

Green values and transparency of household savings: A survey*

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April 8, 2024

Abstract

This paper studies the interest of individuals for transparency regarding how their savings are invested. Using a sample of 1,075 questionnaires from a panel of French individuals who participate in the financial decisions of their households, we investigate whether these individuals care about the sector allocation and the carbon footprint of their savings. Our results show that green consumption values are the main driver of interest for transparency. Furthermore, by analyzing the willingness of individuals to pay for transparency, we show the reluctance of individuals who exhibit green values to pay for this kind of information. In addition, our results show that individuals with pecuniary motives for sustainable investments also attach great importance to transparency. From a general standpoint, our findings contribute to analyzing the barriers that may hinder the mobilization of household savings for funding the green transition.

Keywords: Household finance, carbon footprint, green consumption values, ESG

JEL Classification: G11, G40

*The authors thank the European Savings Institute (Observatoire de l'Épargne Européenne, OEE), the Institut Europlace de Finance (IEF) and CIC Marchés for their financial support. Any errors are the full responsibility of the authors. The authors thank the associate editors and two anonymous reviewers for their insightful comments and suggestions. Declarations of interest: none.

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1 Introduction

In December 2022, the French Minister of Economy and Finance, announced the upcoming creation of a regulated green savings product that would be offered by banks. This product will be transparent, and controls will ensure that savings are directed towards projects in line with the objective of carbon neutrality. For French authorities, simplicity and transparency are prerequisites to overcoming the potential barriers to the mobilization of savings against global warming. Indeed, while 60% of the French population expresses an interest in the environmental and societal impact of their savings (OpinionWay, 2020), a large majority of savers believe that banks are not transparent (IFOP, 2022). In addition, the level of financial and ESG literacy as well as the level of participation in financial markets are modest in France compared to some other OECD countries (UK and Germany, for instance).¹

Looking beyond the French context, understanding the significance individuals place on the transparency of their savings is crucial for at least two reasons. First, it determines the appropriateness of developing green and transparent bank savings products to align with household preferences. Second, on a broader scale, it may very well be the case that the highest potential for new green funding originates from individuals' savings. In 2021, in the EU, deposits amounted to €9.7 trillion. In comparison, the EU budget for the European Green Deal Investment Plan is €503 billion. These figures underscore that the fight against climate change cannot solely rely on “sophisticated” investors choosing ESG funds over conventional ones. To “move the trillions” (Sirakis et al., 2015) necessary for mitigating climate change, it is imperative to explore and analyze every potential funding source. In recent years, a substantial body of academic literature has concentrated on investors' preferences and willingness to pay (WTP) for responsible invest-

¹See Fernandez et al. (2023) for a comparison of financial and ESG literacy across countries. See also Kaustia et al. (2023) for the participation in financial markets.

ments (Riedl and Smeets, 2017; Gutsche and Ziegler, 2019; Hartzmark and Sussman, 2019; Rossi et al., 2019; Baker et al., 2022; Filippini et al., 2021; Heeb et al., 2023). Regarding transparency, Gutsche and Ziegler (2019) show that investors are sensitive to the presence of sustainability certificates on investment products. These authors show that the willingness to pay is more important when a logo exists, especially if it is issued by a government body. Sustainability logos or certifications, along with ESG ratings, encompass diverse dimensions of sustainability and employ varying methodologies. By narrowing down the focus to the “E” in ESG, our primary objective is to investigate the significance of different dimensions of transparency for individuals, as well as their characteristics.

In this paper, we conduct a questionnaire on a panel of 1,075 French individuals who participate in the financial decisions of their household. We choose to work with a sample of individuals that resembles the general population, a choice that enables us to capture the preferences for transparency among both sophisticated and non-sophisticated individuals. Most studies on socially responsible investing typically use samples composed of investors possessing a certain level of financial knowledge and familiarity with the investment fund landscape (interest rates, returns, fees, ESG labels, or market indices, for instance). While these studies provide valuable insights into the preferences of investors, they often pertain to a subset of “sophisticated” savers. Recent studies highlight that sustainable financial literacy is low, even on panels where financial literacy is high (Filippini et al., 2021). Additionally, Engler et al. (2023) demonstrate, based on a large panel spanning five European countries, that investors with low financial literacy might not fully comprehend the significant impact of higher fees on sustainable investments on their net returns.

Furthermore, we examine transparency along two dimensions; the importance of sector allocation and carbon footprint in individuals’ savings decisions. We focus on these two dimensions since: 1) exclusionary screening represents the main environmental, social, and governance (ESG)

investment strategy in Europe and 2) there is a growing emphasis on individuals' carbon footprint. Since the carbon footprint of an individual can dramatically increase because of his/her investments and savings, we investigate whether individuals express a desire to be informed about this carbon footprint. We first ask respondents whether knowing about the sectors that are funded by their current and savings accounts, and whether knowing about the carbon footprint of these bank accounts would guide their financial choices. We then assess their sensitivity for such transparency by suggesting that they use (or pay for) a financial application that provides this type of information.

Our paper offers three main contributions. First, we establish a robust relationship between individuals' green consumption values and their concern regarding the transparency of financial products. Our findings complement the work of Anderson and Robinson (2022), who, using administrative data and actual investment decisions from a large sample of Swedish households, demonstrate that pro-environment households are not more likely to hold pro-environment portfolios. Anderson and Robinson (2022) also show that green financial engagement is stronger when informational hurdles are lower. By demonstrating that individuals with high green consumption values are sensitive to transparency, regardless of its dimensions (sector financing and carbon footprint), our results strengthen the case for potential hurdles. In essence, the lack of transparency hinders the translation of green consumption values into financial choices. Finally, by analyzing individuals' willingness to pay for transparency, we highlight the reluctance of those with green values to pay for this kind of information. This finding echoes the results of Anderson and Robinson (2022), who emphasize the reluctance of pro-environmental individuals to commit to financial products.

Second, we show that the interest for transparency can also be motivated by pecuniary motivations. Building on recent studies (Anderson and Robinson, 2022; Pedersen et al., 2021), we

categorize individuals with pecuniary motivations for investing in ESG as those who believe that environmental considerations will have cash-flow implications for certain types of firms. Our findings indicate that increased transparency holds significance for this subgroup of individuals, irrespective of their green consumption values. Furthermore, these individuals exhibit a higher willingness to pay (WTP) for obtaining such information.

Finally, we demonstrate that there are common drivers between the interest in transparency regarding sector allocation and carbon footprint on one hand, and the preferences for sustainable investing on the other hand. Our analysis reveals that green consumption values and altruistic values, which are known drivers of sustainable investing (Riedl and Smeets, 2017; Hartzmark and Sussman, 2019; Brodback et al., 2019; Gutsche, 2019; Brunen and Laubach, 2022), also play a pivotal role in fostering an interest in transparency.

Our article carries policy implications and offers insights for the financial industry. First, we show that transparency, accounting for both dimensions, holds the potential to influence the investment choices of individuals involved in their household’s financial decisions. The majority of our sample, which includes both investors who are acquainted with financial markets and individuals who only have current and savings accounts, expressed interest in knowing the sector allocation and carbon footprint of the investments made with their savings. Our results resonate with 1) the necessity to “move the trillions” and find new sources of funding for the green transition, and 2) the recent introduction of green deposit solutions by financial institutions (such as Caisse d’épargne, La Nef, HSBC, and Deutsche Bank). These recent initiatives, which combine simplicity and transparency, seem to have the potential to capture the attention of many savers and channel a portion of savings towards green or sustainable investments.

Second, despite country-level differences, recent studies indicate that household consumption tends to lean more towards sustainability, particularly in more developed countries (Bartolj et al.,

2018; Halder et al., 2020). In this context, the mobilization of savings from households with high green values is set to take on even greater importance in the coming years. Our results underline the relevance of transparency for these individuals, while also shedding light on their reluctance to pay for this information. Recently, Laudi et al. (2022) show that advisors impose a premium on sustainable investors compared to conventional investors. Notably, advisors charge the highest fees to sustainable investors with low financial literacy. Beyond transparency, our results emphasize that such behavior (i.e. additional costs for less sophisticated investors) may serve as a disincentive to green investment. Regulators and public authorities should take into account this potential negative impact.

In addition, our findings highlight the weakness of “Impact investing” in the fund industry. Regarding sustainable investing strategies, the “Exclusion/negative screening” category represents about 15.0% of the market shares and the “Impact investing” category amounts to about 0.2% (GSIA, 2022). While our sample is not representative of mutual fund investors, a large proportion (about 42%) of our respondents express the belief that impact is important or very important for their financial choices. This sentiment holds true for individuals with pecuniary motivations for sustainable investment and for financially secure individuals. Therefore, introducing additional impact fund solutions could potentially attract more retail investors. Finally, our findings suggest that regulators should consider introducing and reinforcing mandatory disclosures by financial institutions related to environmental impact. Such measures could play a crucial role in empowering individuals to make more informed decisions.

The rest of the paper is structured as follows. Section 2 is dedicated to the development of the hypotheses, the survey design, the presentation of the sample and the introduction of the main variables used in the econometric analysis. Our empirical analysis is presented in Section 3. Finally, Section 4 concludes the paper.

2 Survey design, sample and main variables

2.1 Hypotheses

The existing literature on socially responsible and green investments emphasizes individuals' preferences and willingness to pay for sustainable assets. These individuals often share common characteristics. Riedl and Smeets (2017) find that investors are drawn to socially responsible investments (SRI) due to intrinsic social values and reputation-related motives. The individuals are also willing to sacrifice part of the financial performance to align their portfolios with their values. Hartzmark and Sussman (2019) find a clear inclination towards sustainability among investors, driven by non-pecuniary motivations such as altruism and experiencing a “warm glow”. Gutsche and Ziegler (2019) emphasize a significant willingness to pay for sustainable investment attributes among individuals who share non-financial motivations, such as “warm glow”, altruism, or green values. Similarly, Rossi et al. (2019) address the substantial willingness to pay for sustainable investment products. In terms of personal characteristics, the literature suggests that SRI investors are predominantly women (Bauer et al., 2021) and individuals with a high level of education (Rossi et al., 2019).

Despite the extensive literature, limited evidence exists concerning individuals' sensitivity to the transparency of their savings.² Gutsche and Ziegler (2019) discuss the importance of a “transparency logo” on financial products, indicating higher willingness to pay for products that exhibit such “transparency logo” compared to products lacking certification. In a recent paper, Heeb et al. (2023) show that investors react to information about the carbon impact of their investments when choosing in which mutual funds to invest their money.

In this paper, we propose three main assumptions. First, research on SRI indicates that in-

²The preference for transparency has primarily been studied in the marketing literature on consumption products (e.g., Napolitano et al., 2008, 2010; Galati et al., 2019).

dividuals inclined towards altruism and environmental values tend to invest more in sustainable products (e.g., Bauer and Smeets, 2015; Riedl and Smeets, 2017; Hartzmark and Sussman, 2019; Gutsche and Ziegler, 2019; Brunen and Laubach, 2022). However, recent findings on green investing reveal that households characterized as environmentally conscious do not necessarily maintain greener investment portfolios (Anderson and Robinson, 2022). The authors attribute this outcome primarily to the lack of transparency and complexity surrounding information on green investments, hindering households from efficiently expressing their green preferences. Based on these findings, we expect transparency to be an important factor in guiding the financial choices of individuals with strong green values. We posit the following:

Hypothesis 1: *Individuals with high green consumption values exhibit greater interest for transparency in terms of sector allocation and carbon footprint of their savings.*

Second, pecuniary motives can impact financial choices as several studies show that expected financial returns on SRI play a role in individuals' portfolio choice (Bauer and Smeets, 2015; Riedl and Smeets, 2017). Anderson and Robinson (2022) discuss how households might invest in ESG-tilted assets solely based on financial expectations. They differentiate between two investor types: ESG-aware and ESG-motivated investors (in line with Pedersen et al., 2021). ESG-aware investors use assets' ESG scores to update their views on risk/expected return trade off. In other words, ESG-aware investors anticipate better long-term performance from responsible investment products compared to conventional ones. By contrast, ESG-motivated investors use ESG information to align their investment decisions with their personal values. Our hypothesis is that, even in the absence of strong pro-environmental preferences, individuals may still care about transparency as a result of purely pecuniary motivations. Therefore, we posit the following hypothesis:

Hypothesis 2: *Individuals who exhibit pecuniary motivations to invest in ESG assets have*

a greater interest for transparency.

Third, we assume that individuals with high green values are not willing to pay for this information. In fact, environmentally oriented individuals often display less financial engagement, reducing their likelihood to actively opt for green investments in their pension plans (Anderson and Robinson, 2022). This result echoes that pro-environmental views are often associated with the political left, which is often critical of financial institutions (Kaustia and Torstila, 2012) and negatively affects sustainable portfolio choices (Gutsche, 2019). We posit:

Hypothesis 3: *Individuals with high green values show greater reluctance towards paying for transparency.*

2.2 Sample and survey design

In July 2021, we conducted a survey on a sample of French individuals who participate in the financial decisions of their households.³ The administration of the questionnaire was operated by Qualtrics Inc., an Internet-based company that specializes in data-gathering through online surveys. The questions used in this article are part of a larger questionnaire that deals with the adoption of mobile financial applications. To understand this adoption, we focus on individuals in the working-age, which ranges from 24 to 65 years.⁴ Our choice was motivated by two main reasons: 1) the adoption rate of Fintech is very low for older people (Krupa and Buszko, 2023; Li et al., 2020); and, 2) a significant proportion of the population under the age of 24 (around

³We asked individuals the following question: “Who is responsible for the financial decision-making in your household?”. We kept only the individuals who answered positively to one of the following statements: “I am responsible for financial decisions in my household” or “I am responsible for financial decisions in collaboration with my spouse”.

⁴This population is made up of 33 million citizens (70% of the French adult population) and holds between 60% and 70% of the financial wealth held by French households (INSEE, Histoire de vie et Patrimoine, 2017-2018).

30%) is not employed and have little savings.⁵ The questionnaire contains multiple parts.⁶ It starts with a description of the study, including a data privacy statement that underlines the anonymity of the respondents. The questionnaire contains only close-ended responses. Types of possible responses include ordinal five-item Likert scales and nominal, interval, and ratio response types. The survey also contains attention-check questions and filters that allow us to control for suspicious response patterns and eliminate low-quality responses. The questionnaire is in French and we pre-tested the survey via Qualtrics on a sub-sample of 100 individuals. After few minor modifications ⁷, we launched the final questionnaire. Our final sample contains 1075 responses.⁸ We provide the characteristics of our sample in Table 1.

Panel A of Table 1 provides information regarding gender, age, and level of education for the full sample. The average age is 43.37 years, and about half of the sample has a higher education degree. Panel B provides information on the type of investment products held by the respondents. We define four categories with respect to the type of financial products held. The first category corresponds to individuals who hold only a current account (no financial products). The second one corresponds to individuals who detain only a savings account. The last two

⁵See Observatoire des inégalités (2023), <https://www.inegalites.fr/Lepatrimoine-selon-l-age>

⁶We have 3 independent sections in our survey. The first section is related to the adoption of fintech solutions by individuals and their relationship with the information technology (IT). In the second part of our questionnaire, we assess individuals' personal values and preferences. Finally, the last section serves to evaluate respondents' level of financial well-being and their level of financial literacy.

⁷We conducted a pre-test of our questionnaire to identify potential design flaws that could impact our data quality. Based on the pilot test, specific adjustments were made to the survey. These included making certain questions "compulsory" as respondents tended to skip non-compulsory questions to expedite survey completion and receive payment. Additionally, we introduced time limits to address respondents who completed the survey hastily ("speeders") to ensure data quality. Attention-check questions were also incorporated to gauge respondents' attentiveness. We excluded some pilot respondents due to insufficient time spent on the survey and incomplete responses.

⁸Since we do not know the number of invitations sent by Qualtrics, and given the fact that we provided Qualtrics with the desired sample size of at least 1,000 individuals, we are unable to compute the alternative response rate for our survey (Callegaro and DiSogra, 2008). The percentage of "usable" responses is 79% (Polonsky et al., 2012). This number represents the proportion of retained questionnaires (1,075) to the total number of received questionnaires (1,367).

categories correspond to individuals who hold financial assets either through their life insurance⁹ or through direct investments (stocks, bonds, or investment funds). As mentioned above, our sample corresponds to a general working age population panel. As a result, about 43% of the individuals in our sample do not have any financial assets (about 28% of the individuals in our sample have only a savings account).

2.3 Main variables and scales

To capture multiple dimensions of individuals' preference for transparency, we ask our respondents to provide their agreement with the following statements: 1) "Knowing which sectors are funded by my current and savings accounts would guide my financial choices" (Variable *Sector allocation*) and 2) "Knowing the carbon footprint of my current and savings accounts would guide my financial choices" (Variable *Carbon footprint*). The answers are on a Likert-type scale, ranging from 1="Strongly disagree" to 5="Strongly agree". The results, provided in Panel C of Table 1, indicate that half (50.35%) of the individuals in our sample agree or strongly agree with the first statement, 36.22% of respondents do not agree or disagree, and 13.44% report disagreement or total disagreement with the importance of such information for their investment decisions. About 42% of the sample considers the carbon footprint of their savings to be an important factor for their financial decisions. The "nor agree, nor disagree" option is selected by 39.04% of respondents. Individuals who do not find this information valuable represent 19.17% of the sample.

To elicit individuals' WTP for information about their savings, we present a fictitious financial

⁹In France, under a French "life insurance" contract ("assurance-vie" in French), the saver undertakes to make periodic contributions to build up savings. The insurer manages this money (through investments in mutual funds) to pay a capital or annuities to the beneficiary. Numerous formulas are available, depending on the chosen duration and the exit options (payment of an annuity/ payment of capital). The risks incurred by the policyholder also vary according to the type of formula chosen.

mobile application to the respondents. We tell them that this application allows them to analyze their current accounts and their savings (saving accounts, life insurance, etc) with respect to societal and environmental criteria.¹⁰ We explain that using this application does not require any personal data and that the application does not store any information. The application mainly allows one to visualize the sectors that the bank finances with one's savings and calculates one's carbon footprint. We also give an example to respondents: "You have €1,000 on a fixed rate savings account in the bank XX. Thanks to the app, you can learn that your money finances the real estate (30%), automotive industry (15%), new technologies (15%), finance and insurance (20%), and health (20%) sectors. In addition, the application informs you that the carbon footprint of your savings amounts to 1,786 kg of CO₂ per year (equivalent to 1.3 flights from Paris to New York)." Then, we ask the respondents how much they would be ready to pay to download the mobile application. Individuals indicate the price they would be willing to pay using a slider ranging from 0 to 5 euros. Among all the respondents, 38% of individuals would be ready to install such an application for free, and 20% of participants would be willing to pay up to €1 to get the app. Only 7% of respondents would be willing to pay more than 4 euros to download this application on their device. On average, the individuals who participated in our questionnaire would be willing to pay 1.27 euros for such an application, with a standard deviation of 1.48 euros.

In this study, we are particularly interested in the effect of personal characteristics on individuals' preferences and WTP for transparency. The academic literature on SRI preferences has shown that personal values, altruism, and social preferences play an important role (Riedl and Smeets, 2017; Hartzmark and Sussman, 2019; Gutsche and Ziegler, 2019; Rossi et al., 2019; Heeb et al., 2023). Thus, we analyze these characteristics. We first measure personal green

¹⁰The description of the application is inspired by the RIFT mobile application. Details can be found at the following address: <https://riftapp.fr/>

consumption values. We borrow the scale developed by Haws et al. (2014), which includes six statements (variable *Green values*; see Appendix 4 for details). This scale constitutes a parsimonious measure of the tendency to express the value of environmental protection through one’s purchases and consumption behaviors. We consider the average of the six Likert scale items. Our measure of green values thus ranges from 1 (respondents who answered “Strongly disagree” to all six questions) to 5 (respondents who answered “Strongly agree” to all six questions). Second, we measure the respondents’ altruistic intentions (variable *Altruism*) using a statement proposed by Falk et al. (2023) : “I am willing to give to good causes without expecting anything in return.” In addition, to assess the objective financial literacy of respondents, we use the classic “Big 3” (Lusardi and Mitchell, 2008, see Appendix 4 for details) (variable *Financial literacy*). More than 50% have one or no correct answer to the Big 3, with only 12% being able to answer all three questions correctly (see Panel B, Table 1). This reflects a low level of financial literacy. In comparison, over 70% of the panel studied by Filippini et al. (2021) answered all three questions correctly (the same orders of magnitude are found by Anderson and Robinson, 2022). The level of financial literacy appears also lower compared to the broader French population. Based on an analysis of several questionnaires, Arrondel (2021) concludes that, on average, only 30% of French individuals correctly answer the three questions, and around 15% do not answer any of them correctly.¹¹

The literature on sustainable investments has shown that individuals’ preference for sustainable assets may be driven by pecuniary motivations (Pedersen et al., 2021; Anderson and Robinson, 2022). Similarly, interest in transparency may be caused by different beliefs about the

¹¹A few explanations for these differences can be put forward. Our sample is not a general population sample and includes a smaller proportion of both men and individuals over 65 who happen to have the highest levels of financial literacy. In addition, as indicated by Arrondel (2021) results are very sensitive to the way and context in which the questions are asked. The fact that the financial literacy questions come towards the end of the questionnaire can also have an impact on participants’ attention span.

risk/return trade-off of responsible assets. Following Anderson and Robinson (2022), we measure these pecuniary motivations by asking respondents whether they believe that sustainable investments outperform. Precisely, we ask respondents whether they agree with the following statement: “Environmentally sustainable investments generate higher returns in the long run” (Variable *Higher returns*). Table 1 (Panel C) shows that 35% of the sample agree or strongly agree with this statement. The agreement rate is a little lower than in Anderson and Robinson (2022), who use a sample of Swedish households.

Finally, we measure the perceived financial security of individuals (variable *Financial security*; see Appendix 4 for details) with a scale proposed by Strömbäck et al. (2017). This variable offers a proxy for financial well being.¹² Numerous studies have focused on the measures, the antecedents and/or the financial behaviors associated with financial well-being (see Mahendru et al., 2022; Brügger et al., 2017, for a literature review), and its relationship with general well-being (Netemeyer et al., 2017). Our approach constitutes an attempt to capture, beyond income, the potential role that financial well-being can play in responsible investment choices. Table 1 (Panel A) shows that about 44% of the individuals in our sample agree or strongly agree when answering the following question about their current financial situation: “I feel secure in my current financial situation” (Q1). When asked about their retirement, less than 38% of individuals agree or strongly agree with the statement “I feel confident about having enough money to support myself in retirement” (Q3). Regardless of the question (Q1, Q2 or Q3), the majority of individuals do not feel entirely secure financially.¹³ The Cronbach’s alpha for this scale is equal to 0.8783, indicating a high level of reliability. As for green values, and in order

¹²Subjective financial well being could be define as the perception of being able to sustain current and anticipated desired living standards and financial freedom (Brügger et al., 2017).

¹³It can be noted that the “International Survey of Adult Financial Literacy” report, published by OECD/INFE in 2020, underlines that, on average, the surveyed individuals do not consider their financial situation to contribute positively to their well-being but rather to add stress and worry.

to homogenize our explanatory variables, we consider the average of the three Likert scale items. The financial security variable thus ranges from 1 to 5.

Table 2 provides a correlation matrix of the different variables. Since most of our variables are ordinal variables, we also present both a Pearson correlation matrix (Panel A) and a Spearman correlation matrix (Panel B). The variables *Sector allocation*, *Carbon footprint* and *WTP* will be used as dependent variables in regressions. The other variables are explanatory variables. Overall, we do not find that there exists a very strong correlation between any of our explanatory variables, indicating that multicollinearity is not an issue. This finding is confirmed by the magnitude of the Variance Inflation Factors (VIF) provided in Table 3. All the VIFs are below 2.5, confirming the absence of multicollinearity.

3 Empirical analyses

In the next section, we examine the determinants of the preference for transparency in terms of carbon footprint and sector allocation of individuals' current and savings account.

3.1 Preference for transparency (sector allocation and carbon impact)

Table 4 (Table 5) reports the parameter estimates and marginal effects for an ordinal logistic regression of the dependent variable *Sector allocation* (respectively, *Carbon footprint*) on a set of explanatory variables described in the previous section. The first column presents the coefficients from the regression. Since coefficients of ordinal logistic regression are difficult to interpret, we provide the marginal effects for each outcome of the dependent variable (Columns 2 to 6). Marginal effects are evaluated at the respective means of the explanatory variables. The marginal

effect estimate provides the increase (or decrease if the estimate is negative) in percentage points of the dependent variable that results from a one unit change in the explanatory variable. For the four following variables - *Green values*, *Higher returns*, *Altruism* and *Financial security* - the unit change corresponds to a change on the 5-point Likert scale (for instance, moving from agreeing to strongly agreeing). Since all four variables have observations that range from 1 to 5, their marginal effect estimates are directly comparable. The marginal effect for the age variable reports the variation in the dependent variable expected from a one year change in age. All the other variables are dummy variables; the marginal effect is thus the effect of the variable taking the value 1 instead of 0.

3.1.1 Main results

Tables 4 and 5 indicate that individuals with pronounced green consumption values and altruistic intentions are significantly more likely ($p < 0.01$) to have a preference for the two dimensions of transparency studied in this paper. For instance, in Table 4, the marginal effect at the mean for the *Green values* variable and when the outcome of the dependent variable is “Agree” is equal to 0.1389. This means that a deviation of one Likert category from the mean of the *Green values* variable implies an increase of 13.89% in the probability that respondents agree with the statement that sector allocation is important. The corresponding figure is 0.0505 when the *Sector allocation* variable takes the value “Strongly agree”. While the effect seems smaller for this latest category, the average predicted probability is also much smaller. Indeed, the first line of Table 4 provides the predicted probabilities, for each outcome of the dependent variable, with explanatory variable set at their means. For the “Strongly agree” outcome, the marginal effect of 0.0505 is to be compared to a predicted probability of 0.0718, that is, the 5.05 percentage points increases is in fact a 70% increase in predicted probability. As a result, while the marginal effect is small in

absolute terms, it is rather important in relative terms. The first plot in Figure 1 provides a clear overview of the impact of the *Green values* variable on predicted probabilities. The blue (red) line corresponds to the predicted probabilities of showing (strong) interest in sector allocation (respectively, the “Agree” and “Strongly agree” statements).¹⁴

The influence of *Green values* is even stronger when we look at the interest of respondents for the carbon footprint of their savings. In Table 5, the dependent variable is whether individuals are interested in the carbon footprint of their investment (i.e., impact). The marginal effects of the *Green values* variable is equal to 0.2060 for the “Agree” outcome and 0.0574 for the “Strongly Agree” outcome. These marginal effects are bigger than the ones obtained when the dependent variable was *Sector allocation* (0.1389 and 0.0505 in Table 4 while the baseline predicted probabilities are smaller - 0.3528 and 0.0574). An overview of the influence of *Green values* on predicted probabilities can be found in Figure 2.

We find a positive and statistically significant influence of *Altruism* on the respondents’ interest for knowing about the sector allocation and the carbon footprint of their savings. Respondents who self-report as being altruistic are less likely to strongly disagree or disagree with the sector allocation and carbon footprint statements and more likely to agree and strongly agree. They are also less likely to not having an opinion on these two statements. While these marginal effects are statistically significant, the magnitude of these effects is less important than for the *Green values* variable. Indeed, in Table 4, the marginal effects of the *Altruism* variable are equal to 0.0335 and 0.0122 for positive outcomes (“Agree” and “Strongly agree” outcomes of the dependent variable) compared to 0.1389 and 0.0505 for the *Green values* variable. For negative outcomes

¹⁴Looking at the plot in Figure 1, we see that the slopes are not necessarily the same between the different categories of the *Green values* variable, which may indicate that the parallel lines assumption is violated. In Appendix 4, for each Ordinal Logistic regression of the paper, we run a Brant test (Brant, 1990) to check for violation of the parallel lines assumption and we conduct, as a robustness check, a Generalized Ordinal Logistic regression.

(“Strongly disagree” and “Disagree”), the marginal effects are respectively -0.0077 and -0.0085 for *Altruism* versus -0.0320 and -0.0351 for *Green values*. In Figure 1, we can also observe that variation in predicted probabilities are much smaller going from the smallest value to the largest value of *Altruism* than they do from the smallest value to the largest value of *Green values*. For the *Altruism* variable, the predicted probabilities range from 0.3456 to 0.4807 for the “Agree” outcome (respectively from 0.0465 to 0.0919 for the “Strongly Agree” outcome). For the *Green values* variable, the predicted probabilities span from 0.1132 to 0.5642 for the “Agree” outcome and from 0.0106 to 0.1810 for the “Strongly agree” outcome. The role of *Altruism* on the interest for knowing about the savings’ carbon footprint follows the same patterns. While significant, the marginal effects of *Altruism* are smaller than the ones of *Green values*. The difference in magnitude is actually stronger than when the dependent variable is *Sector allocation*. For instance, when looking at the positive outcomes in Table 5, we see that the marginal effects for the *Altruism* variable are equal to 0.0367 and 0.0106, versus 0.2060 and 0.0594 for the *Green values* variable. The graphs in Figure 2 yield the same conclusion. For the “Agree” outcome (in blue), the difference in predicted probabilities between the highest and the lowest categories of the *Altruism* variable is equal to 0.1437 (i.e., $0.4059 - 0.2622$). It is equal to 0.0392 (i.e., $0.0751 - 0.0359$) in the case of the “Strongly agree” outcome (in red). In comparison these differences are respectively 0.5083 ($0.5429 - 0.0346$) and 0.2145 ($0.2179 - 0.0034$) for the *Green values* variable.

Taken together, these results underline the strong link that high-value green consumers have with transparency (whatever the dimension). In addition, the role of both *Green values* and *Altruism* in the importance individuals attach to transparency underscores that SRI preferences and interest for transparency share common drivers. Our results are in line with the academic literature on SRI preferences, which highlights the role of non-pecuniary motives such as personal values and beliefs in shaping individuals’ preference for sustainable investment products (e.g. Riedl

and Smeets, 2017; Hartzmark and Sussman, 2019; Brodback et al., 2019; Gutsche and Ziegler, 2019; Bauer et al., 2021). However, the link between green values and sustainable investing is still debated. While some authors demonstrate increased sustainable investments among investors with green-oriented values (Brière and Ramelli, 2021; Riedl and Smeets, 2017), others show that green values do not necessarily lead individuals to invest in sustainable financial products. For instance, Anderson and Robinson (2022), in a study that analyzes the pension funds held by Swedish households, show that green households do not, on average, actively choose green retirement portfolios. They argue that this discrepancy between green values and financial choices is linked to information hurdles. The authors find that, even though pension funds are clearly labeled as ESG-compliant or not, the complexity of the portfolio choice prevents investors from aligning their financial decisions with their personal values. Our result that individuals with high green consumption values are sensitive to transparency (both related to the sector and carbon impact) is in line with the findings of Anderson and Robinson (2022). The lack of transparency (or the complexity of dealing with such information) represents a barrier that prevents individuals from expressing their personal green values in their investment choices. Increasing transparency would be beneficial since it would permit a reconciliation of financial decisions with extra-financial considerations.

3.1.2 Pecuniary motivations for transparency and other drivers

Individuals may care about transparency not as a result of personal values and preferences but because of pecuniary motivations. As argued by Pedersen et al. (2021), some investors may use ESG information to invest according to their personal preferences (ESG-motivated) while other may use such information to update their views on risk and expected returns (ESG-aware). These individuals may choose sustainable investments based on pecuniary motives because they believe

that SRI offers a good risk/return trade off. It follows that the interest for transparency may be also driven by financial reasons. Following Anderson and Robinson (2022), we define ESG-aware individuals by using the agreement on a 5-point Likert scale to the following statement: “Environmentally sustainable investments generate higher returns in the long run”. The results in Tables 4 and 5 show that the *Higher returns* variable is the second most important variable - following the *Green values* variable - for explaining the interest of respondents for transparency (regarding sector allocation and carbon footprint). Roughly speaking, the marginal effects of the *Higher returns* variable are about half as big as the ones of the *Green values* but about twice as large as the ones of the *Altruism* variable. Plot 2 of Figures 1 and 2 show the variation in predicted probabilities of the outcome of the dependent variables with respect to the categories of the *Higher returns* variable. We can see a large variations in predicted probabilities with respect to the different categories of the *Higher returns* variable. For instance, when respondents answer “Strongly disagree” to the higher return statement, the predicted probability of agreeing with the sector allocation (respectively, carbon footprint) statement is 0.2561 (respectively, 0.1850). These probabilities increase to 0.5425 (respectively, 0.4837) when respondents strongly agree with the statement that “Environmentally sustainable investments generate higher returns in the long run”. This result highlight that transparency matters not only to individuals who care about ESG because of personal values but also to individuals who have pecuniary motives to do so. In addition to *Green Values*, *Altruism* and *Higher returns*, the results in Tables 4 and 5 also show that the *financial security* and *Age* variables have a significant impact on the individuals’ willingness to know more about the use and impact of their savings. Briefly speaking, the more financially secure individuals feel, the more interested they are in the transparency of their savings. To get a sense of the influence of the *financial security* variable, the marginal effects are a little bit higher (respectively lower) than the ones for the *Altruism* variable in Table 4 (Table 5). The *Age*

variable has a negative impact on the interest for transparency. In Table 4, a ten years change in age from the mean is associated with a decrease of 3.7 and 1.4 percentage points for positive outcomes of the dependent variable (“Agree” and “Strongly agree”). These figures are respectively 2.6 and 0.8 percentage points when the dependent variable is *Carbon footprint* (Table 5). This last result is in line with previous studies that show that older people are less supportive of sustainable investments (Bauer et al., 2021; Rossi et al., 2019). Although more specific studies need to be conducted, increasing transparency could have a positive impact on mobilizing young adults’ savings for funding the green transition.

3.2 Determinants of individuals’ willingness to pay (WTP) for transparency

In the previous section, we investigated the drivers of the interest for transparency. We now want to assess whether the individuals who care about such transparency, which we identified in the previous section, are also willing to pay to obtain such information. In other words, are ESG-motivated and ESG-aware individuals ready to put their money where their mouth is. To elicit such willingness to pay (WTP) for transparency, we presented a fictitious financial mobile application to respondents. We explained that this application would allow them to analyze their current and savings accounts according to sustainable criteria (see Section 2.3 for details). The respondents were then asked to indicate, with the help of a slider, how much they would be willing to pay for such app. The slider ranged from €0 to €5 and it was initially positioned at €2.51. To investigate the determinants of the WTP for transparency, we consider several approaches. In Table 6, we consider the variable *WTP intervals*, which comprises of six categories ($WTP = €0$, $€0 < WTP \leq €1$, $€1 < WTP \leq €2$, $€2 < WTP \leq €3$, $€3 < WTP \leq €4$, and $€4 < WTP \leq €5$).

We then run an ordinal logistic regression where the explanatory variables are the same as in Tables 4 and 5. In Table 7, we look at two other specifications for the WTP. First, we consider the dummy variable *Willing to pay* that takes the value 1 if respondents were ready to pay for the app and 0 if they were not. The predicted probabilities of being willing to pay for the application are shown in Figure 3. Second, we take into account the potential influence of the default option. Indeed, the slider was initially set up in the middle of the €0-€5 range so that we could more easily check whether individuals stayed with the default option. Setting the slider at €0 would have prevented us to discriminate between respondents who do not want to pay and respondents who do not answer the question correctly and stay with the default option. However, setting the slider at €2.51 could potentially create a point of reference relative to which respondents answer. We thus consider the variable *WTP higher than default* which takes the value 1 if the WTP is higher than €2.51 and 0 otherwise.

We first analyze the results that appear in Table 6. The main findings is that the *Green values* variable is not anymore significant. While this variable had the strongest effect in explaining interest for sector allocation and carbon footprint, it has no effect on the willingness to pay for such information. Individuals with high green values consider transparency important for their financial decisions but do not seem willing to pay for it. Our findings are similar when we consider the logistic regressions of Table 7 where we consider alternative measures of WTP. In agreement with Anderson and Robinson (2022), two explanations can be put forth. First, pro-environmental views are often associated with the political left, which is often critical of financial institutions (Kaustia and Torstila, 2012). These individuals may therefore consider that transparency is a given and that this kind of information must be provided by financial institutions. Therefore, they are not willing to pay for it. In addition, environmentally engaged individuals are more likely to be financially disengaged and thus may not see the need to pay for such transparency.

While *Green values* are not anymore significant, we find that individuals who exhibit pecuniary motivations for caring about ESG are willing to pay significantly more for an application that would provide information about the sector allocation and carbon footprint of savings. An increase of one unit on the 5-point Likert scale related to whether individuals believe that “Environmentally sustainable investments generate higher returns in the long run” generate a 9.31 percentage points decrease in the probability of not being willing to pay for such app. On the contrary, an increase of one unit from the mean in the *Higher returns* variable implies an increase of 2.11 percentage points of the predicted probability to pay more than €4 for the app. Similar results are found in Table 7. The marginal effects are equal to 0.0897 when the dependent variable of the logistic regression is the dummy variable *Willing to pay* and 0.0835 when the dependent variable is whether individuals are ready to pay more than the default option. The effect is stronger in the latter case since the predicted probability at the means is smaller (19.64% versus 63.79% for the first regression specification).

As pointed out earlier, the *Higher returns* variable is borrowed from Anderson and Robinson (2022). These authors define ESG-aware investors as those who think environmental considerations will have cash-flow implications for certain types of firms. Our results suggest that ESG-aware individuals are conscious of the fact that information is costly and that transparency may have a price.

Other variables that positively and significantly influence WTP are *Altruism* and *Financial security*. Similarly, holding complex financial products such as equity, funds or bonds increase the propensity to pay for the app. Interestingly, financial literacy negatively affects the amount of money individuals would be ready to pay to obtain the application, which indicates that financially literate individuals are reluctant to pay for this information. These individuals may have the ability to find information without the help of a financial application. *Age*, *Gender* and having

a university degree (variables *Undergraduate degree* and *Graduate degree*) are other variables of interest. However, these variables are either not very significant and/or the significance is not consistent across regression specifications.¹⁵

4 Conclusion

In a context in which individuals are increasingly sensitive to climate issues and the environmental impact of their investments, our article questions the importance they attach to the transparency of their financial savings. Specifically, we analyze whether these individuals believe that such transparency would help guide their investment. While many studies on preferences for sustainable investments focus on individual investors (with a certain level of financial knowledge), we have chosen to work on a general (working age) population panel. Our choice is guided by the fact that financing the green transition requires mobilizing the savings of all individuals. We analyze the importance of transparency (both the sectors in which savings are invested and their carbon footprint) for a panel of 1,075 individuals who participate in the financial decisions of their households. We then ask these individuals how much they would be willing to pay to adopt a mobile application that would provide them with these two pieces of information.

Overall, a majority of the sample agrees or strongly agrees that knowing about the sector allocation and/or the carbon impact of their savings would help them with their financial decisions. Briefly speaking, individuals care for transparency. More specifically, our results underline the strong link between green consumption values and interest in transparency, whatever its di-

¹⁵Since we question individuals about the use of a mobile application, the WTP for the application can be impacted by the trust that individuals have in this type of technology. Numerous studies have demonstrated that trust is a key driver for understanding individuals' behaviors regarding the adoption of new technologies (Montazemi and Qahri-Saremi, 2015). As a robustness test, we integrate trust in pure players as an additional variable (adapted from McKnight et al., 2002). In line with the information systems literature, this variable is significant. Our results (available upon request) are not impacted by the inclusion of the *Trust* variable.

mension (impact or sector allocations). These results suggest that the lack of transparency (or the complexity of finding this information) may appear to be a barrier to individuals who wish to invest according to their values. In addition, we provide evidence that the preferences for sustainable investing and interest in transparency share common determinants (green consumption values, and altruistic values). These findings indicate that transparency could be a driver of sustainable investment choices. Importantly, our findings hold even for individuals who believe that sustainable investments are profitable in the long term, regardless of their personal values.

Finally, when analyzing individuals' WTP for transparency, we find that individuals with high green consumption values are not willing to pay more for this information. This last result is rather ambiguous since one would expect sustainable considerations to translate into WTP. However, this result is consistent with the findings of Anderson and Robinson (2022) who show that pro-environment households are typically disengaged from financial decisions.

The results of this research also have certain limitations. First, the sample includes only French individuals. As an extension, it would be interesting to study other countries, especially at the European level. Recent research on green sustainable investing shows differences across EU countries. For instance, Engler et al. (2023) demonstrate that fee sensitivity is highest in the Netherlands and Germany, the countries with the highest financial literacy, and lower in Spain, France, and Poland. They also show that the observed country differences can be attributed to differences in financial literacy across countries. Second, our survey is not incentivized, which may be seen as a limitation. However, Burdea and Woon (2022) show, in a study on online belief elicitation methods, that a simpler non-incentivized task may work better than a more complex incentivized task. Third, individuals' intentions do not always translate into real decisions. Brunen and Laubach (2022) argue, for example, that while sustainable consumption is a key driver of SRI investment, self-reported sustainable consumer behavior is not necessarily

associated with sustainable investment choices. Although this work needs to be confirmed on other panels, our results show that transparency can be a vector for mobilizing existing savings towards the green transition. It is time to set clear transparency regulatory requirements if we want to allow citizens to express their environmental preferences through their financial choices.

References

- Anderson, A., Robinson, D.T., 2022. Financial literacy in the age of green investment. *Review of Finance* 26, 1551–1584.
- Arrondel, L., 2021. Financial literacy and french behaviour on the stock market. *Numeracy* 14.
- Baker, M., Egan, M.L., Sarkar, S.K., 2022. How do investors value ESG? Working Paper 30708. National Bureau of Economic Research.
- Bartolj, T., Murovec, N., Slabe-Erker, R., 2018. Development of a household sustainable consumption index and its application to EU-28. *Sustainable Development* 26, 34–50.
- Bauer, R., Ruof, T., Smeets, P., 2021. Get real! Individuals prefer more sustainable investments. *The Review of Financial Studies* 34, 3976–4043.
- Bauer, R., Smeets, P., 2015. Social identification and investment decisions. *Journal of Economic Behavior and Organization* 117, 121–134.
- Brant, R., 1990. Assessing proportionality in the proportional odds model for ordinal logistic regression. *Biometrics* , 1171–1178.
- Brière, M., Ramelli, S., 2021. Responsible investing and stock allocation. Amundi Asset Management Working Paper .
- Brodback, D., Guenster, N., Mezger, D., 2019. Altruism and egoism in investment decisions. *Review of Financial Economics* 73, 118–148.
- Brüggen, E.C., Hogreve, J., Holmlund, M., Kabadayi, S., Löfgren, M., 2017. Financial well-being: A conceptualization and research agenda. *Journal of Business Research* 79, 228–237.

- Brunen, A.C., Laubach, O., 2022. Do sustainable consumers prefer socially responsible investments? A study among the users of robo advisors. *Journal of Banking and Finance* 136, 106314.
- Burdea, V., Woon, J., 2022. Online belief elicitation methods. *Journal of Economic Psychology* 90, 102496.
- Callegaro, M., DiSogra, C., 2008. Computing response metrics for online panels. *Public opinion quarterly* 72, 1008–1032.
- Engler, D., Gutsche, G., Smeets, P., 2023. Why do investors pay higher fees for sustainable investments? An experiment in five european countries. SSRN Working Paper doi:10.2139/ssrn.4379189.
- Falk, A., Becker, A., Dohmen, T., Huffman, D., Sunde, U., 2023. The preference survey module: A validated instrument for measuring risk, time, and social preferences. *Management Science* 69, 1935–1950.
- Fernandez, D., de Bassa Scheresberg, C., Sticha, A., Lusardi, A., 2023. ESG knowledge and interest: A study among householders in 8 countries. Technical Report. GFLEC Working Paper Series WP 2023-1.
- Filippini, M., Leippold, M., Wekhof, T., 2021. Sustainable finance literacy and the determinants of sustainable investing. Swiss Finance Institute Research Paper No. 22-02 .
- Galati, A., Schifani, G., Crescimanno, M., Migliore, G., 2019. “Natural wine” consumers and interest in label information: An analysis of willingness to pay in a new italian wine market segment. *Journal of Cleaner Production* 227, 405–413.

- GSIA, 2022. Global sustainable investment review. <https://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf> .
- Gutsche, G., 2019. Individual and regional christian religion and the consideration of sustainable criteria in consumption and investment decisions: An exploratory econometric analysis. *Journal of Business Ethics* 157, 1155–1182.
- Gutsche, G., Ziegler, A., 2019. Which private investors are willing to pay for sustainable investments? Empirical evidence from stated choice experiments. *Journal of Banking & Finance* 102, 193–214.
- Halder, P., Hansen, E.N., Kangas, J., Laukkanen, T., 2020. How national culture and ethics matter in consumers’s green consumption values. *Journal of Cleaner Production* 265, 121754.
- Hartzmark, S., Sussman, A., 2019. Do investors value sustainability? A natural experiment examining ranking and fund flows. *The Journal of Finance* 74, 2789–2837.
- Haws, K., Winterich, K.P., Naylor, R.W., 2014. Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology* 24, 336–354.
- Heeb, F., Kölbel, J.F., Paetzold, F., Zeisberger, S., 2023. Do investors care about impact? *The Review of Financial Studies* 36, 1737–1787.
- IFOP, 2022. Le rapport des francais ‘a la finance éco-responsable. Opinion Way for Helios .
- Kaustia, M., Conlin, A., Luotonen, N., 2023. What drives stock market participation? The role of institutional, traditional, and behavioral factors. *Journal of Banking & Finance* 148, 106743.

- Kaustia, M., Torstila, S., 2012. Stock market aversion? Political preferences and stock market participation. *Journal of Financial Economics* 100, 98–112.
- Krupa, D., Buszko, M., 2023. Age-dependent differences in using fintech products and services—Young customers versus other adults. *PLOS ONE* 18, e0293470.
- Laudi, M., Smeets, P., Urtz, W., 2022. Do financial advisors charge sustainable investors a premium? SSRN Working Paper .
- Li, B., Hanna, S.D., Kim, K.T., 2020. Who uses mobile payments: Fintech potential in users and non-users. *Journal of Financial Counseling and Planning* 31, 83–100.
- Lusardi, A., Mitchell, O.S., 2008. Planning and financial literacy: How do women fare? *American Economic Review* 98, 413–17.
- Lusardi, A., Mitchell, O.S., 2014. The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature* 52, 5–44.
- Mahendru, M., Sharma, G.D., Pereira, V., Gupta, M., Mundi, H.S., 2022. Is it all about money honey? Analyzing and mapping financial well-being research and identifying future research agenda. *Journal of Business Research* 150, 417–436.
- McKnight, D., Choudhury, V., Kacmar, C., 2002. Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research* 13, 334–359.
- Montazemi, A.R., Qahri-Saremi, H., 2015. Factors affecting adoption of online banking: A meta-analytic structural equation modeling study. *Information & Management* 52, 210–226.
- Napolitano, F., Braghieri, A., Piasentier, E., Favotto, S., Naspetti, S., Zanolli, R., 2010. Effect

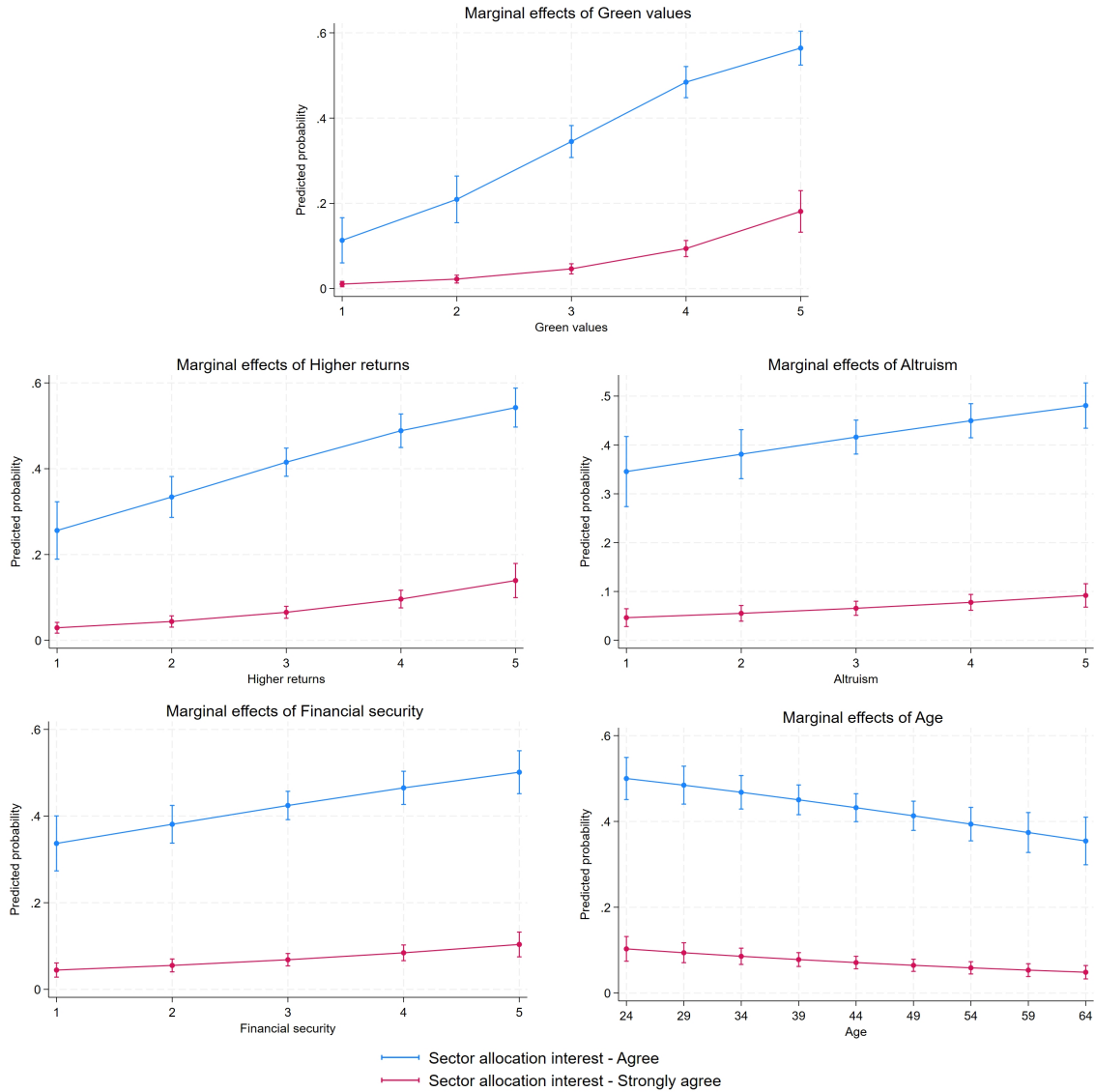
- of information about organic production on beef liking and consumer willingness to pay. *Food Quality and Preference* 21, 207–212.
- Napolitano, F., Pacelli, C., Girolami, A., Braghieri, A., 2008. Effect of information about animal welfare on consumer willingness to pay for yogurt. *Journal of Dairy Science* 91, 910–917.
- Netemeyer, R.G., Warmath, D., Fernandes, D., Lynch, John G, J., 2017. How am I doing? perceived financial well-being, its potential antecedents, and its relation to overall well-being. *Journal of Consumer Research* 45, 68–89.
- OpinionWay, 2020. Les francais et l’usage de leur epargne par les banques. *Opinion Way for Helios* .
- Pedersen, L.H., Fitzgibbons, S., Pomorski, L., 2021. Responsible investing: The ESG-efficient frontier. *Journal of Financial Economics* 142, 572–597.
- Polonsky, M.J., Vocino, A., Grau, S.L., Garma, R., Ferdous, A.S., 2012. The impact of general and carbon-related environmental knowledge on attitudes and behaviour of us consumers. *Journal of Marketing Management* 28, 238–263.
- Riedl, A., Smeets, P., 2017. Why do investors hold socially responsible mutual funds? *The Journal of Finance* 72, 2505–2550.
- Rossi, M., Sansone, D., van Soest, A., Torricelli, C., 2019. Household preferences for socially responsible investments. *Journal of Banking and Finance* 105, 107–120.
- Sirkis, A., Hourcade, J.C., Dasgupta, D., Studart, R., Gallagher, K., Perrissin-Fabert, B., Da Veiga, J.E., Espagne, E., Stua, M., Aglietta, M., 2015. Moving the trillions a debate on positive pricing of mitigation actions. *Brasil no Clima* .

Strömbäck, C., Lind, T., Skagerlund, K., Västfjäll, D., Tinghög, G., 2017. Does self-control predict financial behavior and financial well-being? *Journal of Behavioral and Experimental Finance* 14, 30–38.

Williams, R., 2006. Generalized ordered logit/partial proportional odds models for ordinal dependent variables. *The stata journal* 6, 58–82.

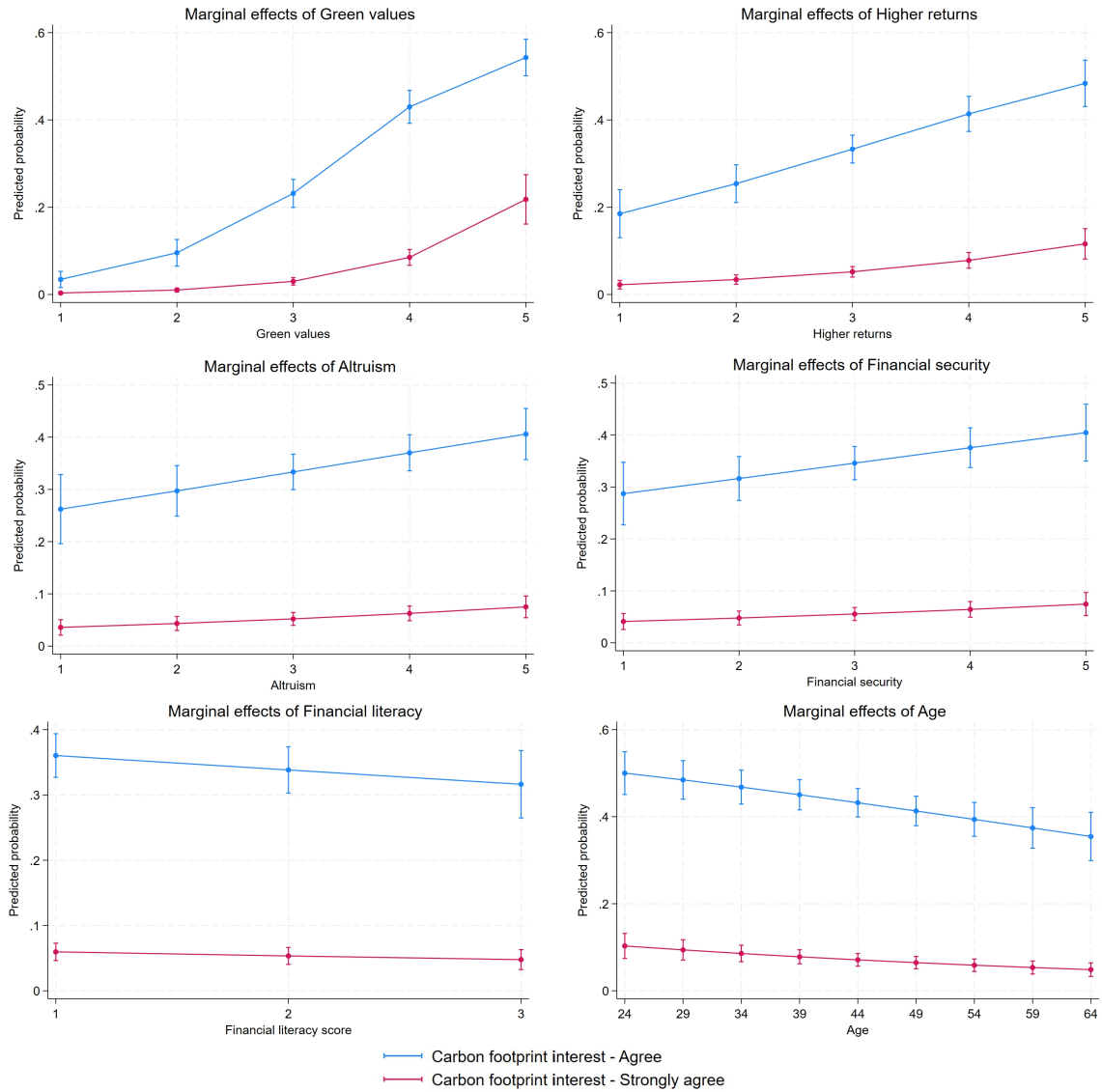
Williams, R., 2016. Understanding and interpreting generalized ordered logit models. *The Journal of Mathematical Sociology* 40, 7–20.

Figure 1: Predicted probability of exhibiting interest for sector allocation



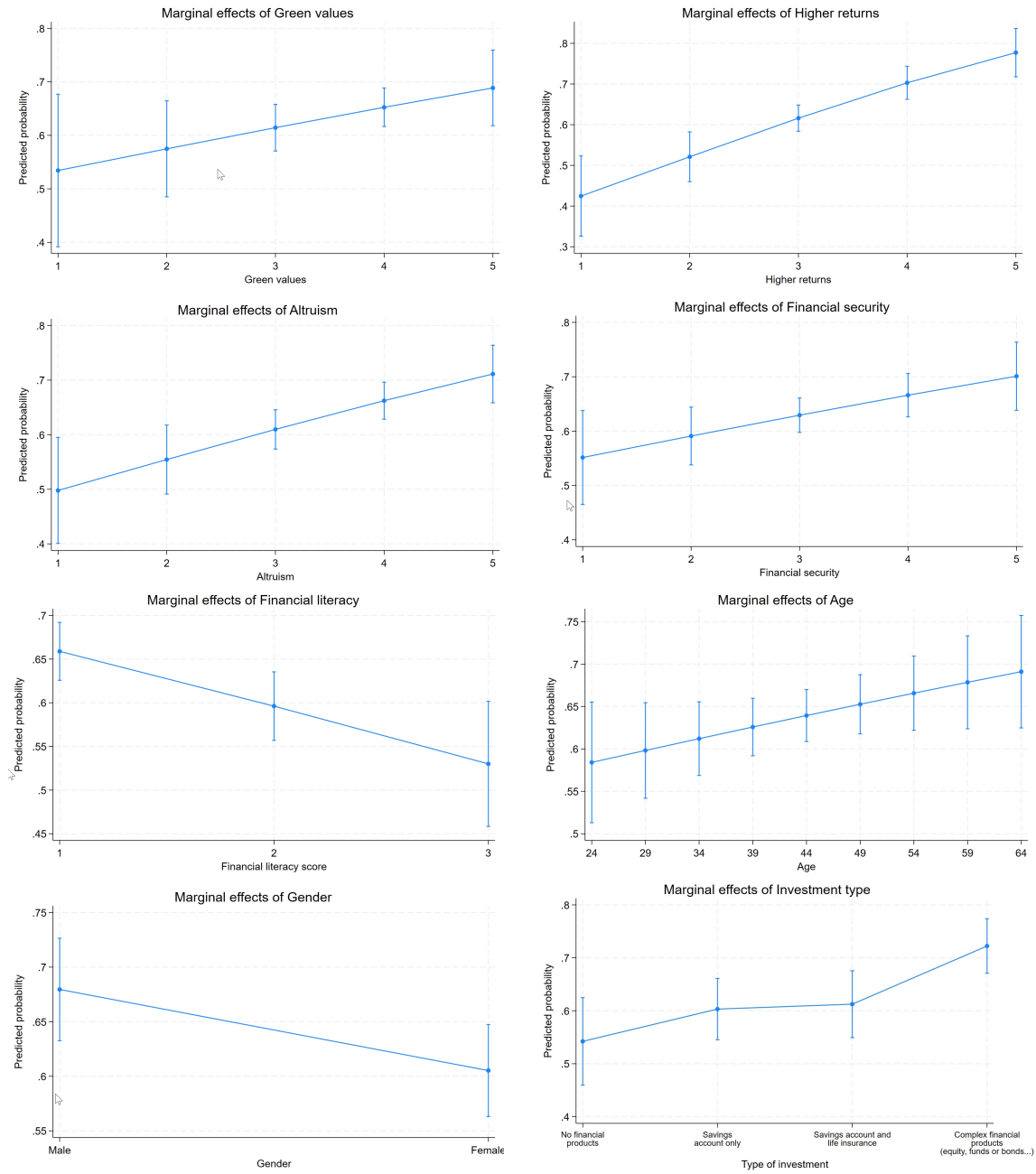
This graph presents the predicted probabilities, with respect to different explanatory variables, of responding “Agree” (in blue) or “Strongly agree” (in red) to the statement *Knowing which sectors are funded by my current and savings accounts would guide my financial choices*. The selected variables are the ones that appear significant in Table 4.

Figure 2: Predicted probability of exhibiting interest for carbon footprint



This graph presents the predicted probabilities, with respect to different explanatory variables, of responding “Agree” (in blue) or “Strongly agree” (in red) to the statement *Knowing the carbon footprint of my current and savings accounts would guide my financial choices*. The selected variables are the ones that appear significant in Table 5.

Figure 3: Predicted probability of being willing to pay for the app



This graph presents the predicted probabilities, with respect to different explanatory variables, of respondents being willing to pay for a financial mobile application that would allow them to analyze their current accounts and their savings (saving accounts, life insurance, etc) with respect to societal and environmental criteria. The selected variables are the ones that appear significant in Table 7 (Columns 1 and 2).

Table 1: Descriptive statistics

Panel A: Gender, age and level of education					
Male	Female	Average age	No university degree	Undergraduate degree	Graduate degree
42.88%	57.12%	43.47	50.79%	32.93%	16.28%
Panel B: Type of investment					
No financial products	Savings account only	Savings account and life insurance	Complex financial products (equity, funds or bonds...)		
15.53%	28.09%	23.35%	33.02%		
Panel C: Likert variables					
	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Sector allocation	6.60%	6.70%	36.65%	39.63%	10.42%
Carbon footprint	9.58%	9.21%	38.88%	32.74%	9.58%
Higher returns	5.40%	8.74%	50.98%	26.14%	8.74%
Altruism	5.67%	7.07%	27.16%	48.93%	11.16%
Green values	<i>Cronbach's alpha= 0.9041</i>				
Q1	2.23%	4.28%	31.07%	44.47%	17.95%
Q2	2.51%	6.79%	33.77%	42.70%	14.23%
Q3	3.72%	9.67%	37.95%	37.02%	11.63%
Q4	1.95%	3.91%	25.30%	45.30%	23.53%
Q5	2.88%	6.70%	37.21%	39.35%	13.86%
Q6	3.07%	6.88%	35.07%	41.77%	13.21%
Financial security	<i>Cronbach's alpha= 0.8783</i>				
Q1	7.72%	13.21%	35.16%	33.77%	10.14%
Q2	7.35%	11.81%	37.12%	33.30%	10.42%
Q3	10.42%	10.79%	40.93%	27.91%	9.95%
Panel D: Financial literacy					
0 correct answer	1 correct answer	2 correct answers	3 correct answers		
20.74%	36.84%	29.95%	12.47%		
Panel E: WTP for the application (in euros)					
0]0; 1]]1; 2]]2; 3]]3; 4]]4; 5]
37.77%	19.63%	12.19%	12.74%	10.70%	6.98%

Table 2: Correlation matrix

	Sector allocation	Carbon footprint	WTP	Green values	Higher returns	Altruism	Financial security	Financial literacy	Type of investment	Level of education	Gender
Sector allocation	1.00										
Carbon footprint	0.67***	1.00									
WTP	0.29***	0.32***	1.00								
Green values	0.37***	0.47***	0.20***	1.00							
Higher returns	0.35***	0.40***	0.31***	0.53***	1.00						
Altruism	0.25***	0.28***	0.20***	0.37***	0.32***	1.00					
Financial security	0.21***	0.20***	0.22***	0.24***	0.26***	0.09***	1.00				
Financial literacy	-0.02	-0.02	-0.06*	0.05*	0.01	0.02	0.08***	1.00			
Type of investment	0.11***	0.12***	0.20***	0.11***	0.13***	0.10***	0.24***	0.30***	1.00		
Level of education	0.06**	0.05*	0.13***	0.05	0.07**	0.05	0.16***	0.21***	0.23***	1.00	
Gender	0.03	0.01	-0.06**	0.01	-0.03	0.08**	-0.18***	-0.26***	-0.18***	-0.06**	1.00
Age	-0.12***	-0.09***	-0.08**	0.02	-0.07**	-0.09***	-0.02	0.23***	0.08***	-0.17***	-0.15***

This table presents the Pearson correlation matrix of the different variables used in the empirical analysis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively. Type of investment takes the values 1 to 4 and Level of education takes the values 1 to 3. In subsequent regressions, these two variables are used as factor variables (i.e., dummies). Since most of the variables are ordinal, we also present a Spearman correlation matrix in the appendix (Table B1 in Appendix 4).

Table 3: Variance inflation factors

Variable	VIF
Green values	1.54
Higher returns	1.49
Altruism	1.22
Financial security	1.19
Financial literacy	1.27
<i>Type of investment dummies - Base level: no financial products</i>	
Savings account only	2.10
Savings account only and life insurance	2.02
Complex financial products (equity, funds or bonds...)	2.50
<i>Level of education - Base level: no degree</i>	
Undergraduate degree	1.19
Graduate degree	1.27
Age	1.16
Female	1.16

This table presents the Variance inflation factors (VIF) for the explanatory variables used in the different regressions in the article.

Table 4: Determinants of interest for sector allocation - ordinal logistic regression

	Sector allocation: <i>Knowing which sectors are funded by my current and savings accounts would guide my financial choices</i>				
	Coefficients		Marginal effects		
	Strongly disagree	Disagree	Nor disagree, nor agree	Agree	Strongly agree
Predicted probability	0.0443	0.0541	0.3958	0.4340	0.0718
Green values	0.7575*** (0.1030)	-0.0320*** (0.0060)	-0.1222*** (0.0180)	0.1389*** (0.0200)	0.0505*** (0.0080)
Higher returns	0.4201*** (0.0810)	-0.0178*** (0.0040)	-0.0678*** (0.0140)	0.0770*** (0.0150)	0.0280*** (0.0060)
Altruism	0.1828*** (0.0680)	-0.0077*** (0.0030)	-0.0295*** (0.0110)	0.0335*** (0.0130)	0.0122*** (0.0050)
Financial security	0.2273*** (0.0680)	-0.0096*** (0.0030)	-0.0367*** (0.0110)	0.0417*** (0.0130)	0.0152*** (0.0050)
Financial literacy	-0.0435 (0.0700)	0.0018 (0.0030)	0.0070 (0.0110)	-0.0080 (0.0130)	-0.0029 (0.0050)
<i>Type of investment dummies - Base level: no financial products</i>					
Savings account only	-0.1280 (0.1840)	0.0064 (0.0090)	0.0194 (0.0280)	-0.0242 (0.0350)	-0.0077 (0.0110)
Savings account only and life insurance	-0.0136 (0.1910)	0.0006 (0.0090)	0.0021 (0.0300)	-0.0025 (0.0360)	-0.0009 (0.0120)
Complex financial products (equity, funds or bonds...)	0.2864 (0.1930)	-0.0112 (0.0080)	-0.0476 (0.0320)	0.0507 (0.0350)	0.0206 (0.0140)
<i>Level of education - Base level: no degree</i>					
Undergraduate degree	0.0406 (0.1330)	-0.0017 (0.0060)	-0.0066 (0.0220)	0.0074 (0.0240)	0.0027 (0.0090)
Graduate degree	-0.0030 (0.1790)	0.0001 (0.0080)	0.0005 (0.0290)	-0.0006 (0.0330)	-0.0002 (0.0120)
Age	-0.0203*** (0.0060)	0.0009*** (0.0000)	0.0033*** (0.0010)	-0.0037*** (0.0010)	-0.0014*** (0.0000)
Female	0.1662 (0.1250)	-0.0071 (0.0050)	-0.0266 (0.0200)	0.0306 (0.0230)	0.0110 (0.0080)
Number of observations	1,075				

Column 1 provides the coefficients and the standard errors (in parentheses) of the ordinal logistic regression. Columns 2 to 6 report the marginal effects, for each level of the dependent variable. Marginal effects are evaluated at the mean values of each independent variable. The first line corresponds to the predicted probabilities obtained when all explanatory variables are evaluated at their respective means. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively.

Table 5: Determinants of interest for impact - ordinal logistic regression

Predicted probability	Impact: <i>Knowing the carbon footprint of my current and savings accounts would guide my financial choices</i>				
	Coefficients		Marginal effects		
	Strongly disagree	Disagree	Nor disagree, nor agree	Agree	Strongly agree
Green values	1.0971*** (0.1050)	-0.0672*** (0.0090)	0.4562 (0.0180)	0.3528 (0.0220)	0.0574 (0.0080)
Higher returns	0.4361*** (0.0810)	-0.0267*** (0.0050)	-0.0550*** (0.0110)	0.0819*** (0.0160)	0.0236*** (0.0050)
Altruism	0.1952*** (0.0690)	-0.0120*** (0.0040)	-0.0246*** (0.0090)	0.0367*** (0.0130)	0.0106*** (0.0040)
Financial security	0.1583** (0.0680)	-0.0097** (0.0040)	-0.0200** (0.0090)	0.0297** (0.0130)	0.0086** (0.0040)
Financial literacy	-0.1174* (0.0690)	0.0072* (0.0040)	0.0148* (0.0090)	-0.0220* (0.0130)	-0.0064* (0.0040)
<i>Type of investment dummies - Base level: no financial products</i>					
Savings account only	-0.2341 (0.1830)	0.0154 (0.0120)	0.0253 (0.0210)	-0.0438 (0.0340)	-0.0113 (0.0090)
Savings account only and life insurance	-0.1077 (0.1900)	0.0062 (0.0110)	0.0126 (0.0230)	-0.0202 (0.0360)	-0.0055 (0.0100)
Complex financial products (equity, funds or bonds...)	0.3140 (0.1920)	-0.0176 (0.0110)	-0.0447* (0.0260)	0.0581 (0.0360)	0.0193* (0.0120)
<i>Level of education - Base level: no degree</i>					
Undergraduate degree	-0.0154 (0.1330)	0.0009 (0.0080)	0.0019 (0.0170)	-0.0029 (0.0250)	-0.0008 (0.0070)
Graduate degree	0.0431 (0.1780)	-0.0026 (0.0110)	-0.0056 (0.0230)	0.0081 (0.0330)	0.0024 (0.0100)
Age	-0.0140** (0.0060)	0.0009** (0.0000)	0.0018** (0.0010)	-0.0026** (0.0010)	-0.0008** (0.0000)
Female	0.0765 (0.1250)	-0.0042 (0.0070)	-0.0096 (0.0160)	0.0144 (0.0230)	0.0041 (0.0070)
Number of observations	1,075				

Column 1 provides the coefficients and the standard errors (in parentheses) of the ordinal logistic regression. Columns 2 to 6 report the marginal effects, for each level of the dependent variable. Marginal effects are evaluated at the mean values of each independent variable. The first line corresponds to the predicted probabilities obtained when all explanatory variables are evaluated at their respective means. The first line corresponds to the predicted probabilities obtained when all explanatory variables are evaluated at their respective means. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively.

Table 6: Determinants of WTP for transparency - Ordinal logistic regression

	Willingness to pay for transparency						
	Coefficients	Marginal effects					
		WTP =€0	€0 < WTP ≤€1	€1 < WTP ≤€2	€2 < WTP ≤€3	€3 < WTP ≤€4	€4 < WTP ≤€5
Predicted probability		0.3596	0.2188	0.1343	0.1326	0.0994	0.0553
Green values	0.1042 (0.0940)	-0.0240 (0.0220)	-0.0014 (0.0010)	0.0041 (0.0040)	0.0077 (0.0070)	0.0082 (0.0070)	0.0054 (0.0050)
Higher returns	0.4041*** (0.0740)	-0.0931*** (0.0170)	-0.0055** (0.0030)	0.0158*** (0.0040)	0.0299*** (0.0060)	0.0317*** (0.0060)	0.0211*** (0.0040)
Altruism	0.1950*** (0.0650)	-0.0449*** (0.0150)	-0.0026* (0.0010)	0.0076*** (0.0030)	0.0144*** (0.0050)	0.0153*** (0.0050)	0.0102*** (0.0040)
Financial security	0.1910*** (0.0640)	-0.0440*** (0.0150)	-0.0026* (0.0010)	0.0075*** (0.0030)	0.0141*** (0.0050)	0.0150*** (0.0050)	0.0100*** (0.0030)
Financial literacy	-0.2774*** (0.0670)	0.0639*** (0.0160)	0.0038* (0.0020)	-0.0108*** (0.0030)	-0.0205*** (0.0050)	-0.0218*** (0.0060)	-0.0145*** (0.0040)
<i>Type of investment dummies - Base level: no financial products</i>							
Savings account only	0.1576 (0.1840)	-0.0386 (0.0450)	0.0026 (0.0040)	0.0079 (0.0090)	0.0114 (0.0130)	0.0104 (0.0120)	0.0064 (0.0070)
Savings account only and life insurance	0.2573 (0.1910)	-0.0624 (0.0470)	0.0029 (0.0040)	0.0125 (0.0100)	0.0187 (0.0140)	0.0175 (0.0130)	0.0109 (0.0080)
Complex financial products (equity, funds or bonds...)	0.7941*** (0.1920)	-0.1795*** (0.0440)	-0.0126* (0.0070)	0.0285*** (0.0090)	0.0571*** (0.0140)	0.0632*** (0.0150)	0.0434*** (0.0110)
<i>Level of education - Base level: no degree</i>							
Undergraduate degree	0.2256* (0.1300)	-0.0521* (0.0300)	-0.0028 (0.0020)	0.0089* (0.0050)	0.0167* (0.0100)	0.0176* (0.0100)	0.0117* (0.0070)
Graduate degree	0.2963* (0.1710)	-0.0676* (0.0380)	-0.0048 (0.0050)	0.0111* (0.0060)	0.0218* (0.0130)	0.0236* (0.0140)	0.0159 (0.0100)
Age	0.0019 (0.0060)	-0.0004 (0.0010)	0.0000 (0.0000)	0.0001 (0.0000)	0.0001 (0.0000)	0.0001 (0.0000)	0.0001 (0.0000)
Female	-0.2254* (0.1230)	0.0516* (0.0280)	0.0034 (0.0020)	-0.0086* (0.0050)	-0.0166* (0.0090)	-0.0178* (0.0100)	-0.0120* (0.0070)
Number of observations				1,075			

Column 1 provides the coefficients and the standard errors (in parentheses) of the ordinal logistic regression. The dependent variable is the *WTP intervals* variable. Columns 2 to 7 report the marginal effects, for each level of the dependent variable. Marginal effects are evaluated at the mean values of each independent variable. The first line corresponds to the predicted probabilities obtained when all explanatory variables are evaluated at their respective means. ***, **, * and * indicate statistical significance at the 1%, 5%, and 10%, respectively.

Table 7: Determinants of WTP for transparency - Logistic regressions

	Willing to pay		WTP higher than default	
	Regression coefficients	Marginal effects	Regression coefficients	Marginal effects
Predicted probability	0.6379		0.1964	
Green values	0.1642 (0.1100)	0.0379 (0.0250)	0.0469 (0.1390)	0.0074 (0.0220)
Higher returns	0.3884*** (0.0890)	0.0897*** (0.0200)	0.5290*** (0.1100)	0.0835*** (0.0170)
Altruism	0.2275*** (0.0750)	0.0525*** (0.0170)	0.1877** (0.0950)	0.0296** (0.0150)
Financial security	0.1613** (0.0750)	0.0373** (0.0170)	0.2945*** (0.0940)	0.0465*** (0.0150)
Financial literacy	-0.2691*** (0.0820)	-0.0621*** (0.0190)	-0.3252*** (0.0930)	-0.0513*** (0.0150)
<i>Type of investment dummies - Base level: no financial products</i>				
Savings account only	0.2495 (0.2060)	0.0610 (0.0510)	-0.1256 (0.2720)	-0.0172 (0.0380)
Savings account only and life insurance	0.2883 (0.2160)	0.0702 (0.0530)	0.0740 (0.2750)	0.0108 (0.0400)
Complex financial products (equity, funds or bonds...)	0.7864*** (0.2220)	0.1800*** (0.0510)	0.5451** (0.2670)	0.0918** (0.0420)
<i>Level of education - Base level: no degree</i>				
Undergraduate degree	0.1562 (0.1540)	0.0361 (0.0350)	0.4399** (0.1800)	0.0701** (0.0290)
Graduate degree	0.1932 (0.2080)	0.0444 (0.0470)	0.3694 (0.2300)	0.0576 (0.0380)
Age	0.0116* (0.0070)	0.0027* (0.0020)	-0.0076 (0.0080)	-0.0012 (0.0010)
Female	-0.3242** (0.1460)	-0.0743** (0.0330)	-0.2828* (0.1680)	-0.0452* (0.0270)
Intercept	-3.0494*** (0.5440)		-4.3471*** (0.6610)	
Number of observations	1,075		1,075	

Column 1 and 3 provide the coefficients and the standard errors (in parentheses) of the logistic regressions. Columns 2 and 4 report the marginal effects. Marginal effects are evaluated at the mean values of each independent variable. In the first regression (Columns 1 and 2), the dependent variable is a dummy that takes the value 1 if respondents are willing to pay anything for the app ($WTP > \text{€}0$) and 0 otherwise ($WTP = \text{€}0$). In the second regression (Columns 3 and 4), the dependent variable is a dummy that takes the value 1 if respondents are willing to pay more, for the app, than the default option of $\text{€}2.51$ and 0 otherwise. The first line corresponds to the predicted probabilities obtained when all explanatory variables are evaluated at their respective means. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively.

Appendices

Appendix A

Main variables and associated survey questions

Green consumption values (Haws et al., 2014)

- Q1:** It is important to me that the products I use do not harm the environment.
- Q2:** I consider the potential environmental impact of my actions when making many of my decisions.
- Q3:** My purchase habits are affected by my concern for our environment.
- Q4:** I am concerned about wasting the resources of our planet.
- Q5:** I would describe myself as environmentally responsible.
- Q6:** I am willing to be inconvenienced in order to take actions that are more environmentally friendly.

Financial security (Strömbäck et al., 2017)

- Q1:** I feel secure in my current financial situation.
- Q2:** I feel confident about my financial future.
- Q3:** I feel confident about having enough money to support myself in retirement, no matter how long I live.

Trust in pure players (McKnight et al., 2002)

- Q1:** Pure players are honest and sincere.
- Q2:** Pure players are trustworthy.
- Q3:** Pure players are interested in the well-being of their clients, not only in their own wellbeing.
- Q4:** Pure players are reliable.

Financial Literacy (Lusardi and Mitchell, 2014)

The correct answers are in bold font.

- Q1:** Assume you have \$100 in a savings account, and you get 2% interest per year on that savings account. No further deposits or withdrawals will be made to this account. What would be the account balance after 5 years?
- **More than \$100**
 - Exactly \$100
 - Less than \$100

- I don't know
- Q2:** Now assume that you receive 1% interest per year instead and that inflation is 2% in the same period. How much could you afford after a year of the money in the account?
- More than today
 - Same as today
 - **Less than today**
 - I don't know
- Q3:** Is the following statement right or wrong: "Buying shares of a single company usually offers a safer return than buying shares of multiple companies."
- Correct
 - **False**
 - I don't know

Appendix B

Spearman correlation matrix

Table B1 presents the Spearman correlation matrix for the different continuous and ordinal variables.

Appendix C

The Brant test (Brant, 1990)

The Brant test (Brant, 1990) is frequently employed to evaluate if the differences observed, in relation to predictions made by the proportional odds model, exceed what could be ascribed to random chance alone (Williams, 2016). Additionally, it can help pinpoint specific variables that do not adhere to the parallel lines assumption. A p-value below 5% provides evidence that the parallel lines assumption has been violated.

The different values of the Brant test are reported in Table C1. We can see that, in the regression of Table 4 – where the dependent variable is the *Sector allocation* –, no variable fail the Brant test with a 5% significance level. In Table 5 – where the dependent variable is the *Carbon footprint* –, there is a clear violation of the parallel lines assumption for both the *Green values* variable and the *Complex financial products* dummy variable. Finally, in the regression of Table 6 – where the response variable is the *WTP intervals* variable –, both the *Age* and *Female* variables exhibit a p-value below 5%.

Since there are clear indications that the parallel lines assumption is violated for most regression models, we decided to run the same regressions using Generalized Ordinal Logistic models instead of Ordinal Logistic models.

Table B1: Spearman correlation matrix

	Sector allocation	Carbon footprint	WTP	Green values	Higher returns	Altruism	Financial security	Financial literacy	Type of investment	Level of education	Gender
Sector allocation	1.00										
Carbon footprint	0.65***	1.00									
WTP	0.30***	0.35***	1.00								
Green values	0.38***	0.45***	0.21***	1.00							
Higher returns	0.37***	0.41***	0.32***	0.52***	1.00						
Altruism	0.28***	0.29***	0.20***	0.39***	0.31***	1.00					
Financial security	0.23***	0.23***	0.21***	0.27***	0.28***	0.13***	1.00				
Financial literacy	-0.02	-0.03	-0.05	0.06*	0.01	0.02	0.08***	1.00			
Type of investment	0.13***	0.14***	0.20***	0.12***	0.13***	0.10***	0.26***	0.29***	1.00		
Level of education	0.08**	0.06**	0.11***	0.05*	0.07**	0.05	0.15***	0.21***	0.23***	1.00	
Gender	0.03	0.01	-0.07**	0.02	-0.04	0.07**	-0.19***	-0.26**	-0.18**	-0.05	1.00
Age	-0.14***	-0.09***	-0.05	0.01	-0.08***	-0.10***	-0.04	0.23***	0.08***	-0.17***	-0.15***

This table presents the Spearman correlation matrix of the different variables used in the empirical analysis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively. Type of investment takes the values 1 to 4 and Level of education takes the values 1 to 3. In the regressions, these two variables are used as factor variables (i.e., dummies).

Generalized Ordinal Logistic regressions

The results of the Generalized Ordinal Logistic regressions appear in Tables C2, C3 and C4. The regression results are obtained thanks to the *gologit2* procedure in Stata (Williams, 2006), using the autofit option. The procedure goes through an iterative process where it first estimates a totally unconstrained model and then does a series of Wald tests on each variable individually to see whether the variable meets the parallel lines assumption.

We do not observe much differences between Table 4 and Table C2. The only variable that violates the proportional odds assumption is the *Financial literacy* variable. However, this variable is not significant in Table 4 and mostly not significant in Table C2.

Table C3 is the most interesting one. When the dependent variable is *Carbon footprint*, the parallel lines assumption is violated by our main variable of interest, the *Green values* variable. In addition, the *Complex financial products* variable also violates the above-mentioned assumption. While these last results would seem problematic at first glance, the difference between the results in Table 5 and Table C3 is actually just a matter of degree. We see, in Table C3 that the coefficients associated with the *Green values* variable are all positive and somewhat larger for the last two panels (SD,D,N vs A,SA and SD,D,N,A vs SA). The interpretation is thus straightforward: The marginal effects are in reality somewhat bigger for positive outcomes and slightly smaller for negative outcomes compared to what is shown in Table 5. While this difference is important to note, it does not change our main conclusions about the influence of the *Green values* variable. Regarding the *Complex financial products* variable, the coefficients are mostly non significant.

Finally, in Table C4, the *Financial security* variable is significant and violates the parallel lines assumption. The results from the partial proportional odds model indicate the same effect as for the *Green Values* variable in the previous table: The marginal effects of the *Financial security* are somewhat bigger for positive outcomes and slightly smaller for negative outcomes compared to what was reported in Table 6. The two other variables that violate the proportional odds assumption, *Age* and *Female*, are mostly non-significant.

Table C1: Brant test of parallel regression assumption

Variables	Regression in Table 4 χ^2	Regression in Table 5 χ^2	Regression in Table 6 χ^2
All	46.87	64.47***	70.36**
Green values	4.23	20.72***	5.01
Higher returns	0.39	1.27	5.89
Altruism	1.15	6.65*	0.91
Financial security	1.25	0.60	5.11
Financial literacy	6.90*	3.98	8.84*
<i>Type of investment dummies - Base level: no financial products</i>			
Savings account only	0.36	4.64	2.87
Savings account only and life insurance	3.01	6.00	4.02
Complex financial products (equity, funds or bonds...)	7.55*	9.74**	3.89
<i>Level of education - Base level: no degree</i>			
Undergraduate degree	0.57	1.94	5.09
Graduate degree	4.46	4.01	8.17*
Age	2.05	3.17	13.46***
Female	2.66	2.64	11.30**

The Brant test (Brant, 1990) is frequently employed to evaluate if the differences observed, in relation to predictions made by the proportional odds model, exceed what could be ascribed to random chance alone (Williams, 2016). Additionally, it can help pinpoint specific variables that do not adhere to parallel lines assumptions. A p-value below 5% provides evidence that the parallel regression assumption has been violated.

Table C2: Determinants of interest for sector allocation - Generalized Ordinal logistic regression

Explanatory variables	Proportional odds	Partial proportional odds			
		SD vs D,N,A,SA	SD,D vs N,A,SA	SD,D,N vs A,SA	SD,D,N,A vs SA
Green values	0.757*** (0.103)				
Higher returns	0.422*** (0.081)				
Altruism	0.184*** (0.068)				
Financial security	0.226*** (0.068)				
Financial literacy		0.009 (0.140)	-0.267** (0.108)	0.054 (0.079)	-0.119 (0.116)
<i>Type of investment dummies - Base level: no financial products</i>					
Savings account only	-0.127 (0.186)				
Savings account only and life insurance	-0.013 (0.192)				
Complex financial products (equity, funds or bonds...)	0.288 (0.194)				
<i>Level of education - Base level: no degree</i>					
Undergraduate degree	0.042 (0.133)				
Graduate degree	-0.003 (0.179)				
Age	-0.021*** (0.006)				
Female	0.170 (0.125)				
Intercept		-1.696*** (0.505)	-2.171*** (0.492)	-4.813*** (0.497)	-7.167*** (0.544)
Number of observations			1,075		

This table presents the results of a generalized ordinal logistic where the dependent regression is the *Sector allocation* variable. The regression results are obtained thanks to the *gologit2* procedure in Stata (Williams, 2006), using the *autofit* option. The procedure goes through an iterative process where it first estimates a totally unconstrained model and then does a series of Wald tests on each variable individually to see whether the variable meets the parallel lines assumption. Here, the only variable for which the parallel lines assumption is violated is the *Financial literacy* variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively.

Table C3: Determinants of interest for carbon footprint - Generalized Ordinal logistic regression

Explanatory variables	Proportional odds	Partial proportional odds			
		SD vs D,N,A,SA	SD,D vs N,A,SA	SD,D,N vs A,SA	SD,D,N,A vs SA
Green values		0.922*** (0.148)	0.763*** (0.132)	1.188*** (0.129)	1.693*** (0.220)
Higher returns	0.422*** (0.080)				
Altruism	0.190*** (0.069)				
Financial security	0.140** (0.068)				
Financial literacy	-0.101 (0.070)				
<i>Type of investment dummies - Base level: no financial products</i>					
Savings account only	-0.213 (0.185)				
Savings account only and life insurance	-0.078 (0.192)				
Complex financial products (equity, funds or bonds...)		0.461 (0.302)	-0.027 (0.233)	0.488** (0.209)	0.340 (0.279)
<i>Level of education - Base level: no degree</i>					
Undergraduate degree	-0.015 (0.134)				
Graduate degree	0.034 (0.178)				
Age	-0.014** (0.006)				
Female	0.084 (0.125)				
Intercept		-2.493*** (0.589)	-2.749*** (0.556)	-6.596*** (0.582)	-11.081*** (0.978)
Number of observations			1,075		

This table presents the results of a generalized ordinal logistic where the dependent regression is the *Carbon footprint* variable. The regression results are obtained thanks to the *gologit2* procedure in Stata (Williams, 2006), using the *autofit* option. The procedure goes through an iterative process where it first estimates a totally unconstrained model and then does a series of Wald tests on each variable individually to see whether the variable meets the parallel lines assumption. Here, the only two variables for which the parallel lines assumption is violated are the *Green Values* variable and the *Complex financial products* variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively.

Table C4: Determinants of WTP for transparency - Generalized Ordinal logistic regression

Explanatory variables	Proportional	Partial proportional odds				
	odds	1 vs 2,3,4,5,6	1,2 vs 3,4,5,6	1,2,3 vs 4,5,6	1,2,3,4 vs 5,6	1,2,3,4,5 vs 6
Green values	0.096 (0.094)					
Higher returns	0.393*** (0.074)					
Altruism	0.198*** (0.065)					
Financial security		0.142** (0.072)	0.142* (0.073)	0.171** (0.081)	0.414*** (0.103)	0.544*** (0.166)
Financial literacy	-0.279*** (0.068)					
<i>Type of investment dummies - Base level: no financial products</i>						
Savings account only	0.170 (0.184)					
Savings account only and life insurance	0.263 (0.191)					
Complex financial products (equity, funds or bonds...)	0.807*** (0.192)					
<i>Level of education - Base level: no degree</i>						
Undergraduate degree	0.215* (0.130)					
Graduate degree	0.289* (0.171)					
Age		0.012* (0.007)	-0.005 (0.007)	-0.004 (0.007)	-0.002 (0.008)	-0.009 (0.012)
Female		-0.328** (0.144)	-0.208 (0.142)	-0.218 (0.150)	-0.229 (0.175)	0.472* (0.263)
Intercept		-2.649*** (0.497)	-2.871*** (0.500)	-3.629*** (0.534)	-5.313*** (0.640)	-7.069*** (0.956)
Number of observations		1,075				

This table presents the results of a generalized ordinal logistic where the dependent regression is the *WTP intervals* variable. The regression results are obtained thanks to the *gologit2* procedure in Stata (Williams, 2006), using the *autofit* option. The procedure goes through an iterative process where it first estimates a totally unconstrained model and then does a series of Wald tests on each variable individually to see whether the variable meets the parallel lines assumption. Here, the only three variables for which the parallel lines assumption is violated are the *Financial security* variable, the *Age* variable and the *Female* dummy variable.. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively.

Appendix D

Additional control variables

Additional demographic information was provided by the participants in the survey. Specifically, participants indicated their labour market status, their marital status and the region in which they have their residence. The *Labour market status* variable is based on the PCS nomenclature used in France (national statistics), which groups individuals into different categories (Farmers / Craftsmen, tradesmen and business owners / Executives and higher intellectual professions / Intermediate professions / Employees / Workers / Retired / Students / Unemployed).¹⁶ The *Marital status* variable is based on the following six categories (Married / Civil union / Common-law / Widowed / Divorced / Single). The *Region* variable corresponds to the French administrative regions in which participants live. Descriptive statistics for these additional variables can be found in Table D1.

We show in Table D2 that including these three variables as dummies in the different regressions do not modify the results.

Table D1: Robustness tests: Descriptive statistics for additional control variables

Labour Market Status		Marital status		Region	
Married	39.35%	Farmer	0.28%	Auvergne-Rhône-Alpes	10.42%
Civil union	8.65%	Craftsmen, tradesmen and business owners	4.00%	Bourgogne-Franche-Comté	4.09%
Common-law	18.98%	Executives and higher intellectual professions	12.37%	Bretagne	5.30%
Widowed	1.86%	Intermediate professions	13.21%	Centre-Val de Loire	4.19%
Divorced	8.84%	Employees	44.28%	Corse	0.47%
Single	22.33%	Workers	7.53%	Grand Est	8.93%
		Retired	5.21%	Hauts-de-France	11.53%
		Students	1.21%	Île-de-France	19.35%
		Unemployed	11.91%	Normandie	6.51%
				Nouvelle-Aquitaine	8.37%
				Occitanie	8.84%
				Pays de la Loire	4.93%
				Provence-Alpes-Côte d'Azur	7.07%

This table provides descriptive statistics (i.e., frequency) for the *Labour market status*, the *Marital status* and the *Region* variables.

¹⁶See <https://www.insee.fr/fr/information/6208292> for additional details.

Table D2: Robustness tests: Inclusion of additional control variables in the regressions

	Sector allocation	Impact	WTP intervals
Green values	0.7720*** (0.1050)	1.1310*** (0.1070)	0.1370 (0.0960)
Higher returns	0.4120*** (0.0820)	0.4500*** (0.0820)	0.4110*** (0.0760)
Altruism	0.1980*** (0.0690)	0.2020*** (0.0700)	0.2060*** (0.0670)
Financial security	0.2270*** (0.0710)	0.1420** (0.0710)	0.1190* (0.0680)
Financial literacy	-0.0390 (0.0710)	-0.1330* (0.0700)	-0.2890*** (0.0690)
<i>Type of investment dummies - Base level: no financial products</i>			
Savings account only	-0.1450 (0.1880)	-0.2860 (0.1870)	0.0910 (0.1890)
Savings account only and life insurance	-0.0400 (0.1970)	-0.2010 (0.1950)	0.1600 (0.1990)
Complex financial products (equity, funds or bonds...)	0.3330* (0.1980)	0.2820 (0.1970)	0.7660*** (0.1980)
<i>Level of Education - Base level: no degree</i>			
Undergraduate degree	0.0590 (0.1410)	-0.0550 (0.1410)	0.1560 (0.1390)
Graduate degree	0.0460 (0.2020)	0.0140 (0.2020)	0.3010 (0.1930)
Age	-0.0240*** (0.0070)	-0.0140** (0.0070)	-0.0050 (0.0070)
Female	0.1800 (0.1320)	0.0700 (0.1310)	-0.2150* (0.1300)
Labour market status dummies	Yes	Yes	Yes
Marital status dummies	Yes	Yes	Yes
Region dummies	Yes	Yes	Yes
Number of observations	1,075	1,075	1,075

This table provides the coefficients (standard errors in parentheses) of the regressions that appear in Tables 4, 5 and 6 where additional (dummy) variables have been included. These additional variables are labour market status, marital status and region. ***, **, and * indicate statistical significance at the 1%, 5%, and 10%, respectively.

Potential multicollinearity between financial literacy and, financial security and investment type

In order to account for potential multicollinearity, we first take a deeper look at the link between *Financial literacy* and *investment type*. Table D3 provides the distribution of financial literacy scores with respect to each investment type class. While the two variables are clearly not independent, the relationship between these two variables is not as strong as one could expect and thus not likely to bias results.

Another approach to check for potential multicollinearity (beyond the calculated VIF values in Table 3) is to gradually introduce the *Financial literacy*, *Financial security* and *Investment type* dummies variables in the different regressions. The results of such approach appear in Tables D4, D5 and D6. Overall, the results of the different regressions do not indicate that a multicollinearity issue impacts the coefficients of the *Financial literacy*, *Financial security* and *Investment type* variables.

Table D3: Relationship between *Financial literacy* and *Investment type*

Investment type	Financial literacy score			
	0	1	2	3
No financial products	40.72%	39.52%	18.56%	1.20%
Savings account only	20.20%	41.06%	31.79%	6.95%
Savings account and life insurance	19.52%	36.65%	35.46%	8.37%
Complex financial products (equity, funds or bonds...)	12.68%	32.11%	29.86%	25.35%

This table provides the distribution of financial literacy scores with respect to each investment type class.

Table D4: Robustness tests: Gradual introduction of variables in the Sector allocation regression (Table 4)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Sector allocation: <i>Knowing which sectors are funded by my current and savings accounts would guide my financial choices</i>						
Green values	1.1640*** (0.0880)	0.8640*** (0.0990)	0.7980*** (0.1020)	0.7990*** (0.1020)	0.7500*** (0.1030)	0.7580*** (0.1030)
Higher returns		0.5050*** (0.0780)	0.4700*** (0.0800)	0.4690*** (0.0800)	0.4260*** (0.0800)	0.4200*** (0.0810)
Altruism			0.1830*** (0.0670)	0.1840*** (0.0680)	0.1920*** (0.0680)	0.1830*** (0.0680)
Financial security					0.2490*** (0.0670)	0.2270*** (0.0680)
Financial literacy				-0.0110 (0.0680)	-0.0190 (0.0680)	-0.0430 (0.0700)
<i>Type of investment dummies - Base level: no financial products</i>						
Savings account only						-0.1280 (0.1840)
Savings account only and life insurance						-0.0140 (0.1910)
Complex financial products (equity, funds or bonds...)						0.2860 (0.1930)
<i>Level of Education - Base level: no degree</i>						
Undergraduate degree	0.1610 (0.1290)	0.1110 (0.1290)	0.1030 (0.1290)	0.1080 (0.1320)	0.0740 (0.1320)	0.0410 (0.1330)
Graduate degree	0.1240 (0.1710)	0.1370 (0.1710)	0.1280 (0.1710)	0.1350 (0.1760)	0.0690 (0.1770)	-0.0030 (0.1790)
Age	-0.0250*** (0.0060)	-0.0210*** (0.0060)	-0.0200*** (0.0060)	-0.0200*** (0.0060)	-0.0190*** (0.0060)	-0.0200*** (0.0060)
Female	0.0430 (0.1170)	0.0900 (0.1180)	0.0620 (0.1190)	0.0570 (0.1220)	0.1320 (0.1230)	0.1660 (0.1250)
Number of observations	1,075	1,075	1,075	1,075	1,075	1,075

This table presents the same results (i.e., the coefficients in the first column) as in Table 4 but the main explanatory variables are introduced gradually.

Table D5: Robustness tests: Gradual introduction of variables in the *Impact* regression (Table 5)

	Impact: <i>Knowing the carbon footprint of my current and savings accounts would guide my financial choices</i>					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Green values	1.4820*** (0.0910)	1.1750*** (0.1010)	1.1110*** (0.1030)	1.1180*** (0.1040)	1.0800*** (0.1040)	1.0970*** (0.1050)
Higher returns		0.5160*** (0.0780)	0.4730*** (0.0790)	0.4690*** (0.0800)	0.4400*** (0.0800)	0.4360*** (0.0810)
Altruism			0.2010*** (0.0690)	0.2050*** (0.0690)	0.2100*** (0.0690)	0.1950*** (0.0690)
Financial security					0.1830*** (0.0660)	0.1580** (0.0680)
Financial literacy				-0.0880 (0.0670)	-0.0930 (0.0670)	-0.1170* (0.0690)
<i>Type of investment dummies - Base level: no financial products</i>						
Savings account only						-0.2340 (0.1830)
Savings account only and life insurance						-0.1080 (0.1900)
Complex financial products (equity, funds or bonds...)						0.3140 (0.1920)
<i>Level of Education - Base level: no degree</i>						
Undergraduate degree	0.0720 (0.1280)	0.0260 (0.1290)	0.0220 (0.1290)	0.0550 (0.1320)	0.0320 (0.1320)	-0.0150 (0.1330)
Graduate degree	0.1560 (0.1690)	0.1490 (0.1690)	0.1500 (0.1690)	0.2020 (0.1740)	0.1470 (0.1750)	0.0430 (0.1780)
Age	-0.0200*** (0.0060)	-0.0150*** (0.0060)	-0.0140** (0.0060)	-0.0120** (0.0060)	-0.0120* (0.0060)	-0.0140** (0.0060)
Female	-0.0010 (0.1180)	0.0420 (0.1180)	0.0090 (0.1190)	-0.0250 (0.1220)	0.0290 (0.1230)	0.0760 (0.1250)
Number of observations	1,075	1,075	1,075	1,075	1,075	1,075

This table presents the same results (i.e., the coefficients in the first column) as in Table 5 but the main explanatory variables are introduced gradually.

Table D6: Robustness tests: Gradual introduction of variables in the *WTP for transparency* regression (Table 6)

	Willingness to pay for transparency					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Green values	0.5140*** (0.0760)	0.2030** (0.0890)	0.1200 (0.0930)	0.1270 (0.0930)	0.0850 (0.0930)	0.1040 (0.0940)
Higher returns		0.4960*** (0.0730)	0.4650*** (0.0730)	0.4640*** (0.0730)	0.4230*** (0.0740)	0.4040*** (0.0740)
Altruism			0.2090*** (0.0650)	0.2190*** (0.0650)	0.2220*** (0.0650)	0.1950*** (0.0650)
Financial security					0.2420*** (0.0630)	0.1910*** (0.0640)
Financial literacy				-0.2120*** (0.0660)	-0.2120*** (0.0660)	-0.2770*** (0.0670)
<i>Type of investment dummies - Base level: no financial products</i>						
Savings account only						0.1580 (0.1840)
Savings account only and life insurance						0.2570 (0.1910)
Complex financial products (equity, funds or bonds...)						0.7940*** (0.1920)
<i>Level of Education - Base level: no degree</i>						
Undergraduate degree	0.3080** (0.1250)	0.2500** (0.1260)	0.2390* (0.1260)	0.3150** (0.1280)	0.2790** (0.1290)	0.2260* (0.1300)
Graduate degree	0.4010** (0.1620)	0.3920** (0.1630)	0.3830** (0.1630)	0.5110*** (0.1680)	0.4380*** (0.1690)	0.2960* (0.1710)
Age	-0.0070 (0.0050)	-0.0030 (0.0060)	-0.0010 (0.0060)	0.0040 (0.0060)	0.0040 (0.0060)	0.0020 (0.0060)
Female	-0.2990*** (0.1140)	-0.2460** (0.1150)	-0.2740** (0.1150)	-0.3690*** (0.1190)	-0.2870** (0.1210)	-0.2250 (0.1230)*
Number of observations	1,075	1,075	1,075	1,075	1,075	1,075

This table presents the same results (i.e., the coefficients in the first column) as in Table 6 but the main explanatory variables are introduced gradually.