

# Socially Responsible Investments: Are households willing to pay? ♦

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## Abstract

We analyze actual behavior and stated preferences for socially responsible investments (SRI). We designed a specific module within the Dutch CentER panel data Survey so as to detect the willingness to pay for SRI and the latent demand for these products. To our respondents we propose two sets of socially responsible products, one with a clear return penalty with respect to the traditional one, the other one with an in kind compensation associated with lower return. Our results show that investors attracted by social financial products are more interested in the pure social product, by showing little interest in compensation. Particularly, individuals with higher educational level, older individuals, and women are those with special interest in SRI. The analysis of actual investment decisions suggests that women more often accept “special offers” but this is less clear for the stated preferences. We offer suggestive evidence that certain forms of ethical investments may be more (or less) effective in attracting private investors.

**Keywords:** Ethical mutual funds; Socially responsible investments

**JEL:** D14; G11; M30

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## 1. Introduction

Financial products, albeit sophisticated, tend to be quite standardized in their features. Investors shape their portfolio by choosing the ideal mix between risk and return trade-off and a time horizon. However, investors might be driven by less traditional factors in deciding where to invest. In a recent paper, (Bauer & Smeets, 2015) highlight that investors might gain beyond the simple financial utility from product savings in bonds that share their same values.

Social Responsible Investments (SRI) could represent one example. Indeed, SRI are characterized by investments that are socially acceptable: for example, SRI mutual funds select their products not only based on the risk-return trade-off, but also on the reassurance that investments exclude those companies investing in tobacco, weapons and gambling. A substantial group of investors wants to invest in products that are socially responsible. In a world characterized by low (if not negative) interest rates and high volatility in financial markets, the possibility of attracting investors by going beyond the standard risk-return trade off represents a venue to be better explored and exploited by the financial industry.

The SRI market is gaining momentum: investments in sustainable and responsible market stocks having increased at a fast pace over the past years ((Busch, Bauer, & Orlitzky, 2016), (EUROSIF, 2014)) with a market now at \$6.57 trillion in the US only. This trend shows an increasing attention for non-strictly financial attributes of the asset, and specifically for the social characteristics of the product. The Netherlands is a particularly interesting country in this context since they represent the third largest market in the world for SRI after the UK and France (EUROSIF, 2014). Furthermore, the size of this market is constantly growing. However, reality seems to be far from the criteria invoked. Little is discernible and despite the good intention of social investments, little change toward a real sustainable investment is detected (Entine, 2003). In other words, the demand of sustainable investments sustained in appearance, while, on the other hand, supply seems to accommodate that request by increasing sustainable investment requirements on paper rather than in the form of real projects, meeting the demand with a formal response rather than a real one (Busch et al., 2016).

Our research idea is to further investigate this potential area of latent demand for products that clearly have a social component as specified in the product subscription (for example stating that part of the foregone interest will be devoted to some charity). Specifically, are people interested in financial products with an explicit social component? And if so, do people accept a higher cost associated to ethical products (i.e. lower return or higher risk)? Or instead, are social investors driven by the possibility of higher returns and thus they see it as a good investment “niche” in the market?

In this study, we investigate the potential for a financial product with a social dimension incorporated into it. Would an investment, be it risk-free or risky, be appealing if the return is explicitly reduced with respect to the standard one, to incorporate a donation? We call this

investment social investment. We also want to estimate the degree of compensation that people need in order “to go social”. For this purpose, we field a survey among a representative sample of the Dutch population with questions on actual SRI and stated choices for hypothetical SRI products. Two possible products are proposed. The first offers a lower monetary return due to the donation component. The second investment compensates more for the social choice, albeit with a non-monetary compensation (in kind). To our knowledge, this research is novel and it constitutes the first analysis carried out on a representative sample of households, which is one of the value added of the paper.

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature on SRI. Section 3 describes the data. Section 4 presents the empirical results of regression models explaining actual and stated choice behaviors. Section 5 draws some conclusions and indicates potential topics for further research.

## **2. Conceptual Background and Literature Review**

The literature on SRI has been growing at a very quick pace since the early 2000s. Focusing on the personal finance perspective<sup>1</sup>, the academic literature addresses a few related questions: why do households invest in SRI? How do SRI assets perform with respect to conventional ones? What is the typical profile of the SR investor?

A set of studies aims to answer the question “why to invest social” and looks at motivations for SRI investments. The answers rest on a theoretical framework where the individual’s utility function depends on both wealth and non-wealth returns, the latter capturing the socially responsible dimensions of the decision. For example (Bollen, 2007) tests difference in behavior between investors in SR mutual funds and investors in conventional funds. Results on the dynamics of cash flows in SR mutual funds are consistent with a multi-attribute utility function, with investors looking not only at the risk-return trade-off, but getting also direct utility from the socially responsible attributes of the funds. Similarly, (Beal, Goyen, & Philips, 2005) provide three non-exhaustive and non-exclusive motivations for ethical investments: superior financial returns (consistently with traditional finance theory), non-wealth returns, and social change. (Glac, 2009) uses lab experiments to underscore that the decision frame influences the likelihood of engagement in SRI. In the same spirit, (Døskeland & Pedersen, 2016) - resting on the theoretical model of utility of wealth and morality by (Levitt & List, 2007) - use a natural field experiment to show that wealth framing is more effective than moral framing in inducing investors to engage in SRI. (Pasewark & Riley, 2010) utilize an experimental approach to determine the effects of values on an investment decision: they ask individuals to choose

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<sup>1</sup> Other studies take the firms’ viewpoint and look at advantages/disadvantages of adopting corporate social responsibility in terms of cost of capital (El Ghouli, Guedhami, Kwok, & Mishra, 2011), cost of debt (Goss & Roberts, 2011), shareholders’ wealth (Krüger, 2015). (Bénabou & Tirole, 2010) provides a first attempt to give an economic framework to individual and corporate social responsibility.

between bonds issued by a tobacco company or by a firm outside the tobacco industry. They conclude that personal values of the investor do affect investment decisions and that social responsibility should be measured on a continuous scale, rather than a dichotomous one.

A related question concerns the historical performances of SRI with respect to conventional funds, and hence the potential existence of an “ethical penalty”. (Renneboog, Ter Horst, & Zhang, 2008) find that SRI funds in European, North-American and Asia-Pacific countries underperform conventional ones and hence conclude that the SRI investor pay a price for their socially responsible choice. By contrast, (Bauer, Koedijk, & Otten, 2005), using a technique that overcomes the benchmark problem, do not find significant differences in risk-adjusted returns between ethical and conventional funds over a database of Germany, UK and US ethical mutual funds. (Renneboog et al., 2008) provide a review of the literature on SRI and emphasize that existing studies hint but do not univocally prove the willingness of agents to accept a lower return in exchange for social or ethical goals. (Benson & Humphrey, 2008) analyze the investors’ behavior and find that SRI fund flows are less sensitive to returns than conventional funds, and more persistent, thus hinting at the difficulty faced by SRI investors in finding alternative investments that meet their non-financial goals.

Another strand of literature aims to identify empirically the SRI investor’s profile. (Bauer & Smeets, 2015) use survey data from retail clients of the only two banks in the Netherlands that exclusively offer SRI and find high levels of social identification among young, highly-educated and low-wealth investors, thus supporting the profiling of socially responsible investors by (Junkus & Berry, 2010). Gender and education are also highlighted in (Nilsson, 2008), who further shows that social investors are not only driven by altruistic motives, but also by the idea that ethical mutual funds have an average or better than average performance. (Hood, Nofsinger, & Varma, 2014) looked at heterogeneities among socially conscious investors, emphasizing the preferences for different social investments across gender, age, religion and political affiliation.

Our paper adds to the empirical literature on SRI by detecting whether SRI investors are indeed willing to pay with a lower interest rate their social financial product or they want to be compensated, somehow, for the monetary loss in which they incur with respect to the traditional investment. In this way, we identify whether the traditional drivers for SRI are the same for “pure” social investors versus SRI investors with compensation.

### **3. Data and Set up of the Experimental Module**

Our data have been collected through an Internet survey among participants of the CentERpanel, run by CentERdata at Tilburg University. CentERdata is a survey research institute that is specialized in data collection and internet surveys. The CentERpanel consists of about 2000 households. This is a random sample representative of the Dutch population. All household members aged 16 or more are invited to complete short questionnaires on a weekly basis<sup>2</sup>,

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<sup>2</sup> Participants receive a small monetary compensation for filling in the questionnaires.

although some questionnaires focus only on certain individuals such as the household head. The response rate at the individual level is usually above 70%. Annually, panel members provide detailed information for the DNB Household Survey (DHS), supplying researchers with a rich set of background information on many domains of the respondents' lives. These data contain information on individual characteristics, employment, pensions, living conditions, mortgages, income, assets, loans, health, and economic and psychological concepts. A peculiarity of this survey is that all data are collected online.<sup>3</sup> Additional information about the dataset can be found in (Teppa & Vis, 2012) and (CentERdata, 2015).

Our survey on SRI was conducted in May 2016.<sup>4</sup> All members of the CentERpanel aged 18 or more received the questionnaire. In total, 2,888 individuals were asked to answer ten questions about socially responsible investments and crowdfunding.<sup>5</sup> The nonresponse rate was around 20%.<sup>6</sup>

We set up a module mimicking an experiment where hypothetical financial products with different return were proposed to the respondents (exact question wording is given in Appendix B). The first part of the survey contained questions about actual financial behavior, while in the second part individuals were asked to express their preferences between different investment possibilities for a hypothetical inheritance. In the first one (Q5 in the questionnaire), individuals were asked how they would allocate the inheritance between savings accounts at a traditional bank, at an SR bank offering a lower return, or at an SR bank which gave a *deluxe* edition of a book as a gift to new clients, but offered a lower return. In the second one (Q6), the choice was again between savings accounts at a traditional bank, at an SR bank offering a lower return but specifically investing part of the return on children vaccination in Africa or on microcredit to women in developing countries<sup>7</sup>, or at an SR bank which gave new customers a voucher allowing them to participate in cultural activities, but also offered a lower return. In the third question (Q7), individuals were explicitly asked what percentages of the inheritance they would allocate to saving accounts at a traditional bank and at an SR bank offering a lower return but investing part of the return in children vaccination in Africa or microcredit to women in developing countries. Finally, in the fourth question (Q8) the choice was between a mutual fund linked to the AEX (Amsterdam Stock Exchange) Index, a SR mutual fund offering a lower expected return, and a SR mutual fund that gave a book as a gift to new clients, but offered an even lower expected return.

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<sup>3</sup> Households without a computer or access to the Internet were provided with a basic computer connected to the Internet, specifically designed for individuals with low computer skills. Technical assistance is also provided by CentERdata. (Teppa & Vis, 2012) discussed the advantages and disadvantages of self-administered surveys.

<sup>4</sup> In particular, the first round of data collection occurred between May, 6<sup>th</sup> and May, 10<sup>th</sup>. Individuals who had not filled in the survey the first time received the questionnaire for the second time between May, 13<sup>th</sup> and May, 17<sup>th</sup>.

<sup>5</sup> Questions Q4, Q9 and Q10 in our survey referred to crowdfunding and will be analyzed in a separate paper.

<sup>6</sup> This is in line with the usual response rate in these surveys. In particular, 574 (19.9%) individuals did not answer the questions. On the other hand, 2,250 (77.9%) individuals completed the task, while 64 (2.2%) individuals answered only some questions.

<sup>7</sup> This is in line with (Berry & Junkus, 2013), where the authors claimed that investors prefer to reward positive social behavior rather than exclude firms based on their products or activities.

Several randomizations are included in the questionnaire in order to investigate the willingness to pay for certain features of the socially responsible choice options. In particular, for half of the sample the hypothetical inheritance amounted to €5,000, while for the other half the level was €10,000. Moreover, the expected return and other details of the available financial investments were randomized.

The experiment design rules out, on purpose, the non-investment option, reflecting the mandatory pension savings features. Indeed, we want to test whether people, when they are offered alternative pension funds among which to invest, and investment is mandatory, they opt for them.

Turing to the feedback of respondents to the question, results show that individuals usually took around 5 minutes to complete the survey.<sup>8</sup> At the end of the questionnaire, as usual in the CentERpanel surveys, respondents are asked to give feedback. In particular, it is worth noticing that around 34% of the respondents found the topic interesting.<sup>9</sup> Around 35% of the respondent reported difficulties in answering the questions.<sup>10</sup> This percentage is higher among female individuals (42%) than among males (29%). Finally, it is reassuring that almost all of the respondents found the questions clear.<sup>11</sup>

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<sup>8</sup> In particular, among those who completed the survey, the median duration was around 4.7 minutes. Some individuals (around 5% of the relevant sample) took more than one hour to complete the task. In fact, it was possible to answer the questionnaire in more than one day.

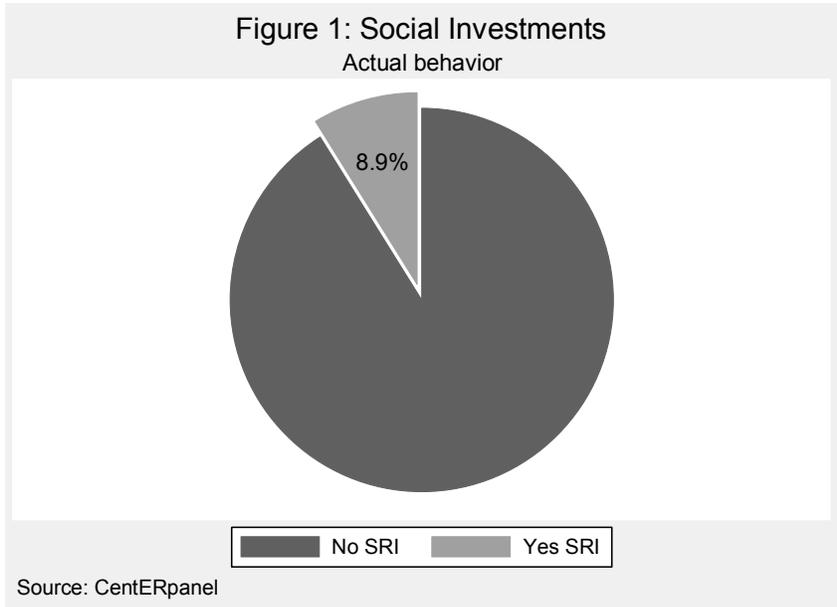
<sup>9</sup> On a scale from 1 (definitely not) to 5 (definitely yes), 21% reported 4, 13% reported 5. The percentages were higher among men than women (23% and 16% respectively).

<sup>10</sup> 20.3% reported 4, 14.8% reported 5.

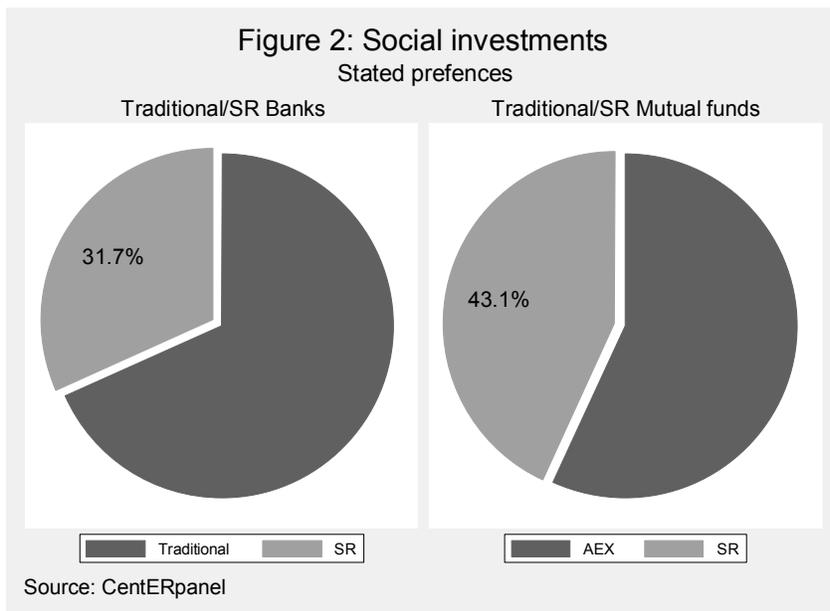
<sup>11</sup> Almost 90% reported 3, 4 or 5.

#### 4. Actual and Stated Behavior: Descriptive Analysis

A good starting point for our analysis are Figures 1-2. As shown in Figure 1, less than 9% of the respondents have investments in socially responsible mutual funds. When asked why they have not invested in these financial instruments, the main reason was that these mutual funds were not liquid (47%), or because households lacked money to save or invest (35%). Very few respondents were discouraged by the low returns or high costs (11%), or wanted to invest only in traditional banks (15%) that only consider expected return and risk. Furthermore, as we will



discuss throughout the paper, there seems to be a latent demand for SRI investments: almost 10% of the respondents who did not have SRI said that they should do it but they had not gotten to it yet.



The answers to the first stated preference question (Q6) show that 32% of the respondents would opt for a saving account at a bank investing in SR companies instead of a more traditional bank (Figure 2).<sup>12</sup> It is even more stunning that more than 43% of the respondents (46% among females) would prefer an ethical mutual fund over one linked to the AEX Index (question Q8).<sup>13</sup>

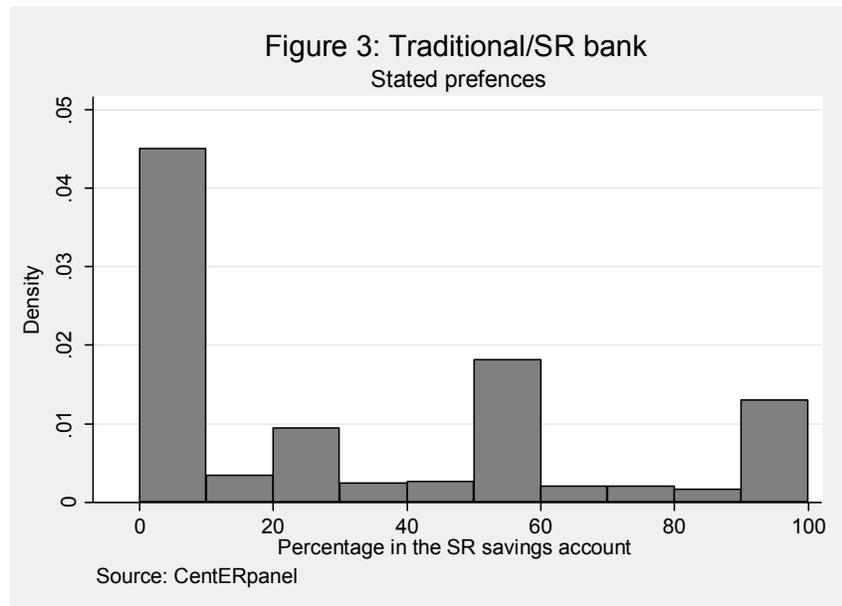
<sup>12</sup> Here we have combined the second option, SR investments for vaccinations/ microcredit, and the third one, SR investments plus voucher.

<sup>13</sup> The second option, SR mutual fund, and the third one, SR plus book, have been combined here.

Question Q7 allows us to look at the intensity of the potential investment in SRI savings. People are asked to allocate the hypothetical inheritance between savings accounts in a traditional bank and an SR one. As shown in Figure 3, we can see different peaks. The relative majority (44%) would choose to put everything in the traditional bank.

Nevertheless, it is interesting to note that 19% of the respondents would allocate more than 50% of the inheritance to the SR bank and 12% would assign the whole amount to such a bank. This is even more remarkable considering that the savings account at the

SR bank offers a lower return. Last but not least, there is a peak at 50, which may suggest an attempt to (naively) diversify between the two investment options, in line with the well-known 1/n heuristic in behavioral finance (Benartzi & Thaler, 2007).



Do stated preferences overstate the social investments? In other words, one of the concern with stated preferences is that people could tend to over-state the “good” action (SRI) but not taking it up when actually offered. Comparing the stated preferences of those who actually own SRI with those who do not own them, can provide useful hints in this respect. Indeed, if stated preferences were over-stated, we would expect a higher percentage of respondents willing to buy the new SRI with respect to those who actually own it.

From Table 1 we can observe that this is not the case. Actual SRI investors do exhibit higher stated preferences too. Indeed, Respondents without SRI show a lower propensity to buy the hypothetical product (Q8): 31% would buy the “pure” SR product versus 55% among those who actually have SRI. From this perspective, it is also worth mentioning that researchers have shown in different contexts the advantages of using stated preferences and that they are good predictor of future actual behavior ((Euwals, Melenberg, & van Soest, 1998), (Donkers & van Soest, 1999), (van Soest & Vonkova, 2014)). Moreover, as stressed in (Teppa & Vis, 2012), our survey was conducted online, thus respondents should not be incentivized to give socially desirable answers.

Another distinguishing feature emerging from the Table 1 is that investors interested in the pure SR product do not show sensitivity to higher returns in either category (with or without actually owning an SRI). Indeed, as shown by the J-Rand columns in Table 1, in question Q8 we

randomly varied the penalization associated to the SR options.<sup>14</sup> We found no difference between the two groups among those who had selected the pure SR option. Instead, those who are appealed by social product whose return is comparable to that of traditional financial product (SRI and in-kind) are sensitive to higher returns: the percentage of respondents increases from 9% to 11% among those who do not own any SRI, and from 4% to 13% among those who actually own SRI. This snapshot suggests that there are two kind of investors: those who are social for the sake of it and to whom higher interest won't be an appeal, and those who see more convenience in SR product (SR and in-kind) and who are sensitive to higher return.

Finally, it is also clear from Table 1 that there was an overall low interest in the voucher among respondents. Indeed, only 10% of them selected the last option (SRI and in-kind) and such figure did not vary between those who already own SRI and those who did not. Similar results are obtained also by looking at the choice between traditional and SR banks (questions Q5 and Q6). It is interesting to note that a similarly low interest in this type of incentive was also found by (Levin, Levitt, & List, 2016) when they tried to increase donations to university by giving away signed copies of *Superfreakonomics*.

**Table 1. Ratio investing in traditional, SRI, SRI with inkind across actual behavior.**

Actual behavior	Type of Mutual Fund (Q8)	SR interest rate (J-Rand)		Total
		Low	High	
Not own SRI	Traditional	0.60	0.58	0.59
	Pure SRI	0.31	0.31	0.31
	SRI & In-kind	0.09	0.11	0.10
Own SRI	Traditional	0.42	0.32	0.37
	Pure SRI	0.54	0.55	0.55
	SRI & In-kind	0.04	0.13	0.09
Total	Traditional	0.59	0.56	0.57
	Pure SRI	0.33	0.33	0.33
	SRI & In-kind	0.09	0.11	.10

<sup>14</sup> At this point it should be stressed that the randomization on the SR returns was conducted differently in the questions. Indeed, as shown in Appendix B, for question Q8 the randomization was the same for the second and third option, while in questions Q5 and Q6 the randomization between the two SR options was not linked. As a results, given the possible combination of returns on the different investment possibilities, in all cases choosing the SR bank which also provides voucher to new clients dominates choosing the SR bank without the voucher. For instance, assume the hypothetical inheritance is €10,000. In Q6 the first option (traditional bank) guarantees a 1% (€100) return. On the other hand, the return in second option (SR bank) is at most 0.8% (€80). The third option (SR bank + voucher) provides investors with at least a return of 0.5% (€50) plus a voucher whose face value is at least €40, for a total of €90. Despite this, very few individuals selected the third option.

Each cell presents the ratio of investors in traditional, SRI, SRI with voucher broken down by two dimensions: their actual behavior (yes/no for those who own/don't own SRI) and the type of return offered on SRI (high or low).

## 5. Multivariate analysis

### 5.1 SRI Versus Traditional Investments

As discussed in the previous paragraph, there is an unexploited interest for SR financial instruments among the Dutch population. The aim of this section is to provide more details on the socio-demographic characteristics of the potential investors.<sup>15</sup> In particular, we have analyzed how respondents would allocate a hypothetical lump sum: would investors be willing to give up some return for “a good cause”? In this way, we are able to assess the preferences for a product clearly embedding a social spill-over - through a foregone part of the return - explicitly stated. As anticipated, we used inheritance as a lump sum to invest so as to isolate a form of asset which is considered a windfall, rather than the consequence of accumulated past savings.

Table 2 illustrated the drivers of participation in SRI. In the first column we have looked at the actual behavior of the individuals, i.e. whether or not they have SR investments (Q1). From the second column onwards we have focused on the stated preferences. In particular, for the second column the choice was between a savings account in a traditional bank and one in a SR bank (Q5).<sup>16</sup> The same has been done in the third column (Q6), although here it was clearly specified in which projects the SR bank would have invested part of the return (vaccinations in Africa or microcredit).<sup>17</sup> Finally, the last column (column 4) looks at risky investments: here the choice was between a mutual fund linked to the AEX and an ethical mutual fund (Q8).<sup>18</sup>

The most persistent result concerns education: highly educated individuals invested more often in SR mutual funds and accounts. Moreover, they showed a 22 percentage points higher of selecting a SR bank (Q6), and they were 14 percentage points more likely to allocate the inheritance to an ethical mutual fund (Q8). From this point of view, these results point at a higher potential market for the SRI (risk-free) bond versus the SRI (risky) mutual fund among this population. Indeed, these results show a lower interest of the well-educated for SRI embedded into a risky product (Q8), with an almost ten percentage points lower probability with respect to the risk-free SRI (Q6).

There are no relevant gender differences in being socially oriented when investing in saving accounts. Nevertheless, women are more likely to be interested in ethical mutual funds. These

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<sup>15</sup> It should be stressed that here we are just looking at the characteristics of the respondents who showed interest for SR investments. No claim of causality has been made. A detailed description of the variable used in the subsequent multivariate analysis is available in Appendix A. When not reported, results are available upon request.

<sup>16</sup> Here we have looked at the question Q5 (see Appendix B). In particular, the second option (SR investments) and third one (SR investments plus book) have been combined in this section.

<sup>17</sup> Here we have looked at the question Q6 (see Appendix B). In particular, the second option (SR investments) and third one (SR investments plus voucher) have been combined in this section.

<sup>18</sup> Here we have looked at the question Q8 (see Appendix B). In particular, the second option (SR risky investments) and third one (SR risky investments plus book) have been combined in this section.

different gender effects are consistent with (Dellavigna, List, Malmendier, & Rao, 2013): women may give more under some circumstances, but not in other situations.

Age also seems to matter in all specification of social products: older individuals tended to be more responsive to this kind of investments, although the effect was concave as evident from the coefficients (not reported). In addition to this, being married or living in a highly urbanized area were all correlated with SR investments, although not in all specifications. It is also interesting to note that the working status was not correlated with these financial decisions. Similarly, income did not seem to play a crucial role in this context.<sup>19</sup> On the negative effect, another pattern emerges quite clearly: if there were children in the households, the interest towards a more social product was lower (although the coefficient was not always significant). We could interpret this effect as a displacement effect: when people feel responsible for their household, they reduce their interest into the social cause. Commitments inside the households reduce the incentive to donate outside.

The survey was specifically designed to exploit include specific randomization. For instance, we were able to detect whether the amount of the inheritance mattered (€5,000 versus €10,000). Indeed, our results showed that doubling the amount did not influence final outcome, the coefficient of A-Random being not statistically significant. This implies that whether the hypothetical inheritance was 5,000€ or 10,000€ did not affect the decision.

On the other hand, the coefficients of B&C-Random and E&H-Random - capturing a lower penalty for the SR investment - is positive and significant. In case of Q6 (column 2), this means that respondents were more likely to select the SR bank when the institution invested only 20% rather than 40% of the returns in social projects. This result is important to understand how much investors are willing to sacrifice to charity and it is in line with (Barreda-Tarrazona, Matallín-Sáez, & Balaguer-Franch, 2011).<sup>20</sup>

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<sup>19</sup> Income is only marginally significant in the first column for the actual behavior, although the magnitude is rather small. Using net household income or gross individual income instead of net individual income does not alter our conclusions.

<sup>20</sup> As a consistency check, in the above stated preferences specifications (columns 2-4) we added a dummy variable indicating whether the respondent had actually invested in SR activities. Results showed that, as expected, its coefficient was positive, highly statistically significant and with a magnitude going from 18 percentage points for the choice on mutual funds to 30 percentage points for the choice on savings accounts. The coefficients of the other regressors remained qualitatively similar.

**Table 2: Participation in social investments - Probit**

	(1) Actual (Q1)	(2) Stated Bank account (Q5)	(3) Stated Bank account with specified SR project(Q6)	(4) Stated Stocks (Q8)
Female	0.006 (0.012)	-0.004 (0.018)	-0.003 (0.020)	0.065*** (0.021)
Age	0.002*** (0.001)	0.002** (0.001)	0.000 (0.001)	0.002* (0.001)
Secondary education	0.032* (0.019)	0.056** (0.026)	0.039 (0.028)	0.008 (0.029)
Tertiary education	0.099*** (0.018)	0.201*** (0.024)	0.224*** (0.025)	0.136*** (0.028)
Working	0.005 (0.017)	0.011 (0.026)	0.030 (0.028)	-0.014 (0.030)
Married / Living together	0.006 (0.015)	-0.015 (0.023)	-0.050** (0.024)	-0.004 (0.026)
Children in the household	-0.007 (0.017)	-0.030 (0.024)	-0.051* (0.026)	-0.037 (0.028)
Urban	0.018 (0.013)	0.047** (0.019)	0.027 (0.021)	0.070*** (0.023)
Log(Individual Income)	0.009* (0.005)	-0.010** (0.005)	-0.004 (0.005)	-0.001 (0.006)
A-Random (Inheritance 10K)		0.011 (0.018)	0.023 (0.019)	0.020 (0.021)
B&C-Random (Return SR bank)		0.050** (0.021)		
D-Random (Book value)		-0.012 (0.018)		
E&H-Random (Return SR bank)			0.056** (0.022)	
G-Random (Vaccine/microloans)			-0.008 (0.020)	
I-Random (Voucher value)			0.001 (0.019)	
J-Random (Return SR fund)				0.026 (0.021)
Observations	2055	2225	2223	2198

Marginal effects; Standard errors in parentheses

SE clustered at the household level

Source: CenntERpanel

(d) for discrete change of dummy variable from 0 to 1

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 5.2 Heterogeneity in SR investors

Our first analysis did not distinguish between the two SRI products: one was centered on a sure return loss (compared with the traditional investments) and the other was based on some compensation mechanism (voucher or book). The two could attract two types of investors: the former would appeal the purely social investor, while the latter would be of interest for investors looking for new opportunities in the market, not necessarily with high social driver. Drivers of demand for social product might therefore be different for those types of investors. As pure SRI investors accepted a sure return loss in their investment, this exercise allowed us to infer whether SRI investors were willing to pay for the social component and how much.

In order to detect whether the determinants differed between the two groups, we run a multinomial probit on the three types of investments: traditional investments, purely SRI investments (with return loss) and SRI with voucher. Results are illustrated in Table 3 for the risky assets (question Q8).

From these tables, we want to emphasize the main result of this analysis: we wanted to highlight whether and to what extent SR investors were willing to pay for SRI. This was captured by the coefficients regarding the SR returns, i.e. J-Random. Purely SR investors were not sensitive to higher interest rate (or lower loss in interest), while SRI investors with compensation (in-kind) were. We interpreted this result as signaling two different types of social investors, with different drivers. The purely SR investors consciously accepted giving up some interest and they did accept larger return losses (lower interest rate) without diminishing their interest in the product. Those investors were those who had higher social interest overall and they were the majority (the predicted probability is higher than that associated to SR investment with vouchers). Another subgroup of SR investors was, conversely, more similar to traditional investors and they went social if they had a compensation, like the voucher or a book. Those groups were sensitive, like traditional investors, to higher interest rate.

**Table 3: Multinomial Probit - Wildlife Gift Stock (Q8)**

	(1) Traditional	(2) SR	(3) SR & In-kind
Female	-0.065*** (0.021)	0.057*** (0.020)	0.009 (0.014)
Age	-0.002* (0.001)	0.001 (0.001)	0.000 (0.001)
Secondary education	-0.011 (0.029)	0.034 (0.028)	-0.022 (0.017)
Tertiary education	-0.137*** (0.028)	0.159*** (0.026)	-0.021 (0.017)
Working	0.014 (0.030)	0.013 (0.028)	-0.027 (0.018)
Married / Living together	0.003 (0.026)	0.012 (0.024)	-0.015 (0.016)
Children in the household	0.036 (0.028)	-0.046* (0.026)	0.010 (0.017)
Urban	-0.070*** (0.023)	0.076*** (0.021)	-0.006 (0.014)
Log(Individual Income)	0.001 (0.006)	0.003 (0.006)	-0.004 (0.004)
A-Random (Inheritance 10K)	-0.020 (0.021)	0.035* (0.020)	-0.015 (0.013)
J-Random (Return SR fund)	-0.026 (0.021)	0.001 (0.020)	0.025* (0.013)
Observations	2198	2198	2198

Standard errors in parentheses

SE clustered at the household level

Source: CenntERpanel

These are the marginal effects computed from the Multinomial Probit model estimates.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 5.2 Intensity of stated SRI

Following (Dorfleitner & Nguyen, 2016), we not only considered whether individuals were interested in SR investments, but also how much they were willing to allocate to these. We investigated the intensity of SRI in Table 4 and 5. Our dependent variable was the percentage of the inheritance that the respondents were willing to deposit in a savings account at a SR bank rather than at a traditional bank that provided a higher interest rate. The average choice was 30%, while the median was 20% (Appendix A, question Q7B). We described the characteristics of these potential investors while taking into account the censoring of the outcome variable by using a Tobit model with upper and lower bound in Table 4. Column 1 reports the coefficients, i.e. the marginal effect on the latent variable, while the marginal effects on the censored variable are shown in column 2.

As in the previous section, the pivotal regressor was education: individuals who completed tertiary education were willing to give 13 percentage points more to the SR bank than respondents with lower educational achievements, i.e. roughly between €650 and €1,300 more (the inheritance was set at €5,000 or €10,000). Among the other regressors, it is interesting to note again that working status, income and household composition were not statistically significant, while older people and those living in urban areas seemed to be more altruistic. Furthermore, individuals living with a partner tended to select a lower level of SR investments. On the other hand, gender seemed to matter for the intensity of SRI: female tended to allocate higher percentages to the SR option.

As we see from the coefficient of A-Random, people with higher wealth to invest – that is, higher inheritance - did not seem to select a higher level of SR investment. Similarly to the findings in (Aretz & Kube, 2013), respondents also seemed to be indifferent to the choice of social project: whether the financial institution invested part of the return on vaccination for children in Africa or microloans for women in developing countries led to the same outcome levels (G-Random). However, there is a gender difference if we include an interaction between female and G-Random: women tended to allocate more (12 percentage points) to the SR bank when the related social project was focused to children in Africa. In addition to this, respondents were willing to accept a penalty for SR investments, by they did react to lower profits: they invested more in the SR bank when they receive a return of 0.8% (instead of 0.6%) annually and the remaining 0.2% (instead of 0.4%) was invested in social projects (the traditional bank offers a return of 1%). Combine with the results from the previous section, we could conclude that the return did not matter for investors when choosing the SR option, but it counted when selection the intensity of the investment.

As expected, if we included among the regressors the respondent's actual behavior, there was a high correlation: those who already had SR investments allocated on average almost 20 percentage points more to the savings account in the SR bank.

One may worry that the assumptions behind the Tobit model are too strong. As a robustness check, we estimated the same model using an ordered probit model, to allow coefficient to vary across the different (ascending) percentage of investing. In this way, our estimates took into account the tri-modal distribution (with peaks at 0, 50 and 100), as well as the tendency to round percentages. We divided the dependent variable into five intervals: one category for those who allocated 0 to the SR bank, one for 1-45, one for 46-55, one for 56-99, and the last for those who selected 100. The estimated coefficients were reported in the first column of Table 4, while the marginal effects were reported from column 2 to column 6.

One of the result we wanted to point out is that of female. Women had higher interest in social investment as they were inclined to invest more. Consistently with the previous results, age, education, living in an urban area, higher returns decreased the probability of selecting zero, while they increased the probabilities of the top categories. Therefore, we could conclude that the results on the intensity of the SR investment were quite robust across different specifications.

**Table 4: Intensity of social investments (Q7) - Tobit**

	(1) Tobit	(2) Margins
Female	8.676*** (3.211)	4.038*** (1.488)
Age	0.837 (0.642)	0.169** (0.068)
Age squared	-0.004 (0.006)	
Secondary education	4.152 (4.226)	1.933 (1.965)
Tertiary education	28.121*** (4.296)	13.090*** (1.949)
Working	4.140 (4.651)	1.927 (2.164)
Married / Living together	-8.163** (3.974)	-3.800** (1.844)
Children in the household	-3.999 (4.293)	-1.861 (1.995)
Urban	6.052* (3.504)	2.817* (1.629)
Log(Individual Income)	-0.468 (0.880)	-0.218 (0.410)
A-Random (Inheritance 10K)	5.046 (3.169)	2.349 (1.473)
E-Random (Return SR bank)	9.681*** (3.244)	4.506*** (1.502)
G-Random (Vaccine/microloans)	-1.557 (3.225)	-0.725 (1.501)
Observations	2209	2209

Marginal effects; Standard errors in parentheses

SE clustered at the household level

Source: CenntERpanel

(d) for discrete change of dummy variable from 0 to 1

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table 5: Intensity of social investments (Q7) - Order Probit**

	(1) Oprobit	(2) Margin 0	(3) Margin 1- 45	(4) Margin 46-55	(5) Margin 56-99	(6) Margin 100
Female	0.135*** (0.048)	-0.052*** (0.018)	0.002* (0.001)	0.014*** (0.005)	0.010*** (0.003)	0.026*** (0.009)
Age	0.013 (0.010)	-0.002** (0.001)	0.000** (0.000)	0.001** (0.000)	0.000** (0.000)	0.001** (0.000)
Age squared	-0.000 (0.000)					
Secondary education	0.060 (0.063)	-0.023 (0.024)	0.001 (0.001)	0.006 (0.007)	0.004 (0.004)	0.012 (0.012)
Tertiary education	0.404*** (0.063)	-0.155*** (0.023)	0.006*** (0.002)	0.042*** (0.007)	0.029*** (0.005)	0.079*** (0.013)
Working	0.051 (0.069)	-0.019 (0.026)	0.001 (0.001)	0.005 (0.007)	0.004 (0.005)	0.010 (0.013)
Married / Living together	-0.114* (0.059)	0.044* (0.023)	-0.002 (0.001)	-0.012* (0.006)	-0.008* (0.004)	-0.022* (0.011)
Children in the household	-0.063 (0.064)	0.024 (0.024)	-0.001 (0.001)	-0.007 (0.007)	-0.004 (0.005)	-0.012 (0.012)
Urban	0.092* (0.052)	-0.035* (0.020)	0.001 (0.001)	0.010* (0.005)	0.007* (0.004)	0.018* (0.010)
Log(Individual Income)	-0.007 (0.013)	0.003 (0.005)	-0.000 (0.000)	-0.001 (0.001)	-0.000 (0.001)	-0.001 (0.003)
A-Random (Inheritance 10K)	0.066 (0.047)	-0.025 (0.018)	0.001 (0.001)	0.007 (0.005)	0.005 (0.003)	0.013 (0.009)
E-Random (Return SR bank)	0.139*** (0.048)	-0.053*** (0.018)	0.002** (0.001)	0.014*** (0.005)	0.010*** (0.003)	0.027*** (0.009)
G-Random (Vaccine/microloans)	-0.023 (0.048)	0.009 (0.018)	-0.000 (0.001)	-0.002 (0.005)	-0.002 (0.003)	-0.005 (0.009)
Observations	2209	2209	2209	2209	2209	2209

Marginal effects; Standard errors in parentheses. SE clustered at the household level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Source: CenntERpanel

(d) for discrete change of dummy variable from 0 to 1

## 6. Discussion and Conclusions

Our analysis looks at the potential market for a financial product with a social component and aims to assess whether social investors are willing to pay a price to be so or they want to be partially compensated in order to have a social investment (for example with in-kind returns). We are then able to investigate whether there is additional room for the development of this market and identify the population segments more oriented to this market. Women, for example, could represent a potential market for risky SR investments, which has not been fully exploited yet. In line with (Prast, Rossi, Torricelli, & Sansone, 2015), alternative investment possibilities may increase women's participation in risky financial market products.

Our results point at one strong evidence that social investors are willing to pay a price to be so rather than needing a little nudge, such as in kind compensation, to approach SRI. The appeal of SRI is lower if there is an in-kind benefit associated to the product. Moreover, the SRI investors show little sensitivity to the magnitude of the return penalty, measured as lower interest rate, thus suggesting that SRI are driven by non-monetary factors in their choice.

Our analysis consistently identifies highly educated individuals as a group with a substantial latent demand that has not yet been fully exploited. To give a sense of the amplitude of this potential market, we can start from the marginal effect of education computed in the Tobit estimate (Table 2 Column 3): respondents with tertiary education allocated 13.4 percentage points more to the SR saving account. If we multiply this figure with the average inheritance (7,500€)<sup>21</sup>, the percentage of individuals in the Netherlands aged between 25 and 64 with a Bachelor's degree or higher (33% in 2014 according to (OECD, 2015)), and the number of adult individuals (9,006,589 according to (CIA, 2015)), we obtain a potential source of social investments of 3 billion euro. A more conservative approach would take into account that 38% of these highly educated respondents did not allocate anything to the SR saving account. Therefore, the above figure would decrease down to 1.85 billion euro, still a substantial amount. Although it is more extreme, one final simulation could take a different amount. Indeed, instead of the hypothetical inheritance - if we assume that these highly educated individuals would behave similarly with their actual saving - the mean amount in the saving/deposit accounts for these individuals was more than 26,500, thus the potential market would reach 6.6 billion euro.

In addition to this, we have also shown that individuals who already have SR investments are more interested in the proposed new SR investments. Therefore, as also stressed in (Landry, Lange, List, Price, & Rupp, 2006), these individuals represent a "warm list", i.e. a large pool of active SR investors which can be contacted by SR financial institutions.

To conclude, in line with (Levin et al., 2016), we hope that this paper has also highlighted the benefits of partnering with academics in the analysis of potential new financial products and

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<sup>21</sup> We have also tried to estimate the same Tobit model by adding an interaction term between the educational achievement and the inheritance level to verify whether the behavior changed for larger amounts. However, its coefficient is not statistically significant, thus we felt confident in using the average inheritance and the marginal effect from the model without such interaction.

markets. Rigorous quantitative methods and innovative survey designs could help financial institutions targeting more efficiently potential customers and identifying which tools may (or may not) be used to attract these individuals.

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## Appendix A – Summary statistics and variables

### Summary statistics

Variable	Obs	Mean	SD	Min	Max
Actual SR investments (Q2)	2,118	0.089	0.284	0	1
SR banks (Q5 - Dummy)	2,289	0.246	0.431	0	1
SR banks (Q5)	2,289	1.339	0.641	1	3
SR banks (Q6 - Dummy)	2,286	0.317	0.465	0	1
SR banks (Q6)	2,286	1.403	0.642	1	3
SR banks (Q7B)	2,272	30.336	34.987	0	100
SR mutual funds (Q8 - Dummy)	2,261	0.431	0.495	0	1
SR mutual funds (Q8)	2,261	1.535	0.675	1	3
Female	2,314	0.485	0.500	0	1
Age	2,314	54	17	18	93
Age squared	2,314	3203	1777	324	8649
Secondary education	2,314	0.323	0.468	0	1
Tertiary education	2,314	0.407	0.491	0	1
Working	2,314	0.507	0.500	0	1
Married / Living together	2,314	0.748	0.434	0	1
Children in the household	2,314	0.340	0.474	0	1
Urban	2,290	0.410	0.492	0	1
Log(Individual Income)	2,271	6.794	2.051	0	11.443

Note: these summary statistics refers to the whole sample. The actual observations used in the empirical analysis may be slightly different.

The summary statistics for Q5, Q6, Q7B, Q8 refer to the original answers provided by the respondents (see the questionnaire below). For Q5, Q6 and Q8 we have also used in the empirical analysis dummy variables where the second option (SR investments) and the third one (SR investment plus book/voucher) have been combined.

## Variable descriptions

### Dependent variables

*Actual SR investments (Q2)* is an indicator variable equal to one if the respondent (or another household member) had already invested in SR financial assets.

*Stated Preferences for Saving Accounts (Q5) - Book.* We asked individuals how they would allocate an inheritance across saving accounts in a traditional bank, in a SR bank that guarantees a lower interest rate than the traditional bank, or in a SR bank that guarantees a lower interest rate than the traditional bank but gives a luxury book as a gift to new customers. Only one option could be selected. In the empirical analysis we have often combined the last two options.

*Stated Preferences for Saving Accounts (Q6) - Voucher.* We asked individuals how they would allocate an inheritance across saving accounts in a traditional bank, in a SR bank that guarantees a lower interest rate than the traditional bank but uses the remaining profits to finance children vaccinations in Africa or microloan to women in developing countries, or in a SR bank that guarantees a lower interest rate than the traditional bank but gives vouchers to attend cultural and sport events as a gift to new customers. Only one option could be selected. In the empirical analysis we have often combined the last two options.

*Stated Preference for Saving Accounts (Q7) – Intensity.* We asked individuals how they would allocate an inheritance between saving accounts in a traditional bank, and in a SR bank that guarantees a lower interest rate than the traditional bank but uses the remaining profits to finance children vaccinations in Africa or microloan to women in developing countries. Respondents had to specify which percentage of the inheritance they would assign to the SR bank.

*Stated Preferences for Mutual Funds (Q8).* We asked individuals how they would allocate an inheritance across a mutual fund linked to the AEX index, an ethical mutual funds with an expected lower return than the AEX (but the same risk), or an ethical mutual fund that gives a luxury book as a gift to new customers and has an expected lower return than the AEX (but the same risk). Only one option could be selected. In the empirical analysis we have often combined the last two options.

### Regressors

*Female* is an indicator variable equal to one when the responded identifies herself as woman, zero if he identifies himself as a man.

*Age* records the age of the respondent (in years).

*Primary Education* is an indicator variable equal to one if the respondent's highest educational level was "basisonderwijs" (elementary school) or "wmbo" (preparatory middle-level applied education, i.e. non-selective secondary education), zero otherwise. This is the baseline.

*Secondary Education* is an indicator variable equal to one if the respondent's highest educational level was "havo/vmo" (higher general continued education/preparatory scholarly education, i.e. selective secondary education) or "mbo" (middle-level applied education, i.e. vocational training), zero otherwise.

*Tertiary education* is an indicator variable equal to one if the respondent's highest educational level was "hbo" (higher professional education, i.e. advanced vocational education) or "wo" (scientific education, taught at research universities), zero otherwise.

*Working* is an indicator variable equal to one if the respondent's main occupation is paid employment, self-employment or working in a family business, zero in the respondent is retired, a student, a housemaker, unemployed, disabled or similar.

*Married / Living Together* is an indicator variable equal to one if the household members are two individuals (un)married living together, with or without children. It is set to zero if the respondent is single (with or without children) or the household structure is different from the ones just mentioned.

*Children in the household* is an indicator variable equal to one if there were one or more children in the household living at home, zero otherwise.

*Urban* is an indicator variable equal to one if the respondent lives in an area with 1,500 or more addresses per km<sup>2</sup>, zero for lower densities.

*Log( Individual Income)* is the logarithm of the respondent's individual monthly net income. It is equal to zero if such income was zero. It is set to missing if the respondent did not know his/her income, if he/she refused to provide it, or if the question was not answered.

## Appendix B - Original questionnaire

The following questions are part of the questionnaire designed for this paper. The whole survey is available upon request.

### Actual behavior

*account*

Financial respondent

0. No

1. Yes

*{intro}*

Sustainability and corporate social responsibility are receiving a lot of attention. One way in which the citizens themselves can contribute to it is by saving their money in some particular way, for example in a special account or in a special investment fund at a regular bank, or at a special bank that only invests in socially responsible projects. Often this is also made more attractive by receiving a gift when you open a new account or, for example, by receiving a discount on transaction costs.

This questionnaire is actually talking about your behavior and your preferences for socially responsible ways to save your money. For example, do you only look to return and risk, or do you also consider other things?

*If account=1*

*{finresp}*

The following four questions are about you and your financial household. If an account or investment is owned by someone with whom you keep a financial family budget together (your partner or child, for example), add it. You don't need to count an account or investment of someone who owns financial household forms (for example, an adult son or daughter who still lives at home).

*If account≠1*

*selectie*

The following four questions are about you and your financial household. If an account or investment is owned by someone with whom you keep a financial family budget together (your partner or child, for example), add it. You don't need to count an account or investment of someone who owns financial household forms (for example, an adult son or daughter who still lives at home).

Do you want or can you not answer to any question? Check the following option:

1 I don't own accounts or investments and I am not aware of the finances of my family

*If account=1 or selectie≠1*

**Q1**

Do you (or your household) have any investments in socially responsible mutual funds or in other accounts that invest in environmentally friendly companies or in cultural or other activities that are beneficial to society?

1. Yes
2. No

**Q2**

*If Q1=1*

Why did you invest in these? (allow for more than one answer)

- a. Because I/we want to contribute in this way to improve society
- b. Because I/we have more confidence in the banks and people managing this kind of funds than in the rest of the financial sector
- c. Because of the (monetary) returns that I/we think these investments will have
- d. Because these accounts are or were (at the time I started this) tax favoured
- e. Because I/we responded to a special promotion action promising me a (monetary or nonmonetary) gift for opening such an account or starting to invest in such a fund

*If Q1=2*

Why did you not invest in these? (allow for more than one answer)

- a. I/we should do this, but I do not get to it (yet)
- b. I/we have no money to invest or save
- c. I/we want to be able to withdraw my savings immediately if necessary
- d. Because of the high costs or low expected returns
- e. Because I/we only want to invest my money in the traditional banks who only look at expected return and risk

0. No
1. Yes

*If account=1 or selectie≠1*

**Q3**

Some banks give you a present, such as a book or a voucher, if you open a new account or start investing or increase your investment in specific mutual funds. Were you (or your household) ever offered this opportunity and if so, did you make use of it?

1. This was never offered to me as far as I know
2. This was offered to me but I did not use this opportunity
3. I once used such an opportunity to allocate (some of) my savings
4. I more than once used such opportunities

## Stated preferences

### **Q5**

The following questions are not about facts but about how you would allocate money in a hypothetical situation.

Suppose you receive an inheritance of *[if ARandom=0: €5000 / if ARandom=1: €10,000]* but the condition is that you cannot spend the money now but only one year from now at the earliest. You can invest it in some account or mutual fund and receive the money plus net return one year from now.

We ask you how you would invest the money.

Please note that all the possible investment strategies are hypothetical; they do not reflect the returns you can currently get with real investments.

What would you choose you if you had the following possibilities?

- a. Put the money in a saving account at a traditional bank and receive an interest rate of 1%.
- b. Put the money in a saving account at a bank that only invests in socially responsible companies and receive an interest rate of *[if BRandom=0: 0.6% / if BRandom=1: 0.8%]*.
- c. Put the money in a saving account at a bank that only invests in socially responsible companies and receive an interest rate of *[if CRandom=0: 0.5% / if CRandom=1: 0.75%]*. In addition, if you open the account you get a Deluxe Edition of the book “Wildlife in Europe” with a value of *[if DRandom=0: 40 / if DRandom=1: 60]* if you would buy it in a store.

### **Q6**

Suppose you receive an inheritance of *[if ARandom=0: €5000 / if ARandom=1: €10,000]* but the condition is that you cannot spend the money now but only one year from now at the earliest.

What would you choose you if you had the following possibilities?

- a. Put the money in a saving account at a traditional bank and receive an interest rate of 1%.
- b. Put the money in a saving account at a bank that only invests in socially responsible companies and receive an interest rate of *[if ERandom=0: 0.6% / if ERandom=1: 0.8%]*. The bank guarantees that the remaining *[if ERandom=0: 0.4% / if ERandom=1: 0.2%]* will be used for *[if GRandom=0: vaccinations of children in Africa / if GRandom=1: loans to help women in developing countries to set up their own business]*.
- c. Put the money in a saving account at a bank that only invests in socially responsible companies and receive an interest rate of *[if HRandom=0: 0.5% / if HRandom=1: 0.75%]*. In addition, when you open the account, the bank gives you a voucher worth *[if IRandom=0: 40 / if IRandom=1: 60]* that you can spend on theatre visits, cinema tickets, sports events, or concerts in the next twelve months.

### Q7

Suppose you receive an inheritance of *[if ARandom=0: €5000 / if ARandom=1: €10,000]* but the condition is that you cannot spend the money now but only one year from now at the earliest.

For example, you can split the amount in two, put part of it in a savings account at a traditional bank with 1% interest rate, and the remaining part in a saving account at a bank that only invests in socially responsible companies, with an interest rate of *[if ERandom=0:0.6% /if ERandom=1: 0.8%]*. The bank guarantees that the remaining *[if ERandom=0:0.4% /if ERandom=1: 0.2%]* will be used for *[if GRandom=0: vaccinations of children in Africa / if GRandom=1: loans to help women in developing countries to set up their own business]*.

How would you choose to allocate the total amount?

0 ... 100% in the traditional savings account

0 ... 100% in the socially responsible savings account

### Q8

Suppose you receive an inheritance of *[if ARandom=0: €5000 / if ARandom=1: €10,000]* but the condition is that you cannot spend the money now but only one year from now at the earliest.

What would you choose you if you had the following possibilities?

- a. Put the money in a mutual fund with a return linked to the AEX (Amsterdam Stock Exchange) Index. (The AEX invests in the stocks of the 500 largest companies in the Netherlands)
- b. Put the money in a mutual fund investing only in a careful selection of socially responsible companies. Compared to the AEX, this mutual fund has a *[if JRandom=0: 1.0 percentage point / if JRandom=1: 0.5 percentage point]* lower return per year on average, and the same risk.
- c. Put the money in a mutual fund investing only in a carefully selected group of socially responsible companies. Compared to the AEX, this mutual fund has a *[if JRandom=0: 1.2 percentage point / if JRandom=1: 0.6 percentage point]* lower return per year on average, and the same risk. In addition, you get a Deluxe Edition of the book “Wildlife in Europe” (with a value of 50 euros if you would buy it in a store).