (Not important) and 6 (Very important)
Donation	The participant's answer to the question "Imagine the following situation: You have unexpectedly received 1000 euros today. How much of this amount would you donate to charity? (Values between 0 and 1000 are allowed.)"	A value between 0 and 1000

Continued on next page

Table B.1 – *Continued from previous page*

Variable	***Description***	***Measurement***
ESG Investment Amount	The participant's answer to the question "Meesman has two types of investment funds. Equity investment funds for the growth of your assets. Worldwide Total Shares is the ultimate share index investment fund for passive investors and Shares Sustainable Future is suitable for investors looking for an index investment fund with a more pronounced sustainable character. Please indicate how much you would like to invest in Worldwide Total Shares using your Meesman Credits. The rest will be automatically invested in Shares Sustainable Future."	A value between 0 and 400
Altruism	The participant's answer to the question "How willing are you to give to charities without expecting anything in return?"	A value between 1 (Definitely not willing) and 7 (Very willing)

Continued on next page

Table B.1 – *Continued from previous page*

Variable	***Description***	***Measurement***
Correct Return Calculation	The participant's answer to the question "Suppose that when answering the previous question you decided to invest X euros of the amount of €10000 in the stock index investment fund and you are one of the selected winners and therefore you have (10,000 – you have put. Remember that the return of the stock index mutual fund in the coming year will be either +40% or −20% with equal probability. The return for the savings account is guaranteed at 5%. How much money do you expect to have at the end of this one-year investment period? Please choose one of the answers below. If you choose the correct answer, you will receive a bonus of €50 on top of your payout for this experiment"	0, $0.5\times(0.4X\text{-}0.2X)+0.05\times(10000\text{-}X)$; 1, $1.4X + 0.8X + 1.05 \times (10000\text{-}X)$; 2, $0.4 \times (10.000\text{-}X)\text{-}0.2 \times (10.000\text{-}X) + 0.05X$; 3, $0.5 \times [0.4 \times (10000\text{-}X)\text{-}0.2 \times (10000\text{-}X)] + 0.05X$; 4, $0.4X\text{-}0.2X+0.05\times(10000\text{-}X)$; 5, $0.5\times(1.4X+0.8X)+1.05\times(10000\text{-}X)$; 6, $1.4\times(10000\text{-}X)+0.8\times(10000\text{-}X)+1.05X$; 7, $0.5 \times [1.4 \times (10000\text{-}X) + 0.8 \times (10000\text{-}X)]+1.05X$; 8, I'd rather not answer that;

C Appendix C

This document includes the screenshots and texts from the survey. We show English translations of the original texts in Dutch. The original Dutch texts are shown in screenshots. Options shown in the questions may vary because of respondents' previous answers.

Page 1

Thank you for participating in the survey!

Please enter your email address registered with Meesman.

Email address

(Correct format: simpel@example.com)

Confirm email address

(Correct format: simpel@example.com)

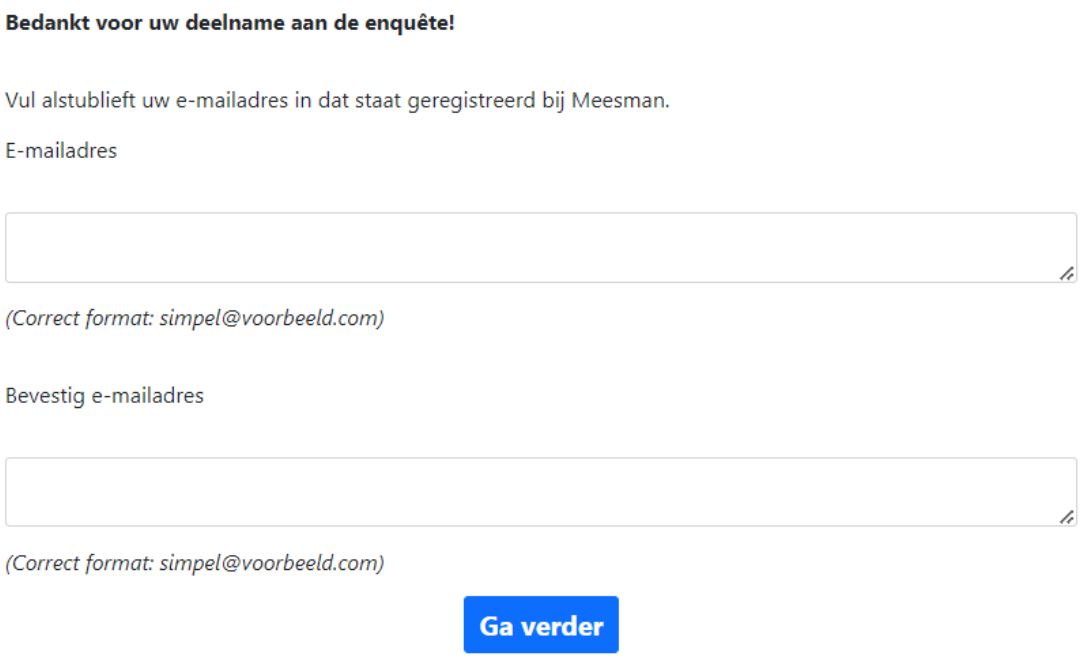


Figure C.1: Page 1

Page 2

Welcome! Please read the following information first.

Consent to Participate in the Survey

We are a group of researchers at Maastricht University. We are conducting research on private investors' predictions regarding mutual fund performance and their preferences for different types of mutual funds. The data collected in this survey will be used solely for research purposes, and your privacy and anonymity will be maintained. Please complete the survey in full. It will take approximately 20 minutes (on average).

Participating in this survey carries no risk. Depending on your luck and choices in the survey, you may receive a monetary reward.

Please confirm that you have read and understood the above consent form.

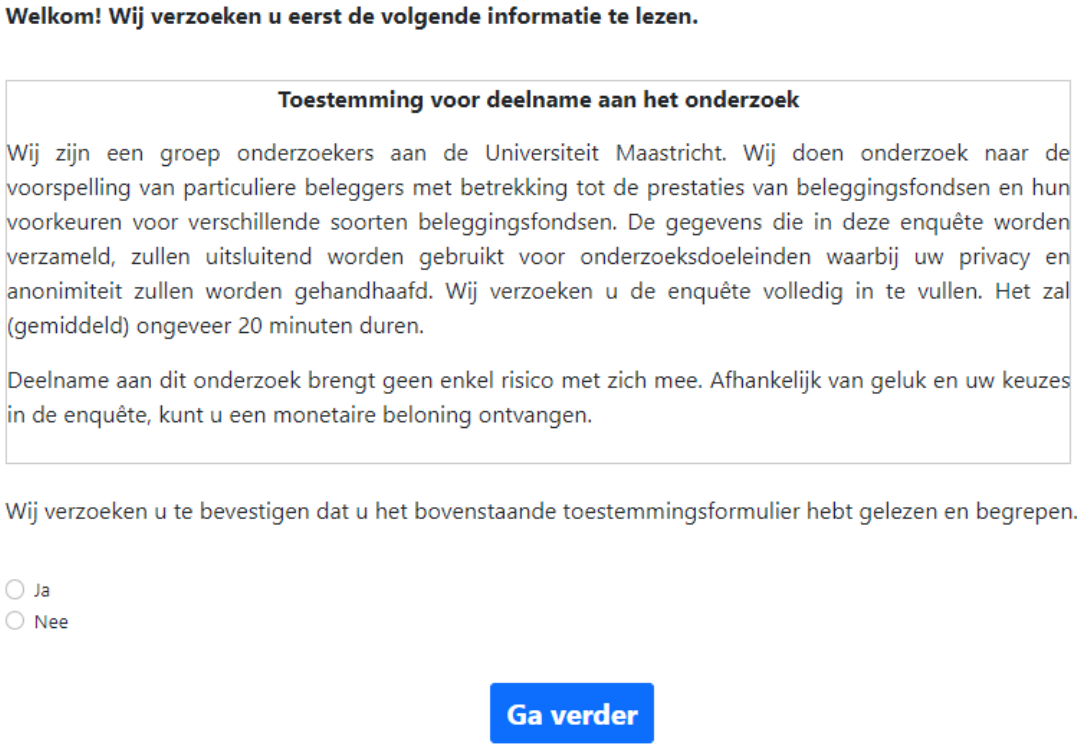


Figure C.2: Page 2

Page 3

General Introduction

Please do not attempt to go back, navigate to other pages, or use your browser buttons.

If you are on a computer, please enlarge your browser window for the best viewing experience.

This survey consists of five modules, each containing a different type of question.

If you complete all the questions in this survey, you may be eligible to win three types of rewards.

Reward – How do you get it?

Number	*Reward*	*How to obtain?*
1	200 euro	Among the first 100 participants, we will randomly select one participant and reward him/her with 200 euros.
2	200 euros + reward depending on choices in the questionnaire	Among all participants, we will randomly select one participant and reward him/her with 200 euros plus additional rewards depending on choices in this questionnaire (this will be explained later).
3	400 euros (for investing only)	We will randomly select one participant from all participants and reward them with €400. This amount can only be invested in Meesman products.

If you're one of the first 500 participants, you'll have a chance to win all three types

of rewards; if not, you'll still have a chance to win the other two. Note: it's possible to win more than one reward.
We'll notify you by email.
So please read the instructions and choose carefully.

Algemene Inleiding

Gelieve **niet** te proberen om terug te gaan, te navigeren naar andere pagina's, of uw browserknoppen te gebruiken.

Als u achter een computer zit, maak uw browservenster dan groot voor de beste kijkervaring.

Deze enquête bestaat uit **5 modules**, die elk een ander soort vragen bevatten.

Als u alle vragen van deze vragenlijst invult, maakt u mogelijk kans op drie soorten beloningen.

Beloning – Hoe krijgt u deze?

Nummer	Beloning	Hoe te verkrijgen?
1	200 euro	Onder de eerste 100 deelnemers zullen wij willekeurig één deelnemer selecteren en hem/haar belonen met 200 euro.
2	200 euro + beloning afhankelijk van keuzes in de vragenlijst	Onder alle deelnemers zullen wij willekeurig één deelnemer selecteren en hem/haar belonen met 200 euro plus extra beloningen afhankelijk van keuzes in deze vragenlijst (dit zal later worden uitgelegd).
3	400 euro (alleen voor beleggen)	Onder alle deelnemers zullen wij willekeurig één deelnemer selecteren en hem/haar belonen met 400 euro. Dit bedrag kan enkel worden belegd in producten van Meesman.

Als u één van de eerste 100 deelnemers bent, maakt u kans op alle drie de soorten beloningen; en zo niet, dan maakt u alsnog kans op de overige twee beloningen. Merk op: het is mogelijk om meer dan één beloning te winnen.

Wij zullen u via de e-mail op de hoogte brengen.

Lees dus alstublieft de instructies en kies zorgvuldig.

Ga verder

Figure C.3: Page 3

Page 4
I think my knowledge of ESG (Environmental, Social, Governance: an English term for investing with an eye for the environment, society and good corporate governance) in the investment context is better than ... that of the respondents in this survey.
Page 5
Module 1
In this module, you will estimate the return of an index mutual fund consisting of approximately 1,600 stocks of large and mid-sized companies from 23 developed countries worldwide.
We have selected seven consecutive years from the mutual fund's history. These seven consecutive years can be from any part of the fund's history and are not necessarily recent.

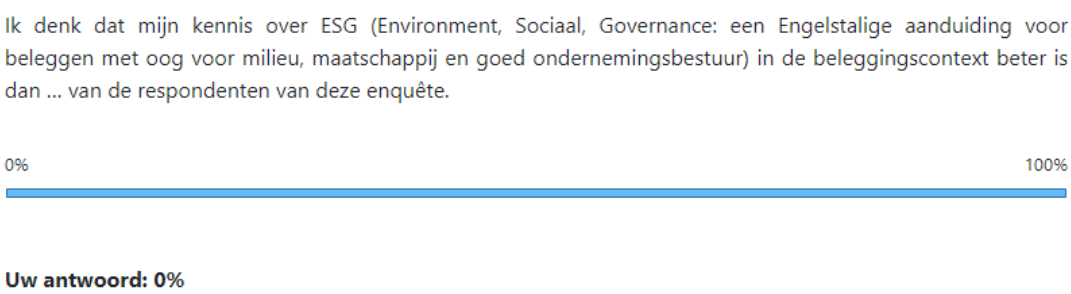


Figure C.4: Page 4

Below is a graph showing the annual return of the mutual fund over the first six years. (Note: All figures are percentage points; for example, 19.0 means 19.0%.) We ask you to make multiple choices regarding the fund's performance in the seventh year (Year 7). If this module is chosen to determine your monetary reward, each correct answer will be rewarded with €50.

For each question, we give you two options, as shown below, and we ask you to choose the option you prefer.

Option 1: You win €50 if the J7 return is equal to or greater than 10 and less than 15.

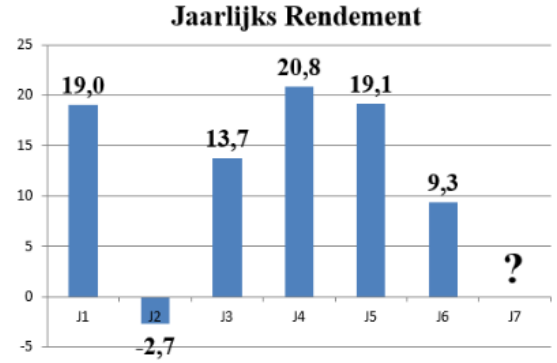
Option 2: You win €50 if the J7 return is equal to or greater than 5 and less than 10.

Clicking "Continue" will begin the real questions.

Module 1

In deze module schat u het rendement van een index-beleggingsfonds bestaande uit ongeveer 1.600 aandelen van grote en middelgrote ondernemingen uit 23 ontwikkelde landen wereldwijd.

Wij hebben zeven opeenvolgende jaren geselecteerd uit de geschiedenis van het beleggingsfonds. Deze zeven opeenvolgende jaren kunnen afkomstig zijn uit elk deel van de geschiedenis van het beleggingsfonds en zijn niet noodzakelijk recent. Hieronder ziet u een grafiek met het jaarlijkse rendement van het beleggingsfonds gedurende de eerste 6 jaar.



(N.B.: Alle getallen zijn procentpunten, bijvoorbeeld: 19,0 betekent 19,0%.)

Wij vragen u meerdere keuzes te maken betreffende de prestaties van het beleggingsfonds in het 7e jaar (J7). Als deze module wordt gekozen om uw monetaire beloning te bepalen, wordt elk juist antwoord beloond met 50 euro.

Bij elke vraag geven wij u twee opties, zoals hieronder, en vragen wij u de optie te kiezen die uw voorkeur heeft.

Optie 1: U wint 50 euro als het J7-rendement gelijk is aan of hoger is dan 10 en lager dan 15.

Optie 2: U wint 50 euro als het J7-rendement gelijk is aan of hoger is dan 5 en lager dan 10.

Als u op "Ga verder" klikt, starter de echte vragen.

Ga verder

Figure C.5: Page 5

Page 6

The investment fund's ESG score is Dark Green, the highest ESG score category.

Note: ESG stands for Environment, Social, Governance. This is an English term for investing with a focus on environmental, social, and corporate governance. Environmental concerns, among other things, how a company performs as a steward of nature. Social concerns, among other things, how the company treats its employees, suppliers, and the communities in which it operates. Good corporate governance concerns, among other things, a company's leadership, executive compensation, audits, internal controls, and shareholder rights. Greener investment funds (with a higher ESG score) therefore consist of companies that generally perform better in environmental, social, and governance (ESG), for example, by emitting fewer greenhouse gases, exhibiting less corruption, and treating their employees responsibly.

Click here to learn more about ESG.

Environmental

Environmental criteria may include a company's energy consumption, waste management, pollution, resource conservation, and animal treatment. These criteria can also be used to evaluate a company's potential environmental risks and how it addresses them. For example, issues may arise related to the ownership of contaminated land, hazardous waste disposal, toxic substance management, or compliance with government environmental regulations.

Social

Social criteria focus on a company's business relationships. Does it work with suppliers who share the same values as the company claims? Does the company donate a percentage of its profits to the local community or encourage employees to volunteer there? Do the company's working conditions prioritize employee health and safety? Are the interests of other stakeholders taken into account?

Governance

Regarding governance, investors may want to know whether a company uses accurate and transparent accounting methods and whether shareholders are allowed to vote on important issues.

Investors also want assurance that companies avoid conflicts of interest when selecting board members, do not use political contributions to obtain unfairly favorable treatment, and do not engage in illegal practices.

De ESG score van het beleggingsfonds is **Donkergroen, de hoogste ESG score categorie**.

Let op: ESG staat voor Environment, Sociaal, Governance. Dit is een Engelstalige aanduiding voor beleggen met oog voor milieu, maatschappij en goed ondernemingsbestuur. Milieu gaat o.a. over hoe een bedrijf presteert als rentmeester van de natuur. Maatschappij gaat o.a. over hoe het bedrijf omgaat met werknemers, leveranciers en de gemeenschappen waarin het bedrijf actief is. Goed ondernemingsbestuur gaat o.a. over het leiderschap van een bedrijf, de beloning van bestuurders, audits, interne controles en de rechten van aandeelhouders. Groenere beleggingsfondsen (met een hogere ESG score) bestaan dus uit bedrijven die over het algemeen beter presteren op het gebied van milieu, maatschappij en bestuur, bijvoorbeeld door minder broeikasgassen uit te stoten, minder corruptie te vertonen en netjes om te gaan met hun werknemers.

Klik hier als u meer wilt weten over ESG.

ESG-uitleg tonen

Ga verder

ESG-uitleg tonen

Milieu

Milieucriteria kunnen onder meer betrekking hebben op het energieverbruik van een bedrijf, het afval, de vervuiling, het behoud van natuurlijke hulpbronnen en de behandeling van dieren door een bedrijf omvatten. De criteria kunnen ook worden gebruikt bij het evalueren van eventuele milieurisico's van een bedrijf en de manier waarop het bedrijf met die risico's omgaat.

Zo kunnen er bijvoorbeeld problemen zijn in verband met het eigendom van verontreinigende grond, de verwijdering van gevaarlijk afval, het beheer van giftige stoffen of de naleving van de milieuvoorschriften van de overheid.

Sociaal

Sociale criteria richten zich op de zakelijke relaties van het bedrijf. Wordt er gewerkt met leveranciers die er dezelfde waarden op nahouden als het bedrijf beweert te doen? Doneert het bedrijf een percentage van zijn winst aan de lokale gemeenschap of moedigt het werknemers aan om daar vrijwilligerswerk te doen? Wordt er in de arbeidsomstandigheden van het bedrijf veel aandacht besteed aan de gezondheid en veiligheid van de werknemers? Wordt er rekening gehouden met de belangen van andere belanghebbenden?

Bestuur (=Governance)

Wat bestuur betreft willen beleggers wellicht weten of een onderneming accurate en transparante boekhoudmethoden hanteert en of aandeelhouders over belangrijke kwesties mogen stemmen.

Beleggers willen ook de zekerheid dat ondernemingen belangenconflicten vermijden bij de keuze van hun bestuursleden, geen politieke bijdragen gebruiken om een oneerlijk gunstige behandeling te verkrijgen en dat ze, zich niet schuldig maken aan illegale praktijken.

Figure C.6: Page 6

Page 7

Module 1: Question 1 of 15 (total five bisection questions)

The ESG score of this investment fund: Dark Green (the highest ESG score category)

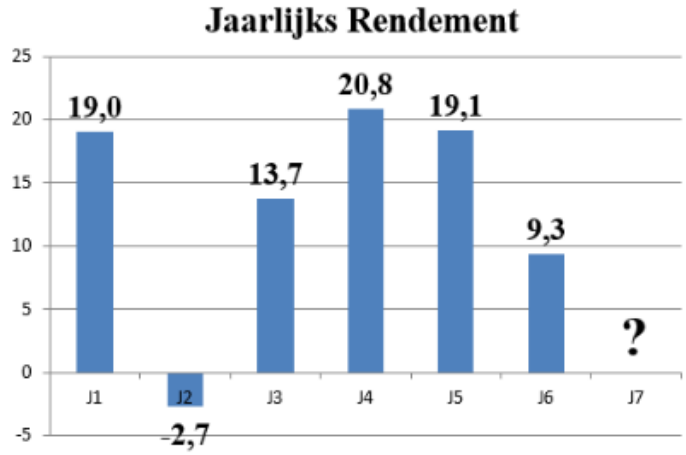
Show the ESG explanation again

ESG stands for Environment, Social, Governance. This is an English term for investing with a focus on environmental, social, and corporate governance. Environmental concerns, among other things, how a company performs as a steward of nature. Social concerns, among other things, how the company treats its employees, suppliers, and the communities in which it operates. Good corporate governance concerns, among other things, a company's leadership, executive compensation, audits, internal controls, and shareholder rights. Greener investment funds (with a higher ESG score) therefore consist of companies that generally perform better in environmental, social, and governance areas, for example, by emitting fewer greenhouse gases, exhibiting less corruption, and treating their employees responsibly.

Vraag 1 van 15 van Module 1

De ESG score van dit beleggingsfonds: **Donkergroen (de hoogste ESG score categorie)**

Laat de ESG-uitleg nogmaals zien



Ik wil €50 winnen...

- ○ **Optie 1: ...als J7 gelijk is aan of hoger is dan 0**
- ○ **Optie 2: ...als J7 minder is dan 0**

Ga verder

Laat de ESG-uitleg nogmaals zien

ESG staat voor Environment, Sociaal, Governance. Dit is een Engelstalige aanduiding voor beleggen met oog voor milieu, maatschappij en goed ondernemingsbestuur. Milieu gaat o.a. over hoe een bedrijf presteert als rentmeester van de natuur. Maatschappij gaat o.a. over hoe het bedrijf omgaat met werknemers, leveranciers en de gemeenschappen waarin het bedrijf actief is. Goed ondernemingsbestuur gaat o.a. over het leiderschap van een bedrijf, de beloning van bestuurders, audits, interne controles en de rechten van aandeelhouders. Groenere beleggingsfondsen (met een hogere ESG score) bestaan dus uit bedrijven die over het algemeen beter presteren op het gebied van milieu, maatschappij en bestuur, bijvoorbeeld door minder broeikasgassen uit te stoten, minder corruptie te vertonen en netjes om te gaan met hun werknemers.

Figure C.7: Page 7

Page 8

Now we'll show you two scenarios. One of them is real.

Your payout in this module is calculated based on your choices in the real scenario.

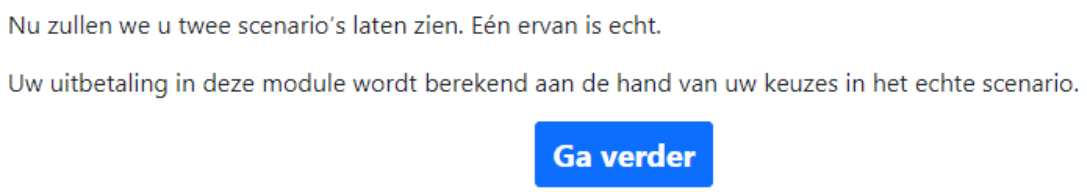


Figure C.8: Page 8

Page 9

Scenario 1:

Module 1: Question 6 of 15 (total five bisection questions)

Suppose the annual return of this investment fund in year 7 is -8.9%.

We ask you to make multiple choices regarding the investment fund's performance in year eight (year 8).

The ESG score of this investment fund: Dark Green (the highest ESG score category)

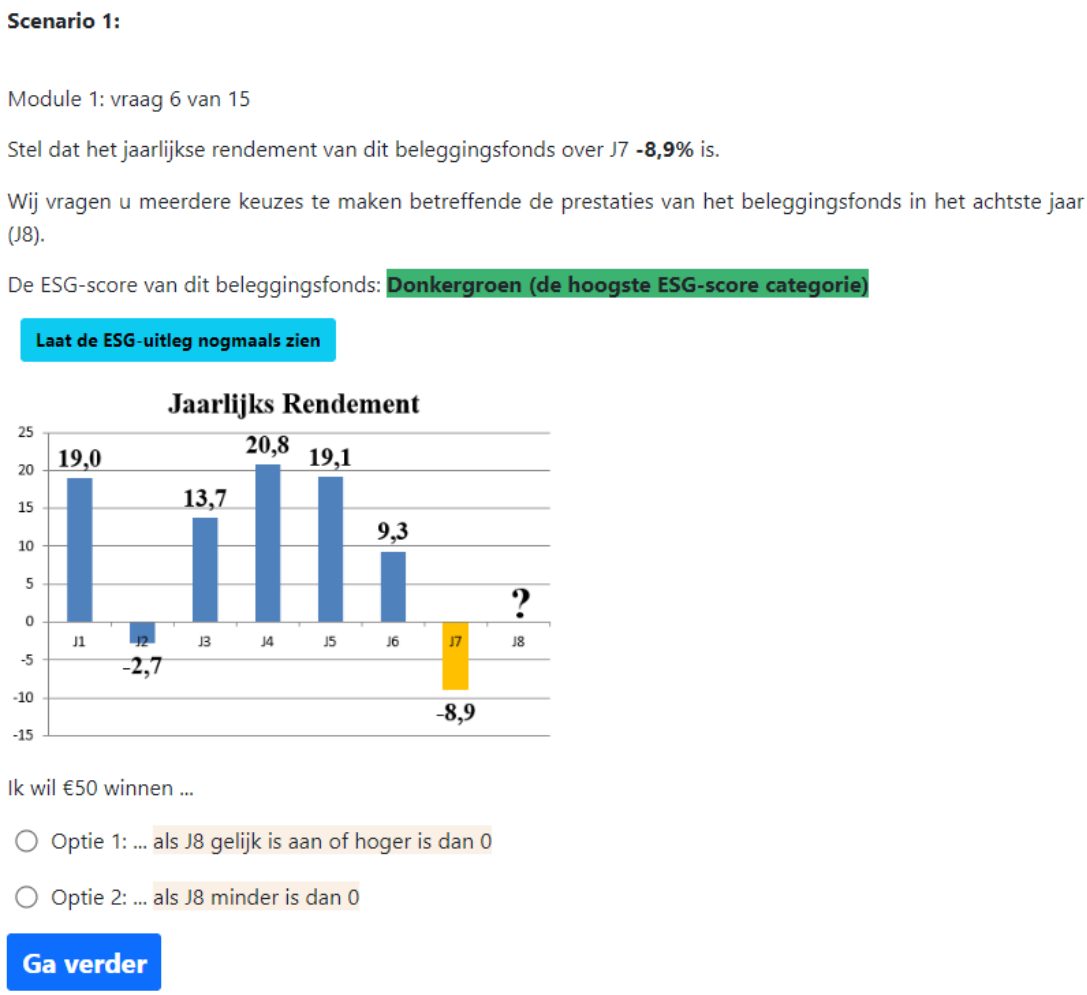


Figure C.9: Page 9

Page 10

Scenario 2:

Module 1: Question 11 of 15 (total five bisection questions)

Suppose the annual return of this investment fund over year 7 is +8.9%.

We ask you to make multiple choices regarding the investment fund's performance in year eight (year 8).

The ESG score of this investment fund: Dark Green (the highest ESG score category)

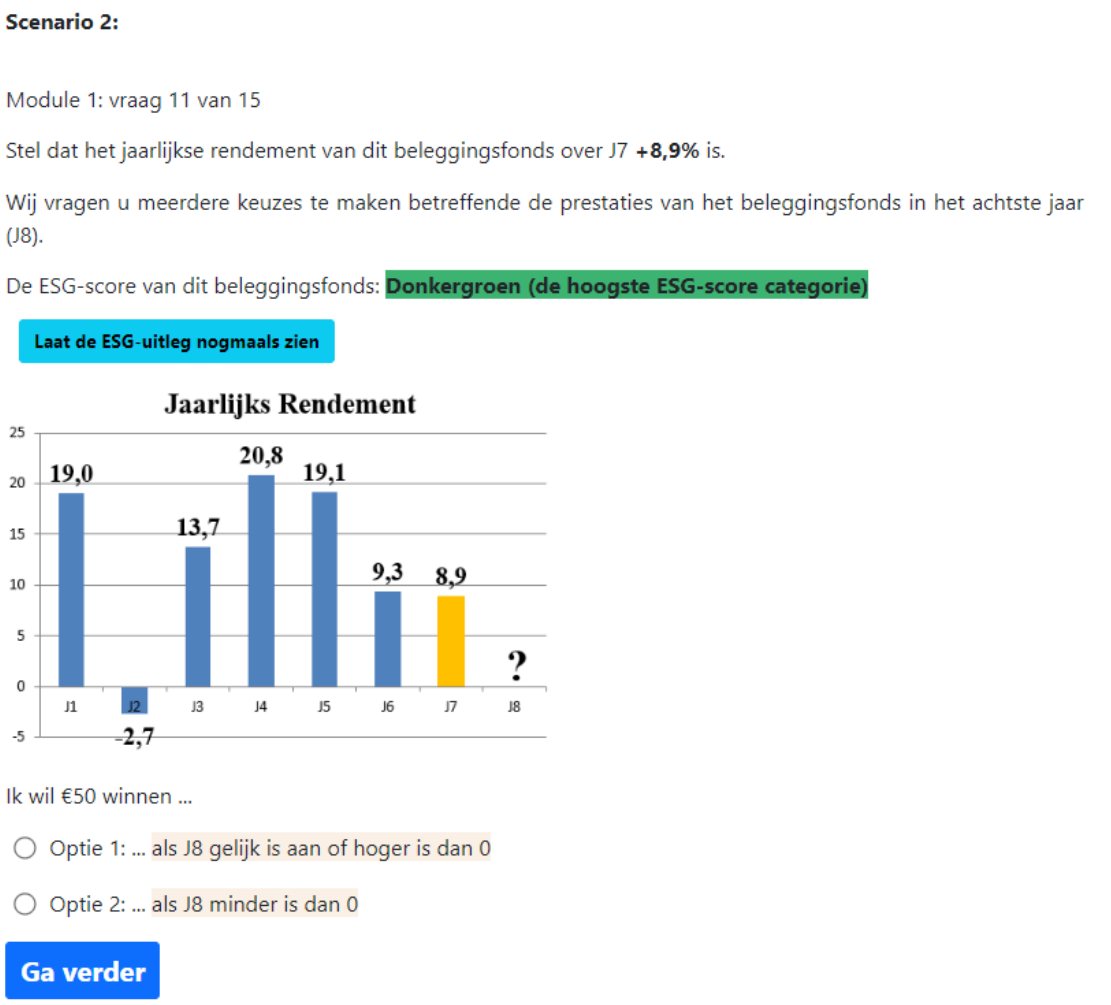


Figure C.10: Page 10

Page 11

Module 2

In this module, we'll ask you to choose between boxes containing different combinations of balls. Each ball represents an investment fund. The number of questions depends on your answers.

By clicking "Continue" below, you'll begin Module 2.

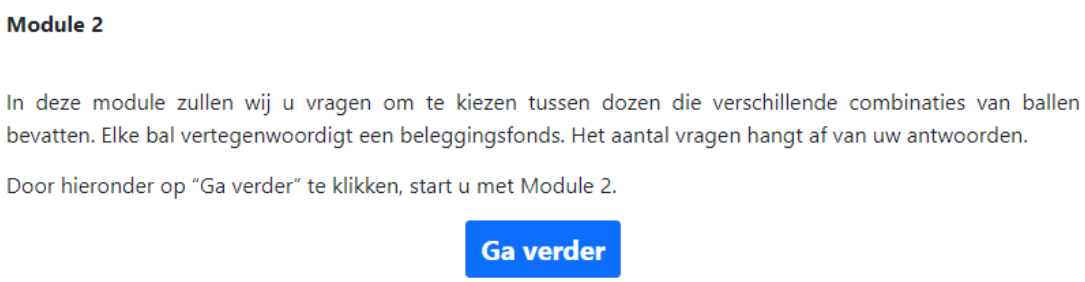


Figure C.11: Page 11

Page 12

Module 2: Question 1

You now have a chance to win €100 with the guessing game below.

Your task is to choose between Box K and Box U, both of which contain 100 mutual funds with either a positive annual return in 2021 ("+" or greater than 0) or a negative annual return in 2021 ("—" or less than 0). The computer will randomly select a ball from the box you choose. You win €100 if a mutual fund with a positive return ("+") is selected.

What is the difference between the two boxes?

Box K contains a precise mix of 100 mutual funds with positive returns ("+") and negative returns ("—"). For example, Box K below contains 50 mutual funds with a positive return ("+") and 50 mutual funds with a negative return ("—"). Note: The mix in Box K may be different for different questions (for example, 60 mutual funds with a positive return and 40 mutual funds with a negative return).

Box U contains 100 mutual funds randomly selected from all the mutual funds on the market, so the precise mix of mutual funds with a positive return ("+") and a negative return ("-") is unknown.

How do you choose?

Please indicate below which box you prefer, and we will select a mutual fund from the box of your choice.

If you find both boxes equally attractive, you can select the option "I can't tell the difference." The computer will then randomly choose a box for you and select a mutual fund from it.

Remember: You win €100 if a mutual fund with a positive return ("+") is selected. Think carefully about your choice.

Module 2: vraag 1

U heeft nu kans om **€100** te winnen met het raadspel hier beneden.

Uw taak is om te kiezen tussen Doos K en Doos U, die beide 100 beleggingsfondsen bevatten met ofwel een positief jaarlijks rendement in 2022 ("+" of groter dan 0) ofwel een negatief jaarlijks rendement in 2022 ("—" of kleiner dan 0). De computer zal willekeurig een bal selecteren uit de doos die u kiest. U wint 100 euro als een beleggingsfonds met een positief rendement ("+") wordt geselecteerd.

Wat is het verschil tussen de twee dozen?

Doos K bevat een precieze mix van 100 beleggingsfondsen met positief rendement ("+") en negatief rendement ("—"). Bijvoorbeeld, Doos K hier beneden bevat 50 beleggingsfondsen met een positief rendement ("+") en 50 beleggingsfondsen met een negatief rendement ("—"). Merk op: De mix in Doos K kan anders zijn voor verschillende vragen (bijvoorbeeld 60 beleggingsfondsen met een positief rendement en 40 beleggingsfondsen met een negatief rendement).

Doos U bevat 100 beleggingsfondsen die willekeurig zijn geselecteerd vanuit alle beleggingsfondsen op de markt, waardoor de precieze mix van beleggingsfondsen met een positief rendement ("+") en een negatief rendement ("—") niet bekend is.

Hoe kiest u?

Geef hieronder alstublieft aan welke doos uw voorkeur heeft en wij zullen een beleggingsfonds selecteren uit de doos naar uw keuze.

Als u beide dozen even aantrekkelijk vindt, mag u kiezen voor de optie "Ik zie het verschil niet". Dan zal de computer willekeurig een doos voor u kiezen en hieruit een beleggingsfonds selecteren.

Onthoud: U wint 100 euro als een beleggingsfonds met positief rendement ("+") wordt geselecteerd. Denk goed na over uw keuze.

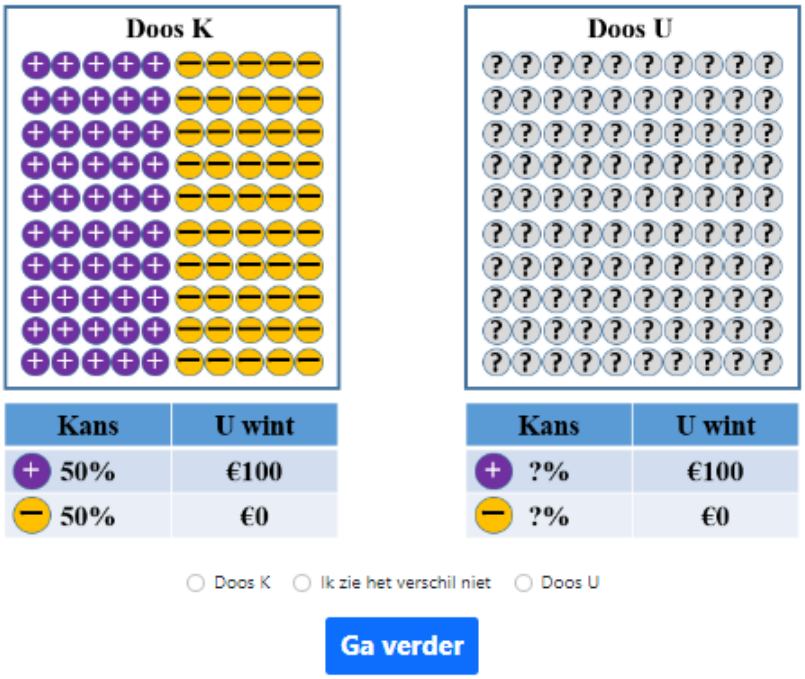


Figure C.12: Page 12

Page 13

Module 2: Question 2

You win € 100 if an investment fund with a positive return ("+") is selected.

Please indicate below which box you prefer, or select the option "I don't see the difference" if you find the boxes equally attractive.

Read the explanation again.

You now have a chance to win €100 with the guessing game below.

Your task is to choose between Box K and Box U, both containing 100 mutual funds with either a positive annual return in 2021 ("+" or greater than 0) or a negative annual return in 2021 ("—" or less than 0). The computer will randomly select a ball from the box you choose. You win €100 if a mutual fund with a positive return ("+") is selected.

What is the difference between the two boxes?

Box K contains a precise mix of 100 mutual funds with positive returns ("+") and negative returns ("—"). Note: The mix in Box K may vary for different questions (for example, 60 mutual funds with a positive return and 40 mutual funds with a negative return). Box U contains 100 mutual funds randomly selected from all the mutual funds on the market, so the precise mix of mutual funds with a positive return ("+") and a negative return ("-") is unknown.

How do you choose?

Please indicate below which box you prefer, and we will select a mutual fund from the box of your choice.

If you find both boxes equally attractive, you can select the option "I can't tell the difference." The computer will then randomly choose a box for you and select a mutual fund from it.

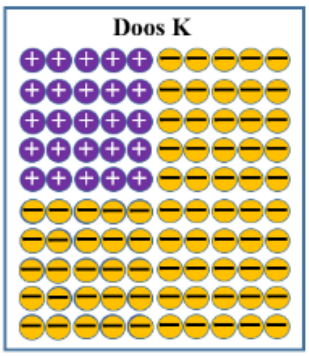
Remember: You win €100 if a mutual fund with a positive return ("+") is selected. Think carefully about your choice.

Module 2: vraag 2

U wint **€100** als een beleggingsfonds met een positief rendement ("+") wordt geselecteerd.

Geef hieronder alstublieft aan welke doos uw voorkeur heeft, of kies voor de optie "Ik zie het verschil niet" als u de dozen even aantrekkelijk vindt.

Lees de uitleg nog eens



Kans	U wint
+ 25%	€100
− 75%	€0



Kans	U wint
+ ?%	€100
− ?%	€0

○ Doos K ○ Ik zie het verschil niet ○ Doos U

Ga verder

Lees de uitleg nog eens

U heeft nu kans om **€100** te winnen met het raadspel hier beneden.

Uw taak is om te kiezen tussen Doos K en Doos U, die beide 100 beleggingsfondsen bevatten met ofwel een positief jaarlijks rendement in 2021 ("+" of groter dan 0) ofwel een negatief jaarlijks rendement in 2021 ("—" of kleiner dan 0). De computer zal willekeurig een bal selecteren uit de doos die u kiest. U wint 100 euro als een beleggingsfonds met een positief rendement ("+") wordt geselecteerd.

Wat is het verschil tussen de twee dozen?

Doos K bevat een precieze mix van 100 beleggingsfondsen met positief rendement ("+") en negatief rendement ("—"). Merk op: De mix in Doos K kan anders zijn voor verschillende vragen (bijvoorbeeld 60 beleggingsfondsen met een positief rendement en 40 beleggingsfondsen met een negatief rendement).

Doos U bevat 100 beleggingsfondsen die willekeurig zijn geselecteerd vanuit alle beleggingsfondsen op de markt, waardoor de precieze mix van beleggingsfondsen met een positief rendement ("+") en een negatief rendement ("—") niet bekend is.

Hoe kiest u?

Geef hieronder alstublieft aan welke doos uw voorkeur heeft en wij zullen een beleggingsfonds selecteren uit de doos naar uw keuze.

Als u beide dozen even aantrekkelijk vindt, mag u kiezen voor de optie "Ik zie het verschil niet". Dan zal de computer willekeurig een doos voor u kiezen en hieruit een beleggingsfonds selecteren.

Onthoud: U wint 100 euro als een beleggingsfonds met positief rendement ("+") wordt geselecteerd. Denk goed na over uw keuze.

Figure C.13: Page 13

Page 14

This concludes Module 2.

By clicking "Continue" below, you will begin Module 3.

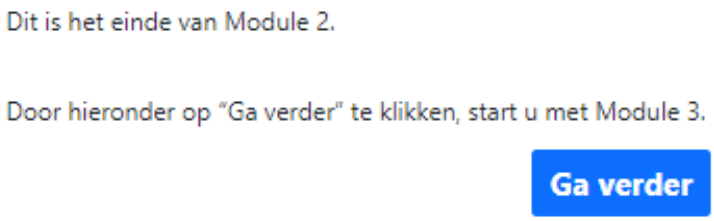


Figure C.14: Page 14

Page 15

Module 3

In this module, we'll ask you to choose between boxes containing different combinations of balls. Each ball represents a dark green investment fund, meaning an investment fund in the highest ESG score category. The number of questions depends on your answers.

By clicking "Continue" below, you'll begin Module 3.

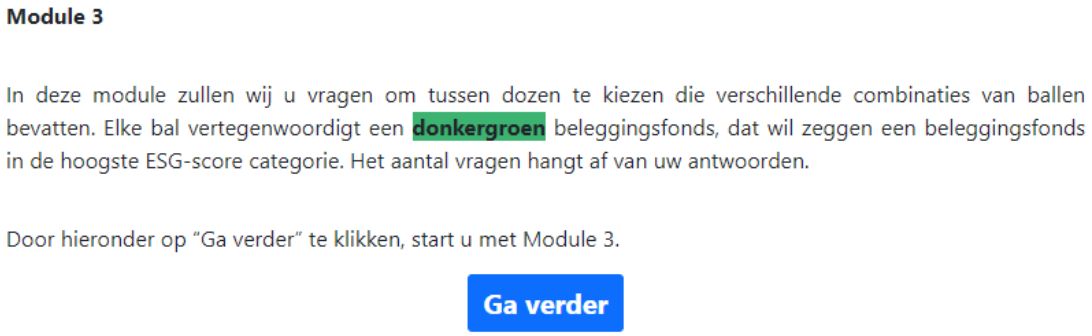


Figure C.15: Page 15

Page 16

Module 3: Question 1

You now have a chance to win €100 with the guessing game below.

Your task is to choose between Box K and Box U, both of which contain 100 dark green mutual funds (from the highest ESG score category) with either a positive annual return in 2021 ("+" or greater than 0) or a negative annual return in 2021 ("—" or less than 0). The computer will randomly select a ball from the box you choose. You win €100 if a mutual fund with a positive return ("+") is selected.

What is the difference between the two boxes?

Box K contains a precise mix of 100 dark green mutual funds with a positive return ("+") and a negative return ("—"). For example, Box K below contains 50 mutual funds with a positive return ("+") and 50 mutual funds with a negative return ("—"). Note: The mix in Box K can vary for different questions (for example, 60 mutual funds with a positive return and 40 mutual funds with a negative return).

Box U contains 100 dark green mutual funds randomly selected from all dark green mutual funds on the market, so the precise mix of mutual funds with a positive return ("+") and a negative return ("-") is unknown.
How do you choose?
Please indicate below which box you prefer, and we will select a mutual fund from the box of your choice.
If you find both boxes equally attractive, you can select the option "I can't tell the difference." The computer will then randomly choose a box for you and select a mutual fund from it.
Remember: You win €100 if a mutual fund with a positive return ("+") is selected. Think carefully about your choice.

Module 3: vraag 1

U heeft nu kans om **€100** te winnen met het raadspel hier beneden.

Uw taak is om te kiezen tussen Doos K en Doos U, die beide 100 **donkergroene** beleggingsfondsen (uit de hoogste ESG-score categorie) bevatten met ofwel een positief jaarlijks rendement in 2022 ("+" of groter dan 0) ofwel een negatief jaarlijks rendement in 2022 ("—" of kleiner dan 0). De computer zal willekeurig een bal selecteren uit de doos die u kiest. U wint 100 euro als een beleggingsfonds met een positief rendement ("+") wordt geselecteerd.

Wat is het verschil tussen de twee dozen?

Doos K bevat een precieze mix van 100 **donkergroene** beleggingsfondsen met een positief rendement ("+") en negatief rendement ("—"). Bijvoorbeeld, Doos K hier beneden bevat 50 beleggingsfondsen met een positief rendement ("+") en 50 beleggingsfondsen met een negatief rendement ("—"). Merk op: De mix in Doos K kan anders zijn voor verschillende vragen (bijvoorbeeld 60 beleggingsfondsen met een positief rendement en 40 beleggingsfondsen met een negatief rendement).

Doos U bevat 100 **donkergroene** beleggingsfondsen die willekeurig zijn geselecteerd vanuit alle **donkergroene** beleggingsfondsen op de markt, waardoor de precieze mix van beleggingsfondsen met een positief rendement ("+") en een negatief rendement ("—") niet bekend is.

Hoe kiest u?

Geef hieronder alstublieft aan welke doos uw voorkeur heeft en wij zullen een beleggingsfonds selecteren uit de doos naar uw keuze.

Als u beide dozen even aantrekkelijk vindt, mag u kiezen voor de optie "Ik zie het verschil niet". Dan zal de computer willekeurig een doos voor u kiezen en hieruit een beleggingsfonds selecteren.

Onthoud: U wint 100 euro als een beleggingsfonds met positief rendement ("+") wordt geselecteerd. Denk goed na over uw keuze.

ESG-uitleg tonen



Kans	U wint
+ 50%	€100
− 50%	€0

Kans	U wint
+ ?%	€100
− ?%	€0

○ Doos K ○ Ik zie het verschil niet ○ Doos U

Ga verder

Figure C.16: Page 16

Page 17

Module 3: Question 2

You win €100 if a dark green investment fund with a positive return ("+") is selected. Please indicate below which box you prefer, or select the option "I don't see the difference" if you find the boxes equally attractive.

You now have a chance to win €100 with the guessing game below.

Your task is to choose between Box K and Box U, both containing 100 dark green mutual funds (from the highest ESG score category) with either a positive annual return in 2021 ("+" or greater than 0) or a negative annual return in 2021 ("—" or less than 0). The computer will randomly select a ball from the box you choose. You win €100 if a mutual fund with a positive return ("+") is selected.

What is the difference between the two boxes?

Box K contains a precise mix of 100 dark green mutual funds with a positive return ("+") and a negative return ("—"). Note: The mix in Box K may vary for different questions (for example, 60 mutual funds with a positive return and 40 mutual funds with a negative return).

Box U contains 100 dark green mutual funds randomly selected from all dark green mutual funds on the market, so the precise mix of mutual funds with a positive return ("+") and a negative return ("-") is unknown.

How do you choose?

Please indicate below which box you prefer, and we will select a mutual fund from the box of your choice.

If you find both boxes equally attractive, you can select the option "I can't tell the difference." The computer will then randomly choose a box for you and select a mutual fund from it.

Remember: You win €100 if a mutual fund with a positive return ("+") is selected. Think carefully about your choice.

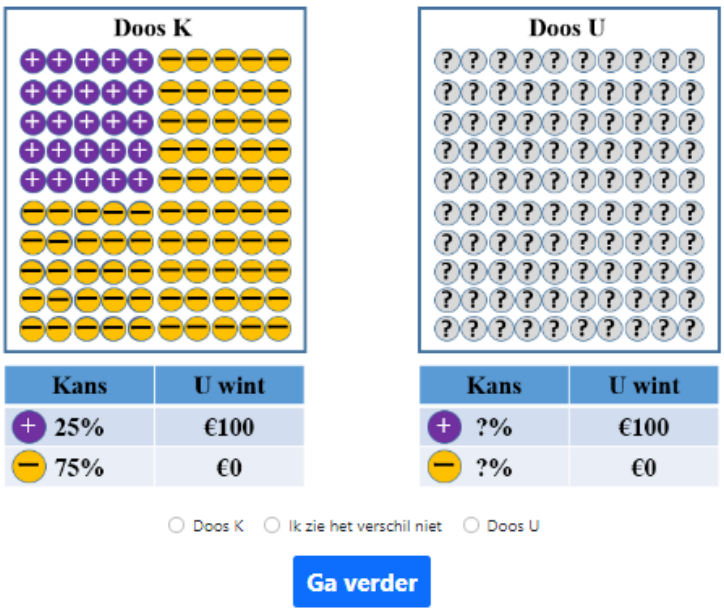
Module 3: vraag 2

U wint **€100** als een **donkergroen** beleggingsfonds met een positief rendement ("+") wordt geselecteerd.

Geef hieronder alstublieft aan welke doos uw voorkeur heeft, of kies voor de optie "Ik zie het verschil niet" als u de dozen even aantrekkelijk vindt.

Lees uitleg opnieuw

ESG-uitleg tonen



Doos K Ik zie het verschil niet Doos U

Ga verder

Lees uitleg opnieuw

U heeft nu kans om **€100** te winnen met het raadspel hier beneden.

Uw taak is om te kiezen tussen Doos K en Doos U, die beide 100 **donkergroene** beleggingsfondsen (uit de hoogste ESG score categorie) bevatten met ofwel een positief jaarlijks rendement in 2021 ("+" of groter dan 0) ofwel een negatief jaarlijks rendement in 2021 ("—" of kleiner dan 0). De computer zal willekeurig een bal selecteren uit de doos die u kiest. U wint 100 euro als een beleggingsfonds met een positief rendement ("+") wordt geselecteerd.

Wat is het verschil tussen de twee dozen?

Doos K bevat een precieze mix van 100 **donkergroene** beleggingsfondsen met een positief rendement ("+") en negatief rendement ("—"). Merk op: De mix in Doos K kan anders zijn voor verschillende vragen (bijvoorbeeld 60 beleggingsfondsen met een positief rendement en 40 beleggingsfondsen met een negatief rendement).

Doos U bevat 100 **donkergroene** beleggingsfondsen die willekeurig zijn geselecteerd vanuit alle **donkergroene** beleggingsfondsen op de markt, waardoor de precieze mix van beleggingsfondsen met een positief rendement ("+") en een negatief rendement ("—") niet bekend is.

Hoe kiest u?

Geef hieronder alstublieft aan welke doos uw voorkeur heeft en wij zullen een beleggingsfonds selecteren uit de doos naar uw keuze.

Als u beide dozen even aantrekkelijk vindt, mag u kiezen voor de optie "Ik zie het verschil niet". Dan zal de computer willekeurig een doos voor u kiezen en hieruit een beleggingsfonds selecteren.

Onthoud: U wint 100 euro als een beleggingsfonds met positief rendement ("+") wordt geselecteerd. Denk goed na over uw keuze.

Figure C.17: Page 17

Page 18

This is the end of Module 3.

By clicking "Continue" below, you will begin Module 4.

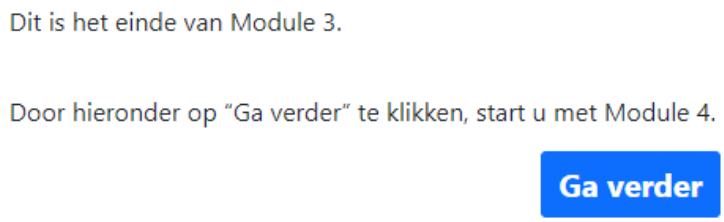


Figure C.18: Page 18

Page 19

Module 4

In this module, we'll ask you for your opinion on the returns of several index mutual funds.

By clicking "Continue" below, you'll begin Module 4.



Figure C.19: Page 19

Page 20

This module consists of two questions: Question A and Question B.

Question A: I expect the returns of index mutual funds that exclude companies with low ESG scores, compared to index mutual funds that do not exclude companies with low ESG scores:

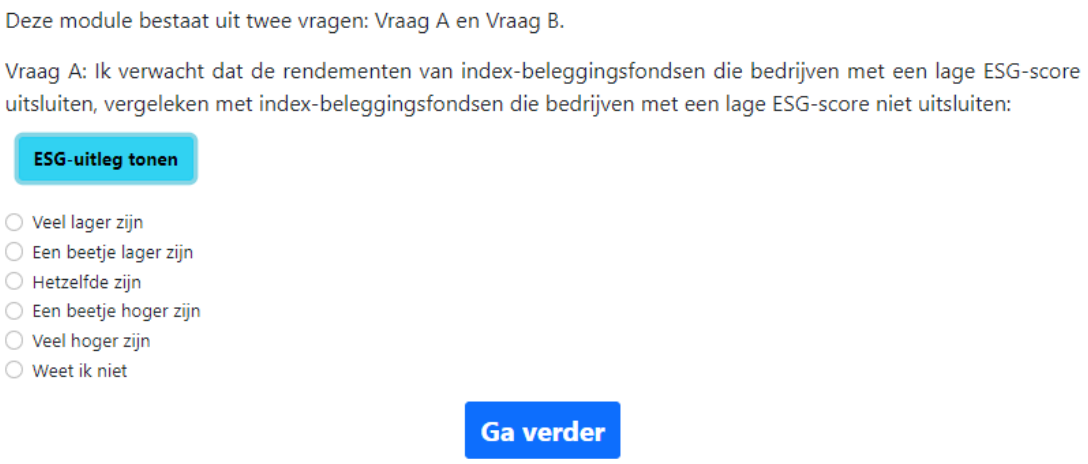


Figure C.20: Page 20

Page 21

Now you have the chance to win an extra monetary reward!

Question B: Please predict the percentage of participants (excluding yourself) who chose "The Same" or "Somewhat Higher" or "Much Higher" in Question A.

Prediction Bonus

We reward your prediction in Question B above based on accuracy. We calculate the percentage of others who chose "The Same" or "Somewhat Higher" or "Much Higher" in Question A and round this to the nearest whole number.

You will receive the maximum reward, €50, if your prediction is exactly correct. The greater the difference between your prediction and the actual percentage, the lower your reward will be. For example, if the difference is 1 percent, your reward will be €45; if the difference is 2 percent, your reward will be €4040;...

Please enter your best prediction to increase your chances of receiving the highest prediction bonus.

Nu heb je de kans om een extra monetaire beloning te winnen!

Vraag B: Voorspel alstublieft het percentage aan deelnemers (exclusief uzelf) die heeft gekozen voor "Hetzelfde" of "Iets hoger" of "Veel hoger" in Vraag A.

Voorspellingsbonus

Wij belonen uw voorspelling in Vraag B hierboven op nauwkeurigheid. Wij berekenen het percentage van anderen die "Hetzelfde" of "Iets hoger" of "Veel hoger" heeft gekozen in Vraag A en ronden dit af op het dichtstbijzijnde hele getal.

U ontvangt de maximale beloning, 50 euro, als uw voorspelling precies correct is. Hoe groter het verschil tussen uw voorspelling en het daadwerkelijke percentage, hoe lager uw beloning zal zijn. Bijvoorbeeld, als het verschil 1 procent is, zal uw beloning 45 euro zijn; als het verschil 2 procent is, zal uw beloning 40 euro zijn;...

Beloningstabel

Vul alstublieft uw beste voorspelling in om de kans te vergroten om de hoogste voorspelbonus te ontvangen.

0% 100%

Uw voorspelling: 0%

Beloningstabel

Voorspellingsfout	Uw beloning
0%	€50 – 0*€5= €50
1%	€50 – 1*€5 = €45
2%	€50 – 2*€5 = €40
3%	€50 – 3*€5 = €35
4%	€50 – 4*€5 = €30
5%	€50 – 5*€5 = €25
6%	€50 – 6*€5 = €20
7%	€50 – 7*€5 = €15
8%	€50 – 8*€5 = €10
9%	€50 – 9*€5 = €5
10% of hoger	€50 – 10*€5 = €0

Figure C.21: Page 21

Page 22

Answer Bonus

You will receive an additional monetary reward as long as at least one participant chooses all the answers in this questionnaire.

How do you calculate your answer bonus?

Suppose you answered "I don't know" to Question A. Then we look at everyone who also answered "I don't know."

Suppose their average Prediction Bonus for Question B is €30. In that case, your answer bonus is also €30.

Your Answer Bonus is therefore the average Prediction Bonus of participants who answered the same as you did for Question A.

By reporting your honest answer, you are compared to like-minded participants, whose prediction bonuses could be just as high as yours!

In this module, Total Bonus = Prediction Bonus + Answer Bonus. After reading the information above, reconsider your answer to Question A.

Question A: I expect the returns of index mutual funds that exclude companies with low ESG scores compared to index mutual funds that do not exclude companies with low ESG scores to be:

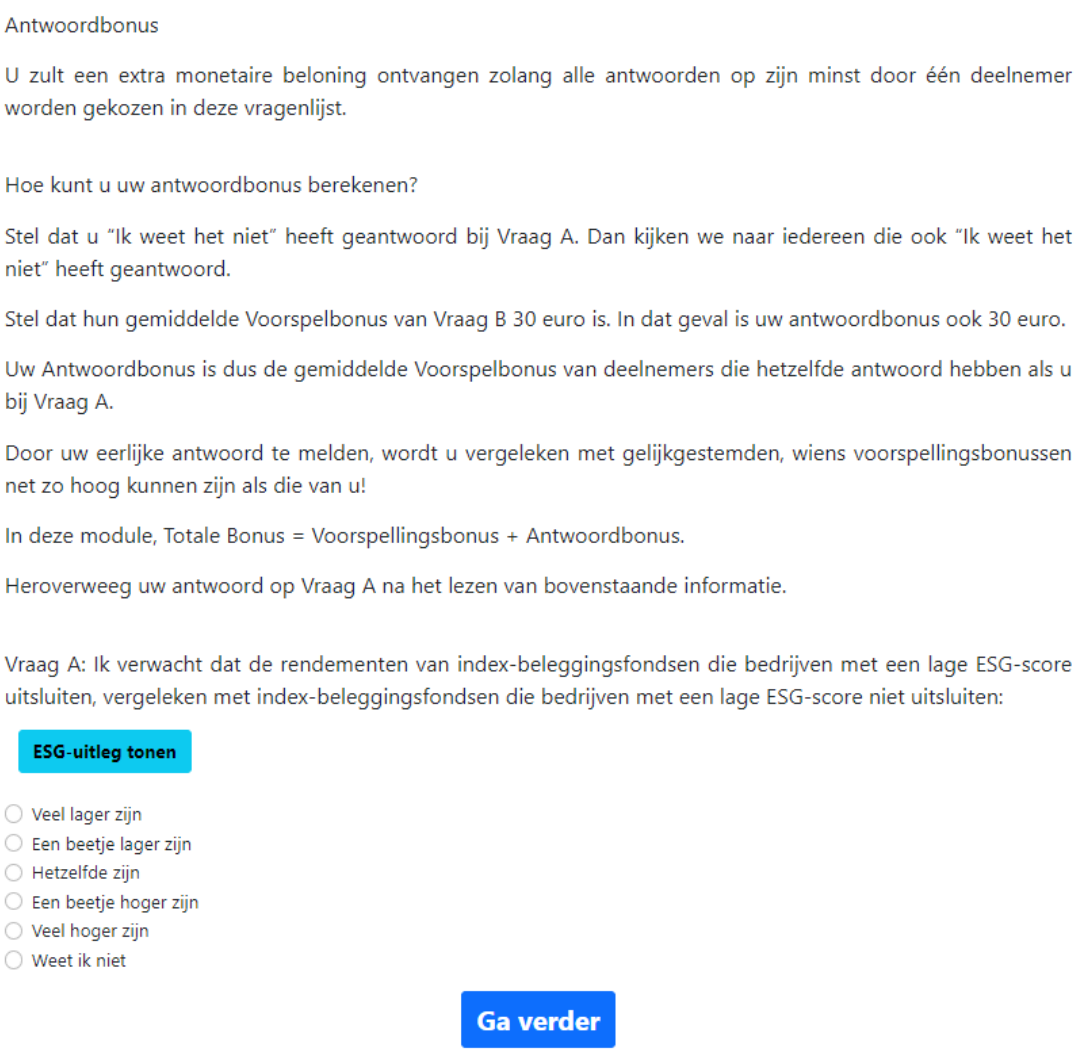


Figure C.22: Page 22

Page 23

In Question A, you chose: the returns of index mutual funds that exclude non-ESG companies are much lower than those of index mutual funds that include non-ESG companies. In Question B, you predicted that 39% of the other participants would choose "The same" or a higher answer (i.e., The same, A little higher, or Much higher).
Would you please confirm your choice in the previous question? If you cannot confirm your choice, you have another opportunity to choose.

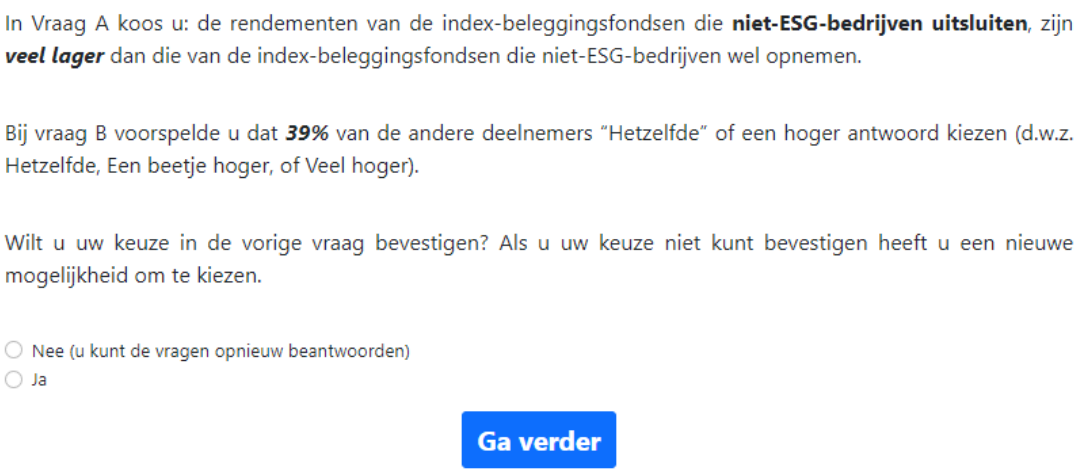


Figure C.23: Page 23

Page 24

You have one additional opportunity to answer the question. This is the last opportunity. You will receive monetary rewards (Answer Bonus and Prediction Bonus) based on your answers to Questions A and B.

Question A: I expect the returns of index mutual funds that exclude companies with low ESG scores, compared to index mutual funds that do not exclude companies with low ESG scores:

Question B: Please predict the percentage of participants (excluding yourself) who selected "The same" or "Slightly higher" or "Much higher" in Question A.

You will receive an additional monetary reward as long as at least one participant chooses all the answers in this questionnaire.

How can you calculate your answer bonus?

Suppose you answered "I don't know" in Question A. Then we look at everyone who also answered "I don't know."

Suppose their average Prediction Bonus in Question B is €30. In that case, your answer bonus is also €30.

In other words, your Answer Bonus is the average Prediction Bonus of participants who answered the same as you to Question A. By reporting your honest answer, you will be compared to like-minded individuals, whose prediction bonuses could be just as high as yours!

In this module, Total Bonus = Prediction Bonus + Answer Bonus.

Reconsider your answer to Question A after reading the information above.

ESG Explanation

ESG stands for Environment, Social, Governance. This is an English term for investing with a focus on the environment, society, and good corporate governance. Environment concerns, among other things, how a company performs as a steward of nature. Society concerns, among other things, how the company treats its employees, suppliers, and the communities in which it operates. Good corporate governance concerns, among other

things, a company's leadership, executive compensation, audits, internal controls, and shareholder rights. Greener investment funds (with a higher ESG score) therefore consist of companies that generally perform better in environmental, social, and governance (ESG) areas, for example, by emitting fewer greenhouse gases, exhibiting less corruption, and treating their employees responsibly.

We reward your prediction in Question B above based on accuracy. We calculate the percentage of others who selected "The same," "Slightly higher," or "Much higher" in Question A and round this to the nearest whole number.

You will receive the maximum reward, €50, if your prediction is exactly correct. The greater the difference between your prediction and the actual percentage, the lower your reward will be. For example, if the difference is 1 percent, your reward will be €45; if the difference is 2 percent, your reward will be €4040;...

Please enter your best prediction to increase your chances of receiving the highest prediction bonus.

U heeft één extra mogelijkheid om de vraag te beantwoorden. Dit is de laatste mogelijkheid.

U ontvangt monetaire beloningen (Antwoordbonus en Voorspellingsbonus) op basis van uw antwoorden op Vraag A en Vraag B.

Vraag A: Ik verwacht dat de rendementen van index-beleggingsfondsen die bedrijven met een lage ESG-score uitsluiten, vergeleken met index-beleggingsfondsen die bedrijven met een lage ESG-score niet uitsluiten:

Antwoordbonus Uitleg

- ○ Veel lager zijn
- ○ Een beetje lager zijn
- ○ Hetzelfde zijn
- ○ Een beetje hoger zijn
- ○ Veel hoger zijn
- ○ Weet ik niet

Vraag B: Voorspel alstublieft het percentage aan deelnemers (exclusief uzelf) die heeft gekozen voor "Hetzelfde" of "Iets hoger" of "Veel hoger" in Vraag A.

Voorspellingsbonus uitleg

0% 100%

Uw voorspelling: 0%

Antwoordbonus Uitleg

U zult een extra monetaire beloning ontvangen zolang alle antwoorden op zijn minst door één deelnemer worden gekozen in deze vragenlijst.

Hoe kunt u uw antwoordbonus berekenen?

Stel dat u "Ik weet het niet" heeft geantwoord bij Vraag A. Dan kijken we naar iedereen die ook "Ik weet het niet" heeft geantwoord.

Stel dat hun gemiddelde Voorspelbonus van Vraag B 30 euro is. In dat geval is uw antwoordbonus ook 30 euro.

In andere woorden, uw Antwoordbonus is de gemiddelde Voorspelbonus van deelnemers die hetzelfde antwoord hebben als u bij Vraag A.

Door uw eerlijke antwoord te melden, wordt u vergeleken met gelijkgestemden, wiens voorspellingsbonussen net zo hoog kunnen zijn als die van u!

In deze module, Totale Bonus = Voorspellingsbonus + Antwoordbonus.

Heroverweeg uw antwoord op Vraag A na het lezen van bovenstaande informatie.

ESG-uitleg

ESG staat voor Environment, Sociaal, Governance. Dit is een Engelstalige aanduiding voor beleggen met oog voor milieu, maatschappij en goed ondernemingsbestuur. Milieu gaat o.a. over hoe een bedrijf presteert als rentmeester van de natuur. Maatschappij gaat o.a. over hoe het bedrijf omgaat met werknemers, leveranciers en de gemeenschappen waarin het bedrijf actief is. Goed ondernemingsbestuur gaat o.a. over het leiderschap van een bedrijf, de beloning van bestuurders, audits, interne controles en de rechten van aandeelhouders. Groenere beleggingsfondsen (met een hogere ESG score) bestaan dus uit bedrijven die over het algemeen beter presteren op het gebied van milieu, maatschappij en bestuur, bijvoorbeeld door minder broeikasgassen uit te stoten, minder corruptie te vertonen en netjes om te gaan met hun werknemers.

Voorspellingsbonus uitleg

Wij belonen uw voorspelling in Vraag B hierboven op nauwkeurigheid. Wij berekenen het percentage van anderen die "Hetzelfde" of "Iets hoger" of "Veel hoger" heeft gekozen in Vraag A en ronden dit af op het dichtstbijzijnde hele getal.

U ontvangt de maximale beloning, 50 euro, als uw voorspelling precies correct is. Hoe groter het verschil tussen uw voorspelling en het daadwerkelijke percentage, hoe lager uw beloning zal zijn. Bijvoorbeeld, als het verschil 1 procent is, zal uw beloning 45 euro zijn; als het verschil 2 procent is, zal uw beloning 40 euro zijn;...

Voorspellingsfout	Uw beloning
0%	€50 – 0*€5= €50
1%	€50 – 1*€5 = €45
2%	€50 – 2*€5 = €40
3%	€50 – 3*€5 = €35
4%	€50 – 4*€5 = €30
5%	€50 – 5*€5 = €25
6%	€50 – 6*€5 = €20
7%	€50 – 7*€5 = €15
8%	€50 – 8*€5 = €10
9%	€50 – 9*€5 = €5
10% of hoger	€50 – 10*€5 = €0

Vul alstublieft uw beste voorspelling in om de kans te vergroten om de hoogste voorspelbonus te ontvangen.

Figure C.24: Page 24

Page 25

Module 5

In this module, we will ask you to answer 15 questions about yourself and your beliefs. By clicking "Continue" below, you will begin Module 5.



Figure C.25: Page 25

Page 26

Module 5: Question 1 of 15

Please indicate your gender:

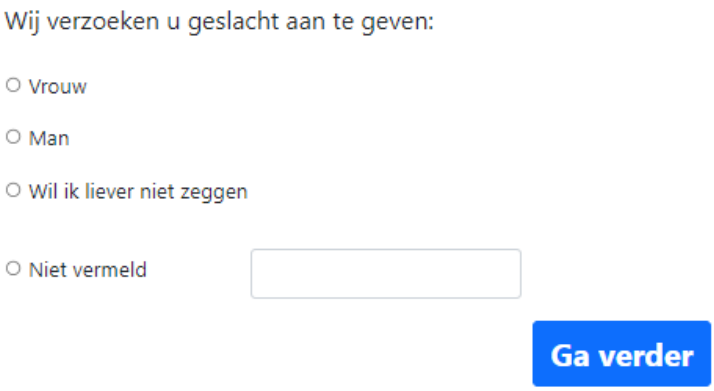


Figure C.26: Page 26

Page 27

Module 5: Question 2 of 15

Your year of birth:



Figure C.27: Page 27

Page 28

Module 5: Question 3 of 15

We request that you state your highest level of education completed:

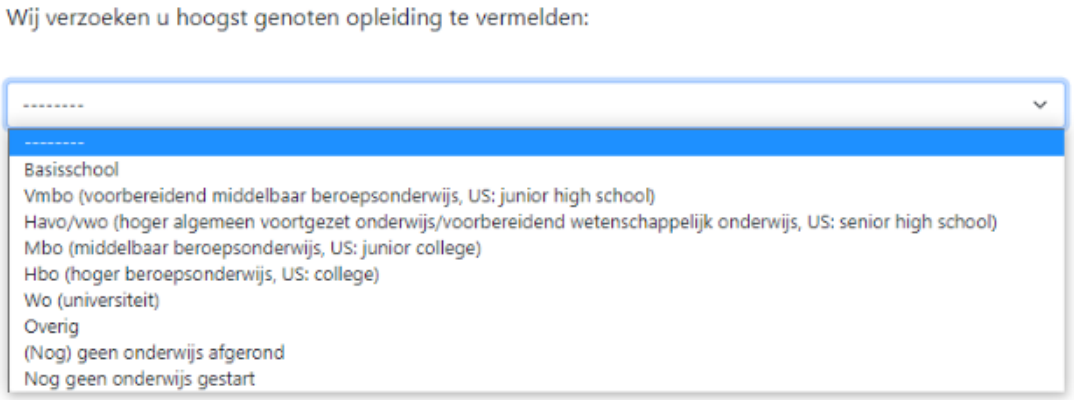


Figure C.28: Page 28

Page 29

Module 5: Question 4 of 15

We request that you indicate your main occupation:

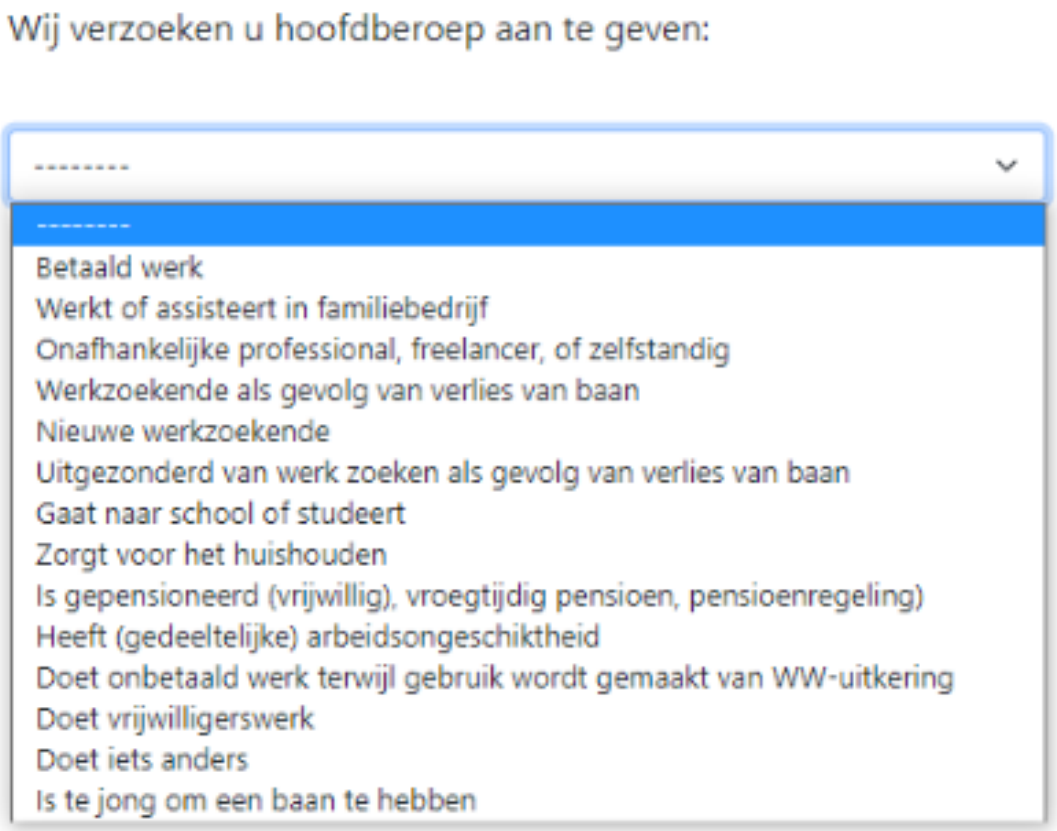


Figure C.29: Page 29

Page 30

Module 5: Question 5 of 15

Your personal gross monthly income, broken down into categories:

How much money are you currently investing (in stocks/mutual funds)?

How much do you invest monthly?



Figure C.30: Page 30

Page 31

Module 5: Question 6 of 15

Your origin:

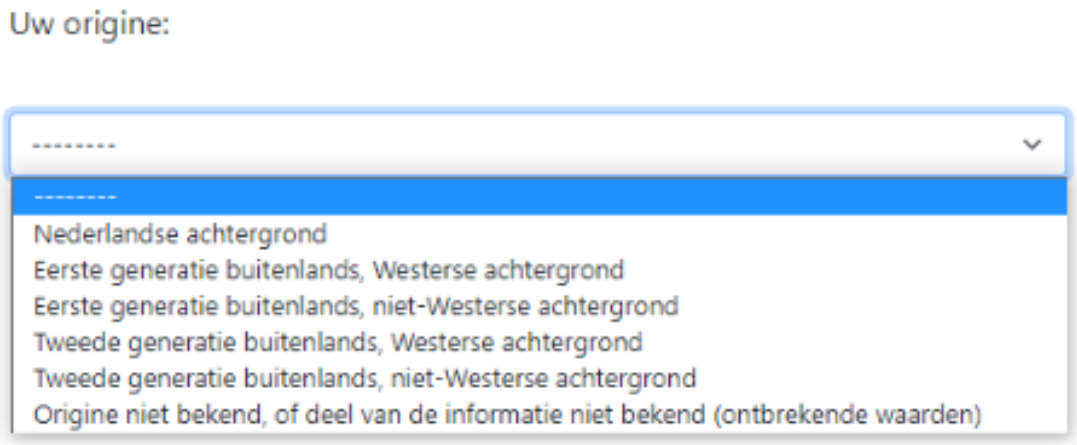


Figure C.31: Page 31

Page 32

Module 5: Question 7 of 15

Please indicate the number of years of investing experience you have:



Figure C.32: Page 32

Page 33

Module 5: Question 8 of 15

How willing are you to give to charities without expecting anything in return?

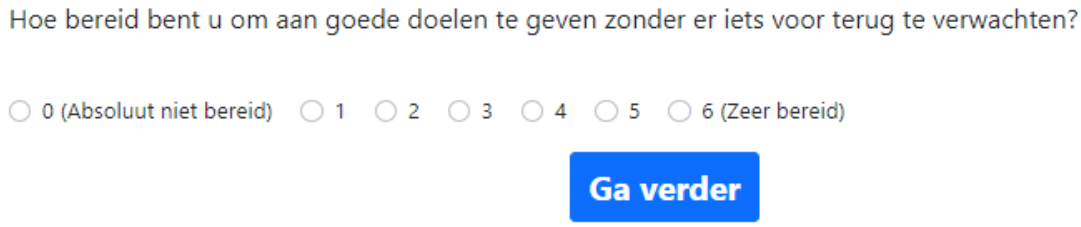


Figure C.33: Page 33

Page 34

Module 5: Question 9 of 15

Suppose you have €10,000 in a savings account. You can leave this money there for the next year and will then receive a guaranteed 5% interest rate. You will then receive €500. Or you can invest the amount in a mutual fund that tracks the stock market performance based on a stock index, with a 50% chance of a return of +40% (+€4,000) and a 50% chance of a return of -20% (-€2,000).

Given this information, how much of the €10,000 will you invest in this stock mutual fund?

Your investment amount in the stock index mutual fund:

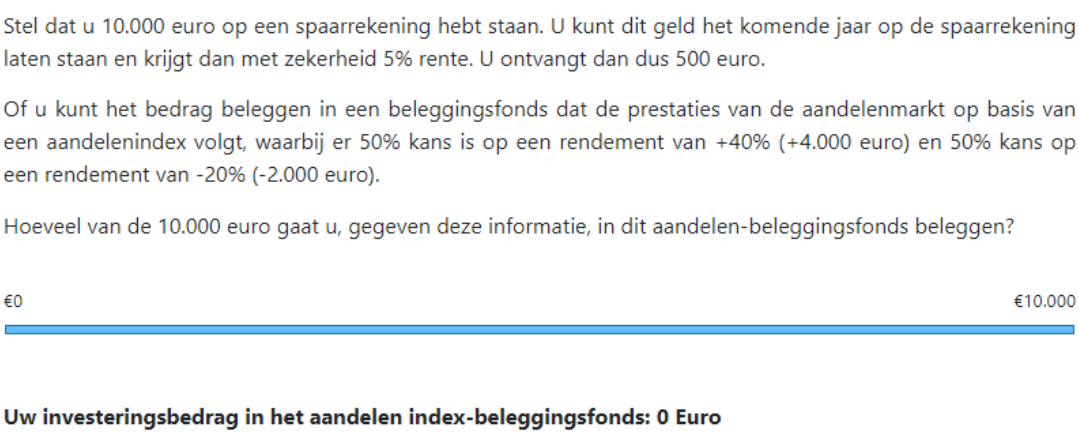


Figure C.34: Page 34

Page 35

Module 5: Question 10 of 15

Suppose that in answering the previous question, you decided to invest X euros of the €10,000 in the stock index mutual fund and you are one of the selected winners. Therefore, you have put (10,000 – x) euros in the savings account.

Consider that the return on the stock index mutual fund over the next year will be either +40% or -20% with equal probability.

The return on the savings account is guaranteed at 5%.

How much money do you expect to have at the end of this one-year investment period?

Please choose one of the answers below.

If you choose the correct answer, you will receive a €50 bonus on top of your payout for this experiment.



Figure C.35: Page 35

Page 36

Module 5: Question 11 of 15

Please indicate your return expectations for the investment funds listed below.

I expect the returns of sustainable investment funds compared to less sustainable investment funds to be:

In general, I expect the returns of index investment funds compared to active investment funds to be:



Wij verzoeken u aan te geven welke verwachting u heeft met betrekking tot het rendement van de onderstaande beleggingsfondsen.

	Veel lager is	Een beetje lager is	Hetzelfde is	Een beetje hoger is	Veel hoger is	Weet ik niet
Ik verwacht dat het rendement van duurzame beleggingsfondsen vergeleken met minder duurzame beleggingsfondsen:	○	○	○	○	○	○
Over het algemeen verwacht ik dat het rendement van index-beleggingsfondsen vergeleken met actieve beleggingsfondsen:	○	○	○	○	○	○

Ga verder

Figure C.36: Page 36

Page 37

Module 5: Question 12 of 15

I assume that people only have the best intentions.

Less sustainable investment funds carry more risk than sustainable investment funds.

Investment funds with ESG (Environmental, Social, and Governance) integration have a positive impact on society.

If someone does me a favor, I am willing to reciprocate. If I am treated very unfairly, I will take revenge at the first opportunity, even if there is a cost to me.

I am willing to punish someone who treats others unfairly, even if this could result in costs for me.

I would like to invest in an index investment fund that excludes companies that do not sufficiently consider the environment, society, and corporate governance, even if this investment strategy comes at the expense of the investment fund's financial performance.

I would like to invest in an actively managed investment fund that excludes companies that do not sufficiently consider the environment, society, and corporate governance, even if this investment strategy comes at the expense of the investment fund's financial performance.

Geef uw antwoord alstublieft aan de hand van de aangegeven schaal.

In hoeverre bent u het eens met de volgende beweringen?

	Helemaal mee oneens	Mee oneens	Redelijk mee oneens	Gemiddeld	Redelijk mee eens	Mee eens	Helemaal mee eens
Ik ga ervan uit dat mensen alleen de beste intenties hebben.	○	○	○	○	○	○	○
Minder duurzame beleggingsfondsen dragen meer risico dan duurzame beleggingsfondsen.	○	○	○	○	○	○	○
Beleggingsfondsen met ESG-integratie (milieu, sociaal, bestuur) hebben een positieve invloed op de samenleving.	○	○	○	○	○	○	○
Wanneer iemand me een dienst bewijst, ben ik bereid tot een wederdienst.	○	○	○	○	○	○	○
Als ik zeer onrechtvaardig wordt behandeld, neem ik wraak bij de eerste gelegenheid, zelfs als er kosten aan verbonden zijn.	○	○	○	○	○	○	○
Ik ben bereid iemand te straffen die anderen oneerlijk behandelt, zelfs als dit kosten voor mezelf zou kunnen opleveren.	○	○	○	○	○	○	○
Ik zou graag willen investeren in een index-beleggingsfonds waarbij ondernemingen buiten beschouwing worden gelaten die niet genoeg rekening houden met het milieu, de samenleving, en goed bestuur van ondernemingen, zelfs als deze beleggingsstrategie ten koste gaat van de financiële prestatie van het beleggingsfonds.	○	○	○	○	○	○	○
Ik zou graag willen investeren in een actief beheerd beleggingsfonds waarbij ondernemingen buiten beschouwing worden gelaten die niet genoeg rekening houden met het milieu, de samenleving, en goed bestuur van ondernemingen, zelfs als deze beleggingsstrategie ten koste gaat van de financiële prestatie van het beleggingsfonds.	○	○	○	○	○	○	○

Figure C.37: Page 37

Page 38

Module 5: Question 13 of 15

To what extent are you willing to invest part of your invested capital in an investment fund that focuses purely on companies that directly contribute to the energy transition (for example, by developing solutions that lead to greater energy efficiency or the development of renewable energy)?

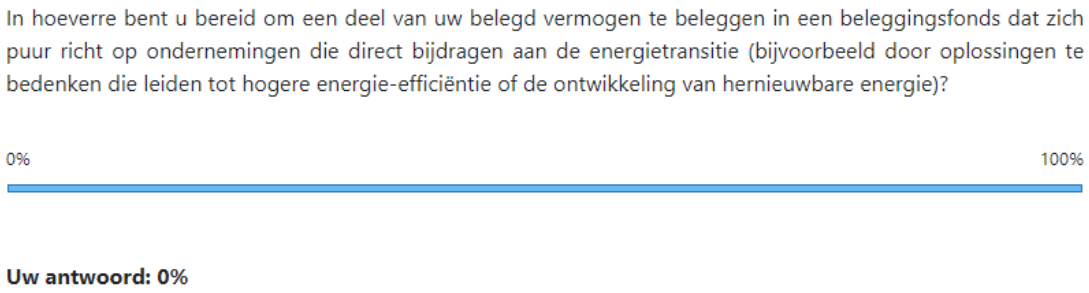


Figure C.38: Page 38

Page 39

Module 5: Question 14 of 15

To what extent do you consider it important that asset managers, in their voting policy (voting remotely at shareholders' meetings) or their engagement policy (private dialogue with companies), address companies' energy efficiency and contribution to the energy transition?

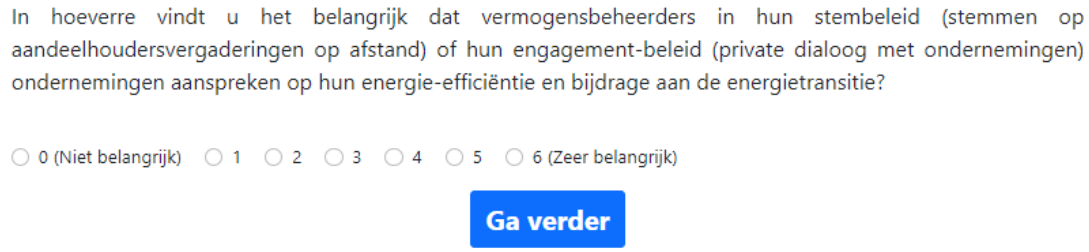


Figure C.39: Page 39

Page 40

Module 5: Question 15 of 15

Imagine the following situation: You unexpectedly received €1,000 today. How much of this amount would you donate to charity? (Values between 0 and 1,000 are allowed.)

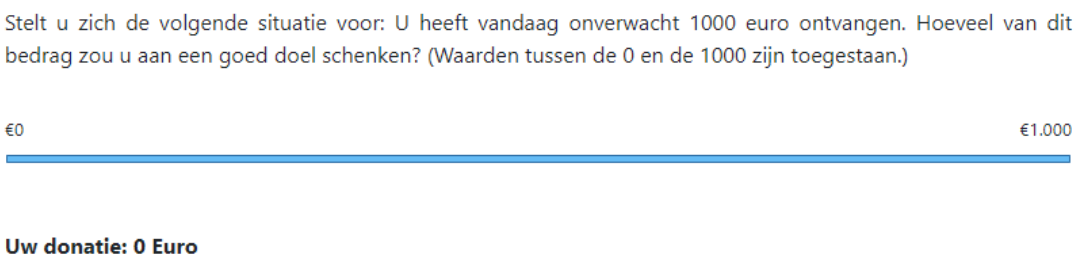


Figure C.40: Page 40

Page 41

Your payout

If you complete all the questions in this survey, you could win three types of rewards.

Reward – How do you get it?

Number	*Reward*	*How to obtain?*
1	200 euro	Among the first 500 participants, we will randomly select one participant and reward him/her with 200 euros.
2	200 euros + reward depending on choices in the questionnaire	Among all participants, we will randomly select one participant and reward him/her with 200 euros plus additional rewards depending on choices in this questionnaire (this will be explained later).
3	400 euros (for investing only)	We will randomly select one participant from all participants and reward them with €400. This amount can only be invested in Meesman products.

If you are one of the first 100 participants, you have a chance to win all three types of rewards; if not, you still have a chance to win the other two. Note: It is possible to win more than one reward.

We will notify you by email if you are randomly selected for one or more of the three rewards.

If you are selected for "Reward 2," you will win the following amount:

Part 1: Your fixed amount is €200.

Part 2: Your payout in Module 4 is €0. You answered the question incorrectly in Module 5. Therefore, your payout in Module 5 is €50.

If you are selected, the total monetary reward you will receive is €250 (€200 + €0 + €50 = €250).

If you are selected for "Reward 3" (€400 to invest in Meesman equity investment funds), please indicate how you would like to allocate this amount between the two Meesman investment funds below:

Our Investment Funds

Meesman offers two types of investment funds. Equity investment funds for capital growth. Global Equity Total is the ultimate equity index investment fund for passive

investors, and Sustainable Future Equity is suitable for investors looking for an index investment fund with a more pronounced sustainable character.
Click on the links below to read more about the equity investment funds above.
Global Equity Total
Sustainable Future Equity
Please indicate how much you would like to invest in Global Equity Total using your Meesman Credits. The remainder will automatically be invested in Sustainable Future Equity.

Uw uitbetaling

Als u alle vragen van deze vragenlijst invult, maakt u mogelijk kans op drie soorten beloningen.

Beloning – Hoe krijgt u deze?

Nummer	Beloning	Hoe te verkrijgen?
1	200 euro	Onder de eerste 100 deelnemers zullen wij willekeurig één deelnemer selecteren en hem/haar belonen met 200 euro.
2	200 euro + beloning afhankelijk van keuzes in de vragenlijst	Onder alle deelnemers zullen wij willekeurig één deelnemer selecteren en hem/haar belonen met 200 euro plus extra beloningen afhankelijk van keuzes in deze vragenlijst (dit zal later worden uitgelegd).
3	400 euro (alleen voor beleggen)	Onder alle deelnemers zullen wij willekeurig één deelnemer selecteren en hem/haar belonen met 400 euro. Dit bedrag kan enkel worden belegd in producten van Meesman.

Als u één van de eerste 100 deelnemers bent, maakt u kans op alle drie de soorten beloningen; en zo niet, dan maakt u alsnog kans op de overige twee beloningen. Merk op: het is mogelijk om meer dan één beloning te winnen.

Wij zullen u via e-mail op de hoogte brengen als u degene bent die willekeurig is geselecteerd voor één of meer van de drie beloningen.

Als u bent geselecteerd voor "beloning 2" wint u het volgende bedrag:

***Deel 1:** Uw vaste bedrag is **200 euro**.

***Deel 2:** Uw uitbetaling in Module 3 is **0 euro**. U heeft de vraag in Module 4 fout beantwoord. Daarom is uw uitbetaling in module 4 **50 euro**.

Als u degene bent die wordt geselecteerd, is de totale monetaire beloning die u ontvangt **250 euro** (€200 + €0 + €50 = €250).

Als u bent geselecteerd voor "beloning 3" (400 euro om te beleggen in Meesman aandelenbeleggingsfondsen), geef dan alstublieft aan hoe dit bedrag zou willen verdelen tussen de twee onderstaande Meesman beleggingsfondsen:

Onze beleggingsfondsen

Meesman heeft twee soorten beleggingsfondsen. Aandelenbeleggingsfondsen voor de groei van uw vermogen. Aandelen Wereldwijd Totaal is het ultieme aandelen index-beleggingsfonds voor passieve beleggers en Aandelen Duurzame Toekomst is geschikt voor beleggers op zoek naar een index-beleggingsfonds met een meer uitgesproken duurzaam karakter.

	Spreiding		Kosten	Risico & rendement						
Fonds	Landen	Aandelen		Laag ↔ Midden ↔ Hoog						
Aandelen										
Aandelen Wereldwijd Totaal	47	6.153	0,4%	1	2	3	4	5	6	7
Aandelen Duurzame Toekomst	47	2.388	0,5%	1	2	3	4	5	6	7

Klik op de linkjes hier beneden om meer te lezen over bovenstaande aandelenbeleggingsfondsen.

Aandelen Wereldwijd Totaal

Aandelen Duurzame Toekomst

Geef alstublieft aan hoeveel u zou willen investeren in **Aandelen Wereldwijd Totaal** door uw Meesman Credits te gebruiken. De rest zal automatisch geïnvesteerd worden in **Aandelen Duurzame Toekomst**.

€0 €400

***Aandelen Wereldwijd Totaal*: 0 euro** ***Aandelen Duurzame Toekomst*: 400 euro**

Figure C.41: Page 41

Page 42

This is the end of the survey.

Thank you for your participation!

You can now close your browser window.

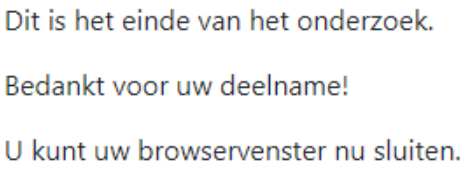


Figure C.42: Page 42

european corporate governance institute

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The ECGI will produce and disseminate high quality research while remaining close to the concerns and interests of corporate, financial and public policy makers. It will draw on the expertise of scholars from numerous countries and bring together a critical mass of expertise and interest to bear on this important subject.

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