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Gregor Dorfleitner, Sebastian Utz

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Profiling German-speaking socially responsible investors

Gregor Dorfleitner and Sebastian Utz
Department of Finance, University of Regensburg, Regensburg, Germany

Abstract

Purpose – The purpose of this paper is to analyze the main motives of investors in allocating their money in a socially responsible (SR) way.

Design/methodology/approach – The paper is based on primary data collected in a survey using an online questionnaire. This paper applies tests for continuous and categorical data and (ordered) logit models.

Findings – In a multivariate analysis that investigates determinants of SR investing, this study finds little influence of the demographic factors of gender and investment volume and none of educational level. Furthermore, it shows that the regions investors allocate their money to are significant along with the preference toward the order of return, risk and liquidity. Moreover, there appears to be a gap between supply and demand of SR investments. Additionally, there are indications that a very important inducement for SR investing is the expectation of a high financial performance.

Originality/value – There are very few international studies concerning the link between SR investments and the explanation of preferences with factors other than demographic ones. This study broadens the scope of the literature by providing novel empirical evidence for the German-speaking market.

Keywords Survey, Multivariate analysis, Investment choice preferences, Socially responsible investors

Paper type Research paper

1. Introduction

Personal investment decisions depend on several, variously distinct attitudes of each investor. An empirical analysis and assessment of the complex personal attitudes has proven to be difficult. Therefore, behavioral finance studies consider a vast number of different topics yielding investments which do not conform to the results of a rational asset allocation approach based solely on financial quantities. Our concern is to investigate investors' attitudes deviant from financial interest in the field of socially responsible (SR) investment. We perform an online survey for German-speaking investors which put us in the position to construct the questions to the effect that we obtain information on all the major issues we wish to consider.

JEL classification – D81, G02, G11

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The SR investment setup is particularly appropriate for studying deviant investors' preferences and beliefs concerning their investment decisions due to two reasons. First, regarding the huge increase of the amount of the money invested in an SR way, there must be explicit causes concerning why people allocate their money with respect to SR aspects. At the end of 2011, the amount of SR assets under management in the German-speaking market had reached €103.5 billion (Dittrich *et al.*, 2012)

The second reason is motivated from the theory of investment psychology. Although there are some studies that show financial underperformance (Hong and Kacperczyk, 2009; Renneboog *et al.*, 2008a) or outperformance (Derwall *et al.*, 2005; Kempf and Osthoff, 2007) of SR investments, most studies (Bauer *et al.*, 2005; Bello, 2005; Guerard, 1997; Hamilton *et al.*, 1993; Kreander *et al.*, 2005; Mallin *et al.*, 1995; Statman, 2000) coincide with regard to the result that there is no statistically significant difference between the performance of conventional investments and SR investments. In a more profound analysis, Derwall *et al.* (2011) explain the out- and underperformance using the *shunned-stock hypothesis* and the *errors-in-expectations hypothesis*. Both effects could appear in short-term analyses, but may be compensated in the long-run. Not even studies dealing with risk aspects relating to both kinds of investments (Bollen, 2007; Renneboog *et al.*, 2008b; Tippet, 2001) are able to find evidence supporting the fact that SR investments are less risky than conventional ones. Therefore, there must be another motivation beyond the financial return leading investors to choosing SR investments. Although institutional investors usually care about their reputation in society (e.g. pension funds do not invest in sin stocks to not be exposed to a negative discussion), private investors do not have any external non-monetary incentives to invest in an SR way (Hong and Kacperczyk, 2009). According to Bauer and Smeets (2012), the consideration of social responsibility by some investors when allocating their money could be caused, on the one hand, by beliefs or, on the other hand, by preferences. The studies of Lewis and Mackenzie (2000a, 2000b), Lewis (2001) and Pasewark and Riley (2010) are examples of psychological research investigating special aspects of SR investors' motives. Although this kind of research is insightful, it does not deliver a big picture and is only loosely linked with finance literature on SR investments.

Moreover, socially responsible investing (SRI) has become an investment policy (Capelle-Blancard and Monjon, 2012) with objectives beyond pure financial quantities over the past few decades as well as an impressively growing consumer demand. This has inspired a number of studies (Junkus and Berry, 2010; Rosen *et al.*, 1991; Starr, 2008; Williams, 2007) which consider SR investor characteristics. Most of these studies agree upon the finding that confirms that well-educated women and young adults are involved in SR investments to a significantly higher degree. The constraint of these studies lies in the fact that they essentially examine differences in demographic properties of SR and non-SR investors. Classifying investors is difficult (McLachlan and Gardner, 2004) because the existing literature shows inconsistencies regarding how to identify an SR investor. However, while some studies (Webley *et al.*, 2001; Lewis and Mackenzie, 2000b) solve this issue by distributing the questionnaires to investors who, for example, have (or have not) already invested in certain SRI products such as SR mutual funds, we do not differentiate SR and conventional investors ex ante. We feel that separating investors in this way is not appropriate due to the fact the conventional investors are also likely to tend to invest in SR funds if they perform well financially. In our research, we wish to elicit which issues are related to indicators representing SR interests from

one single sample. To this end, we ask private investors about their preferences and beliefs with respect to financial and non-financial aspects of investments and place special emphasis on the interaction of preferences, beliefs, socio-demographic properties and the factual investment decisions made by the investors. Our central strategy is to analyze data we obtain from our survey with univariate and multivariate methods to find out the influence of socio-demographic factors on several SRI-related attitudes and to investigate characteristics and motives of investors' SR interests in greater detail.

We contribute to the SRI literature in three ways. First, our analysis is based on a specific sample containing three subgroups, namely, private investors, asset managers and institutional investors, from our own survey. Second, we find significant evidence supporting the fact that demographic issues influence personal attitudes such as the willingness to sacrifice return for a higher degree of social responsibility. Third, through applying multinomial logit models, we show that items like the market, the expectation of the performance of SR investments and the return–risk–liquidity preference have a higher explanatory power than most of the demographic ones. Moreover, we find that although the demand for and the positive view of SR investments are verifiable, investors are still hesitant regarding their involvement in SR investments.

The paper is structured as follows. The research questions and the description of the questionnaire are contained in Section 2. An overview of the sampling strategy and the data of the realized online-survey are provided in Section 3. In Section 4, we display the results, and Section 5 concludes the paper.

2. Research questions and questionnaire design

2.1 Research questions

We compiled a survey to collect data of German-speaking investors which we use to find answers to the following four research questions.

First, we wish to investigate whether preferences, beliefs and factual investment decision issues are related to socio-demographic factors such as gender, educational level and investment volume, respectively. We also try to confirm or disprove the findings that women are more concerned with SRI than men (Junkus and Berry, 2010; Schueth, 2003) and that wealth (Junkus and Berry, 2010; Solomon, 2009a; Tippet and Leung, 2001) and educational level (Rosen *et al.*, 1991; Tippet, 2001; McLachlan and Gardner, 2004) influence investment decisions. In addition to this, we aim at identifying motives (Mackenzie and Lewis, 1999; Lewis, 2001; Beal *et al.*, 2005) for investing in an SR way and a special type of investor who is willing to sacrifice a high level of return for social responsibility (Hofmann *et al.*, 2008; Bauer and Smeets, 2012; Mackenzie and Lewis, 1999; Lewis and Mackenzie, 2000a; Pasewark and Riley, 2010).

Second, we try to find an appropriate multivariate model to explain whether a respondent is likely to invest in SR mutual funds or not. There are two possible motivations which lead to an investment in these kinds of funds: an investor may wish to invest in SR funds either due to preferences regarding responsibility (Mackenzie and Lewis, 1999; Lewis, 2001) or because of the belief in receiving a high financial profit (Cox *et al.*, 2004; Jansson and Biel, 2011a,2011b). Several studies (Webley *et al.*, 2001;Lewis and Mackenzie, 2000b) classify an investor as SR if he/she allocates money to a selected SR fund. Contrary to this, we try to learn from the results of a multivariate model whose attitudes drive a participant to invest in an SR fund.

Third, our aim is to characterize investors according to their willingness to waive financial returns in favor of satisfying high SR requirements. Rosen *et al.* (1991) find that the investors in their study are unwilling to sacrifice return to achieve social responsibility. Other studies (Hofmann *et al.*, 2008; Bauer and Smeets, 2012; Mackenzie and Lewis, 1999; Lewis and Mackenzie, 2000a; Pasewark and Riley, 2010) find different results on this topic. However, besides the above question of whether investment volume, gender and educational level influence the level of return sacrifice, we investigate the issue multivariately to find the influential characteristics that make an investor willing to waive return for social responsibility.

Finally, an indicator for an investor being SR is the proportion of SR investments in his/her portfolio. Lewis and Mackenzie (2000a) and Mackenzie and Lewis (1999) find a low percentage of SR investments for SR investors. In particular, they discern a dichotomy of the invested money, consisting of one part invested conventionally to reach the financial requirements, and a second part, which is considered as a surplus and can be invested in an SR way without financial goals. We wish to explain the investors' share of SR investments with the aid of a multivariate model. The percentage of SR investments in the portfolio displays the current level of involvement of an SR investor. We assume that a higher percentage is consistent with an enhanced interest for SRI. Hence, by shaping the dependency of the percentage variable on several explanatory variables through an appropriate model, we characterize investors with a higher share of SR investments.

2.2 Questionnaire

Next, we, in brief, present the questions of our survey. A detailed overview of the questions and some descriptive statistics are stated in Appendix (Table AI). Moreover, we use some acronyms for the questions which we explain in Table AII.

The first question on the type of investor comprises a branch for the remaining questionnaire. In the spirit of Jansson and Biel (2011b), we choose the groups categorized as *private investors*, *institutional investors* and *asset managers*. After this question, asset managers are requested to answer from the point of view of an average customer during the remainder of the questionnaire, whereas private investors and institutional investors give answers from their own perspective. We use the asset managers, who are familiar with the needs and wishes of an enormous number of single investors, as an independent control group. Due to this fact, we incorporate an additional question in the asset manager's questionnaire regarding the question of whether they answer from an institutional or from a private investor's point of view. The rest of the questionnaire's body is identical for all three types of investors.

After the second question, on whether the participant is familiar with SRI, the questionnaire continues in three parts. The first part is dedicated to preferences regarding SR investments. The growing demand for SRI (Eurosif, 2012) and the different approaches (e.g. screening, impact investing and engagement) to creating SR investments lead to the question of how important German-speaking investors consider environmental, social and governmental (ESG[1]) issues in their asset allocation to be. These three topics are currently seen as the main components of SRI. In more detail, Anand and Cowton (1993) elicit the most important five factors of SRI preferences using a principal component analysis with 14 different exclusion topics. Following them, we also wish to be more precise and cover the three issues with 13 specific items, gathered

from a pool of arguments, all mentioned in telephone interviews of several former studies (Mackenzie and Lewis, 1999; Lewis, 2001; Jansson and Biel, 2011b). Most of them are found to be more important for SR investors than for conventional ones (McLachlan and Gardner, 2004). The next question concerns the trade-off between financial goals and SR objectives, in general. The majority of the participants in the study of Lewis (2001) not only exclusively invest to make money but also have a preference concerning financial goals and non-financial investment objectives. Also, Pasewark and Riley (2010) find that investors are sensitive to financial and non-financial factors when making an investment decision. Furthermore, there is a widespread discussion on the importance of financial returns in comparison to the importance of environmental, social and ethical issues and their benefits in Jansson and Biel (2011b). As a consequence for our study, we asked the participants about their general idea regarding the trade-off between financial and ESG issues which should be different for SR and conventional investors (McLachlan and Gardner, 2004). Following McLachlan and Gardner (2004), who describe the most commonly applied strategies to investing in an SR way, we asked the German-speaking investors in what way they implement their personal moral values. Preferences between couples of or all three of the investment objectives return, risk and liquidity have been considered for long (Markowitz, 1952; Tobin, 1958; Acharya and Pedersen, 2005). To specify the return–risk–liquidity preference of the investors, we incorporated a question in which the respondents had to order these three investment goals according to their importance. Besides the financial risk, we asked the participants about the importance of legal, reputational and environmental risks, all of which can arise from such factors as climate change (Solomon, 2009a). As discussed earlier, the question of whether investors are willing to waive returns for social responsibility is considered intensely (Hofmann *et al.*, 2008; Bauer and Smeets, 2012; Mackenzie and Lewis, 1999; Lewis and Mackenzie 2000a; Pasewark and Riley, 2010). Therefore, we posed a question to evaluate the level of return an investor is willing to sacrifice to meet higher SR requirements.

The second part of the questionnaire regards the beliefs of the investors. Lewis (2001) finds that there appears to be a movement toward social responsibility because of external pressure. To be attractive to investors, companies have to fulfill several issues regarding social responsibility. We ask the participants to indicate their estimation on whether the growing number of SR investments will establish incentives for less SR companies to rethink their strategies and improve their levels of social responsibility. A widely discussed question is whether SRI yields a different financial performance than conventional investments (Bauer *et al.*, 2005; Derwall *et al.*, 2005; Edmans, 2011; Guerard, 1997; Hamilton *et al.*, 1993; Hong and Kacperczyk, 2009; Kempf and Osthoff, 2007; Renneboog *et al.*, 2008a). Lewis and Mackenzie (2000a) consider this topic in their survey on UK ethical investors and find that most of the investors expect neither return nor risk differences between SR and conventional investments. The participants of the Mackenzie and Lewis (1999) survey form a two-part opinion: the more sophisticated investors expect no significant differences, whereas the less sophisticated appear to be pleased with a lower rate of return. In addition to this, Jansson and Biel (2011a) find that SR investors (compared with non-SR investors) have a stronger belief in market benefits of SR investments and also perceive a greater risk associated with SR investments. Jansson and Biel (2011b) find that fund managers and investors are affected by beliefs about long-term returns and a lower risk of SR investments. Most investors of the study

of Bauer and Smeets (2012) anticipate lower long-run returns on SR equity funds than on conventional equity funds. Furthermore, Cox *et al.* (2004) conclude that a high corporate social performance appears to be unattractive to short-term investors, whereas long-term investors are significantly positively related with this issue. Nevertheless, SR investments with higher returns or lower risk could also be a motivating factor for conventional investors to allocate money into SR investments. Two questions about the expectation of performance and risk help us to elicit some evidence on this issue. Mackenzie and Lewis (1999) derive several individual reasons beside faith and moral motives for SRI. As we discussed possible motivations for SRI, we asked about the reasons why social responsibility has been important to the investors. Former studies such as Beal *et al.* (2005) cite three motives for SR investments, the desire to achieve return (which we ask in some of the other questions), a desire to affect social change and a desire for personal satisfaction.

Finally, the third part targets factual investment concerns and socio-demographic issues. Inspired by Tippet and Leung (2001), who state that SR investors have smaller and less diversified portfolios, we asked the participants about the actual portfolio composition. Moreover, we wanted to know to which type of mutual funds the investors allocated their money. This question is especially important for the second of the aforementioned research questions. In addition to this, we enquire about the country, in which the participants invest their money, which is motivated by evidence from Williams (2007) who purported that the market environment is important. The next question defines the dependent variable for the fourth of the aforementioned research questions. Although Lewis and Mackenzie (2000a) and Mackenzie and Lewis (1999) find small proportions of SR investments in the SR investor's portfolios, we expect contemporary SR investors to have higher proportions due to the high growth of SRI in the past ten years. To identify SR investors, the respondents had to value the percentage of SR investments in their portfolios. Moreover, there is some evidence (Solomon, 2009a; Tippet and Leung, 2001) for a connection between the level of wealth and the awareness of social responsibility. To elicit conclusions according to this topic, we requested information on the investment volume. A crucial role in SRI appears to be the investment horizon. Jansson *et al.* (2011) find no differences according to the investment horizon between conventional and SR investors which contrasts with Solomon (2009b), who proves SR investors to be long-term investors. Therefore, we asked about which investment horizon social responsibility would matter to most. Furthermore, several studies (Rosen *et al.*, 1991; Tippet and Leung, 2001; McLachlan and Gardner, 2004) have considered whether SR investors have a higher level of education compared to conventional investors. Thus, we asked the participants about their highest educational qualification. Additionally, we asked them to state their gender because of the aforementioned findings of Bauer and Smeets (2012); Tippet and Leung (2001); Junkus and Berry (2010); Schueth (2003). Finally, asset managers were asked two more questions, namely, how many assets were under management and how many customers they had.

3. Data

3.1 Sampling strategy

To gather information on all kinds of investors' preferences, we created and performed an online survey. Before the questionnaire was finalized, it was first pilot-tested on a

small number of probands. The access to the link to the final online questionnaire was open, and there was no registration necessary. The link was attached with a description of the topic and information about the survey. Due to the fact that analyzing data of a diversified sample including SR and non-SR investors (Lewis, 2001; McLachlan and Gardner, 2004) as well as institutional and private investors (Jansson and Biel, 2011b) is promising, we promoted the questionnaire to public using different channels. On the one hand, we received support in distributing the survey to SR investors by associations advocating SR morals, who asked their members to participate, or by fund managers for SR mutual funds, who required the same of their customers. We distributed the link to our survey to the members and partners of an association for ethical investors, as well as of a society for environment and technology. Moreover, we placed the link on four SRI-related Web sites and in a newsletter for sustainable investments of a German newspaper.

On the other hand, we asked a professional asset management company, a fund management company, as well as a foundation, to encourage their members and customers to participate. Furthermore, we placed the link in three investment groups of an Internet-based social network. Respondents of these entities were either SR or conventional investors. We selected such a heterogeneous sample of all types of investors to be able to carry out fundamental analyses and to carve out which characteristics distinguish investors who act in an SR way concerning specific investment-related questions. It took the participants approximately 10-15 minutes to answer. We did not offer them a reward for participating.

A general limitation regarding collecting data using surveys is that the resulting sample is strongly influenced by the topic of the questions and by the sample of respondents. To investigate the characteristics of German-speaking investors, the survey was originally in German. The online survey was accessible from the end of 2011 to June 2012.

3.2 Data

Although 511 people have started to answer the survey, we received 354 completed questionnaires after data valuation checks, 277 of them by private investors, 16 of them by institutional investors and 61 by asset managers. However, it is noteworthy that our sample generates some clear statistical structures, suggesting that the value of an increased sample size would be very constrained. Because the sub-sample of institutional investors and their advisors is too small, we have to exclude it from the following analysis. However, in Table AI, their answers are documented descriptively for the interested reader.

Most of the private investors in our sample claim to have heard about SR investments. Nearly nine out of ten respondents consider social responsibility to be, at least, hardly important. The sample appears to consist of well-informed investors and most of the respondents care about social responsibility. Approximately half of the respondents invest in companies that match their moral values and the same percentage supports initiatives financially. Charitable organizations, voluntary services in entities with social or ecological aims and voting rights are also popular ways in which to implement moral values.

Furthermore, there is broad acceptance, in that an increasing amount of SR investments also encourages non-SR companies to improve in ESG issues. The majority

of the private investors believe that there is no significant difference between the return of conventional and SR investments, and we find corresponding answers to the question of the level of riskiness of SR investments when compared to conventional ones, as most of the respondents think that there is no significant difference.

Most frequently mentioned reasons concerning why social responsibility is important to the investors are that respondents wish to take a pioneering role in this latest investment issue, that respondents feel good when investing in an SR way and that they assume that SR investments are more profitable in the long run.

The educational level of the respondents is the second variable beside the high degree of familiarity of SRI which shows that our sample is biased. Most of them hold a university degree. Only 6 per cent have a secondary-school leaving certificate or secondary school qualifications as their highest educational achievement. As we discussed earlier in this paper, every survey may suffer from the shortcoming that due to their interest in the topic, respondents may principally differ from non-respondents. In particular, people associated with high educational levels are overrepresented in our sample. However, this is in line with most of the prior studies (Junkus and Berry, 2010; Starr, 2008; Williams, 2007), which show that well-educated individuals are more likely to invest in an SR way. Two out of three respondents are male and only five per cent have an investment volume amounting to half a million euros or higher. More than half of the investors exhibit an investible sum of personal wealth amounting to <€50,000.

4. Results

In this section, we illustrate the results of the analysis on the collected survey data for the sample of private investors. We show that the respondents' answers are consistent and that both univariate and multivariate approaches are important in preventing incorrect conclusions (Simpson, 1951). Moreover, we present the results of the asset managers in a separate subsection.

4.1 Consistency checks

As a check on the quality of our survey data, we looked at whether the behavior of the respondents (regarding the factors of the importance of social responsibility) was broadly consistent with their perceptions regarding the questions according to the importance of environment, social and ethic (Q6~Q4)[2], as well as the questions with the 13 specific issues (development of renewable energies, emission saving programs, accidents regarding the environment, environmentally friendly or energy-saving products, ethical or environmentally contra dictionary industries, human rights, animal testing, genetic engineering, reinforcement of the indigenous region, corruption, executive boards' salaries, employees' rights and consumer rights and equal treatment; Q6~Q5). We would expect those investors who consider specific environmental, social and ethical aspects important also to do so with respect to aggregated non-financial issues (Q6). In all cases, we found that the significant coefficients are positive, as expected. In particular, there are only two negative coefficients, both in the model Q6~Q5 and both are non-significant, which suggest that the investors give internally consistent answers through this part of the survey.

Furthermore, we investigate two more questions. Respondents had to position the three classical investment targets of high return, low risk and high liquidity according to

their importance in the investment decision in Q8. Besides this, we ask for the actual portfolio composition divided into the asset classes stocks, fixed-income securities, real estate, private equity and other assets (Q15). Applying χ^2 test and logit models, we can also confirm that the answers of both questions are compatible in the way in which investors preferring low risk to high return in Q8 invest into fixed-income securities and real estate to a significantly greater extent, whereas respondents with high returns as the most important investment target have significantly higher percentages in stocks and in private equity. Moreover, we find that women are significantly more concerned about low risk as the most important financial investment goal, whereas men significantly prefer high returns (Table I). Furthermore, respondents with high investment volumes are significantly more highly involved in real estate investments and private equity, and also prefer high returns (Table III). Moreover, investors with low investment volumes have significantly higher percentages of fixed-income securities. Thereby, we also show consistency regarding these questions in the corresponding part of the survey as well as with common results concerning the investors.

4.2 Bivariate analysis

We continue with bivariate analyses to check whether certain questions have different distributions of the answers for special groups of respondents. We consider the three variables, "gender", "educational level" and "investment volume", as the explanatory variables, in detail. All variables which are significantly influenced by one of these three quantities are displayed in the Tables I–III. The most important dependencies are explained in the following. Dependent on the data level, we apply the χ^2 test, the rank correlation Goodman and Kruskal γ, *t*-tests and ANOVA.

Gender is the explanatory variable with the highest influence on investment issues. It is a frequently observed phenomenon that women's and men's investment preferences differ. On the one hand, we find that men consider environmental, social and ethical issues as significantly more important in their investment decision. The χ^2 tests do not suggest a tendency, but the rank correlation γ does. As men are coded by 0 and women by 1, a significant positive γ implies a higher value for women for the variables "EnvRegard", "SocRegard", "EthRegard" and "NonFinObj". This means that all four variables are less important to women. On the other hand, we apply the *t*-test on the level of return sacrifice and find that women are willing to sacrifice significantly more return on a level of 5 per cent. Furthermore, we show differences concerning the question of how women and men try to implement their moral values. Although women use their voting rights significantly more often, men invest directly in firms that accomplish their responsible requirements.

Several earlier studies (Junkus and Berry, 2010; Rosen *et al.*, 1991; Schueth, 2003) find a link between high educational level and SRI. For the analysis of the return-sacrifice question, we cluster the educational level into two groups. The first group contains all respondents with high school diploma and university degrees. The second group consists of the secondary school qualification, secondary-school leaving certificate and completed vocational training. By applying *t*-test, we find strong evidence that the first group (i.e. respondents with a higher education) is more willing to abdicate return than the second group. We also learn that respondents of the second group answer

Dependent variable		χ^2 statistic	Rank correlation	*t*-statistic
EnvRegard	1 very important [. . .] 6 unimportant	7.611	0.179*	–
SocRegard	1 very important [. . .] 6 unimportant	9.595*	0.258***	–
EthRegard	1 very important [. . .] 6 unimportant	11.067*	0.266***	–
Emission	1 entirely accurate [. . .] 6 not a bit accurate	6.664	0.205**	–
Accident	1 entirely accurate [. . .] 6 not a bit accurate	9.267*	0.289***	–
Products	1 entirely accurate [. . .] 6 not a bit accurate	7.519	0.258**	–
Industry	1 entirely accurate [. . .] 6 not a bit accurate	22.294***	0.429***	–
HumanRight	1 entirely accurate [. . .] 6 not a bit accurate	14.651**	0.406***	–
AnimalTest	1 entirely accurate [. . .] 6 not a bit accurate	20.764***	0.392***	–
GeneticEng	1 entirely accurate [. . .] 6 not a bit accurate	16.134***	0.309***	–
Corruption	1 entirely accurate [. . .] 6 not a bit accurate	7.379	0.209**	–
CoDetRight	1 entirely accurate [. . .] 6 not a bit accurate	12.082**	0.282***	–
EqualTreat	1 entirely accurate [. . .] 6 not a bit accurate	15.677***	0.331***	–
NonFinObj	1 very important [. . .] 6 unimportant	11.683**	0.226**	–
ComMorVal	0 no, 1 yes	11.732***	–0.432***	–
VoteRights	0 no, 1 yes	4.458**	0.289**	–
Return	1 most important [. . .] 3 third most important	6.066**	0.193*	–
Risk	1 most important [. . .] 3 third most important	9.988***	−0.372***	–
SocSkill	1 yes, 2 no, 3 do not know	6.241**	–	–
RetSacr	1 no sacrifice [. . .] 7 full sacrifice	7.033	0.171*	−1.791**
FeelGood	0 no, 1 yes	8.795***	0.389***	–
OtherReas	0 no, 1 yes	6.342**	−1.000***	–
Unimport	0 no, 1 yes	5.247**	−0.624***	–
PortPerSha	Continuous	–	–	2.435$***
PortPerFix	Continuous	–	–	−2.651***
PortPerReE	Continuous	–	–	1.597*
EquityFund	0 no, 1 yes	16.095***	−0.470***	–
RealEsFund	0 no, 1 yes	11.495***	−0.669***	–
MixFund	0 no, 1 yes	9.114***	0.389***	–
Germany	0 no, 1 yes	4.016**	−0.328**	–
Europe	0 no, 1 yes	10.173***	−0.413***	–
NorthAmer	0 no, 1 yes	10.019***	−0.470***	–
Asia	0 no, 1 yes	9.355***	−0.450***	–
EmerCount	0 no, 1 yes	7.649***	−0.404***	–

Notes: This table displays the significant results of the analysis according to gender (0 male, 1 female); the table contains the χ^2 statistic, the Goodman and Kruskal γ (rank correlation) and the *t*-test statistic, respectively; the significance levels are 0.01, 0.05 and 0.1 which are displayed by ***, ** and *, respectively; test statistics, rank correlations and *p*-values

Table I.
Influence of gender in a bivariate analysis

significantly more often, and that they do not rate social responsibility highly. The results of our investigation are stated in Table II.

The level of wealth was also considered in these former studies. Therefore, we also examine the influence of the investment volume on several variables. All significant observations are summarized in Table III.

The main findings are as follows. Respondents with high investment volumes are significantly more familiar with SR investments, but less affluent respondents state that the social regard of investments is more important to them. Moreover, the relative frequency of investments in firms that accomplish the requirements of social responsibility and of the financial support of initiatives that matter to the investor significantly increases with

Dependent variable		χ^2 statistic	t-statistic	ANOVA
SRIfamiliar	0 yes, 1 no	8.237**	–	–
EqualTreat	1 entirely accurate [. . .] 6 not a bit accurate	37.223**	–	–
VolunWork	0 no, 1 yes	8.172*	–	–
NoEng	0 no, 1 yes	37.654***	–	–
LegalRisk	1 really important [. . .] 6 unimportant	32.519**	–	–
SocSkill	1 yes, 2 no, 3 do not know	19.881**	–	–
RetSacr	1 no sacrifice [. . .] 7 full sacrifice	–	−2.468***	–
Unimport	0 no, 1 yes	9.357*	–	–
PortPerFix	Continuous	9.357*	–	2.76*
EquityFund	0 no, 1 yes	9.511**	–	–
RealEsFund	0 no, 1 yes	15.681**	–	–
NoFund	0 no, 1 yes	11.443**	–	–

Table II.
Influence of educational level in a bivariate analysis

Notes: This table displays the significant results of the analysis according to the educational level (1 secondary school level, 2 secondary-school leaving certificate, 3 high school diploma, 4 completed vocational training, 5 university degree); the table contains the χ^2 statistic, the t-test statistic and the F-statistic of the ANOVA; the significance levels are 0.01, 0.05 and 0.1 which are displayed by ***, ** and *, respectively; test statistics, rank correlations and p-values

growing investment volume. Consistent to that, the percentage of respondents who indicate that they are not currently engaged decreases with growing investment volume.

4.3 Multinomial logit models

As Williams (2007) indicates, research beyond only considering demographic factors is promising. To overcome the limitations of former studies, we apply multivariate analyses on the survey data. We consider the remaining three topics mentioned in Section 2.1 by using multinomial (ordered) logit models. Hence, we select a set of several variables to estimate (ordered) logit models which indicate the relationship with the following three dependent variables separately, namely, first, whether a respondent invests in SR mutual funds, second, the percentage of SR invested capital in the entire portfolio and, third, the level of return-sacrifice an investor is willing to accept as a trade-off for highly SR investments. These three variables are used as indicators for SR-related investors. Using the multinomial models, we find factors with significant influence on these variables.

SR mutual funds are praised as an investment possibility to allocate money appropriately to personal SR preferences. We asked the respondents in the survey whether they have invested in SR mutual funds or not. With the aid of this question, we try to find significant variables for investors in these funds. We build a model with several variables. On the one hand, we incorporate demographic variables like gender and educational level. On the other hand, we employ variables displaying the interest in SR issues, the return–risk–liquidity preference, the assessments on performance and risk of SR investments in comparison to conventional ones, the current portfolio composition and the countries one has invested in. Moreover, we assemble variables according to the investment volume, the investment horizon for SR investments and the question of whether an increasing amount of SRI forces firms to adopt a higher level of

Dependent variable		χ^2 statistic	Rank correlation	*t*-statistic	ANOVA
SRIfamiliar	0 yes, 1 no	8.711*	−0.333**	–	–
SocRegard	1 very important [. . .] 6 unimportant	18.773	−0.160**	–	–
RenewEner	1 entirely accurate [. . .] 6 not a bit accurate	30.251*	−0.110	–	–
Emission	1 entirely accurate [. . .] 6 not a bit accurate	30.388*	−0.133*	–	–
Accident	1 entirely accurate [. . .] 6 not a bit accurate	25.756	−0.198***	–	–
Products	1 entirely accurate [. . .] 6 not a bit accurate	23.421	−0.155**	–	–
Industry	1 entirely accurate [. . .] 6 not a bit accurate	29.141*	−0.139**	–	–
HumanRight	1 entirely accurate [. . .] 6 not a bit accurate	28.649*	−0.182**	–	–
CoDetRight	1 entirely accurate [. . .] 6 not a bit accurate	25.904	−0.218***	–	–
EqualTreat	1 entirely accurate [. . .] 6 not a bit accurate	22.127	−0.183***	–	–
NonFinObj	1 very important [. . .] 6 unimportant	37.533**	−0.079	–	–
ComMorVal	0 no, 1 yes	13.261**	0.289***	–	–
FinSupport	0 no, 1 yes	18.140***	0.368***	–	–
NoEng	0 no, 1 yes	12.566**	−0.464***	–	–
Return	1 most important [. . .] 3 third most important	9.578	0.193*	–	–
Risk	1 most important [. . .] 3 third most important	8.714	−0.372***	–	–
LegalRisk	1 really important [. . .] 6 unimportant	24.55	0.150**	–	–
RetSacr	1 no sacrifice [. . .] 7 full sacrifice	41.828**	−0.084***	−1.349*	1.144*
Unimport	0 no, 1 yes	6.045	0.303*	–	–
PortPerFix	Continuous	–	–	–	17.63***
PortPerReE	Continuous	–	–	–	42.92***
PortPerPar	Continuous	–	–	–	4.48**
PortPerOth	Continuous	–	–	–	18.21***
EquityFund	0 no, 1 yes	24.182***	0.249***	–	–
RealEsFund	0 no, 1 yes	25.613***	0.503***	–	–
NoFund	0 no, 1 yes	18.302***	−0.291***	–	–
Europe	0 no, 1 yes	17.897***	0.358***	–	–
Asia	0 no, 1 yes	8.734*	0.248**	–	–
EmerCount	0 no, 1 yes	14.423***	0.303***	–	–
PercentSRI	1 < 10 per cent [. . .] 6 > 50 per cent, 7 do not know	65.128***	–	–	–

Notes: This table displays the significant results of the analysis according to the investment volume (1 <€10.000 [. . .] 5 >€500.000); the table contains the χ^2 statistic, the Goodman and Kruskal γ (rank correlation), the *t*-test statistic and the *F*-statistic of the ANOVA; the significance levels are 0.01, 0.05 and 0.1 which are displayed by ***, **and *, respectively; test statistics, rank correlations and *p*-values

Table III.
Influence of investment volume in a bivariate analysis

social responsibility. The resulting model is displayed in Table IV. The model is based on 273 observations, which is due to the fact that four respondents did not provide information upon their gender.

Surprisingly, in the logit regression the coefficient of the variable regarding the importance of non-financial objectives in the asset allocation has a negative sign. This means that respondents who indicate that non-financial issues are important[3] invest in SR mutual funds with a lower probability. One reason could be that those who are really interested in responsible investments do not find the right investment opportunities according to their preferences among SR funds. This can be interpreted in a way that means there is a mismatch between the supply and demand. However, a result similar to Cumming and Jordan (2007) and Jansson and Biel (2011a) is that investors who evaluate SR investments as having better performances than conventional investments have a higher probability of investing in SR mutual funds (as opposed to investors who expect

SRIFund		Model 1 Coefficient	$P > \|z\|$	p-value Wald test
NonFinObj	1 = important, 0 = unimportant	−0.821	0.126	
Return	1 = most important, 2 = second most important, 3 = third most important	0.347	0.21	0.239
Risk	1 = most important, 2 = second most important, 3 = third most important	−0.102	0.736	0.239
SocSkillYes	1 = yes, 0 = no	0.668	0.307	0.402
SocSkillNo	1 = yes, 0 = no	0.091	0.916	0.402
PerfSRIBet	1 = yes, 0 = no	1.303	0.173	0.066*
PerfSRIWor	1 = yes, 0 = no	−0.386	0.692	0.066*
PerfSRISam	1 = yes, 0 = no	0.625	0.474	0.066*
RiskSRILow	1 = yes, 0 = no	0.17	0.83	0.862
RiskSRIHig	1 = yes, 0 = no	0.567	0.495	0.862
RiskSRISam	1 = yes, 0 = no	0.332	0.67	0.862
PortPerSha	Continuous	−0.004	0.74	0.754
PortPerFix	Continuous	−0.009	0.455	0.754
PortPerReE	Continuous	−0.013	0.267	0.754
PortPerOth	Continuous	−0.010	0.447	0.754
Germany	1 = yes, 0 = no	0.784	0.125	
Europe	1 = yes, 0 = no	2.116	0.000***	
NorthAmer	1 = yes, 0 = no	0.228	0.646	
Asia	1 = yes, 0 = no	−0.397	0.418	
EmerCount	1 = yes, 0 = no	0.894	0.062*	
OtherCount	1 = yes, 0 = no	0.194	0.718	
InvVolume50	1 = yes, 0 = no	−0.385	0.43	0.724
InvVolume150	1 = yes, 0 = no	−0.102	0.847	0.724
InvVolume500	1 = yes, 0 = no	0.509	0.452	0.724
InvVolumeHig	1 = yes, 0 = no	0.223	0.794	0.724
HorizonMid	1 = yes, 0 = no	13.219	0.994	0.993
HorizonLon	1 = yes, 0 = no	13.092	0.994	0.993
HorizonSam	1 = yes, 0 = no	13.06	0.994	0.993
secoSchool	1 = yes, 0 = no	−14.147	0.992	0.868
ALevel	1 = yes, 0 = no	−0.597	0.476	0.868
vocaTrain	1 = yes, 0 = no	−0.521	0.566	0.868
University	1 = yes, 0 = no	−0.811	0.292	0.868
Gender	1 = female, 0 = male	1.052	0.007***	
Log likelihood				−114.5745
χ^2				65.80
Probability $> \chi^2$				0.0006
Pseudo R^2				0.2231
Observations				273

Table IV.
Logit model on the investments in SR mutual funds

Notes: This table displays the significant coefficients of the ordered logit model for the variable indicating whether the participants invest in SR mutual funds or not; *, **and ***denote the significant coefficients or groups (joint Wald test) at the 10, 5 and 1 per cent level, respectively

SR investments to have a lower performance). Although none of the three dummy variables is significant on its own, the group is, which we test by applying the Wald test for joint significance and finding a p-value of 0.066. Furthermore, investments in Europe and emerging economics have a significant influence. This strengthens the proposition of Williams (2007) that the market is also important. Finally, women also have a significantly higher probability of investing in SR mutual funds.

Another indicator for being an SR investor is the percentage of SR investments within the portfolio. We exclude all respondents who answer that they do not know the percentage and apply an ordered logit model which is displayed in Table V.

Analogous to Model 1, the coefficient of the variable regarding the importance of non-financial objectives in the asset allocation is negative. Furthermore, the importance of a high return is significant with a positive sign. This implies that a respondent, who positions a high return as being less important, has a higher probability for a high percentage of SR investments in the portfolio. Also, the variable displaying the portfolio composition is significant. The reference variable is the share in private equity. In Model 2, the four other portfolio composition variables have coefficients with a negative sign. This indicates that investors in private equity have a higher probability of investing in SR investments (e.g. closed funds for renewable energy, windmill or solar farm). Also, the stock market region is significant. The model has a negative significant coefficient for investments in Asia and a positive significant coefficient for Germany. This matches the ESG assessments of ASSET4 from Thomson Reuters Datastream in form of ESG-scores, which indicate that Asian firms (average ESG-socre in 2010: 50.58) are less responsible than European (average ESG-score in 2010: 79.37) companies. Model 2 has limitations in the variable regarding the investment horizon. Two observations are completely determined and, therefore, the standard errors are questionable. Nevertheless, these variables have a significant influence. Investors with no time preference for SR investments (reference category) have the highest probability of a high percentage of SR investments in their portfolios.

Furthermore, we create a third model to consider the willingness of respondents in sacrificing financial returns in favor of a complete accomplishment of the SR requirements. Model 3 is based on all private investors, even those who do not know their own percentage of the SR investment amount in their portfolio (Table VI).

Investors with a high probability of sacrificing some return are identified by the displayed ordered logit models as follows. They are likely to score the questions regarding non-financial interests as unimportant, they assess a high return as an inferior investment goal and they are less concerned about the appraisal that SR investments perform better. Moreover, they tend to invest in stocks, fixed-income, real estate and other securities than into private equity. An appropriate example to highlight why private equity SR investments are mainly motivated by the return is solar farms. In Germany, there is a development plan for photovoltaic installations, which guarantees a very high and fixed salary for fed-in solar electricity. Also, in Austria and Switzerland, similar development plans exist. The investment in solar farms is SR, but the high and almost risk-free return is a financial motivation, to invest in contrast to an intrinsic one, as discussed in Section 1. Furthermore, the percentage of SR investments does not reveal a linear connection. Nevertheless, in all groups with higher percentage than the reference group with < 10 per cent of SR investments in their portfolios except the group between 20 and 30 per cent, we observe a higher willingness to sacrifice returns.

PercentSRI		Model 2 Coefficient	$P > \|z\|$	p-value Wald test
NonFinObj	1 = important, 0 = unimportant	−1.284	0.014**	
Return	1 = most important, 2 = second most important, 3 = third most important	0.656	0.021**	0.052*
Risk	1 = most important, 2 = second most important, 3 = third most important	0.239	0.454	0.052*
SocSkillYes	1 = yes, 0 = no	0.318	0.576	0.53
SocSkillNo	1 = yes, 0 = no	−0.263	0.735	0.53
PerfSRIBet	1 = yes, 0 = no	1.435	0.186	0.412
PerfSRIWor	1 = yes, 0 = no	0.649	0.541	0.412
PerfSRISam	1 = yes, 0 = no	0.891	0.384	0.412
RiskSRILow	1 = yes, 0 = no	−0.410	0.574	0.801
RiskSRIHig	1 = yes, 0 = no	−0.648	0.395	0.801
RiskSRISam	1 = yes, 0 = no	−0.277	0.709	0.801
PortPerSha	Continuous	−0.008	0.463	0.023**
PortPerFix	Continuous	−0.019	0.092*	0.023**
PortPerReE	Continuous	−0.029	0.006***	0.023**
PortPerOth	Continuous	−0.011	0.374	0.023**
Germany	1 = yes, 0 = no	1.034	0.039**	
Europe	1 = yes, 0 = no	0.607	0.205	
NorthAmer	1 = yes, 0 = no	0.027	0.957	
Asia	1 = yes, 0 = no	−1.060	0.040**	
EmerCount	1 = yes, 0 = no	0.257	0.593	
OtherCount	1 = yes, 0 = no	−0.023	0.966	
InvVolume50	1 = yes, 0 = no	−0.665	0.181	0.254
InvVolume150	1 = yes, 0 = no	−0.579	0.251	0.254
InvVolume500	1 = yes, 0 = no	0.286	0.638	0.254
InvVolumeHig	1 = yes, 0 = no	0.617	0.491	0.254
HorizonSho	1 = yes, 0 = no	−16.512	0.99	0.047**
HorizonMid	1 = yes, 0 = no	−0.766	0.136	0.047**
HorizonLon	1 = yes, 0 = no	−1.148	0.005***	0.047**
secoSchool	1 = yes, 0 = no	−0.650	0.717	0.882
ALevel	1 = yes, 0 = no	−0.256	0.731	0.882
vocaTrain	1 = yes, 0 = no	−0.556	0.503	0.882
University	1 = yes, 0 = no	−0.645	0.339	0.882
Gender	1 = female, 0 = male	0.304	0.433	
Log likelihood				−223.1271
χ^2				68.08
Probability > χ^2				0.0003
Pseudo R^2				0.1324
Observations				165

Notes: This table displays the significant coefficients of the ordered logit model for the variable indicating how big the percentage of SR investments at the portfolios of the participants is; *, **and ***denote the significant coefficients or groups (joint Wald test) at the 10, 5 per cent and 1 per cent level, respectively

Table V.
Ordered Logit model on the percentage of SR investments in the whole investors' portfolio

Investors who are willing to sacrifice returns are less involved in Northern American investments. Additionally, they have very low investment volume. Last, the variable displaying the time preference for SR investments is jointly significant.

Due to our findings in Section 4.1, which state that the variable "NonFinObj" can be well explained by the variables "EnvRegard", "SocRegard" and "EthRegard", for each of the Models 1-3, we create a corresponding model with these three variables instead of

RetSacr		Model3 Coefficient	$P > \|z\|$	p-value Wald test
SRIfamiliar	1 = yes, 2 = no	−0.288	0.418	
NonFinObj	1 = important, 0 = unimportant	−2.648	0.000***	
Return	1 = most important, 2 = second most important, 3 = third most important	0.57	0.004***	0.002**
Risk	1 = most important, 2 = second most important 3 = third most important	−0.099	0.643	0.002**
SocSkillYes	1 = yes, 0 = no	0.573	0.114	0.283
SocSkillNo	1 = yes, 0 = no	0.428	0.388	0.283
PerfSRIBet	1 = yes, 0 = no	−0.691	0.248	0.080*
PerfSRIWor	1 = yes, 0 = no	0.088	0.876	0.080*
PerfSRISam	1 = yes, 0 = no	−0.631	0.242	0.080*
RiskSRILow	1 = yes, 0 = no	−0.037	0.937	0.881
RiskSRIHig	1 = yes, 0 = no	−0.181	0.723	0.881
RiskSRISam	1 = yes, 0 = no	−0.251	0.589	0.881
PortPerSha	Continuous	0.018	0.051*	0.049**
PortPerFix	Continuous	0.021	0.013**	0.049**
PortPerReE	Continuous	0.026	0.003***	0.049**
PortPerOth	Continuous	0.019	0.041**	0.049**
Germany	1 = yes, 0 = no	0.241	0.494	
Europe	1 = yes, 0 = no	0.488	0.131	
NorthAmer	1 = yes, 0 = no	−1.430	0.000***	
Asia	1 = yes, 0 = no	0.584	0.112	
EmerCount	1 = yes, 0 = no	−0.030	0.933	
OtherCount	1 = yes, 0 = no	−0.129	0.731	
PercentSRI20	1 = yes, 0 = no	1.022	0.027**	0.016**
PercentSRI30	1 = yes, 0 = no	−0.098	0.861	0.016**
PercentSRI40	1 = yes, 0 = no	1.055	0.074*	0.016**
PercentSRI50	1 = yes, 0 = no	0.743	0.32	0.016**
PercentSRIHig	1 = yes, 0 = no	1.517	0.002***	0.016**
PercentSRIDNK	1 = yes, 0 = no	0.16	0.61	0.016**
InvVolume50	1 = yes, 0 = no	−0.758	0.021**	0.005***
InvVolume150	1 = yes, 0 = no	−0.537	0.156	0.005***
InvVolume500	1 = yes, 0 = no	−1.910	0.000***	0.005***
InvVolumeHig	1 = yes, 0 = no	−0.599	0.394	0.005***
HorizonMid	1 = yes, 0 = no	−0.258	0.818	0.084*
HorizonLon	1 = yes, 0 = no	−0.504	0.645	0.084*
HorizonSam	1 = yes, 0 = no	0.222	0.838	0.084*
secoSchool	1 = yes, 0 = no	−1.136	0.337	0.77
ALevel	1 = yes, 0 = no	−0.210	0.742	0.77
vocaTrain	1 = yes, 0 = no	−0.641	0.329	0.77
University	1 = yes, 0 = no	−0.380	0.516	0.77
Gender	1 = female, 0 = male	−0.130	0.631	
Log likelihood				−369.0249
χ^2				149.15
Probability $> \chi^2$				0.0000
Pseudo R^2				0.1681
Observations				273

Notes: This table displays the significant coefficients of the ordered logit model for the variable indicating the level of return the respondents are willing to sacrifice while investing socially responsibly; *, **, and *** denote the significant coefficients or groups (joint Wald test) at the 10, 5 and 1 per cent level, respectively

Table VI.
Ordered Logit model on the score of willingness to sacrifice return while investing socially responsibly

"NonFinObj" to show whether the models and the results are robust. The results mainly remain the same. Furthermore, we create two further models describing the willingness to sacrifice returns. These two models are estimated using the subsample of only those private investors who know the percentage of SRI in their portfolios, whereas Model 3 incorporates all private investors, even those who do not know their percentage of SRI in their portfolio. The results for the reduced sample are similar. Some variables are not significant anymore (rank of high return and small risk and the opinion on the performance of SR investments). Therefore, the increasing willingness to sacrifice return for an increasing percentage of SR investments is more pronounced.

4.4 Asset managers

Finally, we analyze the sample of asset managers. As the sample size of the institutional investors and their asset managers are 16 and 9, respectively, we only apply statistical tests to the sample of asset managers of private investors (sample size 52). We treat this group as the control group for private investors because of the impartial view the asset manager seems to have. Generally speaking, we obtain significant results similar to those using the sample of private investors.

For example, asset managers think that men are more concerned about social responsibility of their investments, in general, and about social and environmental issues as well as several special issues, in particular. Moreover, there are analogous answers regarding the way in which investors assemble their engagement and the higher willingness of women to sacrifice returns. They also state that women have a higher percentage of fixed-income securities in their portfolios than men. Furthermore, higher investment volumes lead to a higher significance of emission reduction programs, animal testing, reinforcement of the indigenous region and employees' rights. The asset managers also assert that higher educational levels are associated with more importance for the issues mentioned in the last sentence as well as with the order of risk, liquidity and return. Additionally, they suppose that clients with a higher educational level have a higher percentage of SR investments in their portfolios. Summarizing the results of this sample and the results from the private investor sample, we deduce that asset managers know the needs of the customers well. Concerning our research questions, this subsample confirms the results of the previous sections.

5. Conclusion

We analyze survey data from German-speaking private investors concerning their preferences and beliefs when allocating money, especially with respect to SRI issues. Our findings are manifold. We find several significant dependencies between SRI attitudes and the demographic factors of gender, educational level and wealth in a bivariate analysis. We can confirm well-known properties such as the higher risk aversion of women or the higher involvement in real estate and private equity for investors with greater investment volume. We find that women or persons with higher educational levels are willing to abdicate significantly higher returns for a high level of social responsibility of the investment. Respondents with high investment volumes have a higher propensity to invest in firms that are appropriate to their moral values.

The multivariate analysis shows that the demographic factors are not the most important ones in explaining SRI attitudes. In some models, the demographic factors

gender and investment volume have a significant influence. We find some results to be similar to the ones of Williams (2007) for the importance of the regions in which investors allocate their money. In addition, the portfolio composition, the return–risk–liquidity preferences of an investor and the SRI time horizon are variables that significantly affect the percentage of SR investments in the portfolio and the willingness to sacrifice return. Furthermore, we show that a very important inducement for SRI is the expectation of high financial performance. Investors who expect SR investments to perform better than conventional ones are less anxious to sacrifice return and invest in SR mutual funds to a larger extent.

The influence of the variables displaying the importance of non-financial SR issues for the investment decision is partly surprising, i.e. investors who score these issues as being important are more likely not to invest in SR mutual funds, have a small percentage of SR investments in their portfolios and are not anxious to sacrifice financial returns for a high level of social responsibility of investments. The most obvious explanation is that there may be a gap between supply and demand.

Moreover, we apply the analyses on data representing the asset managers' views on the characteristics of private investors. The results of this sample confirm the results from the private investor sample.

Notes

1. ESG scores are used as the assessments of firms' activities according these SR issues.
2. The formula Q6~Q4 means that question six defines the dependent variable and the three variables of Q4 are the explanatory ones. Analogously, Q6~Q5 is the ordered logit model explaining Q6 with all 13 variables of Q5. We find strongly significant models with pseudo R^2 values in the range of [0.17,0.25].
3. We created one dummy variable for two groups of investors. Those who select the unimportant variable are the group with index "0", all others (hardly important […] very important) have index "1".

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Appendix

This table lists all questions of our questionnaire as well as the answers distributions. In the following questions the term 'SR investment', which is used as a synonym for the sustainable investment in the German version of this survey, is used as an investment which considers social, environmental and ethical issues appropriate to the investors' preferences besides the traditional return, risk and liquidity.

1. Please choose the type of investors you are.

	Frequency	Percentage
Private investor	277	78.20%
Institutional investor	16	4.50%
Asset manager	61	17.20%
Sum	354	100%

The next question is asked only to those who answered asset manager in question 1.

1. a) Do you serve more private or institutional investors?

	Frequency	Percentage
Private investors	52	85.20%
Institutional investor	9	14.80%
Sum	61	100%

2. Have you ever heard about `socially responsible investments', e.g. socially responsible mutual funds?

		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
YES	Frequency	239	40	16	9
	Percentage	86.30%	76.90%	100%	100%
NO	Frequency	38	12	0	0
	Percentage	13.70%	23.10%	0.00%	0.00%
		277	52	16	9

3. Did your asset manager ever offer socially responsible investments to you? (Question for asset manager: Did you ever offer socially responsible investments to your customers?)

		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
YES	Frequency	58	33	7	8
	Percentage	20.90%	63.50%	43.80%	88.90%
NO	Frequency	96	19	3	1
	Percentage	34.70%	36.50%	18.80%	11.10%
No asset manager	Frequency	123	0	6	0
	Percentage	44.40%	0%	37.50%	0.00%

Table AI.
Survey and absolute frequencies

(*continued*)

4. How do you consider the effects of your investments for the environment as well as the compliance of social and ethical principles?

Environment		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Really important	Frequency	13	1	0	0
	Percentage	4.70%	1.90%	0.00%	0.00%
Important	Frequency	22	6	1	1
	Percentage	7.90%	11.50%	6.30%	11.10%
Ratherimportant	Frequency	21	8	0	1
	Percentage	7.60%	15.40%	0.00%	11.10%
Partially important	Frequency	49	8	2	1
	Percentage	17.70%	15.40%	12.50%	11.10%
Hardly important	Frequency	75	16	1	4
	Percentage	27.10%	30.80%	6.30%	44.40%
Unimportant	Frequency	97	13	12	2
	Percentage	35.00%	25.00%	75.00%	22.20%

Social		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Really important	Frequency	17	1	1	0
	Percentage	6.10%	1.90%	6.30%	0.00%
Important	Frequency	23	10	0	1
	Percentage	8.30%	19.20%	0.00%	11.10%
Rather important	Frequency	25	10	0	2
	Percentage	9.00%	19.20%	0.00%	22.20%
Partially important	Frequency	50	12	1	0
	Percentage	18.10%	23.10%	6.30%	0.00%
Hardly important	Frequency	77	16	4	4
	Percentage	27.80%	30.80%	25.00%	44.40%
Unimportant	Frequency	85	3	10	2
	Percentage	30.70%	5.80%	62.50%	22.20%

(*continued*)

Table AI.

	Percentage	30.70%	5.80%	62.50%	22.20%

Ethic		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Really important	Frequency	14	1	0	0
	Percentage	5.10%	1.90%	0.00%	0.00%
Important	Frequency	12	8	1	0
	Percentage	4.30%	15.40%	6.30%	0.00%
Rather important	Frequency	26	9	0	2
	Percentage	9.40%	17.30%	0.00%	22.20%
Partially important	Frequency	51	11	2	0
	Percentage	18.40%	21.20%	12.50%	0.00%
Hardly important	Frequency	75	14	4	3
	Percentage	27.10%	26.90%	25.00%	33.30%
Unimportant	Frequency	99	9	9	4
	Percentage	35.70%	17.30%	56.30%	44.40%

5. I wish to invest in firms that care about ...

		Private investors					
		Entirely accurate	Accurate	Rather accurate	Not rather accurate	Not accurate	Not a bit accurate
Developement of renewable energies	Frequency	10	9	12	46	88	112
	Percentage	3.60%	3.20%	4.30%	16.60%	31.80%	40.40%
Emission save programms	Frequency	15	11	28	73	83	67
	Percentage	5.40%	4.00%	10.10%	26.40%	30.00%	24.20%
Accidents regarding the environment	Frequency	8	6	19	69	97	78
	Percentage	2.90%	2.20%	6.90%	24.90%	35.00%	28.20%
Environm./energy - saving product	Frequency	9	5	14	49	105	95
	Percentage	3.20%	1.80%	5.10%	17.70%	37.90%	34.30%
Ethics or environment contradicting industry	Frequency	21	19	29	48	59	101
	Percentage	7.60%	6.90%	10.50%	17.30%	21.30%	36.50%
Human rights	Frequency	6	5	8	29	81	148
	Percentage	2.20%	1.80%	2.90%	10.50%	29.20%	53.40%

Table AI. (*continued*)

Animal testing	Frequency	28	19	41	68	57	64
	Percentage	10.10%	6.90%	14.80%	24.50%	20.60%	23.10%
Genetic engineering	Frequency	28	25	48	56	57	63
	Percentage	10.10%	9.00%	17.30%	20.20%	20.60%	22.70%
Reinforcement of the native region	Frequency	10	16	26	58	91	76
	Percentage	3.60%	5.80%	9.40%	20.90%	32.90%	27.40%
Corruption	Frequency	11	19	23	53	100	71
	Percentage	4.00%	6.90%	8.30%	19.10%	36.10%	25.60%
Executive boards' saleries	Frequency	23	25	38	69	62	60
	Percentage	8.30%	9.00%	13.70%	24.90%	22.40%	21.70%
Employees' rights	Frequency	17	18	40	81	74	47
	Percentage	6.10%	6.50%	14.40%	29.20%	26.70%	17.00%
Consumer rights and equal treatment	Frequency	12	6	23	71	91	74
	Percentage	4.30%	2.20%	8.30%	25.60%	32.90%	26.70%

		Asset manager (p)					
		Entirely accurate	Accurate	Rather accurate	Not rather accurate	Not accurate	Not a bit accurate
Developement of renewable energies	Frequency	0	2	7	9	22	12
	Percentage	0.00%	3.80%	13.50%	17.30%	42.30%	23.10%
Emission save programms	Frequency	1	2	14	13	19	3
	Percentage	1.90%	3.80%	26.90%	25.00%	36.50%	5.80%
Accidents regarding the environment	Frequency	2	3	9	16	14	8
	Percentage	3.80%	5.80%	17.30%	30.80%	26.90%	15.40%
Environm./energy - saving product	Frequency	0	2	7	12	17	14
	Percentage	0.00%	3.80%	13.50%	23.10%	32.70%	26.90%
Ethics or environment contradicting industry	Frequency	2	2	10	12	15	11
	Percentage	3.80%	3.80%	19.20%	23.10%	28.80%	21.20%
Human rights	Frequency	1	2	9	6	20	14
	Percentage	1.90%	3.80%	17.30%	11.50%	38.50%	26.90%
Animal testing	Frequency	2	6	15	12	13	4
	Percentage	3.80%	11.50%	28.80%	23.10%	25.00%	7.70%

(*continued*)

Table AI.

Genetic engineering	Frequency	4	4	14	18	10	2
	Percentage	7.70%	7.70	26.90%	34.60%	19.20%	3.80%
Reinforcement of the native region	Frequency	3	5	10	17	15	2
	Percentage	5.80%	9.60%	19.20%	32.70%	28.80%	3.80%
Corruption	Frequency	3	6	10	18	14	1
	Percentage	5.80%	11.50%	19.20%	34.60%	26.90%	1.90%
Executive boards' saleries	Frequency	4	7	16	10	14	1
	Percentage	7.70%	13.50%	30.80%	19.20%	26.90%	1.90%
Employees' rights	Frequency	3	8	13	14	13	1
	Percentage	5.80%	15.40%	25.00%	26.90%	25.00%	1.90%
Consumer rights and equal treatment	Frequency	3	6	10	13	14	6
	Percentage	5.80%	11.50%	19.20%	25.00%	26.90%	11.50%
		Institutional investors					
		Entirely accurate	Accurate	Rather accurate	not rather accurate	Not accurate	Not a bit accurate
Developement of renewable energies	Frequency	0	1	0	1	8	6
	Percentage	0.00%	6.20%	0.00%	6.20%	50.00%	37.50%
Emission save programms	Frequency	0	0	0	3	9	4
	Percentage	0.00%	0.00%	0.00%	18.80%	56.20%	25.00%
Accidents regarding the environment	Frequency	0	2	0	2	8	4
	Percentage	0.00%	12.50%	0.00%	12.50%	50.00%	25.00%
Environmental/energy-saving product	Frequency	0	0	0	4	4	8
	Percentage	0.00%	0.00%	0.00%	25.00%	25.00%	50.00%
Ethics or environment contradicting industry	Frequency	0	2	1	4	5	4
	Percentage	0.00%	12.50%	6.20%	25.00%	31.20%	25.00%
Human rights	Frequency	0	0	0	3	4	9
	Percentage	0.00%	0.00%	0.00%	18.80%	25.00%	56.20%
Animal testing	Frequency	1	2	2	1	7	3
	Percentage	6.20%	12.50%	12.50%	6.20%	43.80%	18.80%
Genetic engineering	Frequency	1	2	0	3	7	3
	Percentage	6.20%	12.50%	0.00%	18.80%	43.80%	18.80%

Table AI. (*continued*)

Reinforcement of the native region	Frequency	1	0	1	7	6	1
	Percentage	6.20%	0.00%	6.20%	43.80%	37.50%	6.20%
Corruption	Frequency	0	0	0	6	5	5
	Percentage	0.00%	0.00%	0.00%	37.50%	31.20%	31.20%
Executive boards' saleries	Frequency	0	0	3	8	4	1
	Percentage	0.00%	0.00%	18.80%	50.00%	25.00%	6.20%
Employees' rights	Frequency	0	1	1	6	4	4
	Percentage	0.00%	6.20%	6.20%	37.50%	25.00%	25.00%
Consumer rights and equal treatment	Frequency	1	0	0	2	8	5
	Percentage	6.20%	0.00%	0.00%	12.50%	50.00%	31.20%

		Asset manager (i)					
		Entirely accurate	Accurate	Rather accurate	Not rather accurate	Not accurate	Not a bit accurate
Developement of renewable energies	Frequency	0	0	1	3	3	2
	Percentage	0.00%	0.00%	11.10%	33.30%	33.30%	22.20%
Emission save programms	Frequency	0	1	1	4	3	0
	Percentage	0.00%	11.10%	11.10%	44.40%	33.30%	0.00%
Accidents regarding the environment	Frequency	1	0	1	3	3	1
	Percentage	11.10%	0.00%	11.10%	33.30%	33.30%	11.10%
Environmental/energy-saving product	Frequency	0	1	1	3	2	2
	Percentage	0.00%	11.10%	11.10%	33.30%	22.20%	22.20%
Ethics or environment contradicting industry	Frequency	0	0	1	2	1	5
	Percentage	0.00%	0.00%	11.10%	22.20%	11.10%	55.60%
Human rights	Frequency	0	0	1	1	2	5
	Percentage	0.00%	0.00%	11.10%	11.10%	22.20%	55.60%
Animal testing	Frequency	0	1	3	3	1	1
	Percentage	0.00%	11.10%	33.30%	33.30%	11.10%	11.10%
Genetic engineering	Frequency	0	2	2	0	3	2
	Percentage	0.00%	22.20%	22.20%	0.00%	33.30%	22.20%
Reinforcement of the native region	Frequency	1	1	3	2	2	0
	Percentage	11.10%	11.10%	33.30%	22.20%	22.20%	0.00%

(*continued*)

Table AI.

Corruption	Frequency	0	0	1	4	4	0
	Percentage	0.00%	0.00%	11.10%	44.40%	44.40%	0.00%
Executive boards' saleries	Frequency	2	0	2	4	0	1
	Percentage	22.20%	0.00%	22.20%	44.40%	0.00%	11.10%
Employees' rights	Frequency	1	2	2	2	0	2
	Percentage	11.10%	22.20%	22.20%	22.20%	0.00%	22.20%
Consumer rights and equal treatment	Frequency	1	0	0	5	1	2
	Percentage	11.10%	0.00%	0.00%	55.60%	11.10%	22.20%

6. Score the importance of the considered non-financial issues in comparison with the financial issues (return, risk, liquidity) for your investment decision.

		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Really important	Frequency	10	0	0	0
	Percentage	3.60%	0.00%	0.00%	0.00%
Important	Frequency	20	12	1	2
	Percentage	7.20%	23.10%	6.20%	22.20%
Rather important	Frequency	56	13	1	2
	Percentage	20.20%	25.00%	6.20%	22.20%
Partially important	Frequency	59	11	5	1
	Percentage	21.30%	21.20%	31.20%	11.10%
Hardly important	Frequency	95	13	6	2
	Percentage	34.30%	25.00%	37.50%	22.20%
Unimportant	Frequency	37	3	3	2
	Percentage	13.40%	5.80%	18.80%	22.20%

7. Personal moral values could be implemented in several ways. In which way do you implement yours?

		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Investment in firms that are in line with your moral values	Frequency	137	29	9	6
	Percentage	49.50%	55.80%	56.20%	66.70%
Exertion of the voting rights	Frequency	92	5	9	1
	Percentage	33.20%	9.60%	56.20%	11.10%
Engagement in an association	Frequency	122	16	6	0
	Percentage	44.00%	30.80%	37.50%	0.00%

Table AI. (*continued*)

Voluntary work in a social or ecological organization	Frequency	102	17	4	3
	Percentage	36.80%	32.70%	25.00%	33.30%
Sponsorship of initiatives that matter to you	Frequency	143	15	11	3
	Percentage	51.60%	28.80%	68.80%	33.30%
Other	Frequency	38	0	3	0
	Percentage	13.70%	0.00%	18.80%	0.00%
No engagement at the moment	Frequency	33	9	0	1
	Percentage	11.90%	17.30%	0.00%	11.10%

8. Which of the traditional investment issues of return, risk and liquidity is the most important one relating to your investment decision?

High return		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Most important	Frequency	67	6	2	2
	Percentage	24.20%	11.50%	12.50%	22.20%
Second most important	Frequency	110	17	10	2
	Percentage	39.70%	32.70%	62.50%	22.20%
Third most important	Frequency	100	29	4	5
	Percentage	36.1%	55.80%	25.1%	55.60%

Small risk		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Most important	Frequency	172	40	13	4
	Percentage	62.10%	76.90%	81.30%	44.40%
Second most important	Frequency	67	8	2	4
	Percentage	24.20%	15.40%	12.50%	44.40%
Third most important	Frequency	38	4	1	1
	Percentage	13.70%	7.70%	6.30%	11.10%

High liquidity		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Most important	Frequency	38	6	1	3
	Percentage	13.70%	11.50%	6.30%	33.30%
Second most important	Frequency	100	27	4	3
	Percentage	36.10%	51.90%	25.00%	33.30%
Third most important	Frequency	139	19	11	3
	Percentage	50.20%	36.50%	68.80%	33.30%

(*continued*)

Table AI.

9. Do you consider risk besides the financial risk in your investment decision?

Risk of law		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Really important	Frequency	11	1	0	0
	Percentage	4.00%	1.90%	0.00%	0.00%
Important	Frequency	36	9	2	0
	Percentage	13.00%	17.30%	12.50%	0.00%
Rather important	Frequency	35	10	2	1
	Percentage	12.60%	19.20%	12.50%	11.10%
Partially important	Frequency	69	11	4	2
	Percentage	24.90%	21.20%	25.00%	22.20%
Hardly important	Frequency	93	18	5	6
	Percentage	33.60%	34.60%	31.20%	66.70%
Unimportant	Frequency	33	3	3	0
	Percentage	11.90%	5.80%	18.80%	0.00%
Risk of reputation		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Really important	Frequency	16	1	0	0
	Percentage	5.80%	1.90%	0.00%	0.00%
Important	Frequency	29	7	1	0
	Percentage	10.50%	13.50%	6.20%	0.00%
Rather important	Frequency	52	13	5	1
	Percentage	18.80%	25.00%	31.20%	11.10%
Partially important	Frequency	77	11	0	1
	Percentage	27.80%	21.20%	0.00%	11.10%
Hardly important	Frequency	79	17	8	7
	Percentage	28.50%	32.70%	50.00%	77.80%
Unimportant	Frequency	24	3	2	0
	Percentage	8.70%	5.80%	12.50%	0.00%
Environmental risk		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Really important	Frequency	11	1	0	0
	Percentage	4.00%	1.90%	0.00%	0.00%

Table AI. (*continued*)

Important	Frequency	15	6	1	1
	Percentage	5.40%	11.50%	6.20%	11.10%
Rather important	Frequency	26	8	2	2
	Percentage	9.40%	15.40%	12.50%	22.20%
Partially important	Frequency	71	11	4	2
	Percentage	25.60%	21.20%	25.00%	22.20%
Hardly important	Frequency	95	19	5	1
	Percentage	34.30%	36.50%	31.20%	11.10%
Unimportant	Frequency	59	7	4	3
	Percentage	21.30%	13.50%	25.00%	33.30%

10. Do you think that because of an increasing number of socially responsible investments firms with low socially responsible standards could be induced to more socially responsible actions and more social expertise?

		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
YES	Frequency	204	38	12	9
	Percentage	73.60%	73.10%	75.00%	100.00%
NO	Frequency	33	10	1	0
	Percentage	11.90%	19.20%	6.20%	0.00%
I do not know	Frequency	40	4	3	0
	Percentage	14.40%	7.70%	18.80%	0.00%

11. What is your opinion about the performance of socially responsible investments in comparison to conventional ones?

		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Better	Frequency	43	8	6	1
	Percentage	15.50%	15.40%	37.50%	11.10%
Worse	Frequency	61	12	2	2
	Percentage	22.00%	23.10%	12.50%	22.20%
No difference	Frequency	154	25	8	6
	Percentage	55.60%	48.10%	50.00%	66.70%
I do not know	Frequency	19	7	0	0
	Percentage	6.90%	13.50%	0.00%	0.00%

(*continued*)

Table AI.

12. How do you assess the risk of socially responsible investments in comparison to conventional ones?

		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
...Less risky	Frequency	92	14	9	4
	Percentage	33.20%	26.90%	56.20%	44.40%
...Riskier	Frequency	47	6	1	1
	Percentage	17.00%	11.50%	6.20%	11.10%
...Do not differ	Frequency	110	28	6	3
	Percentage	39.70%	53.80%	37.50%	33.30%
I do not know	Frequency	28	4	0	1
	Percentage	10.10%	7.70%	0.00%	11.10%

13. There are two investment possibilities (firm A and B). A is a sheer profit-orientated firm, whereas B has a comprehensive social responsibility strategy which conforms exactly to your opinion on socially responsible moral values. The expected return in one year of firm A is 6%. How much return would you sacrifice for a investment in firm B?

		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
No return sacrifice	Frequency	41	12	7	4
	Percentage	14.80%	23.10%	43.80%	44.40%
Return sacrifice <1%	Frequency	51	22	3	3
	Percentage	18.40%	42.30%	18.80%	33.30%
Return sacrifice <2%	Frequency	104	14	5	1
	Percentage	37.50%	26.90%	31.20%	11.10%
Return sacrifice <3%	Frequency	49	3	0	0
	Percentage	17.70%	5.80%	0.00%	0.00%
Return sacrifice <4%	Frequency	14	0	1	0
	Percentage	5.10%	0.00%	6.20%	0.00%
Return sacrifice <5%	Frequency	3	1	0	1
	Percentage	1.10%	1.90%	0.00%	11.10%
Sacrifrice of the whole return	Frequency	15	0	0	0
	Percentage	5.40%	0.00%	0.00%	0.00%

14. Why does social responsibility matter to you?

		Private investors	Asset manager (*p*)	Institutional investor	Asset manager (i)
Improving prestige in the	Frequency	22	5	2	3

Table AI. (*continued*)

Community	Percentage	7.90%	9.60%	12.50%	33.30%
Socially responsible investments have higher return in the long run	Frequency	104	34	9	3
	Percentage	37.50%	65.40%	56.20%	33.30%
Doing good while investing	Frequency	155	33	5	5
	Percentage	56.00%	63.50%	31.20%	55.60%
Having a pioneering role in such an vogue topic	Frequency	202	1	10	3
	Percentage	72.90%	1.90%	62.50%	33.30%
Other reasons	Frequency	14	5	3	2
	Percentage	5.10%	9.60%	18.80%	22.20%
Socially responsibility does not matter to me	Frequency	25	19	1	4
	Percentage	9.00%	36.50%	6.20%	44.40%

15. Of what is your current portfolio composed?

Private investor		≤ 20%	>20 – 40%	>40–60%	>60–80%	>80	Average
Stocks	Frequency	191	38	23	15	10	19.83
	Percentage	69.00%	13.70%	8.30%	5.40%	3.60%	
Fixed-interest securities	Frequency	132	56	34	22	33	33.89
	Percentage	47.70%	20.20%	12.30%	7.90%	11.90%	
Real estate	Frequency	183	24	29	28	13	21.54
	Percentage	66.10%	8.70%	10.50%	10.10%	4.70%	
Participation	Frequency	239	25	7	4	2	8.23
	Percentage	86.30%	9.00%	2.50%	1.40%	0.70%	
Other	Frequency	213	22	18	8	16	16.51
	Percentage	76.90%	7.90%	6.50%	2.90%	5.80%	
Asset manager (p)		≤ 20%	>20 – 40%	>40–60%	>60–80%	>80	Average
Stocks	Frequency	25	16	8	3	0	30.06
	Percentage	48.10%	30.80%	15.40%	5.80%	0.00%	
Fixed-interest securities	Frequency	11	21	14	6	0	37.17
	Percentage	21.20%	40.40%	26.90%	11.50%	0.00%	
Real estate	Frequency	36	12	4	0	0	17.96
	Percentage	69.20%	23.10%	7.70%	0.00%	0.00%	

(*continued*)

Table AI.

Participation	Frequency	50	2	0	0	0	4.56%
	Percentage	96.20%	3.80%	0.00%	0.00%	0.00%	
Other	Frequency	48	2	1	0	1	10.25%
	Percentage	92.30%	3.80%	1.90%	0.00%	1.90%	
Institutional investor		≤ 20%	>20 – 40%	>40–60%	>60–80%	>80	Average
Stocks	Frequency	11	0	2	0	3	31.44%
	Percentage	68.80%	0.00%	12.50%	0.00%	18.80%	
Fixed-interest Securities	Frequency	9	1	1	3	2	37.00%
	Percentage	56.20%	6.20%	6.20%	18.80%	12.50%	
Real Estate	Frequency	15	0	1	0	0	5.94%
	Percentage	93.80%	0.00%	6.20%	0.00%	0.00%	
Participation	Frequency	13	2	1	0	0	7.75%
	Percentage	81.20%	12.50%	6.20%	0.00%	0.00%	
Other	Frequency	12	2	0	1	1	17.88%
	Percentage	75.00%	12.50%	0.00%	6.20%	6.20%	
Asset manager (i)		≤ 20%	>20 – 40%	>40–60%	>60–80%	>80	Average
Stocks	Frequency	5	2	1	0	1	34.78%
	Percentage	55.60%	22.20%	11.10%	0.00%	11.10%	
Fixed-interest Securities	Frequency	3	1	3	2	0	44.44%
	Percentage	33.30%	11.10%	33.30%	22.20%	0.00%	
Real Estate	Frequency	9	0	0	0	0	10.22%
	Percentage	100.00%	0.00%	0.00%	0.00%	0.00%	
Participation	Frequency	9	0	0	0	0	4.67%
	Percentage	100.00%	0.00%	0.00%	0.00%	0.00%	
Other	Frequency	8	1	0	0	0	5.89%
	Percentage	88.90%	11.10%	0.00%	0.00%	0.00%	

16. In which type of funds do you invest?

		Private inv.	Ass. man. (p)	Insti. inv.	ass. man. (i)
Equity Funds	Frequency	133	44	11	7
	Percentage	48.00%	84.60%	68.80%	77.80%

Table AI. (*continued*)

Real estate funds	Frequency	44	25	3	2
	Percentage	15.90%	48.10%	18.80%	22.20%
Socially responsible mutual funds	Frequency	65	26	8	6
	Percentage	23.50%	50.00%	50.00%	66.70%
Commodity funds	Frequency	30	27	1	2
	Percentage	10.80%	51.90%	6.20%	22.20%
Mixed funds	Frequency	80	36	9	6
	Percentage	28.90%	69.20%	56.20%	66.70%
I do not invest in funds	Frequency	100	2	4	2
	Percentage	36.10%	3.80%	25.00%	22.20%

17. In which country do you invest?

		Private inv.	Ass. man. (p)	Insti. inv.	Ass. man. (i)
Germany	Frequency	224	41	11	5
	Percentage	80.90%	78.80%	68.80%	55.60%
Europe	Frequency	185	48	15	9
	Percentage	66.80%	92.30%	93.80%	100.00%
Northern America	Frequency	80	36	12	6
	Percentage	28.90%	69.20%	75.00%	66.70%
Asia	Frequency	82	37	9	5
	Percentage	29.60%	71.20%	56.20%	55.60%
Emerging countries	Frequency	86	43	10	6
	Percentage	31.00%	82.70%	62.50%	66.70%
Other	Frequency	38	8	2	1
	Percentage	13.70%	15.40%	12.50%	11.10%

18. Which percentage of your entire portfolio is invested in socially responsible investments?

		Private inv.	Ass. man. (p)	Insti. inv.	Ass. man. (i)
<10%	Frequency	67	22	2	4
	Percentage	24.20%	42.30%	12.50%	44.40%
10 –20%	Frequency	26	13	3	0
	Percentage	9.40%	25.00%	18.80%	0.00%

(*continued*)

Table AI.

20–30%	Frequency	19	2	0	1
	Percentage	6.90%	3.80%	0.00%	11.10%
30–40%	Frequency	14	1	0	0
	Percentage	5.10%	1.90%	0.00%	0.00%
40–50%	Frequency	7	3	0	0
	Percentage	2.50%	5.80%	0.00%	0.00%
>50%	Frequency	36	5	8	4
	Percentage	13.00%	9.60%	50.00%	44.40%
I do not know	Frequency	108	6	3	0
	Percentage	39.00%	11.50%	18.80%	0.00%

19. Which is the total amount in euros you could invest?

		Private inv.	Ass. man. (p)
<10.000 EUR	Frequency	93	2
	Percentage	33.60%	3.80%
10.000–50.000 EUR	Frequency	81	12
	Percentage	29.20%	23.10%
50.000–150.000	Frequency	61	13
	Percentage	22.00%	25.00%
150.000–500.000	Frequency	29	15
	Percentage	10.50%	28.80%
>500.000	Frequency	13	5
	Percentage	4.70%	9.60%
I do not know	Frequency	0	5
	Percentage	0.00%	9.60%
		Instit. inv.	Ass. man. (i)
<5 Mio EUR	Frequency	3	0
	Percentage	18.80%	0.00%
5 Mio–20 Mio EUR	Frequency	3	1
	Percentage	18.80%	11.10%
20 Mio–50 Mio EUR	Frequency	3	2

Table AI. (*continued*)

	Percentage	18.80%	22.20%
50 Mio–80 Mio EUR	Frequency	0	0
	Percentage	0.00%	0.00%
>80 Mio EUR	Frequency	7	4
	Percentage	43.80%	44.40%
I do not know	Frequency	0	2
	Percentage	0.00%	22.20%

20. In which investment horizon are socially responsible investments most important for you?

		Private inv.	Ass. man. (p)	Insti. inv.	Ass. man. (i)
Short term (<1 year)	Frequency	3	1	1	0
	Percentage	1.10%	1.90%	6.20%	0.00%
Mid-term (1–5 years)	Frequency	38	6	3	1
	Percentage	13.70%	11.50%	18.80%	11.10%
Long-term (>5 years)	Frequency	115	28	5	3
	Percentage	41.50%	53.80%	31.20%	33.30%
Equal for all kind of terms	Frequency	121	17	7	5
	Percentage	43.70%	32.70%	43.80%	55.60%

21. What is your highest educational level?

		Private inv.	Ass. man. (p)
Secondary school qualification	Frequency	4	0
	Percentage	1.50%	0.00%
Secondary school leaving certificate	Frequency	12	1
	Percentage	4.40%	1.90%
High school diploma	Frequency	47	10
	Percentage	17.20%	19.20%
Completed vocational training	Frequency	27	8
	Percentage	9.90%	15.40%
University degree	Frequency	183	25
	Percentage	67.00%	48.10%
I do not know	Frequency	0	8
	Percentage	0.00%	15.40%

(*continued*)

Table AI.

22. What is your gender?

		private inv.	ass. man. (p)
Male	Frequency	178	47
	Percentage	65.20%	90.40%
Female	Frequency	95	5
	Percentage	34.80%	9.60%

23. What is the total amount of your assets under management?

		Ass. man. (p)	Ass. man. (i)
≤ 25 Mio. EUR	Frequency	17	1
	Percentage	32.70%	11.10%
25–50 Mio EUR	Frequency	9	2
	Percentage	17.30%	22.20%
50–100 Mio EUR	Frequency	4	0
	Percentage	7.70%	0.00%
>100 Mio EUR	Frequency	4	5
	Percentage	7.70%	55.60%
No answer	Frequency	18	1
	Percentage	34.60%	11.10%

24. How many customers do you have?

		Ass. man. (p)	Ass. man. (i)
≤ 50	Frequency	12	6
	Percentage	23.10%	66.70%
51–100	Frequency	14	1
	Percentage	26.90%	11.10%
101–150	Frequency	6	0
	Percentage	11.50%	0.00%
151–200	Frequency	2	0
	Percentage	3.80%	0.00%
>200	Frequency	8	0
	Percentage	15.40%	0.00%
no answer	Frequency	10	2
	Percentage	19.20%	22.20%

Table AI.

Question	Acronym	Scale	Question	Acronym	Scale
1	InvType	Categorial	13	RetSacr	Ordinal
2	SRIfamiliar	Categorial	14a	SocReput	Binary
3	SRIoffered	Categorial	14b	BetterRet	Binary
4a	EnvRegard	Dummy	14c	FeelGood	Binary
4b	SocRegard	Dummy	14d	PionRole	Binary
4c	EthRegard	Dummy	14e	OtherReas	Binary
5a	RenewEner	Ordinal	14f	Unimport	Binary
5b	Emission	Ordinal	15a	PortPerSha	Continuous
5c	Accident	Ordinal	15b	PortPerFix	Continuous
5d	Products	Ordinal	15c	PortPerReE	Continuous
5e	Industry	Ordinal	15d	PortPerPar	Continuous
5f	HumanRight	Ordinal	15e	PortPerOth	Continuous
5g	AnimalTest	Ordinal	16a	EquityFund	Binary
5h	GeneticEng	Ordinal	16b	RealEsFund	Binary
5i	NativeReg	Ordinal	16c	SRIFund	Binary
5j	Corruption	Ordinal	16d	CommFund	Binary
5k	BoardSal	Ordinal	16e	MixFund	Binary
5l	CoDetRight	Ordinal	16f	NoFund	Binary
5m	EqualTreat	Ordinal	17a	Germany	Binary
6	NonFinObj	Dummy	17b	Europe	Binary
7a	ComMorVal	Binary	17c	NorthAmer	Binary
7b	VoteRights	Binary	17d	Asia	Binary
7c	EngClub	Binary	17e	EmerCount	Binary
7d	VolunWork	Binary	17f	OtherCountt	Binary
7e	FinSupport	Binary	18	PercentSRI	Ordinal
7f	OtherMoVal	Binary	18a	PercentSRI10	Dummy
7g	NoEng	Binary	18b	PercentSRI20	Dummy
8a	Return	Ordinal	18c	PercentSRI30	Dummy
8b	Risk	Ordinal	18d	PercentSRI40	Dummy
8c	Liquidity	Ordinal	18e	PercentSRI50	Dummy
9a	LegalRisk	Ordinal	18f	PercentSRIHig	Dummy
9b	ReputRisk	Ordinal	18g	PercentSRIDNK	Dummy
9c	EnvirRisk	Ordinal	19a	InvVolume10	Dummy
10a	SocSkillYes	Dummy	19b	InvVolume50	Dummy
10b	SocSkillNo	Dummy	19c	InvVolume150	Dummy
10c	SocSkillDNK	Dummy	19d	InvVolume500	Dummy
11a	PerfSRIBet	Dummy	19e	InvVolumeHig	Dummy
11b	PerfSRIWor	Dummy	20a	HorizonSho	Dummy
11c	PerfSRISam	Dummy	20b	HorizonMid	Dummy
11d	PerfSRIDNK	Dummy	20c	HorizonLon	Dummy
12a	RiskSRILow	Dummy	20d	HorizonSam	Dummy
12b	RiskSRIHig	Dummy	21	EduLevel	Categorial
12c	RiskSRISam	Dummy	22	Gender	Binary
12d	RiskSRIDNK	Dummy			

Note: This table contains the acronyms for each question used in the paper

Table AII.
Survey questions' overview

About the authors

Gregor Dorfleitner holds a degree in mathematics and business administration from the University of Augsburg, where he also did his PhD thesis in 1998. He became a Full Professor of Finance at the Vienna University of Economics and Business in 2004. Since 2007, he has been a Full Professor of Finance at the Universität Regensburg, where he also has been the Director of the Center of Finance since April 2008. He has published various articles in international journals such as the *European Journal of Operational Research*, *Applied Financial Economics, Quantitative Finance, Insurance: Mathematics and Economics, International Journal of Theoretical and Applied Finance* and *Journal of Banking and Finance.*

Sebastian Utz is a research fellow at the Department of Finance, University of Regensburg, where he also did his PhD thesis in 2012. He received a Diploma in Mathematics from the University of Augsburg in 2009. His research interests are in the areas of multicriteria portfolio theory and SRI. Sebastian Utz is the corresponding author and can be contacted at: sebastian.utz@ur.de