The Impact of Sustainable Finance Literacy on Investment Decisions

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August 14, 2025

Abstract

This paper examines the effects of an educational program on Sustainable Finance Literacy (SFL) and its influence on sustainable investment decisions. Through a randomized controlled trial and an incentivized choice experiment, we found that the SFL program has a significant impact on enhancing literacy. The program also increased the probability of investing in a highly sustainable fund by 5 percentage points on the extensive margin and decreased allocations to a brown fund by 2.5 percentage points on the intensive margin. Among participants who already held pro-sustainability attitudes, the treatment further lowered the propensity to invest in moderately sustainable funds on the intensive margin. Higher SFL further led to lower sustainability perceptions and reduced tendencies to chase past high returns.

JEL Classification: G11; G18; G41; G53; C83

Keywords: Sustainable Finance Literacy, RCT, text analysis, household finance

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We thank Ursa Bernadic, Yuliya Blondiau, Tabea Bucher-Koenen, Juan Carlos Caro, Marius Cziriak, Ann-Kathrin Faust, Serge Giacomotto, Kenneth Gillingham, Bennet Janssen, Boris Jaros, Xenia Karametaxas, Nicola Koch, Julian Kölbel, Adrien-Paul Lambillon, Vardges Levonyan, Annamaria Lusardi, René Nicolodi, Falko Paetzold, Silvia Ruprecht, Zacharias Sautner, Alessia Sconti, Frank Wolak, Achim Zeileis, the participants of the G53 Network Brown Bag Lunch seminar, the EHL Sustainable Investing Forum 2025, and of EAERE 2025 for their comments. We thank Thea Kolasa for her valuable contribution and excellent research assistance during part of the experimental design phase of the project. We also thank Katharina Holzheu for her general excellent research assistance.

This research was financed by the Swiss Federal Office of Energy under contract number SI/502534-01. Any opinions, findings, conclusions, or recommendations expressed in this material are those of the authors and do not necessarily reflect the view of the funding agency. This paper is also part of a project that has received funding from the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant agreement No 870245. The ethics commission of ETH Zurich approved this research under the number 2023-N-282.

1 Introduction

Sustainable finance has gained considerable traction in recent years, yet retail investors often struggle to navigate its complexities due to widespread deficiencies in sustainable finance literacy (SFL). Following Filippini et al. (2024), SFL means having the knowledge and skills to identify and assess sustainable financial products. Despite its importance for guiding sustainable investment behavior, little is known about how improving SFL causally affects investment choices and through which mechanisms this occurs.

This gap is particularly pressing in light of the current regulatory landscape. First, the current European regulations classify several types of sustainable financial products that are difficult to distinguish. Similar regulatory developments were planned but have been temporarily paused in the United States.[1] Second, under the European Union's Markets in Financial Instruments Directive II (MiFID-II), financial institutions are required to assess the sustainability preferences of retail investors. Yet, they are not mandated to provide educational resources.

Empirical studies consistently find low levels of knowledge on sustainable investing across various countries, including the USA (Mottola et al., 2022), Switzerland (Filippini et al., 2024), Italy (Lanciano et al., 2024), Singapore (Sconti and Fernandez, 2023), Austria (Seifert et al., 2024a), Germany (Auzepy et al., 2024; Engler et al., 2025), and France (Engler et al., 2025). Addressing this knowledge gap is crucial to ensure that retail investors can align their sustainability preferences with their actual investment choices.

This paper addresses two key questions: (1) Can an educational intervention increase sustainable finance literacy among retail investors? (2) How does improved SFL affect actual investment decisions regarding funds with varying sustainability levels? To answer these questions, we expand the scope of previous studies by updating and validating the concept of sustainable finance literacy from Filippini et al. (2024). Then, we conduct an incentivized, preregistered online experiment in which participants receive an SFL-focused educational treatment before allocating a budget among mutual funds with different sustainability ratings.[2]

[1] For details, see https://www.sec.gov/rules-regulations/2022/10/s7-17-22.

[2] Preregistration on OSF under the following link:
`https://osf.io/ksw7p/?view_only=ca1d9985b9a14c16beaedefdd8c7ffb5`;
based on a grant application submitted to [institution anonymized for peer-review] in June 2022 and approved by the ethics commission of [university anonymized for peer-review] under the number [anonymized for peer-review].

Our design distinguishes between the effects of genuine literacy improvement and simple informational priming by employing two control groups. We further refine the understanding of SFL's impact by differentiating between the decision to invest at all (extensive margin) and the allocation of funds across options (intensive margin).[3] Finally, we thoroughly validate our measures and information treatments, following best practices in the literature (e.g., Haaland et al., 2023; Heeb et al., 2023).

This study's findings demonstrate that the short SFL treatment significantly enhances sustainable finance literacy. When choosing among funds with varying levels of sustainability, the SFL treatment generally increases the allocation to more sustainable funds while decreasing the allocation to less sustainable ones.

Our study distinguishes between the extensive margin (i.e., the binary decision to buy or not to buy a fund) and the intensive margin (i.e., the amount invested, given the decision to invest). The treatment significantly increases the probability of new investments in the most sustainable fund by approximately 5% (extensive margin). On the intensive margin, the treatment reduced investments in the least sustainable fund by approximately 2.5%. For participants who expressed sustainability-friendly values, there were additional treatment effects on the intensive margin, with 3.5% higher shares of the most sustainable fund and 3.5% to 4% lower shares in the funds with mid-range sustainability. Moreover, the study suggests that the treatment led to lower subjective ratings of fund sustainability and a reduction in return-chasing.

The remainder of this paper is organized as follows: Section 2 reviews the related literature, Sections 3 and 4 describe the experimental design and data, Section 5 presents the empirical strategy and results, followed by a conclusion.

2 Related Literature

The importance of sustainable finance literacy (SFL) has gained increasing recognition in recent years. Several studies document that SFL remains low among retail investors, which constrains their ability to identify and select appropriate sustainable financial products (Filippini et al., 2024; Seifert et al., 2024a; Strauss et al., 2023). This knowledge gap poses a particular barrier for investors who wish to align their financial decisions with personal

[3]While the extensive margin highlights whether low SFL acts as a barrier that deters potentially interested individuals from entering the market, the intensive margin shows whether SFL affects investors' trade-offs between available options. This distinction is particularly relevant for policymakers and industry stakeholders, as it sheds light on whether SFL education fosters new participation in sustainable investing or shifts the portfolio composition of those already engaged.

sustainability values but face difficulties navigating the complexity of green investment products (Anderson and Robinson, 2022). More broadly, evidence from general financial literacy research suggests that simplifying information and improving transparency can help less literate investors make better choices effectively (Agnew et al., 2018; Bateman et al., 2016; Hastings and Tejeda-Ashton, 2008).

Our study contributes to this growing literature in several ways. First, we extend the conceptualization of SFL developed by Filippini et al. (2024) by validating and applying it within a causal experimental framework. While prior work provided correlational evidence, we provide causal estimates of how enhancing SFL affects actual investment behavior.

Second, we contribute to the literature on the determinants of sustainable investment decisions. Previous studies show that alignment with personal values is a key driver of demand for sustainable assets (Aiken et al., 2020; Bauer et al., 2021; Giglio et al., 2023; Riedl and Smeets, 2017; Rossi et al., 2019). Investors may also prefer holding sustainable assets for purely financial reasons, such as risk management or return expectations (Pedersen et al., 2021; Starks, 2023). Importantly, complexity and lack of knowledge can hinder the expression of sustainability preferences (Anderson and Robinson, 2022). Our study builds on this insight by showing that increasing SFL enables investors, especially those with pro-sustainability attitudes, to better align their choices with their values.

Third, we contribute to educational interventions for finance in general. Christelis et al. (2010) demonstrate that information constraints are a major investment barrier for individuals. While Klapper et al. (2013) suggest increased financial literacy positively affects financial wellbeing, Jappelli and Padula (2013) show that acquiring financial literacy is costly for individuals. In this context, Lührmann et al. (2018) used an incentivized experiment to show that an educational intervention on financial literacy improves students' intertemporal financial decision-making. Choi et al. (2010) used an incentivized choice experiment where respondents can spread 10,000 USD among four funds; treated individuals received additional education information about investing, which in turn modestly improved the portfolio allocation. In a recent meta-analysis of 76 experimental interventions that affected financial literacy, Kaiser et al. (2022) found that on average, these interventions increased the level of financial knowledge by 0.15–0.2 standard deviation units and affected financial behaviors by 0.06–0.1 standard deviation units.

Closely related to our work are recent studies that experimentally investigate the impact of information provision on sustainable investment behavior. Seifert et al. (2024b) conducted an information experiment where ESG concepts were introduced with varying frames

(financial vs. sustainability benefits). They found that framing shapes beliefs and demand for sustainable products, reflecting how the EU's MiFID-II regulation inquires about ESG preferences without mandating explanatory support. We complement this line of research by demonstrating that enhancing literacy, beyond framing or priming, enables investors to make choices that are more aligned with their values and the true sustainability of products.

Auzepy et al. (2024) take a step further by combining an educational treatment with an incentivized investment task. They develop an SFL index (building partly on Filippini et al. (2024)) and show that a brochure-based treatment increases both SFL and sustainable fund allocations. While our study shares similarities with theirs, we advance this line of research in several important ways. Specifically, we (i) rigorously refine and validate the SFL construct through expert feedback and extensive pre-testing; (ii) disentangle true literacy effects from priming by using two control groups; (iii) analyze impacts on both extensive (participation) and intensive (allocation) margins, addressing zero allocation biases; (iv) capture heterogeneity in sustainability preferences using an innovative text-based elicitation; and (v) explore behavioral channels by examining subjective sustainability perceptions and return-chasing tendencies.

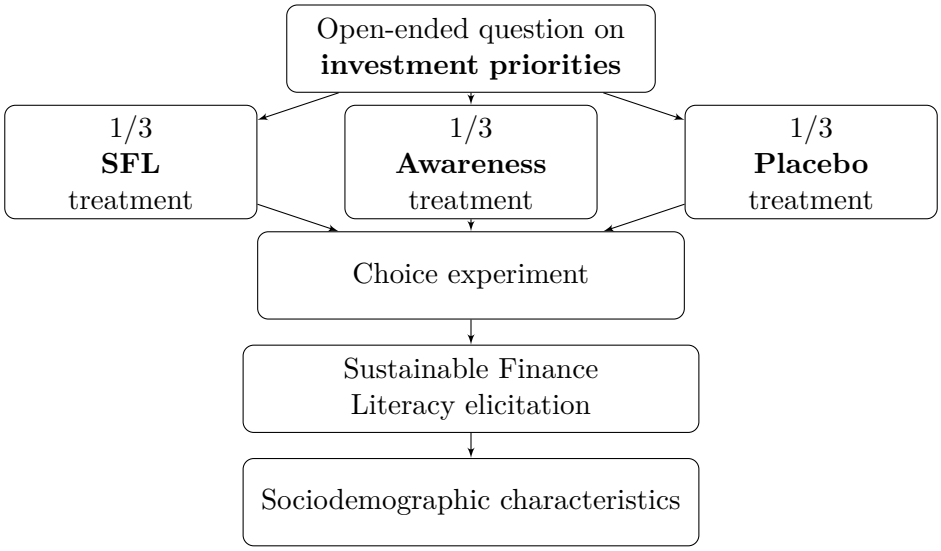
3 Experimental Design

Our experimental design comprised a five-step incentivized online study: attitude elicitation, information treatment, choice experiment, literacy elicitation, and a socioeconomic survey. Figure 1 illustrates our survey design. Initially, respondents answered an open-ended question regarding their investment priorities. We chose this question format to prevent participants from being primed with sustainability or other topics through predetermined answer options.

Subsequently, one-third of the respondents received the educational treatment, which consisted of five slides totaling fewer than 400 words. The remaining respondents were divided into two control groups. They received either a text to raise awareness on sustainable finance without addressing SFL (awareness) or a placebo treatment. After the treatment, respondents engaged in the incentivized choice experiment.

Following this, they participated in a similar choice experiment without incentives and randomized returns. Finally, they provided a subjective sustainability rating for each of the investment funds, followed by questions on sustainable finance literacy and socioeconomics. These results are complementary extensions, which we will mainly present in the appendix.

Figure 1: Study Design



Note: This figure shows the experimental design. After answering an open-ended question about investment priorities, respondents were randomly allocated to one of three information treatments. After the treatments, we conducted an incentivized choice experiment followed by a non-incentivized choice experiment. Then, respondents answered questions about financial literacy, sustainable finance literacy, and their sociodemographic attributes.

3.1 Investment Priorities

We used an open-ended question, combined with text analysis, at the beginning of the survey to elicit investor preferences. This technique is gaining traction in economic research because it avoids priming and minimizes bias in subsequent information treatments or choice experiments (Haaland et al., 2024).[4]

At the start of the survey, respondents answered an open-ended question about their investment priorities. We asked respondents to imagine that they received CHF 10,000 and would like to invest this sum for a period of ten years. They should imagine that their bank offered them a choice of mutual funds. Respondents should list their top four criteria when choosing a mutual fund in this scenario. For each of the four priorities, we provided a separate text box. This setting allowed us to elicit investment attitudes without priming respondents. Figure J.5 in Appendix J shows a survey screenshot.

[4]In theory, it would also be possible to address the priming effect by calculating the effect of the educational treatment on investments via the SFL score, using the local average treatment effect (LATE), or causal mediation analysis. However, using these approaches to address priming relies on strong assumptions that we believe are generally not met: first, the SFL score must perfectly measure all the knowledge effects from the educational treatment. Second, a higher SFL score achieved through the treatment does not influence priming (i.e., participants who learned more from the treatment did not experience more priming than those who learned little from the educational intervention).

The answers were generally well articulated and contained between 1.85 and 1.93 words per priority and between 1139 and 1604 unique words per priority. An example answer for the four priorities would be: *1) "Return," 2) "Risk," 3) "Sustainability,"* and *4) "Simplicity."* These words would be classified into the following topics: return, risk, sustainability, and hassle.

Figure 2 shows a word cloud with the most frequently used words to describe all four priorities. Many respondents emphasized words related to return and risk; respondents also frequently mentioned the word *sustainability*. This observation aligns with the allocated topics, where, overall, 73% of the answers contained one priority that was classified under the *risk* topic, 72% under *return*, and 51% under *sustainability*. A detailed description of the topic allocation is in the Appendix, in Section D.

Figure 2: Word-cloud answers to top four investment priorities

Note: This figure shows a word cloud with the most frequent words used by respondents to describe all four priorities from the open-ended question. Larger words appeared more often; the words in the graphic had a minimum frequency of four and were translated from German using Google Translate.

3.2 Educational Treatment

The content and design of educational interventions are critical for genuinely improving sustainable finance literacy (SFL). Not all information treatments effectively increase actual literacy: some only prime participants with general ideas, similar to advertising, rather than providing the specific knowledge and skills needed to identify and assess sustainable financial

products. For example, nudging or priming can influence sustainable choices in consumption and health contexts (Kurz, 2018; Ruiz-Tagle and Schueftan, 2021; Streletskaya et al., 2014), but it does not directly remove knowledge barriers. Therefore, to isolate the true impact of increased literacy, it is essential to disentangle genuine learning effects from mere priming (Haaland et al., 2023; Oberrauch and Kaiser, 2024).

Following Haaland et al. (2023), we implemented a three-arm design: (a) an SFL treatment to enhance literacy; (b) an active control to capture priming effects; and (c) a passive control to establish a neutral baseline.

The SFL educational treatment of this study is the authors' interpretation of current industry practices, informed by consultations with experts from regulatory authorities, the financial industry, academia, and non-governmental organizations (NGOs). The treatment takes into account the legal framework in the European Union, specifically the Sustainable Finance Disclosure Regulation (SFDR), as well as the stance of the Swiss Federal Council on greenwashing. Banks are required by the SFDR to disclose sustainability information for their financial products under EU jurisdiction. The amount of information disclosed does not equal a certain level of sustainability and does not equal a sustainability rating. However, the information typically disclosed can provide a proxy for what the product implies regarding sustainability, and more importantly, what it does not imply.

Our educational treatment explains various types of disclosures and their relevance to qualitative sustainability assessments. Importantly, we also emphasize their limitations. It is crucial to consider the information that is not disclosed when making a qualitative assessment, in the sense that "no news is bad news." More details on our interpretation of current working definitions are in the appendix in Section A.[5]

The active control group received an awareness treatment designed to inform participants about finance and sustainability, but it did not provide practical knowledge or skills. This group reads a text about the touristic aspects of the New York Stock Exchange (NYSE), mentioning that the NYSE promotes ESG products. This primes familiarity with ESG concepts but does not equip respondents to identify or evaluate sustainable funds.

The passive control group received an unrelated text about how survey companies operate, containing no references to finance or sustainability. This group serves as the

[5]Note that our literacy measures do not cover the EU Taxonomy, a list of economic activities considered sustainable, which is still under development and not yet applied by most asset managers (Badenhoop et al., 2023).

baseline for estimating the combined effects of priming and literacy gains in the other groups. Table 1 summarizes the design and validation expectations for each group.

Table 1: Summary of treatments

Group	SFL Treatment	Awareness (Active Control)	Placebo (Passive Control)
Objective	Provide knowledge and skills to identify and assess sustainable financial products.	Prime respondents with finance and ESG context.	Provide a reading task unrelated to finance or sustainability.
Content	Explanation of sustainable finance concepts and the EU-SFDR framework.	Touristic description of the NYSE, mentioning its promotion of ESG products.	Description of survey company operations.
Validation	Sustainable Finance Literacy index compared to the two control groups.	Sustainable finance awareness question compared to the treatment group and passive control group.	The passive control group serves as a baseline.

Note: This table describes the three treatments.

To verify the intended distinction, we validated the treatment in two ways. First, we expect respondents receiving the SFL treatment to score significantly higher on the SFL index than both control groups, demonstrating genuine literacy improvement. Second, we expect both the SFL and active control groups to score similarly on an ESG awareness question and both to outperform the passive control group, confirming that the awareness treatment successfully primes respondents without enhancing literacy.

In the empirical analysis, we compare the SFL group to the active control group to isolate the literacy effect, while the passive control group serves as an additional baseline and covariate, consistent with similar designs in recent literature (e.g., Akesson et al., 2022).

3.3 Choice Experiment

After receiving one of the three treatments (but before answering the SFL questions), participants completed an incentivized investment task. They allocated a hypothetical budget of 1,000 Swiss Francs (approximately USD 1,100) across four real-world mutual funds. Participants could distribute this amount freely among the funds in increments of 50 CHF.

Allocating a portfolio rather than choosing a single fund offers two advantages. First, it better reflects actual investor behavior, as most investors hold diversified portfolios rather than making binary investment choices. Second, it mitigates the "windfall effect" — the tendency to spend unexpected money more freely (Arkes et al., 1994). A forced all-or-nothing choice could obscure the true impact of the SFL treatment if participants simply placed the

entire windfall in the most sustainable fund regardless of their underlying preferences. Allowing flexible allocation ensures that the treatment effect can still emerge through portfolio adjustments.

All information displayed to participants was drawn from actual fund data accessible to retail investors. The experiment was incentivized: four participants were randomly selected to have their portfolios implemented in reality. After one year, each winner receives the actual value of their investment, totaling 4,000 CHF.

Figure 3 shows the choice set. The order of the columns was randomized. The first row shows the investment type ("equity" for all options). Next, we show the annualized net return for the past three years, which ranged from 4.7% to 7.4% (we subtracted the total expense ratio from the annualized return for the past three years). The level of risk was also identical for all funds, with four out of seven funds from the summary risk indicator (SRI), a commonly used risk score that ranges between 1 and 7. The SRI is typically determined and provided by the asset management company; it is displayed on the fund's official fact sheet and indicates an approximate level of risk.

We deliberately chose funds where higher sustainability levels were associated with lower past returns. Hence, we imply a certain willingness to pay for sustainability, as shown in the literature (e.g., Gutsche and Ziegler, 2019; Heeb et al., 2023). This design creates a clear trade-off between financial performance and sustainability, consistent with theoretical predictions (Pástor et al., 2021) and empirical observations (El Ghoul et al., 2023): For example, brown funds aim to maximize returns, while funds with sustainable characteristics incorporate sustainability information. If this extra sustainability information does not positively correlate with returns, its inclusion effectively acts as a constraint, potentially diminishing risk-adjusted returns.

The last four rows presented qualitative sustainability-related information, which differed for each fund. They included four dimensions: investment goal, qualitative sustainability characteristics, exclusion of firms with poor governance and controversial sectors, and consideration of sustainability risks. In the following, we describe the four funds:

Dark-Green (Article 9) The most sustainable option, with a clear sustainability objective and strict exclusions. This fund had the lowest past net return (4.7%). This corresponds to the EU-SFDR Article 9 fund ("dark-green") requirements: a concrete, measurable sustainability objective and not significantly harm any other dimension (DNSH).

Light-Green-Plus (Article 8 +) A fund with active sustainability features but without a clearly measurable sustainability goal, offering a moderate return (5.6%). Under the EU-SFDR, this fund falls under Article 8 ("light-green") and could be considered in practice as "Article 8 plus" because the qualitative characteristics suggest an active sustainability strategy.

Light-Green (Article 8) A fund with basic sustainability exclusions but no explicit sustainability objective, with a higher return (6.5%) This is the minimum disclosure under the EU-SFDR Article 8. Further, this fund also considers sustainability risks, but which are not considered relevant to sustainability characteristics.

Brown (Article 6) A conventional index fund with no sustainability features, delivering the highest past return (7.4%). This fund also does not consider sustainability-related risks. Under the EU-SFDR, this fund's sustainability disclosures fall under Article 6.

Figure 3: Choice Experiment

Please allocate CHF 1000 to these four funds to create your own portfolio. You can invest the entire amount of CHF 1000 in one fund or distribute the amount evenly or unevenly among the different funds. If you wish to invest in a fund, you must invest at least CHF 50.

To continue, please note that the total investment amount should be CHF 1000. As soon as you are in this area, the "Continue" button will be displayed.

	Fund A	**Fund B**	**Fund C**	**Fund D**
Type of investment	Equity	Equity	Equity	Equity
Average net return per year in % (last 3 years)	4.7%	5.6%	6.5%	7.4%
Risk profile (past performance)	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7
Investment target	**Long-term returns and sustainable investments**	**Long-term returns**	**Long-term returns**	**Long-term returns**
Sustainability features	Companies in the fund: • lower CO2 emissions than comparable companies • do not harm any social aspects	Companies in the fund: • low CO2 emissions		
Exclusion of controversial industries and poor corporate governance	Yes	Yes	Yes	No
Consideration of sustainability risks	Yes	Yes	Yes	No
Investment amount remaining budget: 1000 CHF	0 CHF	0 CHF	0 CHF	0 CHF

Note: This figure shows a choice set from the incentivized part of the experiment (English translation from German). The order of the columns was randomized.

To ensure realism, we selected actual funds using Bloomberg data (the 3-year annualized returns were as of February 7, 2024). Next, we performed multiple validation steps to ensure the displayed information was accurate, understandable, and that participants would read it (more information on the validation steps is in Appendix H.1).

After completing the incentivized task, participants repeated the allocation task in a hypothetical version with randomized past returns (ranging from 4% to 8% in 0.5% increments) to isolate return-chasing behavior. Respondents were asked to imagine they were in the same experiment as before (even though not incentivized) and to rethink their choice with different past returns. Each respondent completed two such hypothetical allocations where we randomized each time the returns and the fund order. Appendix J provides an example choice card for this stage.

In the final segment of the choice experiment, participants assigned a subjective sustainability score to each fund, using a scale of 1 to 10. Although the European Union's disclosure regulation does not define the sustainability strength of a product, investors can develop their subjective ratings based on the information provided by each fund. The core objective of this exercise is to assess whether individuals who received treatment perceive the sustainability levels of the funds differently, in relation to the disclosed information. Appendix Figure J.7 shows a screenshot of the choice set along with the rating instructions.

3.4 Sustainable Finance Literacy (SFL)

We build on the framework from Filippini et al. (2024), which defines SFL as *"the knowledge and skill to identify and assess financial products according to their reported sustainability-related characteristics."* In practice, SFL equips retail investors with the skills to *identify* and *assess* sustainable finance products according to the current working definitions of sustainable finance in the European Union and Switzerland.

To operationalize this concept for our experiment, we adapted and extended the original SFL questionnaire from Filippini et al. (2024) to reflect the EU regulatory context. With input from multiple experts, we retained three core questions from the original index that target common misconceptions about sustainable investing. Additionally, we developed two new questions specifically addressing EU Sustainable Finance Disclosure Regulation (SFDR) distinctions. Together, these five questions measure the essential skills that our educational treatment aims to improve: identifying genuinely sustainable mutual funds and qualitatively comparing their sustainability levels.

Our goal was to create an SFL index that is both conceptually valid and practically relevant for retail investors under EU rules. By combining general principles with EU-specific knowledge, the index remains adaptable to other contexts where regulatory definitions differ.[6]

[6]In early stages, we considered retaining the full original index from Filippini et al. (2024). However, expert consultations highlighted the importance of covering key regulatory distinctions introduced by the SFDR.

Table 2 presents each of the five SFL concepts alongside their corresponding underlying skills; it also includes the concept of sustainable finance awareness, which we utilize for the active control group.

Table 2: Overview SFL questions

		Question	Description	Skill type
		SF Aware	**ESG Awareness:** Know the abbreviation ESG.	Aware
General + Specific	*General*	**SFL 1**	**Lack of standards:** Know that no uniform ratings or standards for sustainable finance products exist.	Identify
		SFL 2	**ESG risk integration:** Know that Sustainability risk integration is usually insufficient to be considered sustainable.	Identify
		SFL 3	**Impact investing:** Know that a sustainable fund does not automatically imply an impact on the invested firms' sustainability performance.	Assess
		SFL 4	**EU SFDR (light green):** Know that light green funds use sustainability as a criterion, but no concrete sustainability objective is necessary.	Assess
		SFL 5	**EU SFDR (dark green):** Know that dark green funds must include a concrete sustainability objective and follow "do not significantly harm" criteria (DNSH).	Assess

Note: This table describes the SFL and SF Aware questions.

To maintain conceptual consistency, we aligned the SFL index closely with the choice experiment and the information provided in the educational treatment. We refined the questions through iterative expert feedback and extensive pretesting to ensure clarity, accuracy, and alignment with real-world investing conditions.

To ensure the reliability and external validity of our SFL measure and treatment, we followed a multi-step validation process. We pretested the questions with diverse participant samples, sought expert reviews from regulators, academics, industry practitioners, and NGOs, and refined wording and presentation accordingly. This rigorous approach ensures that the SFL index accurately captures the knowledge and skills needed for real-world sustainable investment decisions. Appendix H.0.1 provides further details on the validation steps.

Therefore, we streamlined the original questions to three core items and added two tailored to the EU framework.

4 Data and Descriptive Analysis

This section describes the dataset used for the empirical analysis and provides summary statistics for SFL and investment choices for the three experimental groups. We conducted an online survey between March 12 and March 31, 2024, targeting retail investors in the German-speaking part of Switzerland. Participants were recruited through a professional market research firm using a large household panel. Respondents received monetary compensation and provided additional socioeconomic information.

To ensure relevance to real investment contexts, only individuals with actual investment experience were eligible for participation. Specifically, respondents were required to participate in Switzerland's voluntary pension plan ("3rd pillar"), which involves active investment decisions and is comparable to private pension schemes in the US. As of 2019, about 62% of Swiss adults use this plan.[7]

A total of 24,505 panelists were randomly invited, stratified by age and gender. Of these, 5,667 began the survey (response rate: 23.1%). After screening out 364 individuals for pension plan participation and 119 for age and gender quotas, 5,181 respondents were included in the survey. Ultimately, 2,021 respondents completed it after accounting for 3,160 dropouts, including three failed attention checks. The median completion time was 17 minutes.

Respondent feedback indicated high overall comprehension. At the end of the study, respondents could comment. Of 101 comments, only six noted question difficulty, with no substantive concerns about ambiguity. Additionally, six pretests conducted between December 2023 and February 2024 informed technical refinements and wording adjustments.

4.1 Sample Characteristics

Table 3 shows the sample characteristics. The variables are differentiated for the three treatment groups and appear balanced. The mean age was just below 50 years, with slightly less than half of the sample consisting of women. More than half of the respondents had a university degree, and around 50% were married, with a household size between 2.15 and 2.44 people per household. The Placebo group contained fewer pensioners than the other groups (7% compared to 15 and 16%). However, we control for this variable in our models.[8]

[7] See Swiss Federal Statistical Office: https://www.bfs.admin.ch/bfs/de/home.html.

[8] There are only statistics on the Swiss working population actively contributing to a "third pillar" pension plan for gender, age, and university education. Among this population, the average age is 43 years, 43% are women, and 50% hold a university degree. Our sample differs because it comprises the entire population that owns such a pension plan, including pensioners who are no longer in the workforce.

Participants generally demonstrated high financial literacy, with an average score of 2.7 out of 3 correct. About 80% correctly answered all three "Big Three" questions from (Lusardi and Mitchell, 2008), which exceeds typical rates for the general Swiss population (57% in 2015 by Klapper et al. (2015)).[9] The higher level of financial literacy in this study can be attributed to the investment experience of the participants because all respondents participated in a voluntary pension plan.

Table 3: Sample Characteristics

Question	SFL	Awareness	Placebo
# participants	682	687	652
Age	49.88	48.67	49.95
Female [%]	45	46	47
University Degree [%]	59	56	58
Pensioner [%]	15	16	07
Married [%]	52	47	48
HH Size	2.44	2.37	2.15
Financial Literacy (/3)	2.77	2.76	2.76
Income (CHF)*	9301.00	9182.80	9102.25

Note: This table presents the socioeconomic variables from the sample separately for each treatment group. *660 respondents chose not to disclose their income. Hence, we will not use this variable for the subsequent analysis.

4.2 Descriptive Analysis

Table 4 shows descriptive results for the SFL and ESG awareness questions. As expected, ESG awareness is higher in the SFL and awareness groups than in the placebo group, reflecting content in the treatments. For the five SFL questions, correct response rates for the untreated groups (awareness and placebo) range from 26% to 56%, indicating relatively low baseline literacy. In contrast, the treated group scores substantially higher (55% to 73%), suggesting the educational treatment effectively increased SFL.

At the bottom of Table 4, we include the SFL total scores obtained for the reduced set of questions ("general") and the extended set ("general + specific"). This score is obtained by summing up the correct answers provided by the respondents to the three or five SFL questions, respectively. A high score, for instance, five, implies that the respondent answered all questions correctly. On the three general items, the SFL group averages 2.01 correct answers versus about 1.56–1.58 for the controls. On the full set of five questions (general plus specific), the SFL group averages 3.2, compared to 2.2 for the controls.

[9]For comparison Klapper et al. (2015) found 67% answering the big three correctly for the UK, 57% for the US, and 71% for Norway and Sweden.

Table 4: Summary Stats: SFL level

			Percentages			
			Question	SFL	Awareness	Placebo
		ESG Awareness	% correct	48.8	44.7	32.4
			% incorrect	31.7	30.4	30.7
			% don't know	19.5	24.9	37.0
General + Specific	*General*	**SFL 1**	% correct	73.0	55.6	53.5
		Lack of standards	% incorrect	10.9	11.9	11.0
			% don't know	16.1	32.5	35.4
		SFL 2	% correct	64.5	52.0	53.5
		ESG risk integration	% incorrect	21.8	16.6	13.7
			% don't know	13.6	31.4	32.8
		SFL 3	% correct	64.1	48.5	51.8
		Impact investing	% incorrect	21.4	24.5	22.4
			% don't know	14.5	27.1	25.8
		SFL 4	% correct	63.5	28.4	26.1
		EU SFDR light green	% incorrect	20.7	15.9	18.3
			% don't know	15.8	55.7	55.7
		SFL 5	% correct	55.7	38.9	39.1
		EU SFDR dark green	% incorrect	26.5	14.3	12.4
			% don't know	17.7	46.9	48.5
		SFL (General)	correct /3	2.01	1.56	1.58
			SD	(0.93)	(1.01)	(1.01)
		SFL (General + Specific)	correct /5	3.20	2.23	2.24
			SD	(1.31)	(1.43)	(1.42)

Note: This table shows the results of the SFL questions and the question on ESG-Awareness for the three treatment groups.

Table 5 presents how participants allocated their CHF 1,000 budget across the four mutual funds. On average, the SFL-treated group invested more in the most sustainable fund (dark-green: CHF 380) than the control groups (CHF 340–353). For mid-level sustainability funds, allocations are slightly lower for the treated group than for the awareness or placebo groups. The least sustainable fund (brown) shows similar mean allocations across groups.

MAKE PARAGRAPH ON INTERPRETATION FOR DARK GREEN FOR ALL VALUES AS EXAMPLE

ALSO TRANSFORM ZERO SHARES IN 1-ZERO SHARE

CHANGE TABLE FONT TO MAKE VALUES BOLT AND SD IN PARENTHESIS

Examining the extensive margin (whether respondents invest in each fund) and the intensive margin (amount invested conditional on investing) confirms this pattern. For the

dark-green fund, the SFL group shows fewer zero investments. These descriptive results suggest that the treatment not only raises SFL but also nudges investors to favor more sustainable funds, mainly in terms of the participation margin.

Table 5: Summary Stats: choice experiment

		SFL	Awareness	Placebo
Dark-Green				
Total	Mean (CHF)	380	340	353
	SD	329	326	325
Extensive margin	Zero Share	0.25	0.31	0.29
	SD	0.43	0.46	0.45
Intensive margin	Mean (CHF)	507	494	496
	SD	282	280	279
Light-Green-Plus				
Total	Mean (CHF)	226	241	229
	SD	219	243	234
Extensive margin	Zero Share	0.34	0.36	0.36
	SD Zeros	0.47	0.48	0.48
Intensive margin	Mean (CHF)	343	375	358
	SD	181	205	198
Light-Green				
Total	Mean (CHF)	241	259	270
	SD	284	280	291
Extensive margin	Zero Share	0.40	0.37	0.37
	SD	0.49	0.48	0.48
Intensive margin	Mean (CHF)	404	409	432
	SD	264	250	256
Brown				
Total	Mean (CHF)	153	160	148
	SD	269	286	276
Extensive margin	Zero Share	0.63	0.64	0.67
	SD	0.48	0.48	0.47
Intensive margin	Mean (CHF)	417	444	447
	SD	295	317	312

Note: This table shows the investment choices in the incentivized choice experiment. For each treatment group, the table shows the average investment, the standard error, and the share of zero investments (i.e., respondents who did not invest in the respective fund).

5 Empirical models and results

In this section, we outline the econometric models utilized to analyze the impact of the SFL treatment on the two primary outcome variables: the SFL score and the number of fund units chosen by a participant.[10]

- The first outcome is a participant's SFL level, measured using an index ranging from 0 to 5.
- The second outcome is the number of fund units a participant selects in the incentivized choice experiment.

Participants could allocate 1,000 CHF to four different funds, with one unit of a fund corresponding to 50 CHF; thus, participants could distribute 20 increments of 50 CHF. Because participants were free to allocate their funds, we observed several instances of zero investments for many participants, which we must consider in the econometric models.

We first discuss the model and the results on the impact of educational treatment on the level of SFL (Model 1). We then present the second econometric model, examining the impact of educational treatment on the decision to allocate a share of the budget to a fund (Model 2) and the decision on the amount to allocate (Model 3). From an econometric point of view, two decisions are modeled together using a hurdle Poisson approach.

We further included sustainability-friendly attitudes in the model to account for heterogeneous treatment effects. Sustainability attitudes are a major determinant for sustainable investing (Bauer et al., 2021; Riedl and Smeets, 2017). To capture investors' attitudes towards sustainability, we utilize an indicator variable that takes a value of one if sustainability is mentioned as one of the top four investment priorities in the open-ended question included at the beginning of the survey.

In the appendix, we present two additional outcomes as an extension to further explain the mechanism behind the treatment effect. In Appendix E, we use the number of fund units a participant selects in a non-incentivized choice experiment, where we randomly changed the past returns. In Appendix F, we use the rating level provided by participants for the different funds, which ranges from 1 to 10.

[10] As discussed previously, we asked the participants to make a further non-incentivized investment choice and then to give a sustainability rating. Therefore, we can identify two other outcome variables, i.e., the number of fund units a participant selects in the non-incentivized choice experiment, where we randomly changed the past returns; and the rating level provided by the participants to the different funds, which ranges between 1 and 10.

5.1 Outcome 1: SFL score

We use the ordinary least squares (OLS) methodology to evaluate the impact of the SFL educational treatment on the SFL score. For this purpose, we estimate the following model:

$$\begin{aligned} \text{Model 1:} \quad ExtensFund_{k,i} = \; & \alpha + \beta_1 \cdot TreatSFL_i + \beta_2 \cdot TreatPlacebo_i \\ & + \beta_3 \cdot Sust_i + \beta_4 \cdot (TreatSFL_i \times Sust_i) \\ & + \beta_5 \cdot (TreatPlacebo_i \times Sust_i) + \mu \cdot X_i + \varepsilon_i \end{aligned}$$

where the dependent variable consists of the level of SFL of respondent i, and the independent variables represent the SFL treatment and a variable indicating if the individual is part of the Placebo group. This model is also estimated by adding socioeconomic variables, such as gender and age, in X_i.

Like Haaland et al. (2023), we use the active control group, which received a priming treatment ("Awareness"), as the reference group to estimate the treatment effect of SFL. This means that the interpretation of the coefficient for the SFL treatment variable differs from a scenario where the reference group is typically the placebo group, which receives no treatment. In model 1, the coefficient of the SFL treatment variable indicates the impact of the treatment in comparison to the group that has been primed with general information on SFL. Proceeding in this way, we can directly identify the un-primed effect of the educational treatment on the level of SFL.

5.1.1 Treatment effect of SFL level

The results of the treatment's impact on the SFL level are presented in Table 6, with the outcome variable being the SFL score obtained by each individual by answering the sustainable financial literacy questions. We differentiated between the extended score, which included five questions ("general + specific"), and the basic version, which included three questions ("general"). The model has been estimated by OLS.[11]

Column (1) presents the estimation results for the "general + specific," excluding socioeconomic covariates, whereas in column (2), we include basic controls (such as gender, age, education, household size, financial literacy, as well as marital and working status). The findings in both columns indicate that, as expected, respondents in the SFL treatment group

[11] The results are similar when using an ordered Probit model.

show a higher SFL score than the control group. i.e., the Awareness group. The effect size is around 0.9 in both model specifications. This implies that treated individuals answered on average one additional question correctly.

Examining the results reported in column (2), we can observe that private investors with high financial literacy and educational levels exhibit a higher level of SFL. The coefficient of the gender variable is negative, indicating that women score lower on the SFL questions. The results also indicate that the two untreated groups with SFL educational treatment (Awareness and Placebo groups) do not show a difference in the level of the SFL score. These results are similar to those in Filippini et al. (2024), where education and financial literacy have significant and positive coefficients, and women have significant and negative coefficients. Columns (3) and (4) show the same approach for the three general questions, with similar results.

Importantly, respondents with sustainability-friendly attitudes did not score higher on the SFL test as a result of the educational treatment. This means that any heterogeneous treatment effect with sustainability attitudes cannot be attributed to the hypothesis that these respondents learned more. Instead, they may apply the acquired knowledge in different ways.

As a robustness check, we estimated the same model with financial literacy as the outcome variable, which we collected after treatment. Column (5) shows the coefficients of an OLS regression where the outcome is the big-three financial literacy score. The results show that the SFL treatment had no impact on the level of financial literacy. Note that financial literacy shows a low correlation with the SFL score, with a correlation coefficient of 0.12 to 0.18 for the three treatment groups for both the General and General + Specific SFL scores.

Comparing our treatment effect with the average results from the literature, our results are larger than the average but within the range of other studies. Kaiser et al. (2022) found that educational interventions increase financial knowledge on average 0.15-0.2 standard deviations; this average, however, also includes several studies with effect sizes between 0.5 and 1 SD. In our case, our treatment led to a 0.9 point increase in the general SFL score, which corresponds to 0.63 SD from the reference group (Awareness group SD: 1.43)

Table 6: Treatment effect on SFL score, with attitudes

	General + Specific	General + Specific	General	General	Financial Literacy
T. SFL	0.925***	0.910***	0.461***	0.446***	−0.047
	(0.107)	(0.105)	(0.075)	(0.074)	(0.041)
T. Placebo	0.106	0.115	0.095	0.104	−0.001
	(0.109)	(0.106)	(0.077)	(0.075)	(0.041)
SFL x Sust. prio	0.087	0.102	−0.018	−0.002	0.082
	(0.150)	(0.147)	(0.106)	(0.103)	(0.057)
Placebo x Sust. prio	−0.201	−0.201	−0.140	−0.142	−0.013
	(0.151)	(0.148)	(0.107)	(0.104)	(0.058)
Sust. Priority	0.269**	0.213**	0.243***	0.199***	0.064
	(0.106)	(0.104)	(0.075)	(0.073)	(0.041)
Fin. Lit.		0.332***		0.230***	
		(0.057)		(0.040)	
Age		−0.004		−0.003	0.001
		(0.003)		(0.002)	(0.001)
Female		−0.191***		−0.168***	−0.159***
		(0.062)		(0.044)	(0.024)
Uni. ed.		0.305***		0.272***	0.165***
		(0.063)		(0.045)	(0.024)
Pensioner		0.082		0.025	−0.008
		(0.104)		(0.073)	(0.040)
Married		−0.014		−0.030	0.069***
		(0.067)		(0.047)	(0.026)
HH-size		0.026*		0.020*	−0.005
		(0.015)		(0.011)	(0.006)
Intercept	2.099***	1.242***	1.439***	0.867***	2.642***
	(0.075)	(0.213)	(0.053)	(0.150)	(0.058)
Num.Obs.	2021	2021	2021	2021	2021
R2	0.107	0.147	0.053	0.108	0.062

Note: *p<0.1; **p<0.05; ***p<0.01
This table shows the coefficients of an OLS regression with the SFL score (0-5) as dependent variable, including the sustainability attitudes from the open-ended question.

5.2 Outcome 2: Incentivized investment choice

For modeling the second variable, we assume that the investment decision consists of two steps: a binary decision about whether a respondent is interested in investing in a fund. Then, conditional on participating, the second decision concerns the number of units of a fund to buy. Hence, for the second step, we can use a count model that is truncated at one.

Following Mullahy (1986) and Cameron and Trivedi (2013), we use a Poisson hurdle model, which implies that the first step is modeled with a binary choice model, while the second step uses a zero-truncated Poisson regression. The two parts of the hurdle model can be estimated separately or together (Cameron and Trivedi, 2013), using the same set of

explanatory variables. We follow Zeileis et al. (2008) and estimate the model with the pscl package from R, which jointly estimates both models.

We extend both parts of the hurdle model to analyze heterogeneous treatment effects by sustainability attitudes. Specifically, we include a dummy variable indicating whether the participant mentioned sustainability as a top investment priority in the open-ended question at the beginning of the survey (51% mentioned sustainability). Then interact this dummy variable with both the SFL and Placebo treatment indicators. This allows us to assess whether the effect of the educational intervention differs for investors who are already more sustainability-oriented.

For the first step, the extensive margin, we use for each of the four funds the following four logit models:

$$\begin{aligned} \text{Model 2:} \quad ExtensFund_{k,i} = \; & \alpha + \gamma_1 \cdot TreatSFL_i + \gamma_2 \cdot TreatPlacebo_i \\ & + \gamma_3 \cdot Sust_i + \gamma_4 \cdot (TreatSFL_i \times Sust_i) \\ & + \gamma_5 \cdot (TreatPlacebo_i \times Sust_i) + \theta X_i + \nu_i \end{aligned}$$

where $ExtensFund_{k,i}$ is a binary indicator equal to 1 if participant i invests in fund k and 0 otherwise.

For the intensive margin, we use the following zero-truncated Poisson model:

$$\begin{aligned} \text{Model 3:} \quad IntensFund_{k,i} = \; & \alpha + \delta_1 \cdot TreatSFL_i + \delta_2 \cdot TreatPlacebo_i \\ & + \delta_3 \cdot Sus_i + \delta_4 \cdot (TreatSFL_i \times Sust_i) \\ & + \delta_5 \cdot (TreatPlacebo_i \times Sust_i) + \lambda X_i + \epsilon_i \end{aligned}$$

where $IntensFund_{k,i}$ is the number of units (1–20) invested in fund k by participant i, modeled as zero-truncated Poisson: $IntensFund_{k,i} \sim \text{ZTP}(\lambda_{k,i})$.

5.2.1 Educational Treatment Effect on Portfolio Allocation

Table 7 and Table 8 report the results of the Hurdle Poisson model. This two-step approach assesses the SFL treatment's effect on (i) the decision to invest in a fund (logistic regres-

sion for Model 2 without heterogeneous effects, Table 7) and (ii) the number of fund units purchased, conditional on investing (truncated Poisson for Model 3, Table 8).

This framework disentangles the investment decision into an extensive margin (whether to invest) and an intensive margin (investment size). All coefficients are average marginal effects. Odd-numbered columns show estimates without covariates; even-numbered columns include the same controls as prior analyses.

Extensive Margin

Table 7 shows that the SFL treatment significantly increased the probability of investing in the most sustainable fund (Dark-Green) by 5% (coefficient 0.49; columns (1)–(2)). No effect was found for other funds (columns (3)–(8)). The significant SFL treatment coefficients are relative to the Awareness group (primed participants); the Placebo group shows no significant difference, implying similar behavior between primed and non-primed individuals.

Sustainability attitudes strongly influence the extensive margin: a 22% increase for Dark-Green, no effect for Light-Green-Plus, and 16–25% decreases for Light-Green and Brown. This confirms the importance of value alignment for sustainable investing. Interaction terms show no significant heterogeneous treatment effects on the extensive margin.

Including covariates reveals that higher financial literacy has the opposite effect: an additional point on the big-three score decreases the probability of investing in the Dark-Green fund by 5.7%, in Light-Green-Plus by 4.1%, and in the Brown fund by 3.6%. This suggests more financially literate respondents prefer concentrating investments, a reasonable strategy given that all options are already diversified mutual funds.

Gender effects show women are more likely to invest in environmentally focused funds, with an 8.2% higher probability for the Dark-Green option, 5.3% for Light-Green-Plus, and lower probabilities for the Light-Green and Brown funds by 3.7% and 16.3%, respectively.

Table 7: Extensive Margin: Hurdle Poisson, Binary Part (Logistic Regression), AME

	Dark-Green		*Light-Green-Plus*		*Light-Green*		*Brown*	
					Binary			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T. SFL	0.049*	0.049*	0.019	0.021	−0.051	−0.045	0.024	0.028
	(0.029)	(0.029)	(0.036)	(0.036)	(0.039)	(0.038)	(0.033)	(0.032)
T. Placebo	0.028	0.026	0.019	0.020	−0.048	−0.040	−0.022	−0.020
	(0.030)	(0.030)	(0.037)	(0.037)	(0.040)	(0.039)	(0.033)	(0.032)
SFL x Sust. prio	0.020	0.017	−0.003	−0.005	0.028	0.025	−0.032	−0.028
	(0.048)	(0.048)	(0.052)	(0.052)	(0.051)	(0.050)	(0.049)	(0.048)
Placebo x Sust. prio	−0.031	−0.035	−0.047	−0.046	0.078	0.079	−0.001	0.010
	(0.049)	(0.049)	(0.054)	(0.054)	(0.049)	(0.048)	(0.051)	(0.050)
Sust. Priority	0.225***	0.225***	0.039	0.042	−0.166***	−0.157***	−0.253***	−0.224***
	(0.033)	(0.033)	(0.036)	(0.036)	(0.036)	(0.036)	(0.036)	(0.036)
Fin. Lit.		−0.057***		−0.041*		0.029		−0.036*
		(0.019)		(0.021)		(0.020)		(0.018)
Age		0.001		0.000		−0.005***		−0.003***
		(0.001)		(0.001)		(0.001)		(0.001)
Female		0.082***		0.053**		−0.037*		−0.163***
		(0.020)		(0.022)		(0.022)		(0.020)
Uni. ed.		−0.019		−0.029		−0.014		−0.066***
		(0.020)		(0.022)		(0.022)		(0.021)
Pensioner		0.033		0.009		−0.047		−0.078**
		(0.033)		(0.036)		(0.037)		(0.034)
Married		0.030		0.012		0.022		−0.055**
		(0.024)		(0.024)		(0.023)		(0.023)
HH-size		−0.009		0.006		0.005		0.004
		(0.009)		(0.006)		(0.005)		(0.006)
Num.Obs.	2021	2021	2021	2021	2021	2021	2021	2021
R2 Adj.	0.788	0.839	0.022	0.257	0.351	0.578	0.592	0.722

Note: *p<0.1; **p<0.05; ***p<0.01

This table shows the average marginal effects of a logistic regression. The dependent variable is an indicator that takes the value of one if the respondent invested a positive sum in the respective fund and zero otherwise.

Intensive Margin

Table 8 presents the intensive margin results. The SFL treatment alone reduced investment in the least sustainable fund (Brown) by 0.54–0.55 units, equivalent to a 2.5% budget decrease.[12] The interaction term (SFL × Sust. Prio) is significant for the high- and mid-sustainability funds. For Dark-Green, it increases investment by 0.73 units (3.6%); for Light-Green-Plus, it decreases investment by 0.69 units (3.5%) when controls are included; for Light-Green, it lowers investment by about 0.75 units (3.8%). No significant interaction is observed for Brown.

The sustainability dummy has a strong positive effect for Dark-Green (coefficient 3.4, or 17% increase) and a positive interaction effect (0.7, or 3.5%). For other funds, sustainability preferences reduce investment, except for Light-Green-Plus, with coefficients between -0.9 and -2.5 (4.5–12.5% decrease).

[12]The CHF 1000 budget was split into 20 units of CHF 50 each; thus, one unit equals 5% of the total budget.

Financial literacy correlates negatively with Dark-Green (-0.3; 1.6% decrease) but positively with Light-Green (0.9; 4.5% increase) and Brown (1.2; 6% increase), possibly due to higher past returns for these products. Women invest more in Dark-Green (1.6; 8% increase) and slightly more in Light-Green-Plus (0.4; 2%), but less in Light-Green (-0.5; 2.5%) and Brown (-2.2; 11%). Older participants invest more in the sustainable funds and less in Light-Green. University education increases investment only in Dark-Green (0.6; 3%), while married respondents invest slightly more in Dark-Green and Light-Green and less in Brown. The treatment effect magnitude aligns with the lower bound of financial literacy and gender effects.

Table 8: Intensive Margin: Hurdle Poisson, Count Part (Truncated Poisson Regression), AME

	Dark-Green		*Light-Green-Plus*		*Light-Green*		*Brown*	
					Count			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T. SFL	−0.256	−0.341	−0.350	−0.266	0.250	0.299	−0.559*	−0.544*
	(0.344)	(0.340)	(0.254)	(0.256)	(0.262)	(0.261)	(0.289)	(0.281)
T. Placebo	0.006	−0.065	−0.092	−0.199	0.384	0.476*	−0.033	−0.075
	(0.354)	(0.350)	(0.259)	(0.258)	(0.267)	(0.266)	(0.304)	(0.294)
SFL x Sust. prio	0.732*	0.759*	−0.536	−0.687**	−0.754**	−0.753**	0.181	0.281
	(0.439)	(0.437)	(0.342)	(0.338)	(0.381)	(0.378)	(0.587)	(0.575)
Placebo x Sust. prio	−0.020	−0.090	−0.444	−0.452	0.254	0.329	0.534	0.819
	(0.430)	(0.424)	(0.349)	(0.348)	(0.404)	(0.403)	(0.606)	(0.604)
Sust. Priority	3.397***	3.053***	0.024	0.024	−0.868***	−0.975***	−2.468***	−2.570***
	(0.293)	(0.292)	(0.250)	(0.252)	(0.281)	(0.280)	(0.400)	(0.389)
Fin. Lit.		−0.335**		−0.105		0.867***		1.244***
		(0.150)		(0.136)		(0.162)		(0.199)
Age		0.067***		0.044***		−0.039***		0.009
		(0.007)		(0.007)		(0.008)		(0.010)
Female		1.613***		0.409***		−0.463***		−2.154***
		(0.165)		(0.153)		(0.166)		(0.221)
Uni. ed.		0.619***		0.131		0.363**		0.230
		(0.169)		(0.156)		(0.167)		(0.212)
Pensioner		−0.090		0.539**		0.475		−0.266
		(0.256)		(0.257)		(0.318)		(0.388)
Married		0.322*		−0.141		0.389*		−1.028***
		(0.173)		(0.184)		(0.203)		(0.260)
HH-size		−0.085***		0.075		−0.028		0.174
		(0.028)		(0.081)		(0.083)		(0.106)
Num.Obs.	2021	2021	2021	2021	2021	2021	2021	2021
R2 Adj.	0.788	0.839	0.022	0.257	0.351	0.578	0.592	0.722

Note: *p<0.1; **p<0.05; ***p<0.01

This table shows the average marginal effects of a Poisson regression truncated at one (the count part of the hurdle model). The coefficients explain the amount of units invested in a fund, conditional on investing (i.e., having a non-zero investment).

5.2.2 Discussion and Mechanisms

Consistent with prior experimental studies on sustainable finance information interventions (Auzepy et al., 2024; Seifert et al., 2024b), our educational treatment promotes more sus-

tainable investment choices. However, our estimated effect sizes are slightly smaller than those in previous studies, likely because our design explicitly controls for priming effects and distinguishes between extensive and intensive investment decisions.

The heterogeneous treatment effects highlight that the SFL intervention is particularly effective for investors who already hold sustainability-friendly attitudes — but this effect appears only on the intensive margin, not on the decision to invest at all. As a robustness check, we re-estimated the models excluding sustainability attitudes and the interaction terms; the results remain consistent (see Tables H.6 and H.7 in Appendix H.2).

Quantitatively, the treatment effect on the extensive margin corresponds to about 0.1 standard deviations (an effect size of 0.049, compared to a standard deviation of 0.46 in the Awareness group). This finding aligns with the meta-analysis by Kaiser et al. (2022), which reports typical effect sizes of 0.06–0.10 standard deviations for financial education interventions aimed at behavioral outcomes. For the intensive margin, the effects are comparable, ranging from approximately 0.09 SDs for the least sustainable fund (Article 6; –0.54 units, SD 317) to 0.17 SDs for the Light-Green-Plus fund (–0.68 units, SD 205).

Two extensions shed light on potential mechanisms. First, Appendix E explores whether higher SFL reduces past return chasing — a common bias in fund allocation (Bailey et al., 2011; Greenwood and Nagel, 2009; Tran and Wang, 2023). In a follow-up non-incentivized choice task with randomized past returns, we find that participants with higher SFL show roughly 20% lower return-chasing behavior for the Dark-Green and Light-Green-Plus funds.

Second, Appendix F analyzes subjective sustainability perceptions. Participants assigned their own sustainability scores to each fund. We find that the SFL treatment lowers perceived sustainability for the Light-Green and Brown funds. Additionally, sustainable attitude investors rated the Dark-Green and Light-Green-Plus funds lower, while giving the Brown fund a slightly higher rating. This indicates that greater SFL leads investors to be more critical and selective regarding sustainability claims, particularly among those with eco-conscious perspectives. For example, the educational intervention highlights that even the Dark-Green fund does not directly affect the real economy. This understanding diminishes the ratings for both dark and light green funds, narrowing their distinction from the brown fund and causing the brown fund to appear more sustainable by comparison.

6 Conclusion

Sustainable finance remains conceptually ambiguous and lacks universally accepted standards, with definitions varying across regulatory frameworks, institutions, and academic discourse. These inconsistencies create substantial difficulties for retail investors who must navigate a shifting landscape of criteria and benchmarks when choosing sustainable mutual funds. Previous research has documented low levels of sustainable finance literacy (SFL) and called for better evidence on how improving SFL influences investor behavior.

This study addresses this gap with an incentivized, preregistered randomized controlled experiment that evaluates the causal impact of an educational intervention on both sustainable finance literacy and actual investment decisions. By employing two control groups, an active priming control and a passive placebo, our design disentangles the effect of genuine literacy gains from mere priming.

Our results demonstrate that the SFL treatment significantly increases participants' literacy scores, while the awareness treatment does not. Higher SFL translates into more sustainable portfolio choices: treated investors allocate a larger share of their budget to highly sustainable funds and reduce allocations to less sustainable options. Specifically, the SFL intervention increases the likelihood of investing in the most sustainable fund (Dark-Green) by about 5 percentage points (extensive margin) and reduces investment in the least sustainable fund (Brown) by approximately 2.5 percentage points (intensive margin).

The treatment effect is particularly pronounced for investors who already hold sustainability friendly attitudes. For these participants, the SFL treatment further increases allocations to the most sustainable fund by 3.5 percentage points while decreasing investments in mid-tier sustainability funds (Light-Green-Plus and Light-Green) by about 3.5–4 percentage points. This suggests that higher SFL enables sustainability-minded investors to align their portfolios more closely with their values.

Importantly, the results also show that higher SFL reduces return-chasing behavior and lowers overly optimistic perceptions of mid-tier funds' sustainability levels, making investors more discerning about sustainability claims.

Taken together, these findings suggest that enhancing sustainable finance literacy can significantly shift capital toward genuinely sustainable investment products. While current EU regulations (e.g., MiFID II) require banks to assess clients' sustainability preferences, they do not mandate educating clients on how to interpret sustainability disclosures. Our

concise, expert-reviewed intervention — under 400 words — effectively fills this gap and could be integrated into advisory practices or digital investment platforms.

Given that low SFL is common worldwide, these results likely extend beyond Switzerland. Providing targeted, clear literacy education to retail investors and equipping financial advisors to share it, could help overcome key barriers to sustainable investing, fostering better-informed decisions and supporting the broader transition to a more sustainable financial system. Future research could investigate how SFL training can be effectively scaled digitally to reach a broader retail audience.

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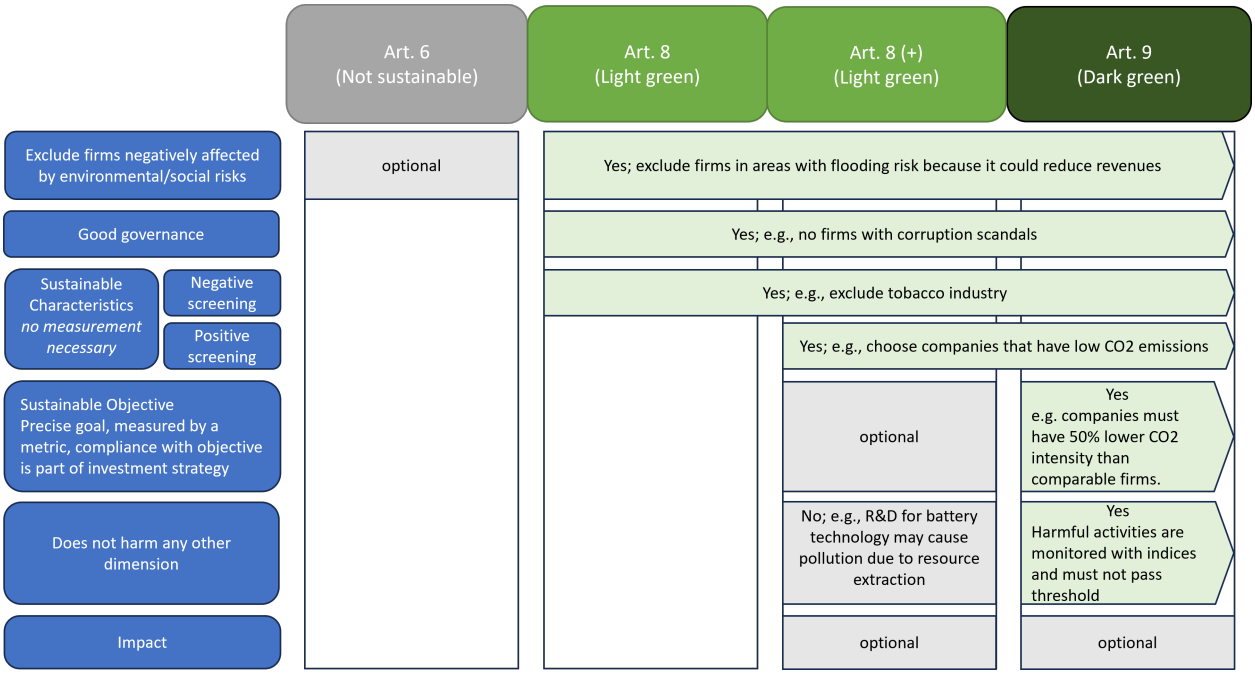
A European Union Sustainable Finance Disclosure

Figure A.1 shows the authors' interpretation of the different types of disclosures from the EU-SFDR. Although the EU-SFDR categories do not indicate a level of sustainability, the information can help with a qualitative assessment. Importantly, the different types of disclosure also give insight when certain characteristics are not disclosed.

Figure A.1: EU SFDR interpretation



Note: This table presents the authors' interpretation of the EU-SFDR.

Depending on the amount of information that banks choose to disclose, a product's sustainability-related disclosure falls under one of the following three categories:

- Article 6: only information on whether ESG-risk is integrated (or not) is disclosed.
- Article 8: promoting environmental and social characteristics, often called "light green."
- Article 9: sustainable objective, often called "dark green."

In practice, Light-Green is sometimes further differentiated from "Light-Green plus," which discloses more information than necessary for "Light-Green" but not enough for "Dark-Green." Often, Light-Green plus funds follow an active investment strategy in which firms are selected according to sustainability criteria. However, sustainability may not be monitored

with a quantitative index, ESG risk and DNSH criteria could be violated. For example, a fund focusing on R&D for battery technology could cause pollution due to resource extraction.

We identified several sustainability dimensions relevant to the SFDR and where disclosure (or its absence) can provide qualitative insights. The first category describes the integration of ESG risk, which usually means excluding firms that could be negatively affected by environmental or social risks. For example, companies in areas with flooding risks could be excluded because they could reduce revenues. Financially motivated ESG-risk integration must be disclosed under all EU-SFDR articles; for Brown, disclosure is necessary but does not mean that these products must practice ESG integration; fund managers can disclose that they do not apply ESG integration. However, this does not imply a product is considered "green." The Swiss Federal Council's position states that exclusion on a mere financial basis is not sufficient for a product to be marketed as "sustainable."

Similarly, negative screening (i.e., exclusion) of firms with bad governance (e.g., corruption scandals) is sufficient for an Light-Green product ("light green") but not for the Swiss Federal Council. The same applies to environmental or social-based negative screening (e.g., excluding tobacco companies). On the other hand, positive screening implies actively choosing companies based on their sustainability characteristics. For example, a fund might explicitly select firms with low CO2 emissions or focus on a specific theme, like R&D in new energy technologies. Such funds are often referred to as "Article 8 plus."

To be considered Dark-Green, or "dark green," two additional criteria apply: First, the fund must have a sustainable objective, which implies a precise goal measured by a metric and part of the investment strategy. For example, companies could have a 50% lower CO2 intensity than comparable firms. Second, these funds must satisfy the "do not significantly harm" criteria: harmful activities of the firms are monitored and must not exceed a quantitative threshold.

Interestingly, the EU-SFDR does not consider impact investing, i.e., if a fund influences the firm's sustainability practices. The reason is that the EU-SFDR mainly covers investments in the secondary financial market (i.e., stocks and bonds from already existing companies). Hence, the impact could be generated through active ownership (i.e., still focusing on the secondary market but voting in favor of sustainability-related strategies) or supporting new business ventures (i.e., the primary financial market). Hence, the EU-SFDR articles do not give insight into the impact of a financial product. In contrast, the Swiss

Federal Council's position on greenwashing explicitly mentions impact investing as a key characteristic of sustainable finance products.[13]

Our SFL treatment does not consider the EU Taxonomy (a list of economic activities considered sustainable investments). The reason is that the EU Taxonomy is still in development and only covers some investment areas. Dark-Green funds must disclose the shares of their assets that explicitly fall under the EU Taxonomy. However, fund managers can also perform their own screenings to determine if their investments follow the criteria of the EU Taxonomy regulation (even if the specific activities have not yet been included in the EU Taxonomy). For this reason, most Dark-Green funds have low or zero shares of assets listed in the EU Taxonomy and instead apply their own screenings to determine sustainable investments (Badenhoop et al., 2023). The underlying reason is that many activities have not yet been defined by the EU taxonomy. Hence, asset managers can apply their own screenings to determine whether the activities of a company align with the principles of the EU taxonomy. However, the fund's asset management performs this evaluation, not the EU.

[13]The Swiss Federal Council further differentiates between active ownership on the secondary market and impact investing with direct investments on the primary market. However, we considered both approaches to be "impact" investing.

B Choice Cards detailed fund information

Figure B.2: Choice Experiment

	Fund A	Fund B	Fund C	Fund D
Name	CARMIGNAC PF G-EURP-A USDHAC	JPM INV-JPM GLOBAL SEL EQT-D	BGF-US FLEX EQTY-A2 USD	SPDR S&P 500 Low Volatility UCITS ETF (Acc)
EU-SFDR	Art 9	Art 8	Art. 8	Art. 6
Investment type	Equity (OE Mutual Fund)	Equity (OE Mutual Fund)	Equity (OE Mutual Fund)	Equity (ETF)
Average net return	6.46 (3Y ann return, 7.2.24)- 1.81 (TER)	8.19 (3Y ann return, 7.2.24)-2.55 (TER)	8.34 (3Y ann return, 7.2.24)-1.81 (TER)	6.91 (3Y ann return, 7.2.24)-0.19 (TER)
Summary Risk Indicator (SRI)	SRI: 4	SRI: 4	SRI: 4	SRI: 4
Investment objective	The fund aims to outperform its reference indicator over 5 years and to generate capital growth, while implementing a socially responsible investment approach formalised by a sustainable investment objective.	"To achieve a return in excess of the global equity markets by investing primarily in companies, globally."	"The Fund aims to maximise the return on your investment through a combination of capital growth and income on the Fund's assets in a manner consistent with the principles of environmental, social and governance ("ESG") investing."	The Fund seeks to track the performance of the S&P 500® Low Volatility Index [...]
Sustainability features	"The Sub-fund aims to achieve carbon emissions 50% lower than its reference indicator (STOXX 600 Europe), measured monthly by carbon intensity (tCO2/ mUSD revenue converted to Euros; aggregated at portfolio level (Scope 1 and 2 of GHG Protocol)." «Furthermore, this Sub-Fund is committed to applying the SFDR level II 2019/2088 Regulatory Technical Standards (RTS) annex 1 related to Principal Adverse Impacts [...].»	"Through its inclusion criteria, the Sub-Fund promotes environmental characteristics which may include effective management of toxic emissions and waste, as well as good environmental record." "To be included in the 51% of assets promoting environmental and/or social characteristics, a company must score in the top 80% relative to its peers on either its environmental score or social score and follow good governance practices."	N/A	N/A
Exclusion of controversial industries and poor governance	«Negative screening and exclusions of unsustainable activities and practices are identified using an international norms and rules-based approach on the following [...].»	"fully excluding companies that are involved in particular activities such as manufacturing controversial weapons and applying maximum revenue, production or distribution percentage thresholds to others such as those that are involved in thermal coal and tobacco."	"This Fund applies the BlackRock EMEA Baseline Screens with the Fundamental Insights Methodology. This approach seeks to avoid exposures that have negative environmental outcomes by excluding direct investment in issuers that have material involvement in [...]"	N/A
Consideration of ESG risks	"ESG integration through ESG scoring using Carmignac's proprietary ESG platform [...]"	"Active ownership allows us to manage ESG risks [...]" "Portfolios are reviewed in the context of objectives, performance, risk positioning and ESG integration."	"The Investment Adviser conducts enhanced analysis on all companies that it considers to have heightened ESG risks, higher carbon emissions and controversial business activities."	"Funds that are SFDR Article 6 financial products With respect to the Funds included in the table below the investments underlying each of these Funds do not take into account the EU criteria for environmentally sustainable economic activities."

Note: This Table shows each fund prospectus and factsheet excerpts to design the choice cards. Note that Fund B is classified under EU-SFDR Light-Green but could be considered as Light-Green-Plus, which is however not an official EU-SFDR class.

C EU SFDR in the Swiss context

The Swiss Sustainable Investment Market Study 2023 revealed that only 18% of Swiss fund volumes are not subject to EU regulations. This implies that the remaining 82% are likely subject to the EU Sustainable Finance Disclosure Regulation (SFDR), even if many have not yet disclosed whether they are Article 8 or Article 9 funds.[14] Swiss financial market players are exempt from SFDR if their products are domiciled in Switzerland and they do not sell them to EU customers. Most investment funds, however, are domiciled in Luxembourg or Liechtenstein for tax reasons, thus falling under EU regulations. Further, many EU investors in Swiss funds fall under SFDR themselves (e.g., pension funds), which requires Swiss asset managers to comply with these rules. For this reason, our study mainly focuses on the EU-SFRD regulations, but also aims to consider the Swiss context.

[14] https://marketstudy2023.sustainablefinance.ch/wp-content/uploads/2023/06/SSF˙2023˙MarketStudy.pdf

In December 2022, the Swiss Federal Council released its position on greenwashing in the financial industry and the measures that should be in place to prevent it.[15] Specifically, the Swiss Federal Council stated that sustainable investment products must either align with a sustainability goal (e.g., the Paris Agreement) or contribute to a sustainability objective (e.g., through impact investing). In an EU-SFDR context, funds with these characteristics could fall into either Light-Green ("light-green") or Dark-Green ("dark-green"). The reason why "sustainable" funds from the Swiss definition could fall into either Dark-Green or 8 is that the Swiss position does not consider the "do not significantly harm" criteria (e.g., a fund focusing on battery technology could have an "impact" but fall under Light-Green because it could rely on polluting raw materials).

We consider the Swiss Federal Council's position by further differentiating between Light-Green / Dark-Green from the SFDR. While the SFDR is specific in defining alignment, it does not cover impact. As a result, we have included this aspect in our educational text by explicitly explaining the concept of impact. Additionally, we have incorporated the Federal Council's position that merely integrating sustainability factors into financial risk management is insufficient to classify a product as sustainable.

Many Swiss banks aim to comply with the Federal Council's position on Greenwashing and the EU SFDR. However, this information can still be complex and insufficient for precise product comparisons. Despite this, the framework allows investors to broadly distinguish between high, medium, and zero levels of sustainability, as well as impact and focus (environment or social).

However, the information is still too general to enable a detailed comparison of investment funds on the market based on numerical metrics. The Swiss Climate Scores are the first attempt to provide such metrics for sustainable finance's climate dimension (which are not analyzed in this study).

D Text Analysis

We classified each priority separately into one of 16 topics, using a semi-manual dictionary approach. This approach was developed in Wekhof and Houde (2023) and used in Filippini et al. (2024) and Wekhof (2024). The method consists of creating a dictionary for each topic, containing keywords that can assign an answer to a topic. Wekhof (2024) used a similar open-ended question to the one in this study, which allowed us to use the same topics

[15] For further information: https://www.newsd.admin.ch/newsd/message/attachments/83722.pdf and https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-98351.html

and the corresponding dictionary.[16] We enhanced the dictionary from Wekhof (2024) with new words, using the method from Wekhof and Houde (2023) to identify relevant words. In a nutshell, this method uses pre-trained word embeddings to cluster words by their semantic similarity (e.g., *pen* and *paper* are closer than *pen* and *monkey*). We manually allocated words (and groups of words) to topics based on the clusters of similar words. In this case, we removed all words already present in the dictionary after the clustering step and allocated the remaining words whenever possible. We increased the number of words in the dictionary by 351, from 1285 to 1636 words.[17]

Table D.1 shows the main words for the three most important topics: sustainability, return, and risk. All topics have one dominant word that most respondents used, followed by a sharp decline by several midrange words and then by less common keywords.

Table D.1: Topic frequencies for open-ended question

sustainability		*return*		*risk*	
word	freq.	word	freq.	word	freq.
sustainability	530	return	682	security	850
sustainable (sg.)	173	gain	206	risk	369
sustainable (pl.)	52	performance	100	safe (sg.)	129
ethical	39	interest rate	96	loss	49
social	33	yield	77	safe (pl.)	48
environment	33	profitable	28	stability	41
ecological (sg.)	31	profit	28	low-risk	21
eco-friendly	24	profitable	26	long-term	19
ecological (pl.)	15	value increase	9	risks	18
ecology	14	distributing	6	balanced	16

Note: This table presents the most frequent words for the topics sustainability, return, and risk. The words were originally in German and translated for this table. For this reason, some words appear multiple times because in German, the word is differentiated by its singular and plural form.

Table D.2 shows the percentage of each topic by priority and over all four priorities (i.e. if a respondent mentioned the topic in any of the four priorities). Overall, the two most mentioned topics were risk and return, with more than 70%, followed by sustainability

[16] Wekhof (2024) had the following question: Please imagine the following situation: You received CHF 10,000 and would like to invest this sum over a period of 10 years. Your bank offers you a broad selection of mutual funds. What criteria would be important to you when choosing a fund? Please write a short text with about three sentences.

[17] The dictionary approach could not allocate topics to all answers. We manually classified these answers for each priority (190, 263, 405, and 544 answers). Some answers contained multiple topics. In that case, we manually reviewed these answers, decided on the dominant topic, and prioritized the sustainability topic whenever it appeared. Multiple topics occurred across priorities 153, 119, 120, and 115 times respectively.

with 51% and the fund's content with 45%. Mid-range topics that had an overall occurrence between 10 and 20% were fees, control over the investment, trust in the bank, historical financial development, and transparency. Less frequent topics included hassle, bank advisor, ETF, third-party advice, and greenwashing. Overall, 4.6% gave a blanc answer in one of the four text fields, and 2.9% wrote "I do not know" in one of the fields. This ranking of topics is also reflected in the four individual priorities, with risk and return being the most frequently mentioned topics, followed by sustainability and the content of the fund.

Table D.2: Topic frequencies for open-ended question (in %)

Topic	Priority 1	Priority 2	Priority 3	Priority 4	All
Risk	44.48	19.25	11.33	8.02	72.69
Return	19.64	28.06	18.41	13.31	71.70
Sustainability	12.82	17.86	19.05	15.14	51.51
Content fund	8.96	13.90	17.91	18.80	43.25
Fees	3.22	5.59	7.47	6.19	21.87
Control	0.54	2.52	7.72	9.55	19.25
Trust bank	3.86	3.51	4.65	7.17	17.47
Transparent	1.14	2.28	3.61	4.70	11.23
Development	2.57	3.22	2.52	3.46	11.18
Hassle	0.30	0.79	2.33	3.46	6.73
Bank advisor	0.79	1.09	1.68	2.47	5.99
ETF	1.34	0.99	0.89	0.59	3.41
Advice third	0.15	0.15	0.30	0.05	0.64
Greenwashing		0.10		0.20	0.30
Do not know	0.10	0.45	0.59	2.42	2.92
No answer	0.10	0.25	1.53	4.45	4.70

Note: This table presents the topic frequencies (in %) for each priority and jointly for all priorities.

E Extension 1: Return Chasing

Once the participants distributed 1000 CHF across the four funds in an incentivized setting, we prompted them to make two more investment decisions using new choice cards with randomized past returns in a non-incentivized setting. The information collected using these two additional choices enabled us to estimate a modified specification of Models 2 and 3, which incorporate returns as an explanatory variable. Below is the model specification for this case:

Model 4 :

$$ExtensFund_{k,i} = \alpha + \gamma_1 * TreatmentSFL_i + \gamma_2 * TreatmentPlacebo_i + \theta_k * return_k + \nu_i$$

where the dependent variable assumes the value 0 or 1 depending on whether the participant i decides to invest in fund k. The independent variables are the SFL treatment, indicating whether the individual is part of the Placebo group, and $\beta_k * return_k$ is the past returns for fund k.

For the second step of the hurdle model, we use the following specification:

Model 5 :

$$IntensFund_{k,i} = \alpha + \delta_1 * TreatmentSFL_i + \delta_2 * TreatmentPlacebo_i + \lambda_k * return_k + \epsilon_i$$

Even though past returns do not predict future returns, it is widely documented that investors make decisions based on past returns, so-called "return-chasing" (Bailey et al., 2011; Greenwood and Nagel, 2009; Tran and Wang, 2023).

This model can test whether return chasing is present in the participants' behavior in our experiment and, therefore, consistent with the literature. We expect to find a positive association between a fund's own return and a negative association with the returns of alternative funds. Of course, we are aware that the results obtained from estimating Model 5 could be biased because the choices have not been incentivized.

Evidence suggests that in hypothetical experiments, the non-incentivization induces an upward bias of willingness to pay (WTP) (Fifer et al., 2014; Haghani et al., 2021). However, this bias mainly affects the magnitude of WTP; the underlying structural preferences behind the choices are likely to remain stable compared to incentive-compatible settings (Hainmueller et al., 2015). For this reason, several studies showed that stated-preference

results are similar to the ones from revealed-preference settings (Dechezleprêtre et al., 2022; Engler et al., 2025; Fehr et al., 2021; Funk, 2016; Hainmueller et al., 2015).

As a complementary analysis, we estimated Models 4 and 5 with randomized past returns in an unincentivized choice experiment. This helps us better understand how historical data on a fund's performance impacts decision-making and allows us to investigate whether investors tend to chase past returns. If this is the case, we would expect to see a positive relationship between the choice of a fund with a fund's own returns and a negative relationship with the returns of other funds. As before, we used a Hurdle Poisson approach. Because the returns were randomized, they are independent of each other and have a zero correlation by construction. Therefore, we can exclude the other funds' returns in the model specification.[18]

The results are reported in Table E.3. Compared to the previous sections, the SFL treatment effect is higher in the extensive margin, with a coefficient of 0.1 for Dark-Green. For the intensive margin, the SFL treatment is significant for Dark-Green and 8 (+), with a coefficient of 1.4 and 1.5, respectively. The own returns are similar to the specification that included the other funds' returns, which indicates return chasing. For the extensive margins, a 1% higher return is associated with a 4% to 8% higher probability of investment in the funds. For the intensive margin, a 1% higher return is associated with a 5% to 6% higher investment in the funds.

The interaction effect between own return and the SFL treatment is negative and significant for the extensive margin for Dark-Green, with -0.014, indicating a 20% reduction of return chasing. Similarly, the interaction effect is negative and significant for the intensive margins of Dark-Green and 8 (+). With coefficients of -0.2 and -0.3, respectively, these results indicate that the return chasing decreased by 18% and 26%, respectively.

[18] As a validation check, we included all fund returns in each model (i.e., the own and the other funds' returns). The results are in the appendix, in Table G.5. The treatment effect prevails in the extensive margin but is not statistically significant in the intensive margin. The return coefficients indicate return chasing, with the own return being positive and the cross-returns negatively associated with extensive and intensive margins. For the extensive margin, the magnitude is between 0.04 and 0.08 for the own return and between -.01 and -0.6 for the other funds' returns, which is similar to the treatment effect and the effect of other covariates. For the intensive margin, the own return coefficients are between 1.2 and 0.9, and for the other funds' returns, the coefficients are between -0.1 and -0.6. This implies a 6% to 4.5% portfolio increase for one percentage point additional own return and a 3% to 0.5% decrease in portfolio allocation for one additional percentage point in the alternative funds' return.

Table E.3: Hurdle Poisson, hypothetical returns, interacted treatment, AME

	Dark-Green	Light-Green-Plus	Light-Green	Brown
	Binary			
	(1)	(2)	(3)	(4)
Treatment SFL	0.102***	−0.033	−0.012	−0.016
	(0.038)	(0.059)	(0.061)	(0.052)
Treatment Placebo	0.032	−0.086	0.007	−0.063
	(0.043)	(0.062)	(0.060)	(0.053)
Own Return	0.067***	0.081***	0.073***	0.041***
	(0.004)	(0.005)	(0.005)	(0.004)
Own Return x SFL	−0.014*	0.009	−0.002	0.003
	(0.008)	(0.010)	(0.010)	(0.009)
Own Return x Placebo	−0.005	0.016	−0.002	0.007
	(0.008)	(0.011)	(0.010)	(0.010)
	Count			
	(1)	(2)	(3)	(4)
Treatment SFL	1.411*	1.573**	0.333	−0.372
	(0.768)	(0.734)	(1.051)	(1.266)
Treatment Placebo	−0.045	0.888	0.661	0.835
	(0.925)	(0.779)	(0.990)	(1.584)
Own Return	1.272***	1.229***	1.084***	0.964***
	(0.068)	(0.063)	(0.086)	(0.114)
Own Return x SFL	−0.225*	−0.321***	−0.107	0.048
	(0.123)	(0.112)	(0.169)	(0.210)
Own Return x Placebo	−0.019	−0.124	−0.043	−0.060
	(0.145)	(0.121)	(0.159)	(0.237)
Num.Obs.	4042	4042	4042	4042

Note: *p<0.1; **p<0.05; ***p<0.01

This table shows the average marginal effects of both parts of the hurdle model (logistic regression and truncated Poisson regression). Unlike the results from the previous section, this table shows results from a non-incentivized hypothetical choice, where the past returns were randomized. Respondents performed two separate choices; Standard errors are clustered at the respondent level. Because the returns were random, this model specification only includes the own returns, interacted with the two treatments.

F Extension 2: Sustainability Rating

At the end of the experiment, respondents rated each of the four funds based on their sustainability perceptions (see Appendix Figure J.7 for a screenshot of the choice set along with the rating instructions). This allows for two insights: first, whether respondents understood the different levels of sustainability implied by the choice cards. Second, whether this perception of sustainability changes for the treated group because of their deeper understanding of sustainable finance. We estimate the following model separately for each fund using an OLS regression:

$$\text{Model 6 :}$$
$$Rating_{k,i} = \alpha + \rho_1 * TreatmentSFL_i + \rho_2 * TreatmentPlacebo_i + \varepsilon_i$$

where $Rating_{k,i}$ is the sustainability rating for fund k by respondent i. The rating was on a scale from 1 to 10, where 1 was the least sustainable and 10 was the most sustainable.

As a last analysis, we show how the SFL treatment impacts investors' subjective sustainability ratings of the funds. In Table F.4, we present the results from estimating Model 6, which shows the impact of the SFL treatment on the sustainability rating of the four funds provided by each participant. The dependent variable is the sustainability score assigned to each fund by each individual, which ranges from 0 to 10. The independent variables include treatment and socioeconomic variables that have been previously used in our models. These models were estimated using OLS.[19]

We expect treated respondents to show more realistic expectations about the sustainability level of the funds. The information in the SFL treatment should equip them with more skills and knowledge to evaluate better the sustainability level of funds related to Light-Green and Light-Green-Plus, which are more challenging to assess.

The results presented in Table 9 confirm this hypothesis. The treatment had a negative impact on the ratings of Light-Green and, to a lesser extent, brown funds for all respondents. For those with sustainability-friendly attitudes, there was an additional negative treatment effect on the ratings for Dark-Green and Light-Green-Plus. Interestingly, investors with sustainable attitudes rated the brown fund slightly higher after receiving the treatment. It is possible that treated sustainable investors have more realistic perceptions of the sustainability of different funds (for example, our treatment emphasizes that even the Dark-Green fund has no direct impact on the real economy). This perception decreases the ratings for dark

[19]The results are similar when using an ordered Probit model.

and light green funds, reducing their difference from the brown fund and making the brown fund seem more sustainable in comparison.

Table F.4: Sustainability Rating (1-10), OLS

	Dark-Green		*Light-Green-Plus*		*Light-Green*		*Brown*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment SFL	0.189	0.194	−0.028	−0.014	−0.354***	−0.349***	−0.204	−0.207*
	(0.131)	(0.131)	(0.117)	(0.118)	(0.135)	(0.135)	(0.127)	(0.125)
Treatment Placebo	−0.159	−0.154	−0.121	−0.121	0.041	0.038	−0.041	−0.066
	(0.133)	(0.133)	(0.119)	(0.120)	(0.137)	(0.137)	(0.129)	(0.127)
SFL x Sust. priority	−0.463**	−0.476***	−0.493***	−0.503***	0.019	0.026	0.316*	0.334*
	(0.183)	(0.183)	(0.165)	(0.165)	(0.189)	(0.189)	(0.178)	(0.175)
Placebo x Sust. priority	0.128	0.129	0.034	0.044	0.105	0.117	0.020	0.042
	(0.185)	(0.185)	(0.166)	(0.167)	(0.191)	(0.191)	(0.180)	(0.177)
Sustainability Priority	0.380***	0.376***	−0.009	0.010	−0.493***	−0.484***	−0.873***	−0.808***
	(0.129)	(0.130)	(0.116)	(0.117)	(0.133)	(0.134)	(0.126)	(0.125)
Financial Literacy		0.187***		0.055		0.003		−0.393***
		(0.072)		(0.064)		(0.074)		(0.069)
Age		−0.004		−0.005*		−0.003		0.006*
		(0.003)		(0.003)		(0.004)		(0.003)
Female		0.012		−0.059		−0.173**		−0.188**
		(0.078)		(0.070)		(0.080)		(0.074)
University educ		−0.024		−0.087		0.028		−0.176**
		(0.079)		(0.071)		(0.081)		(0.076)
Pensioner		0.040		0.130		0.177		0.339***
		(0.130)		(0.117)		(0.134)		(0.124)
Married		0.136		−0.017		−0.140		−0.133*
		(0.084)		(0.075)		(0.086)		(0.080)
HH-size		0.002		−0.002		0.006		−0.006
		(0.019)		(0.017)		(0.019)		(0.018)
Intercept	8.410***	8.045***	6.916***	7.077***	4.828***	5.059***	2.526***	3.507***
	(0.091)	(0.266)	(0.082)	(0.239)	(0.094)	(0.274)	(0.089)	(0.254)
Num.Obs.	2021	2021	2021	2021	2021	2021	2021	2021
R2 Adj.	0.010	0.012	0.013	0.012	0.026	0.027	0.050	0.081

Note: *p<0.1; **p<0.05; ***p<0.01

This table shows the coefficients from an OLS regression. The dependent variable is the participants' rating between 1 and 10 for each fund, indicating the fund's subjective sustainability level (1: least sustainable, 10: most sustainable).

G Hurdle model with hypothetical returns

Table G.5: Hurdle Poisson, hypothetical returns, AME

	Dark-Green	Light-Green-Plus	Light-Green	Brown
	Binary			
	(1)	(2)	(3)	(4)
Treatment SFL	0.040**	0.011	−0.025	−0.001
	(0.016)	(0.021)	(0.022)	(0.019)
Treatment Placebo	0.007	0.000	−0.001	−0.026
	(0.016)	(0.022)	(0.022)	(0.019)
Return Dark-Green	0.063***	−0.063***	−0.045***	−0.012***
	(0.004)	(0.005)	(0.005)	(0.004)
Return Light-Green-Plus	−0.025***	0.085***	−0.035***	−0.008*
	(0.004)	(0.004)	(0.005)	(0.004)
Return Light-Green	−0.015***	−0.018***	0.073***	−0.021***
	(0.004)	(0.005)	(0.004)	(0.004)
Return Brown	−0.012***	−0.001	−0.007	0.043***
	(0.004)	(0.005)	(0.005)	(0.004)
	Count			
	(1)	(2)	(3)	(4)
Treatment SFL	0.152	−0.384	−0.285	0.054
	(0.285)	(0.235)	(0.292)	(0.450)
Treatment Placebo	−0.145	0.095	0.434	0.516
	(0.294)	(0.242)	(0.302)	(0.467)
Return Dark-Green	1.241***	−0.775***	−0.616***	−0.255***
	(0.065)	(0.056)	(0.072)	(0.096)
Return Light-Green-Plus	−0.622***	1.151***	−0.581***	−0.308***
	(0.061)	(0.058)	(0.069)	(0.105)
Return Light-Green	−0.244***	−0.294***	1.064***	−0.373***
	(0.061)	(0.053)	(0.076)	(0.103)
Return Brown	−0.167***	−0.132**	−0.174**	0.938***
	(0.061)	(0.054)	(0.068)	(0.106)
Num.Obs.	4042	4042	4042	4042

Note: *p<0.1; **p<0.05; ***p<0.01

This table shows the average marginal effects of both parts of the hurdle model (logistic regression and truncated Poisson regression). Unlike the results from the previous section, this table shows results from a non-incentivized hypothetical choice, where the past returns were randomized. Respondents had two separate choices; Standard errors are clustered on a respondent level.

H Robustness Checks

H.0.1 Validation SFL Score

Achieving Clarity The design of our treatment and the questions prioritized clarity and simplicity. To achieve this, we kept the information concise, distributing it across five slides, each accompanied by a brief comprehension question to encourage active engagement with the content. These comprehension questions were deliberately unrelated to the SFL content to avoid influencing the participants' answers. Importantly, if respondents answered incorrectly, they were required to reattempt the question, reinforcing their focus on the material.

Ensuring Relevance To ensure the accuracy and relevance of the presented sustainable finance information, we based our content on official EU and Swiss publications and publicly available interpretations. In addition, we consulted experts from academia, financial authorities, NGOs, and the financial industry. Their feedback was essential in resolving ambiguities and ensuring that the information targeted the most relevant aspects of sustainable finance for retail investors. Given the complexity of the subject, this process took several months to complete.

Improving Coherence Coherence between the treatment text and the SFL questions was a top priority. Expert feedback and pretests were key in ensuring the information was understandable. In December 2023, we conducted an initial pretest with 40 experienced German investors from Prolific, confirming that participants could generally answer the questions. A second pretest, with 100 experienced German investors in January 2024, further validated the clarity of the treatment. Almost all respondents indicated they understood the information, and none selected the option, indicating that the questions were unclear. A similar pretest with 20 inexperienced investors yielded consistent results, reinforcing the coherence of the material.

Selecting Questions We selected a final set of five SFL questions from an initial pool of 12, covering the five key areas of the treatment. In January 2024, as part of a related project funded by the Swiss Federal Office of Energy, we surveyed 504 Swiss retail investors using the preliminary set of 12 SFL questions. Based on the feedback and alignment with our criteria, we narrowed the final selection to five questions, each representing a distinct area of SFL.

Check Consistency Following the pretest results, we finalized five questions based on two criteria. First, we calculated McDonald's Omega score (McDonald, 1999) for all possible combinations of five questions covering each SFL area. McDonald's Omega is a reliability coefficient that estimates how consistently a set of questions measures the same underlying concept. Unlike Cronbach's Alpha, which assumes all items contribute equally, Omega allows each question to vary in how strongly it relates to the concept and how much measurement error it contains. This more flexible approach is known as a congeneric model. While there is no strict cut-off for McDonald's Omega, a minimum of 0.7 is commonly accepted, though higher values are preferred (Lance et al., 2006). We selected combinations that achieved an Omega score above 0.7 and further refined the selection in consultation with experts to ensure the final questions were both comprehensible and representative of the key SFL concepts. This process resulted in the five questions used for our analysis.

With the final survey data, we recalculated the McDonald's Omega score. The larger set of five ("general + specific") questions yielded a score of 0.71, while a smaller subset of three questions ("general") scored 0.76. For comparison, the Omega score for the "big three" financial literacy questions by Lusardi and Mitchell (2008) in our survey data was also 0.76, demonstrating consistency in the reliability of the questions across different measures.

Enhance Understanding Each treatment slide had a short true/false comprehension question designed to improve attention. Respondents had two attempts to answer each question. If the question was answered incorrectly on the first attempt, the survey continued. For the SFL treatment, 88% of the comprehension questions were answered correctly on the first attempt, 6% on the second attempt, and 6% were answered incorrectly twice. Similarly, for the Placebo treatment, 86% of the comprehension questions were answered correctly on the first attempt, 6% on the second attempt, and 7% were answered incorrectly twice. For the Awareness treatment, 95% of the comprehension questions were answered correctly on the first attempt, 3% on the second attempt, and 2% were answered incorrectly twice.

H.1 Validation Choice Experiment

Control Correctness To ensure that the information on the choice cards was correct, we based all characteristics on elements from the funds' official prospects. In Appendix B, we show the exact references with excerpts from each prospectus. We also discussed the choice cards with experts from academia, industry, and NGOs to ensure the information was relevant to real-world financial choices.

Check Understandability We used several steps to check if respondents understood the choice cards. Before starting the investment game, we informed respondents with a text about the lottery. Next, we presented the choice cards and asked two comprehension questions, with two trials in case the first answer was wrong. If the answer was wrong the second time, we displayed the results (similar to Heeb et al. (2023)). Screenshots from the survey for the explanation and the attention check are in the appendix in section I. Further, we conducted three pretests in January and February 2024 with 100, 20, and 20 respondents. At the end of the survey, participants could give general comments; we did not receive any comments on the understandability of the choice cards.

Increase Attention The order of the choices (the columns in the table) was randomized. Hence, if respondents only chose depending on the representation pattern (e.g., the first fund from the left), this effect would cancel out with the randomization. It also incentivized respondents to read the information carefully.

H.2 Treatment effect of portfolio allocation - basic model

Table H.6: Hurdle Poisson, binary part (logistic regression), AME

	Dark-Green		*Light-Green-Plus*		*Light-Green*		*Brown*	
				Binary				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment SFL	0.060**	0.059**	0.018	0.019	−0.038	−0.033	0.006	0.012
	(0.023)	(0.023)	(0.026)	(0.026)	(0.027)	(0.026)	(0.026)	(0.025)
Treatment Placebo	0.022	0.018	−0.004	−0.002	−0.008	0.002	−0.030	−0.022
	(0.024)	(0.024)	(0.026)	(0.026)	(0.027)	(0.026)	(0.026)	(0.025)
Financial Literacy		−0.043**		−0.038*		0.020		−0.054***
		(0.020)		(0.021)		(0.020)		(0.019)
Age		0.002*		0.000		−0.005***		−0.003***
		(0.001)		(0.001)		(0.001)		(0.001)
Female		0.112***		0.057***		−0.055**		−0.194***
		(0.020)		(0.022)		(0.022)		(0.021)
University educ		0.014		−0.026		−0.032		−0.100***
		(0.021)		(0.022)		(0.022)		(0.021)
Pensioner		0.033		0.009		−0.047		−0.077**
		(0.034)		(0.036)		(0.037)		(0.035)
Married		0.018		0.011		0.026		−0.046**
		(0.023)		(0.024)		(0.023)		(0.023)
HH-size		−0.005		0.006		0.005		0.003
		(0.007)		(0.006)		(0.005)		(0.005)
Num.Obs.	2021	2021	2021	2021	2021	2021	2021	2021
R2 Adj.	0.066	0.678	0.011	0.249	0.036	0.471	0.005	0.576

Note: *p<0.1; **p<0.05; ***p<0.01

This table shows the average marginal effects of a logistic regression. The dependent variable is an indicator that takes the value of one if the respondent invested a positive sum in the respective fund and zero otherwise.

Table H.7: Hurdle Poisson, count part (truncated Poisson regression), AME

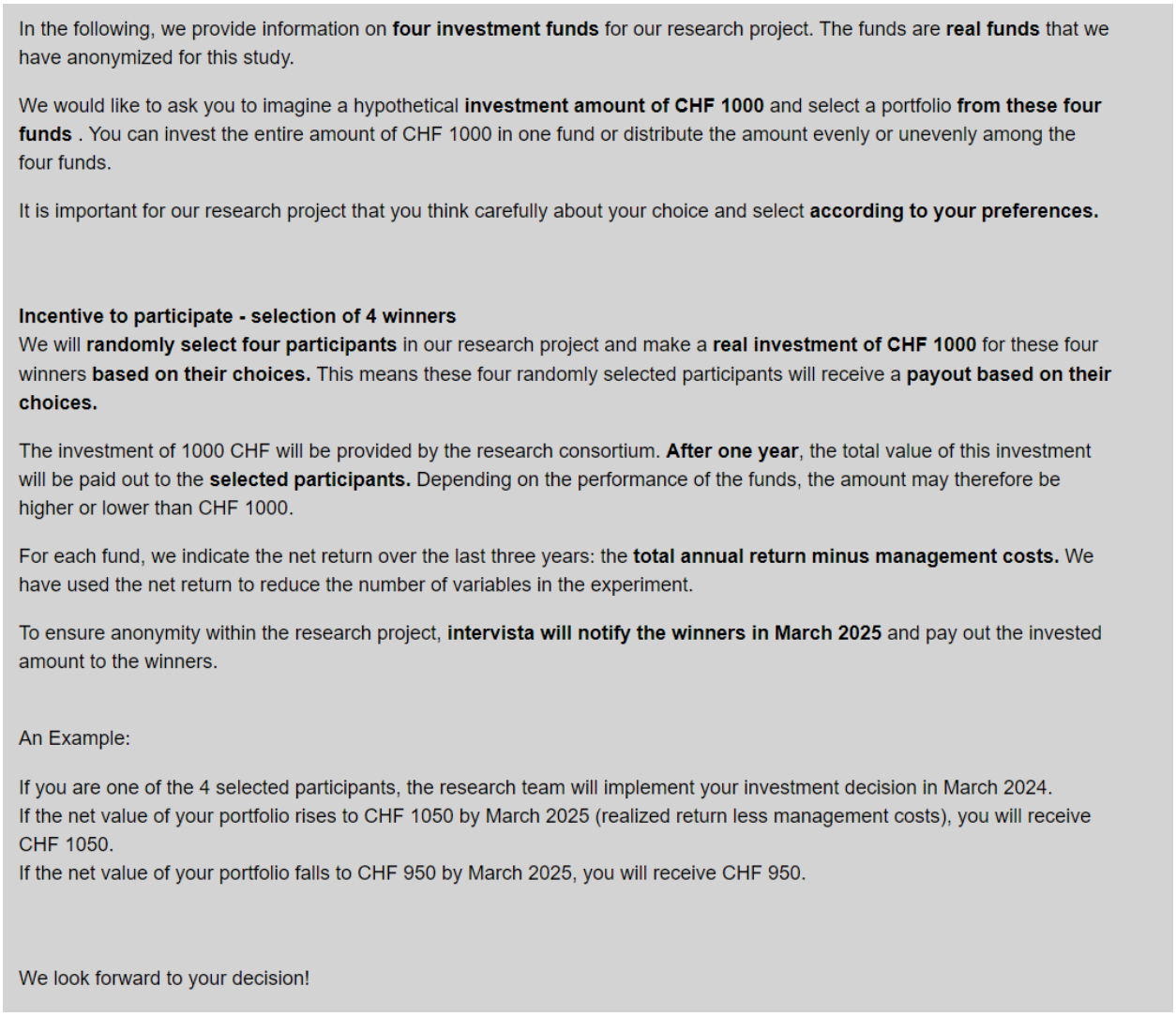
	Dark-Green		*Light-Green-Plus*		*Light-Green*		*Brown*	
				Count				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment SFL	0.266	0.173	−0.631***	−0.630***	−0.100	−0.052	−0.533**	−0.492*
	(0.203)	(0.200)	(0.175)	(0.175)	(0.200)	(0.199)	(0.261)	(0.254)
Treatment Placebo	0.039	−0.088	−0.325*	−0.437**	0.455**	0.578***	0.072	0.120
	(0.208)	(0.204)	(0.179)	(0.178)	(0.201)	(0.201)	(0.273)	(0.265)
Financial Literacy		−0.011		−0.146		0.764***		1.209***
		(0.151)		(0.135)		(0.163)		(0.209)
Age		0.074***		0.043***		−0.041***		0.007
		(0.007)		(0.007)		(0.008)		(0.010)
Female		2.100***		0.365**		−0.568***		−2.361***
		(0.168)		(0.152)		(0.166)		(0.230)
University educ		1.216***		0.075		0.237		0.190
		(0.169)		(0.154)		(0.167)		(0.222)
Pensioner		−0.070		0.521**		0.467		−0.268
		(0.263)		(0.256)		(0.320)		(0.407)
Married		0.333*		−0.129		0.452**		−0.911***
		(0.177)		(0.184)		(0.204)		(0.273)
HH-size		−0.098***		0.066		−0.062		0.108
		(0.030)		(0.081)		(0.084)		(0.111)
Num.Obs.	2021	2021	2021	2021	2021	2021	2021	2021
R2 Adj.	0.066	0.678	0.011	0.249	0.036	0.471	0.005	0.576

Note: *p<0.1; **p<0.05; ***p<0.01

This table shows the average marginal effects of a Poisson regression truncated at zero (the count part of the hurdle model). The coefficients explain the amount of units invested in a fund, conditional on investing (i.e., having a non-zero investment).

I Choice Cards explanation and comprehension check

Figure I.3: Choice Cards Explanation



In the following, we provide information on **four investment funds** for our research project. The funds are **real funds** that we have anonymized for this study.

We would like to ask you to imagine a hypothetical **investment amount of CHF 1000** and select a portfolio **from these four funds** . You can invest the entire amount of CHF 1000 in one fund or distribute the amount evenly or unevenly among the four funds.

It is important for our research project that you think carefully about your choice and select **according to your preferences.**

Incentive to participate - selection of 4 winners
We will **randomly select four participants** in our research project and make a **real investment of CHF 1000** for these four winners **based on their choices.** This means these four randomly selected participants will receive a **payout based on their choices.**

The investment of 1000 CHF will be provided by the research consortium. **After one year**, the total value of this investment will be paid out to the **selected participants.** Depending on the performance of the funds, the amount may therefore be higher or lower than CHF 1000.

For each fund, we indicate the net return over the last three years: the **total annual return minus management costs.** We have used the net return to reduce the number of variables in the experiment.

To ensure anonymity within the research project, **intervista will notify the winners in March 2025** and pay out the invested amount to the winners.

An Example:

If you are one of the 4 selected participants, the research team will implement your investment decision in March 2024.
If the net value of your portfolio rises to CHF 1050 by March 2025 (realized return less management costs), you will receive CHF 1050.
If the net value of your portfolio falls to CHF 950 by March 2025, you will receive CHF 950.

We look forward to your decision!

Note: This figure shows the explanation for the choice experiment (English translation from German).

Figure I.4: Choice Cards Comprehension Check

Comprehension Check

Before we start the investment, we would like to ask you to answer the following questions.

	Fund A	Fund B	Fund C	Fund D
Type of Investment	Equity	Equity	Equity	Equity
Average net return per year in % (last 3 years)	4.7%	5.6%	7.4%	6.5%
Risk profile (past performance)	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7
Investment target	**Long-term returns and sustainable investments**	**Long-term returns**	**Long-term returns**	**Long-term returns**
Sustainability features	Companies in the fund: • lower CO2 emissions than comparable companies • do not harm any social aspects	Companies in the fund: • low CO2 emissions		
Exclusion of controversial industries and poor corporate governance	Yes	Yes	No	Yes
Consideration of sustainability risks	Yes	Yes	No	Yes

How many funds take sustainability risks into account?

○	**1**
○	**2**
○	**3**

How many funds exclude controversial sectors?

○	**1**
○	**2**
○	**3**

How many funds have 'lower CO2 emissions' as a sustainability feature than comparable companies?

○	**1**
○	**2**
○	**3**

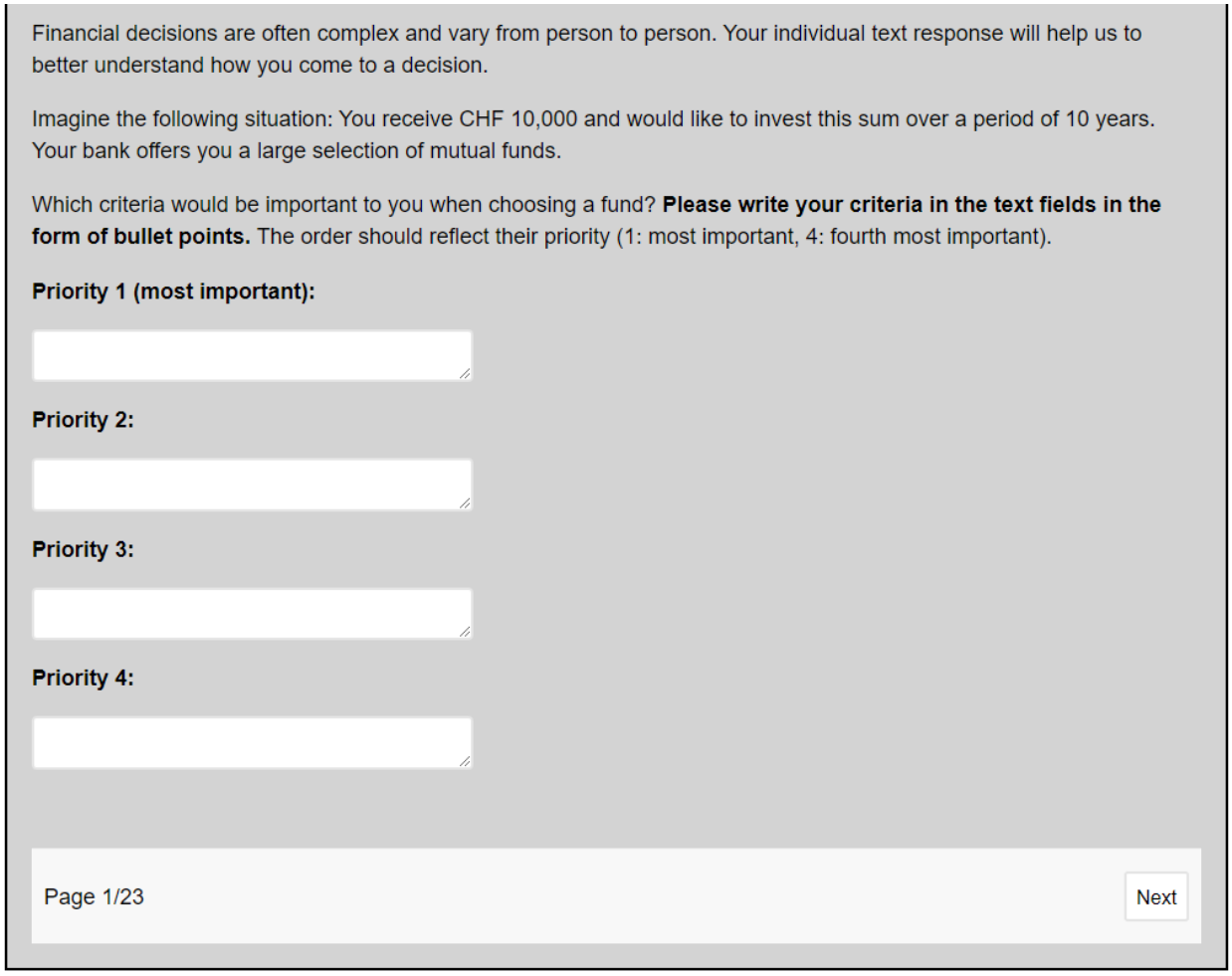
How many funds had an average net return of less than 6%?

○	**1**
○	**2**
○	**3**

Note: This figure shows the comprehension check for the choice experiment (English translation from German).

J Additional Figures

Figure J.5: Open-ended question



Note: This figure shows the open-ended question to elicit investment attitudes (English translation from original German). The question was placed at the beginning of the survey.

Figure J.6: Choice Experiment - randomized past returns

Please allocate CHF 1000 to these four funds to create your own portfolio. You can invest the entire amount of CHF 1000 in one fund or distribute the amount evenly or unevenly among the different funds. If you wish to invest in a fund, you must invest at least CHF 50.

To continue, please note that the total investment amount should be CHF 1000. As soon as you are in this area, the "Continue" button will be displayed.

	Fund A	**Fund B**	**Fund C**	**Fund D**
Type of investment	Stocks	Stocks	Stocks	Stocks
Average net return per year in % (last 3 years)	6	3.5	3	7.5
Risk profile (past performance)	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7
Investment target	**Long-term returns**	**Long-term returns and sustainable investments**	**Long-term returns**	**Long-term returns**
Sustainability features		Companies in the fund: • lower CO2 emissions than comparable companies • do not harm any social aspects	Companies in the fund: • low CO2 emissionen	
Exclusion of controversial industries and poor corporate governance	No	Yes	Yes	Yes
Consideration of sustainability risks	No	Yes	Yes	Yes
Investment amount remaining budget: **1000 CHF**	0 CHF	0 CHF	0 CHF	0 CHF

Note: This figure shows a choice set from the non-incentivized part of the experiment with randomized past returns (English translation from German). The order of the columns was randomized.

Figure J.7: Choice Experiment - Fund Ratings

	Fund A	**Fund B**	**Fund C**	**Fund D**
Type of investment	Equity	Equity	Equity	Equity
Average net return per year in % (last 3 years)	4.7%	5.6%	6.5%	7.4%
Risk profile (past performance)	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7	1 2 3 **4** 5 6 7
Investment target	**Long-term returns and sustainable investments**	**Long-term returns**	**Long-term returns**	**Long-term returns**
Sustainability features	Companies in the fund: • lower CO2 emissions than comparable companies • do not harm any social aspects	Companies in the fund: • low CO2 emissions		
Exclusion of controversial industries and poor corporate governance	Yes	Yes	Yes	No
Consideration of sustainability risks	Yes	Yes	Yes	No
Sustainability - Your Rating (1:very low, 10: very high)	0	0	0	0

Note: This figure shows a choice set from the last part of the experiment, where respondents gave their own sustainability rating for each fund. As before, the order of the columns was randomized. Participants received the following instruction for this exercise: "We would now like to ask you to give your assessment of the sustainability of the 4 funds. Please give each fund a rating between 1 and 10 (1: very low; 10: very high)."

K Additional Tables

Table K.8: Impact of SFL

	General + Specific		*General*	
	(1)	(2)	(3)	(4)
Treatment SFL	0.975***	0.966***	0.456***	0.448***
	(0.075)	(0.074)	(0.053)	(0.052)
Treatment Placebo	0.008	0.015	0.029	0.034
	(0.076)	(0.074)	(0.054)	(0.052)
Fin. Lit.		0.350***		0.243***
		(0.057)		(0.040)
Age		−0.004		−0.003
		(0.003)		(0.002)
Female		−0.165***		−0.147***
		(0.062)		(0.043)
Uni. ed.		0.326***		0.292***
		(0.063)		(0.044)
Pensioner		0.084		0.026
		(0.104)		(0.073)
Married		−0.024		−0.037
		(0.067)		(0.047)
HH-size		0.027*		0.020*
		(0.015)		(0.011)
Intercept	2.233***	1.267***	1.560***	0.901***
	(0.053)	(0.209)	(0.038)	(0.147)
Num.Obs.	2021	2021	2021	2021
R2	0.099	0.141	0.043	0.101

Note: *p<0.1; **p<0.05; ***p<0.01

This table shows the coefficients of an OLS regression with the SFL scores as dependent variables.

L Background Variables

Table L.9: Definition of variables obtained from the survey company

Variable	Description
Survey Variables	
Sustainability Attitude	An indicator variable that takes the value of 1 if a respondent mentioned the sustainability topic in the open-ended question on investment priorities at the start of the survey.
Treatment	Randomly assigned information treatment that takes either the value "SFL," "Aware," or "Placebo."
Financial Literacy	The "big three" questions on financial literacy by Lusardi and Mitchell (2008)
Income	Respondents were classified into seven intervals for their monthly income: "less than 3,000 CHF," "3,000 - 4'500 CHF," "4'501 - 6,000 CHF," "6,001 - 9,000 CHF," "9,001 - 12,000 CHF", "12,001 - 16,000 CHF" and "more than 16,000 CHF." We converted the intervals into a continuous variable by taking the average value for the interval when possible. The new continuous income variable thus takes the values: 3,000 CHF, 3,750 CHF, 5,250 CHF, 7,500 CHF, 10,500 CHF, 14,000 CHF, and 16,000 CHF.
Background Variables (provided by survey company)	
Female	A dummy variable that takes the value of 1 if the respondent identifies as female and 0 otherwise.
Age	Age in years.
University Degree	A dummy variable that takes the value of 1 if the respondent holds a university degree and 0 otherwise.
Pensioner	A dummy variable that takes the value of 1 if the respondent's current employment status is "pensioner" and 0 otherwise.
Married	A dummy variable that takes the value of 1 if the respondent is married and 0 otherwise.
Household size	The number of people currently living in the respondent's household.

Note: This table describes the variables used in this study.

M Treatment and SFL questions

M.1 SFL Treatment

Treatment	SFL Questions
Q1: What is sustainable finance? Sustainable finance considers **environmental, social, and governance (ESG)** characteristics alongside traditional financial risk and return analysis. The level of **sustainability varies** across financial products. Due to the **lack of standardized sustainability ratings,** government guidelines aim to increase transparency. European and Swiss authorities issued **guidelines for the disclosure** of sustainability characteristics that apply to most investment funds sold in Switzerland. Question: **The level of sustainability between different financial products can vary.** • True • False	1. **ESG Awareness:** The acronym "ESG" is often used in the context of sustainable finance investments. What do you think the abbreviation "ESG" stands for? • Environmental and Social Goals • Environmental and Sustainable Goals • <u>Environmental, Social, and Governance</u> • Environmental, Sustainable, and Governance • I do not know. 2. **SFL 1 - Lack of standards:** Sustainability ratings and labels for funds do not follow a uniform standard. As a result they are not directly comparable. • <u>Yes</u> • No • I do not know.

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Q2: What are funds that account only for sustainability risk alongside financial risk and return analysis? These funds consider ESG-related issues that can negatively impact a firm's financial performance. For example, they consider whether a company is exposed to the negative effects of climate legislation (e.g., higher CO2 taxes) or avoid investments in companies that are frequently affected by natural disasters due to climate change. A fund that considers **sustainability-related risks** in addition to the financial risk analysis pursues a purely financial investment objective and is **not considered a sustainable fund.** Question: **Sustainability risks can influence the profitability of companies.** • True • False	3. **SFL 2 - ESG risk integration:** Suppose a fund considers sustainability-related risks in addition to the financial risk analysis. Is that sufficient for this fund to be considered sustainable? • Yes • <u>No</u> • I do not know.

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Q3: What are funds with a medium degree of sustainability (also called "light green")? **In addition to financial returns,** these funds also take sustainability into account as an additional criterion. These funds include firms that show **positive environmental or social characteristics** (e.g. low carbon emissions or fair wages). The firms **do not need to meet a specific sustainability target** (e.g. a specific emission goal). Question: **Light green funds have sustainable characteristics.** • True • False	*The EU regulations differentiate between three different levels of sustainable funds: no sustainability (Brown), medium (light-green or Light-Green), and high (dark-green or Dark-Green).* 4. **SFL 4 - EU SFDR light green:** A "light green" fund does not have to set specific CO2 reduction targets for companies. • Yes • No • I do not know.

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Q4: What are funds with a high degree of sustainability (also called "dark green")? These funds have **two goals:** to meet a **sustainability objective** and to achieve **financial gains.** Regarding their, sustainability funds must meet two conditions: (i) Declare and monitor a **sustainable objective:** firms in these funds must contribute to either a specific environmental or social objective (e.g., meet a specific target for CO2 emissions). (ii) The **firms in the fund do not harm any other sustainability dimension** (e.g., a fund promoting fair wages must ensure that its firms do not cause any environmental harm). Question: **Dark green funds have a specific sustainability objective.** • True • False	5. **SFL 5 - EU SFDR dark green:** Is it sufficient for a fund to define and monitor an environmental or social objective in order to be considered "dark green"? • Yes • <u>No</u> • I do not know.

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Q5: When does a fund directly impact the sustainability performance of firms (e.g. on CO2 emissions)? A sustainable fund (light or dark green) is not obliged to influence the firms' sustainability strategy, e.g., CO2 emissions may remain unchanged following investment. A fund only impacts the sustainability of firms by • Obliging **low-sustainability firms to change** (e.g. introducing clean technologies like CO2-neutral production). • Investing in **new ventures** (e.g. building a new wind park). Question: **A sustainable fund always has an impact on a company's sustainability strategy.** • True • False	6. **SFL 3 - Impact investing:** A fund that invests in firms with a low CO2 footprint automatically reduces global CO2 footprint. • Yes • <u>No</u> • I do not know.

M.2 Awareness Treatment

Treatment 2 (Awareness)
Q1: How did the New York Stock Exchange (NYSE) get established? The NYSE, also called the "Big Board," is a stock exchange in NYC. **It was founded in 1792** by 24 stockbrokers who signed the Buttonwood Agreement, establishing rules for trading stocks and bonds. The NYSE grew rapidly in the 19th century, becoming the **dominant US exchange.**

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Question: **The NYSE was founded in 1792?**

- True
- False

Q2: What was the New York Stock Exchange's role in America in the 20th century?

The NYSE played a crucial role in American history during the 20th century. **It survived multiple crises**, including the Great Depression and the Black Monday crash, and continued to innovate. In 2007, **it merged with Euronext** to become the world's largest stock exchange. Today, with over 2,800 listed companies, it remains one of the most important financial institutions globally.

Question: **The NYSE has survived multiple crises.**

- True
- False

Q3: Why is the New York Stock Exchange a popular tourist destination?

The NYSE at 11 Wall Street in Lower Manhattan is a *symbol of the American economy* and a popular tourist destination. Built in 1903, the **neoclassical building** features six Corinthian columns and a pediment with a sculpture of Mercury, the Roman god of commerce. It houses a bustling **trading floor**, offices, conference rooms, and a museum showcasing the history of the exchange and the financial industry.

Question: **The NYSE is located in Upper Manhattan.**

- True
- False

Q4: What is the role of the opening and closing bell at the NYSE?

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The bell ringing at the NYSE is a **symbolic tradition** that marks the opening or closing of the trading day. It involves the ringing of the opening or closing bell by a prominent public figure, such as a celebrity, athlete, or corporate executive. The ceremony is **broadcast live** on major news networks and is often used as a platform for companies to promote their brand or upcoming events. The bell ringing is a highly **popular opportunity,** and many companies compete for the chance to participate.

Question: **The bell opens the opens the trading day.**

- True
- False

Q5: How does the New York Stock Exchange promote sustainable finance?
Sustainable finance considers **environmental, social, and governance (ESG)** characteristics alongside traditional financial risk and return analysis. The exchange has launched **several initiatives** to promote ESG investing, such as planning to introduce sustainability labels in the future.

Question: **The New York Stock Exchange promotes sustainable finance.**

- True
- False

M.3 Placbo Treatment

Treatment 1 (Placebo)

Q1: Why are surveys an important tool for research?
Surveys are a central means of **gathering data and opinions** to support decisions in research, business, and administration. Market researchers collect **demographic data, attitudes, and behaviors** of respondents and analyze the information to gain new insights. Therefore, surveys are a valuable means of gathering information and an instrument for any organization that wants to **better understand its stakeholders.**

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Question: **Surveys help analyze behaviors.**

- True
- False

Q2: Who typically organizes professional surveys?
Surveys are conducted by researchers at universities, the Federal Statistical Office, or market research institutes. The organization of a survey includes **planning**, creating the survey the questionnaire, **implementing it**, and **statistically evaluating the results.**

Question: **Organizing a survey only involves creating the questionnaire.**

- True
- False

Q3: What is special about online panels from market research institutes?
Online panels from market research institutes have some features that make them particularly valuable for market research:

- **Access to a target group:** With an online panel, companies gain access to a pool of potential participants who ideally match the target group.
- **Data quality:** Special recruitment sources and careful management of the panel ensure that surveys have a high-quality and **representative sample.**

Question: **A representative panel is crucial for the quality of a survey.**

- True
- False

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Q4: Which research areas are most market research institutes specialized in?
Most market research institutes specialize in the following areas:

- **Social science research:** Understanding human interactions and social trends.
- **Consumer research:** Understanding consumer decisions and behavior.

Question: **Most market research institutes specialize in consumer decisions.**

- True
- False

Q5: What are the commonly used survey tools?
Market research institutes offer a variety of survey tools, including:

- **Online surveys:** These are questionnaires that participants can complete online.
- **Telephone interviews:** In this method, an interviewer asks individual respondents questions over the phone.
- **Focus groups:** This involves a small group of people brought together to discuss a specific topic or product.

Question: **Online surveys are a commonly used survey tool.**

- True
- False