

Leuermann, Andrea; Roth, Benjamin

Working Paper

Stereotypes and risk attitudes: Evidence from the lab and the field

SOEPpapers on Multidisciplinary Panel Data Research, No. 474

Provided in Cooperation with:

German Institute for Economic Research (DIW Berlin)

Suggested Citation: Leuermann, Andrea; Roth, Benjamin (2012) : Stereotypes and risk attitudes: Evidence from the lab and the field, SOEPpapers on Multidisciplinary Panel Data Research, No. 474, Deutsches Institut für Wirtschaftsforschung (DIW), Berlin

This Version is available at:

<https://hdl.handle.net/10419/62331>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

SOEPpapers
on Multidisciplinary Panel Data Research

SOEP – The German Socio-Economic Panel Study at DIW Berlin

474-2012

**Stereotypes and Risk Attitudes:
Evidence from the Lab and the Field**

Andrea Leuermann and Benjamin Roth

SOEPPapers on Multidisciplinary Panel Data Research at DIW Berlin

This series presents research findings based either directly on data from the German Socio-Economic Panel Study (SOEP) or using SOEP data as part of an internationally comparable data set (e.g. CNEF, ECHP, LIS, LWS, CHER/PACO). SOEP is a truly multidisciplinary household panel study covering a wide range of social and behavioral sciences: economics, sociology, psychology, survey methodology, econometrics and applied statistics, educational science, political science, public health, behavioral genetics, demography, geography, and sport science.

The decision to publish a submission in SOEPPapers is made by a board of editors chosen by the DIW Berlin to represent the wide range of disciplines covered by SOEP. There is no external referee process and papers are either accepted or rejected without revision. Papers appear in this series as works in progress and may also appear elsewhere. They often represent preliminary studies and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be requested from the author directly.

Any opinions expressed in this series are those of the author(s) and not those of DIW Berlin. Research disseminated by DIW Berlin may include views on public policy issues, but the institute itself takes no institutional policy positions.

The SOEPPapers are available at
<http://www.diw.de/soeppapers>

Editors:

Jürgen **Schupp** (Sociology, Vice Dean DIW Graduate Center)
Gert G. **Wagner** (Social Sciences)

Conchita **D'Ambrosio** (Public Economics)
Denis **Gerstorff** (Psychology, DIW Research Professor)
Elke **Holst** (Gender Studies)
Frauke **Kreuter** (Survey Methodology, DIW Research Professor)
Martin **Kroh** (Political Science and Survey Methodology)
Frieder R. **Lang** (Psychology, DIW Research Professor)
Henning **Lohmann** (Sociology, DIW Research Professor)
Jörg-Peter **Schräpler** (Survey Methodology, DIW Research Professor)
Thomas **Siedler** (Empirical Economics)
C. Katharina **Spieß** (Empirical Economics and Educational Science)

ISSN: 1864-6689 (online)

German Socio-Economic Panel Study (SOEP)
DIW Berlin
Mohrenstrasse 58
10117 Berlin, Germany

Contact: Uta Rahmann | soeppapers@diw.de

Stereotypes and Risk Attitudes: Evidence from the Lab and the Field*

Andrea Leuermann Benjamin Roth[†]

July 2012

Abstract

Recent studies have found correlations between risk attitudes and several sociodemographic characteristics. In this paper, we deploy an artefactual field experiment and study whether subjects - non-professionals and financial professionals - are aware of these correlations. This is largely confirmed by our results for all subject groups. We show that the subjects attach informational value to sociodemographic information when assessing others' risk attitudes. This provides external validity to the correlations found between risk preferences and sociodemographics. A person's self-assessment of risk attitudes is the most helpful device for the subjects' assessments of others, although experienced professionals make use of it to a minor extent than all other subjects.

Classification: Risk Preferences, Financial Advice, Artefactual Field Experiment, Behavioral Finance

JEL-Codes: C91, D81, G02

*We would like to thank Isadora Dorn, Andreas Roider, Wendelin Schnedler, Andrew Schotter and Israel Waichman for their valuable comments and suggestions. We gratefully acknowledge the comments of the participants of the seminar at Heidelberg University, the ESA World Meeting 2011 in Chicago, the 2011 Experimental Finance Conference in Innsbruck, the 2011 TIBER-X conference in Tilburg and the 2012 IMEBE in Castellón. We also want to thank Christoph Lukes for the programming of the experiment.

[†]andrea.leuermann@awi.uni-heidelberg.de (+49 6221 542951)/ benjamin.roth@awi.uni-heidelberg.de (+49 6221 542940), Heidelberg University, Bergheimer Str. 58, 69115 Heidelberg, Germany

1 Introduction

The correlation between risk attitudes and sociodemographic characteristics has been actively studied in recent years (Dohmen et al. 2011, von Gaudecker et al. 2011). These findings give rise to the question of whether subjects are aware of the correlation between risk preferences and sociodemographic information. It is of interest whether and to which sociodemographic attributes subjects assign value, i.e., attach informational content. The studies so far only report correlations between risk preferences and sociodemographics. Our study allows to proceed a step further by studying how subjects assess the risk preferences of others. If subjects rely on sociodemographics when forming beliefs about others' risk preferences - in particular if this information is costly - this allows concluding that the relationship goes beyond pure correlations.

Previous evidence suggests that risk attitudes are important for decision making, for example for buying stocks or becoming self-employed (e.g., Dohmen et al. 2011). When making their decisions, however, individuals are increasingly relying on professionals - such as doctors in the health domain, insurance agents, and in particular financial consultants (c.f. Allen 2001, Bhattacharya et al. 2012). In recent years, regulators have become concerned about the quality of financial advice.¹ In order to improve financial advice, some countries, e.g., Germany², introduced a standardized questionnaire in the course of the counseling interview in which advisees are asked to self-assess their risk attitudes. Our research thus focuses on regulations as well; we investigate whether this self-assessment is recognized as helpful by advisors, especially if they are working in the financial sector.

To study these concerns, we conduct an artefactual field experiment³ in which three types of subjects participate: senior financial advisors, junior financial advisors and non-professionals. In particular, we assess professionals' knowledge about decision making and seek to ascertain if they attach importance to other characteristics than subjects without advice experience. Studying these groups

¹A result of these concerns is e.g., the "Markets in Financial Instruments Directive" of the European Union, which is - besides other objectives - set up to protect consumers in investment services. In the US, the "Restoring American Financial Stability Act of 2010" accommodates these matters.

²The exact wording of the regulations defined by German regulators can be found under §31,4-5 WPHG (Security Trading Act).

³Artefactual field experiments use the tools of a standard lab experiment with a non-standard subject pool (Harrison and List 2004).

in particular allows us to explore potential sorting effects into employment in the financial sector (c.f. Bonin et al. 2007, Dohmen and Falk 2011, Haigh and List 2005), especially as the junior professionals and non-professionals are similar in age and educational status.

The experiment consists of two main parts. The first part is based on a survey conducted on the Web and a large-scale survey (SOEP) of Germany. In them, we estimate risk preferences of certain subgroups of the population (e.g., older versus younger, female versus male). In the second part, we run a computerized lab experiment. The lab experiment consists of two main stages. In the first stage, we elicit subjects' stereotypes (perceived correlations) of risk preferences of sociodemographic groups (such as gender). Secondly, we inspect which sociodemographic characteristics subjects use in the process of giving advice, namely assessing the risk preferences of others. By augmenting the subject pool with financial professionals we are able to study behavioral differences between financial advisors and non-professionals.

The results of the experiment show that subjects recognize the correlation between particular sociodemographic variables and risk preferences. The subjects are able to assess how their own risk attitude relates to the mean risk attitude of a representative population with a high precision. Professionals in general are slightly more risk averse than the observed non-professionals.

When forming beliefs over another person's risk attitude, subjects are willing to pay for sociodemographic information about the assessed person. Subjects thus expect informational value coming from the sociodemographic information. This finding provides external validity for studies that find pure correlations between risk preferences and sociodemographics.

In particular an advisee's self-assessment of risk preferences and the advisee's gender are considered to be informative when judging another person. However, senior financial professionals attach less informational content to the self-assessment of risk preferences than the other subject groups. Surprisingly, the subject group with the highest counseling experience trusts less in the information requested by regulators. Our findings are consistent across the treatments and mechanisms to elicit risk preferences.

The remainder of the paper is structured as follows: In the next section (section 2), we discuss the literature on risk preferences and advice. Section 3 explains the experimental design of the study. Section 4 presents the treatments in detail and the results, the conclusions follow in section 5.

2 Literature

Recent research on risk preferences has detected significant linkages between sociodemographic characteristics and risk attitudes. It is largely undisputed that women are more risk averse than men (e.g., Byrnes et al. 1999, Croson and Gneezy 2009). By using German micro data (SOEP) Dohmen et al. (2011) in addition find that individuals are more risk averse if older, married, or with children. The authors report that individuals are more risk loving if they have a high school diploma or higher income. However, regarding the relationship of education or income and risk tolerance, the findings of other literature are ambiguous (c.f. Belzil and Leonardi 2007, Barsky et al. 1997, Hartog et al. 2002). In addition, Dohmen et al. (2011) report that actual behavior is related to answers to risk questions asked; a significant correlation between stated risk preferences and e.g., holding risky financial assets such as stocks, smoking, and being self-employed becomes evident. Nevertheless, these findings report mere correlations.

One strategy to figure out others' preferences is subsumed by "stereotyping", namely subjects' intuition regarding the variation of a single piece of sociodemographic information. Regarding the knowledge about the correlation between risk preferences and sociodemographic information, Eckel and Grossman (2008) study gender stereotypes. Their results are twofold: First, in line with previous results, females tolerate less risk than males. And second, the beliefs⁴ over gender are consistent since women are perceived to be less risk tolerant. In this setup the judged person is fully visible to the judging subject. If the belief formation is based on groups (e.g., males) instead of individuals, subjects overestimate males' risk tolerance, while females' is correctly assessed (Siegrist et al. 2002). In terms of cultural stereotypes people perceive Chinese to be less risk tolerant than Americans. Interestingly, the actual experimental data shows that the opposite is true (Hsee and Weber 1999).

One of the most obvious situations in which advice is of major interest is in financial decision making. Previous studies suggest that financial professionals are less prone to behavioral biases, such as anchoring effects when forming expectations about long-term stock returns (Kaustia et al. 2008). They show a higher degree of analytical behavior than the general population (Nofsinger and Varma 2007). Furthermore, there is contradictory evidence regarding the

⁴In the literature 'prediction', 'forecast' and 'belief' are used interchangeably.

degree of myopic loss aversion of financial professionals compared to student subjects (Eriksen and Kvaloy 2009, Haigh and List 2005). Financial professionals are better in assessing the quality of public information, while students more closely follow Bayes' Rule (Alevy et al. 2007). Nevertheless, artefactual field experiments which allow observing financial professionals and students in an identical situation are rare.

One reason why financial professionals could systematically exhibit different risk preferences than other employees is occupational sorting. It is argued that individuals who are willing to take more risk sort into occupations with a higher variance in income (Bonin et al. 2007, Fuchs-Schündeln and Schündeln 2005, Grund and Sliwka 2010) or even with a higher mortality risk (DeLeire and Levy 2004). Typically, financial advisors are paid with highly premium dependent incentive schemes, which might attract particularly risk tolerant individuals (Dohmen and Falk 2011, Masclet et al. 2009).

This study contributes to the existing literature by analyzing subjects' stereotypes of risk preferences by varying *several* sociodemographic characteristics. We investigate to which characteristics subjects attach *informational content* when assessing others. We are thus able to extend research on the relationship between risk preferences and sociodemographics beyond pure correlations. This is the first study that takes up these questions by an *artefactual field experiment* as the subject pool is augmented by junior as well as senior financial professionals. This setup allows exploring differences in behavior between the subject groups.

3 Experimental Design

Since the objective of this paper is to investigate how subjects predict the risk preferences of others, it is vital to prepare the exposition of the given sociodemographic characteristics thoughtfully. Therefore the experiment consists of two parts (c.f. Figure 1). In the first part we use survey data and evaluate risk attitudes of subsamples identified by certain sociodemographic variables (e.g., parents vs. non-parents). In the second part, initiated six months afterwards, a computerized lab experiment is employed. The lab experiment consists of the treatments SELF, SINGLE and SIMULT.⁵ Subjects participating in the first

⁵The instructions of both parts of the experiment can be found in the appendix.

part are denominated as *advisees* whereas the subjects of the lab experiment are called *advisors*. In the lab, advisors perform one treatment after another. During the experiment there is no interaction and no feedback about the payoff. Each treatment is performed with two different risk measures which will be described in section 3.1.

The SELF treatment is the first step in the experiment. When coming to the lab, advisors are randomly allocated to sit at the computers. After logging into the experimental software advisors answer questions about their sociodemographics and their risk attitudes are elicited.

In the second treatment (SINGLE), we study advisors' knowledge about the correlation between a single sociodemographic variable and risk tolerance. The different subsamples from part one are presented to the advisors. Their task is to decide which subsample makes the riskier choice *on average* within each subgroup (e.g., whether they think that parents show a riskier behavior than non-parents). By this we are able to investigate the advisors' stereotypes on the effect of the variation of a single sociodemographic property on risk preferences. With the data from the surveys (see section 3.2), we compare the risk attitudes of different subsamples (e.g., whether non-parents are more risk tolerant than parents) and construct the correct answer.

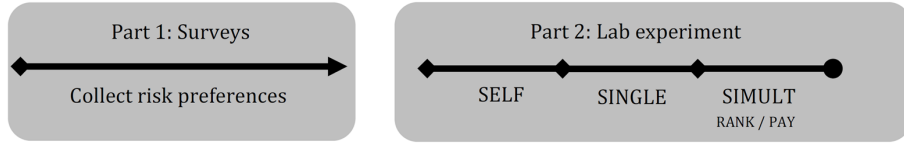
In the third treatment (SIMULT), we investigate if advisors attach informational value to the different sociodemographic properties. To accomplish this we choose eight profiles from the survey-data of part one, which we show to the advisors successively. The advisor's task is to predict the risk attitude for each single advisee presented. The profiles are presented in different modes - RANK and PAY - which are explained in section 4.3. In contrast to the SINGLE treatment, the advisors have to judge the risk preferences of an *individual* advisee instead of assessing the average decision of certain subgroups. Finally, the payoffs are shown to the advisors and the session is finished.⁶

3.1 Measures of Risk Aversion

Before the treatments are described in detail, we introduce two mechanisms to elicit risk preferences.

⁶Before the payoffs are presented a further treatment is played. A companion paper explains this treatment in detail (Leuermann and Roth 2012). Subjects are not informed about the content of this last treatment before entering it. We are thus confident that it does not bias our results.

Figure 1: Experimental Design: Course of Action



The first measure employed is a variation of the multiple price list design (MPL) of Holt and Laury (2002) (hereafter: HL-lottery). In order to enforce monotonicity of the risk preferences we use a switching MPL or sMPL instead of the classic design (Andersen et al. 2006) as depicted in Figure 2. In this mechanism a subject is confronted with ten choices between two lotteries (option A or option B). Option A pays €2 in the first state and €1.60 in the second state. Option B pays €3.85 in the first and €0.10 in the second state. The payoff of option A exhibits a lower variance than the payoff of option B. In the tenth row the amount of the first state is paid for sure. Hence, a rational individual switches from option A to option B once - at least at row ten. An increasing row number indicates a higher probability that the first state is paid out. The more rows a subject opts for option B, i.e., the earlier a subject switches from option A to option B, the higher the subject's risk tolerance. For the subject's payoff in the lab experiment, one row is randomly chosen. In this row, the lottery is played according to the subject's choice.⁷ For the analysis, we will use the first row the subject opts for option B as the measure of risk attitudes.

Figure 2: HL-lottery as Presented to Subjects

Nr.	Option A			Option B				
	Payoff	Probability		Payoff	Payoff	Probability		Payoff
1	2 Euro	10%	90%	1,60 Euro	3,85 Euro	10%	90%	0,10 Euro
2	2 Euro	20%	80%	1,60 Euro	3,85 Euro	20%	80%	0,10 Euro
3	2 Euro	30%	70%	1,60 Euro	3,85 Euro	30%	70%	0,10 Euro
4	2 Euro	40%	60%	1,60 Euro	3,85 Euro	40%	60%	0,10 Euro
5	2 Euro	50%	50%	1,60 Euro	3,85 Euro	50%	50%	0,10 Euro
6	2 Euro	60%	40%	1,60 Euro	3,85 Euro	60%	40%	0,10 Euro
7	2 Euro	70%	30%	1,60 Euro	3,85 Euro	70%	30%	0,10 Euro
8	2 Euro	80%	20%	1,60 Euro	3,85 Euro	80%	20%	0,10 Euro
9	2 Euro	90%	10%	1,60 Euro	3,85 Euro	90%	10%	0,10 Euro
10	2 Euro	100%		1,60 Euro	3,85 Euro	100%		0,10 Euro

I choose option B the first time in row: Pls choose ▾

⁷Although this elicitation mechanism is widely used in the literature it has its weaknesses - it is prone to framing effects and intellectually sophisticated (Harrison and Rutström 2008). Nevertheless, the mechanism measures risk attitudes outside the lab consistently (Harrison and List 2004, Harrison et al. 2007).

The second mechanism (hereafter: “€100,000 question”) applied is taken from the SOEP panel. It provides the opportunity to cross-check our experimental data with the large-scale data of the survey. The exact wording is as follows:

€100,000 question *Please consider what you would do in the following situation: Imagine that you had won €100,000 in the lottery. Almost immediately after you collect the winnings, you receive the following financial offer, the conditions of which are as follows: There is the chance to double the money. It is equally possible that you could lose half of the amount invested. You have the opportunity to invest the full amount, part of the amount or reject the offer. What share of your lottery winnings would you be prepared to invest in this financially risky, yet lucrative investment?*

Your Decision €100,000 - €80,000 - €60,000 - €40,000 - €20,000 - Nothing, I would decline the offer

The elicitation mechanism is an ordered lottery selection design in which subjects can invest €100,000 into a lottery that doubles or halves the amount with equal probabilities. In order to provide incentives to take the decision thoroughly in the lab experiment, for the actual payoff we convert the €100,000 into €2.50, €80,000 into €2 etc. The reliability of this measure has been validated via a lab experiment with substantial stakes (Dohmen et al. 2011). In contrast to the HL-lottery this design is very easy but it captures only preferences on the risk averse domain.

For a better comparability, the €100,000 measure is rescaled in the analysis. We will present the amount invested in an inverse order and refer to it as the amount *not* invested in the lottery in units of €10,000. By this, a value of 10 indicates that nothing is invested whereas the 0 means that €100,000 are invested into the lottery. Hence, in both measures a higher value indicates a higher willingness to take risk on a comparable numerical scale.

3.2 Part 1: Surveys

Our main goal is to study subjects’ stereotypes of the risk preferences of certain sociodemographic groups and individuals. Before we are able to elicit these beliefs we have to collect profiles of individuals containing their risk attitudes and their sociodemographic information. In order to elicit the mean decision of representative subgroups in SINGLE and to present advisees with heterogeneous sociodemographics in SIMULT it is necessary to obtain sufficient variation within the advisees’ profiles. In order to collect this data we use two surveys. First, for the HL-measure we employ a web-based survey which can be easily

distributed to different people via e-mail.⁸ This is necessary because for the HL-measure no large-scale data sources are publicly available. The survey collects risk preferences (in the HL-lottery as well as the €100,000 question) and sociodemographic information and it ran from November to December 2010.⁹ Secondly, concerning the collection of decisions for the €100,000 question, we can make use of a large-scale panel. The German Socioeconomic Panel (SOEP) provides representative data on 20,750 individuals containing the relevant sociodemographic information and the €100,000 question.¹⁰

The second and the third column in Table 1 show the descriptives of the surveys. The data show heterogeneity within the surveys especially in the categories age, parenthood and university education. Nevertheless, the subjects in the SOEP survey are significantly older and thus more often have a partner and children.

Table 1: Descriptive Statistics of Advisees and Advisors

Variable	Part 1: Reference Decisions				Part 2: Lab Experiment					
	Web survey		SOEP survey		Non-prof.		Junior prof.		Senior prof.	
	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd
N	84	-	20750	-	77	-	52	-	38	-
Year born	1979	10.0	1959	17.71	1986	6.29	1989	1.06	1973	11.0
Gender (female=1)	0.57	0.56	0.52	0.50	0.56	0.50	0.46	0.50	0.18	0.39
Partner (yes=1)	0.41	0.62	0.77	0.42	0.26	0.44	0.23	0.43	0.66	0.48
Parenthood (yes=1)	0.20	0.40	0.62	0.49	0.05	0.22	0.02	0.14	0.47	0.51
High income* (yes=1)	0.02	0.15	0.01	0.07	0	0	0	0	0.11	0.31
Uni degree (yes=1)	0.59	0.50	0.21	0.41	0.94	0.25	1.00	0.00	0.63	0.49
Counsel. exp. (years)	-	-	-	-	-	-	1.02	1.07	10.97	8.27
Risk index [†]	3.54	1.81	1.90	2.13	5.26	1.39	5.08	1.52	4.68	1.71
HL ^Δ	5.30	1.78	-	-	6.81	1.56	6.33	1.78	6.32	2.08
100,000 ^ψ	7.61	2.70	9.08	1.98	4.70	3.29	6.00	2.44	6.89	3.18

* refers to a monthly net income above €6,000 (approx. \$8460)

[†] Self-stated risk (0=risk averse to 10= fully prepared to take risks)

^Δ refers to the row in which Option B was chosen for the first time in the HL-lottery.

^ψ refers to the the amount not invested into the lottery in the €100,000 question.

3.3 Part 2: Lab Experiment

The experimental sessions took place in 2011 and 2012. In total 167 subjects in the role of advisors participated.¹¹ In the subject pool of the lab experiment we have three types of advisors: senior professional advisors, junior professional advisors and non-professionals. The non-professionals are mainly students recruited via the AWI-lab at Heidelberg University where all sessions with non-

⁸See appendix A for details.

⁹Participants were recruited via e-mail and were asked to further distribute the survey. For the completion of the web-based survey we raffled off €50 among the participants.

¹⁰We use data from 2009. See www.diw.de/soep for more details.

¹¹The experiment involves no interaction among the advisors, therefore each advisor is considered to be an independent observation.

professionals were run.¹² The senior professional advisors were recruited from a German financial advisory agency and from local banks. The junior advisors come from a banking specific advanced training institution.¹³ After finishing high school, the junior professionals enter a study program in financial advisory. This takes place at an applied university, and practical counseling makes up 50% of their education. Since these advisors are currently students, their age and educational level are comparable to the non-professional advisors.

An experimental session lasted approximately 50 minutes, on average advisors earned €11.92. Detailed information on the subject pool is shown in Table 1 in columns four through six. A first observation of relevance is that, while the gender division between junior professionals is nearly half-half, there are significantly less female advisors among the senior professionals. This could either be a result of women leaving their job for family reasons. On the other hand this could also indicate that women, being more risk averse than males on average, avoid the premium dependent financial sector and sort into other occupations. A detailed description of all treatments will be given along with the results in the next section.

4 Description and Results

This chapter describes the different treatments in detail and presents the results. In subsection 4.1 we report the advisors' risk preferences (SELF). Then we discuss the treatment SINGLE. In this treatment advisors were called to predict the effect of a variation of a single sociodemographic variable on others' risk preferences (stereotypes). In section 4.3 we present the treatment SIMULT that investigates which characteristics (out of a given set of characteristics) are important to the advisors. Finally, we check whether choices in the SIMULT treatment are consistent with the knowledge exhibited in the SINGLE treatment.

4.1 SELF: Advisors' risk preferences

Procedure The SELF treatment elicits the advisors' own sociodemographics and their risk tolerance. First, advisors answer the questions about their

¹²The experiment is programmed on a PHP-platform.

¹³We ran seven sessions with professionals - three in the lab and four on-site - under identical conditions.

sociodemographics. Then they play the €100,000 question and the HL-lottery. Both measures are incentivized as described in section 3.1.

Results The distributions of the advisors' choices in both risk elicitation mechanisms are presented in Figure 3, separately for each advisor group.¹⁴ The two-sample Kolmogorov-Smirnov test for distribution equality reveals that we cannot observe a statistically significant difference between choices of senior and junior professionals for the €100,000 question. On the contrary, non-professionals exhibit a significantly different distribution compared to both groups of professionals. This is also backed by the means of the choices in every subgroup. The amount not invested is significantly lower for non-professional advisors (around €47,000) than for professionals. Again, no difference between senior and junior professionals can be observed; junior professionals do not invest €60,000, senior professionals around €69,000 (c.f. Table 1) on average. Compared to the mean choice of the SOEP survey population (c.f. Table 1), we find that all advisor groups are less risk averse on average.

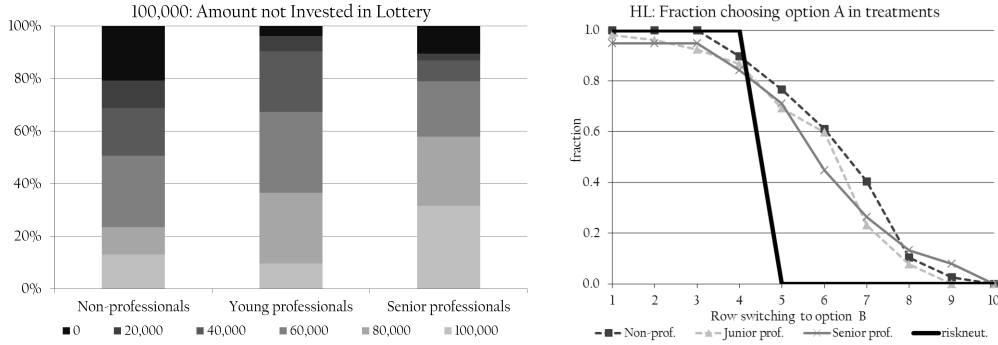
No obvious pattern of advisors' risk attitudes in the HL-lottery for the different types exists, neither for the distribution of choices nor for the means as presented in Table 1. The intersection of the risk neutral prediction (black solid line) with the actual distribution of subjects' choices in Figure 3 indicates that up to 13% of the advisors exhibit risk loving choices.¹⁵ On average, however, the advisors exhibit risk averse preferences.

Apparently, the relative payoffs - namely the earnings in the experiment compared to the actual income - of advisors in the experiment could matter. In particular senior professionals with a significantly higher income could be affected. However, previous evidence suggests that even unincentivized lottery choices correlate with actual behavior or behavior in incentivized choices (Dohmen et al. 2011). If the actual income matters, junior professionals should exhibit preferences similar to those of non-professionals, as their income is similar. However, we observe that junior and senior professionals exhibit similar choices, which underlines the occupational sorting argument.

¹⁴As previously outlined, for the €100,000 question we present the amount not invested in the lottery on a scale from 0 to 10. For the HL-lottery, the row in which option B is chosen for the first time is presented. An increasing row number indicates a higher degree of risk aversion.

¹⁵This is similar to Holt and Laury (2002), who find 20% of subjects to exhibit risk loving choices.

Figure 3: Advisors' Risk Attitudes in €100,000 question and HL-lottery



4.2 SINGLE: Variation of a Single Characteristic

Procedure At first, after finishing the SELF treatment, advisors move on to SINGLE. In the first task, we are interested in finding out whether advisors are able to locate their own risk attitudes in the (representative) distribution of risk preferences. We ask the advisors to assess whether their own decision in the two preference elicitation tasks is riskier, less risky, or bears the same risk compared to the advisees' average decision in the surveys of part 1. Advisors are informed that in a pretest, subjects answered the €100,000 question and the HL-lottery.¹⁶

Secondly, we study stereotypes of risk preferences of different subsamples. The exact wording and the different subsamples are presented in Table 2. The advisors' task is to predict correctly the subsample that makes the riskier decision. To determine whether the advisors' stereotypes are correct, we use the data from the surveys of part 1. The average decisions of different subsamples formed in the categories in 'age', 'gender', 'family status', 'education', 'parenthood' and 'income' are computed. Two subsamples are formed per category, i.e., characteristic. For these we calculate the average decisions and infer which subsample takes the riskier decision. For example, we compute the average decision among advisees that are 40 years old and above and the average of advisees that are below 40 years of age. The averages are computed for both risk measures separately.

In Table 2 an asterisk (triangle) indicates the subgroup that makes the decision

¹⁶For the HL-lottery we use the average choices in the web survey to determine the advisees' average decision, for the €100,000 question choices from the SOEP survey are employed. However, only the SOEP survey constitutes a representative sample of the German population. As mentioned above, no large representative surveys are available for the HL-lottery.

that embodies more risk for the HL-lottery (the €100,000 question).¹⁷

In total, there are fourteen questions to answer: One regarding the assessment of the advisor’s own risk preferences compared to the mean decision of the reference group and six about the specific subgroups, each for both risk measures. Each question pays €0.25 if answered correctly and zero otherwise.

Table 2: SINGLE: Average Choices of Subsamples

€100,000 question: Which group invested more money in the lottery? HL-lottery: Which group switched to option B earlier?			
Category	Choice 1	Choice 2	Choice 3
Age	younger than 40* ^Δ	40 and older	both equal
Gender	male* ^Δ	female	both equal
Family status	single* ^Δ	partner/married	both equal
Education	university degree* ^Δ	no university degree	both equal
Parenthood	having no children* ^Δ	having children	both equal
Net income	up to €1,000*	more than €1,000 ^Δ	both equal

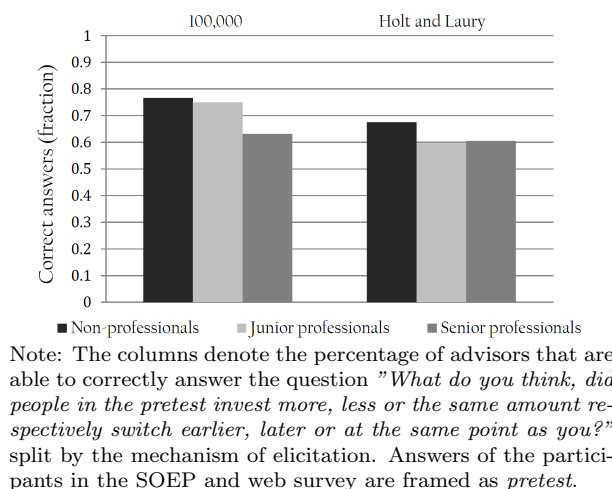
The *riskier* average decision (= the correct answer) as computed from the web survey (HL-lottery) and the SOEP survey (€100,000 question) is denoted by an asterisk (*) for HL and by a triangle (Δ) for the €100,000 question.

Results: Risk Preferences Relative to the Population Mean Figure 4 shows the percentage of advisors which are able to locate themselves correctly in the distribution of risk preferences. The figure is split up into the different subject groups and the two elicitation instruments. On the left, the fractions of correct answers in the €100,000 question are presented. The results indicate that over three quarters of the non-professionals and the junior professionals rank their risk tolerance relative to the mean choice of the subjects in the web survey and SOEP survey correctly.¹⁸ For senior professionals this value is lower but still amounts to 63%. Decisions in the HL-lottery in the right part show a similar pattern. Approximately 60% of the professionals and 67% of non-professionals assess their risk tolerance correctly. However, no statistically significant difference can be observed between the subgroups.

¹⁷The decisions of two samples differ only in the income variable. This is in line with the ambiguous findings in the literature. Hartog et al. (2002) find that risk aversion decreases in income and wealth. In contrast to that, Barsky et al. (1997) identify an inverse U-shape relation of risk aversion and income.

¹⁸As there are three possible answers, random answering would result in 33% of correct answers.

Figure 4: Advisors' Self-assessment Compared to Reference Group

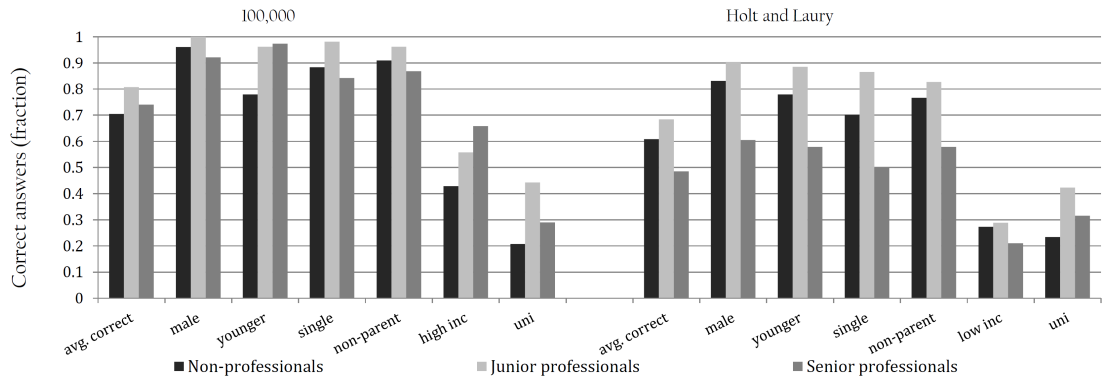


Results: Risk Preferences and Stereotypes Table 2 outlines the different subsamples and their attitudes towards risk. In Figure 5 we present the fraction of advisors who are able to identify this correlation correctly in the experiment. The column labeled 'avg. correct' displays the average of correct answers summarized over all six categories. It is followed by the fraction of correct answers in the six different subsamples.

On average, for the €100,000 question, the stereotypes of the junior professionals coincide significantly more often with the correlations in the subsamples than for the other subjects - the stereotypes of the non-professionals significantly more often than the stereotypes of senior-professionals. Regarding the HL-lottery, again junior professionals on average answer the most questions correctly, followed by non-professionals and senior professionals. Over both elicitation mechanisms, junior professionals recognize the correlation between sociodemographic information and risk preferences with significantly higher precision than non-professionals or senior professionals.

Considering the category 'gender' in Figure 5, nearly all advisors are aware of the fact that men tolerate more risk than women; in the €100,000 question even 100% of junior professionals judge this correctly. On the other hand, in the HL-lottery mechanism 61% of the senior professionals correctly believe that males, on average, tolerate more risk. Considering the categories 'age', 'family status' or 'parenthood', around 70% to nearly 100% of advisors assess the statistical relationship in the €100,000 question correctly. The percentage of

Figure 5: Distribution of Correct Answers



Note: The columns denote the percentage of advisors that are able to correctly answer the question "What do you think, on average, which of the two groups invests more/ switches earlier, or do both groups switch at the same time/invest the same amount?". The categories below the columns denote the correct answers, namely the subgroups that are found to take riskier decisions in the SOEP and web survey. The column "avg. correct" averages the correct answers over the six characteristics per risk elicitation mechanism.

correct answers is lower for the HL-lottery in these categories with around 50 to 90%.

Whereas the data delivers fairly clear results for the first four categories, in the 'education' and 'income' category the results are less clear.¹⁹ Approximately 20% of the non-professionals and 30 - 40% of the professional groups identify the effect of a university degree correctly.²⁰ While in the €100,000 question 50% to 65% are aware of the correct correlation with 'income', for the HL-lottery less than 30% of answers are accurate. The 'income' category is a special case as the correct answer is "high income" to the €100,000 question and "low income" to the HL-lottery. Our study finds that only 7% recognize this pattern correctly and answer that a different subgroup exhibits the riskier choice.

By choosing the answer "both groups switch at the same time/invest the same

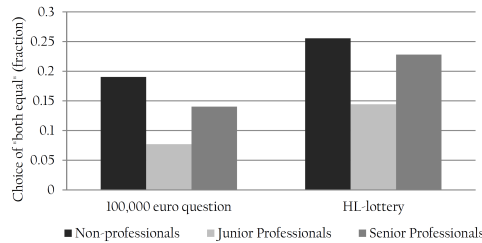
¹⁹If advisors chose their answers randomly from the three possible answers, the percentage of correct answers (in expectation) would amount to 33%. In both mechanisms beside for income and education a t-test rejects the null-hypothesis that the presented fractions equal 33% at reasonable levels of significance. If we consider that people randomly answer except for the answer "both equal", this would amount to a 50:50 chance of answering. In all categories, the fractions of correct answers of junior and non-professionals are significantly different from 50% except for income and education.

²⁰Regarding education, the correlations found in the literature are - as for income - ambiguous. Dohmen et al. (2011) show that higher educated people are more risk tolerant. In contrast to that, Belzil and Leonardi (2007) find only modest evidence for the hypothesis that higher risk tolerance relates to higher education levels, whereas Barsky et al. (1997) find a U-shaped relationship between completed years of education and the willingness to take risk.

amount” advisors indicate that they do not or cannot attach any informational value to this sociodemographic information. Figure 6 shows the percentage of advisors per subgroup and preference elicitation mechanism averaged over all categories choosing this option. The results indicate, first, that junior professionals significantly pick this option less frequently, namely on average in 7% (€100,000 question) and 14% of cases (HL-lottery). The other groups choose this option nearly twice as often. Second, in the HL-lottery, the option “both groups switch at the same time/invest the same amount” is employed significantly more often than in the €100,000 question.

In summary, we find that advisors are able to identify their own risk attitude relative to the risk preferences of the average choices in the surveys. The stereotypes regarding gender, age, partner and parenthood widely coincide with the correlations of the surveys, while this is not the case for income and education. Overall, junior professionals appear to have the highest degree of coherence in the stereotypes.

Figure 6: Distribution of Answer “both equal”: €100,000 Question and HL-Lottery



Note: Answer the question “What do you think, on average, which of the two groups invests more/switches earlier, or do both groups switch at the same time/invest the same amount?” with “both groups switch at the same time/invest the same amount”, averaged over all categories and split by advisors’ type and elicitation mechanism.

4.3 SIMULT: Which Characteristics are important?

In this section we analyze the sociodemographic characteristics to which (if at all) advisors attach informational value when assessing the risk attitude of an advisee.

Procedure In contrast to the SINGLE treatment, in SIMULT the advisors have to assess *individual profiles* of advisees. We chose eight profiles from the

web survey data of part one to use them as advisee profiles. Each profile contains data on seven sociodemographic characteristics as shown in Table 3. The advisors are informed which menu of information is provided for each category. The advisor’s task is to assess the advisee’s choice in the two risk measures correctly. If the advisor’s prediction is correct, it pays off €0.50 for each risk measure. Each advisor has to assess all eight advisee profiles. An example for such a profile would be a married man with children and university degree, aged 64, and with an income over €6,000.

However, to the advisor not the whole set of sociodemographic characteristics is necessarily available when making the prediction. We used two modes (RANK, PAY) in order to present the advisees’ information to the advisors. Each advisor has to assess four advisee profiles in RANK and four advisee profiles in PAY. The order of the eight profiles is randomly assigned.

Table 3: Categories Provided in RANK and PAY

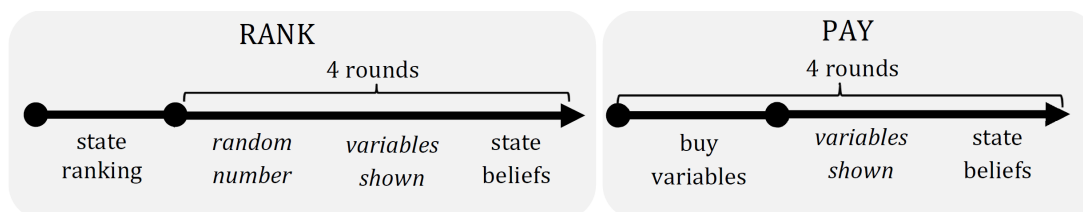
Age	Age in years
Education	University, Master, training, in training, no formal training
Family status	single, partner, married, divorced, living separated, widowed
Gender	male, female
Net income	up to €1,000, €1,001-€3,000, €3,001-€6,000, more than €6,000
Parenthood	having children, having no children
Risk Index	Self-assessment of risk with the question: <i>Regarding financial matters, are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?(0=risk averse to 10= fully prepared to take risks)</i>

RANK We are interested in the informational value advisors attach to the different sociodemographic characteristics. In this mode, advisors can influence the probability with which characteristics are shown to them. We ask the advisors to rank the seven characteristics of Table 3. The ranking has to be stated at the beginning of the treatment. For example, an advisor states: 1. age, 2. gender, 3. income, 4. risk index,... In the following the computer draws a random number between 1 and 7. If, for example, the number is two and the ranking is as in the example above, the advisor would see the following information about the advisee: age: *64 years old*, gender: *male*.

As presented in the timeline in Figure 7, each advisor states the ranking once before assessing the four advisees. The same advisor’s ranking is applied to all four advisees. However, for each advisee we draw a separate random number

that determines how many characteristics are seen. This means that advisors could see the 'age' and 'gender' of the first advisee but 'age', 'gender' and 'income' for the second advisee. The probability that a category is visible is strictly higher if ranked higher. The category ranked first is definitely seen.

Figure 7: Course of Action in RANK and PAY



PAY In the second mode PAY advisors can freely choose which characteristics are presented to them. In contrast to RANK, the advisors have to pay for each category in each profile (c.f. Figure 7) separately. The characteristics are priced according to a convex pricing rule. While the first characteristic costs €0.01 buying all seven characteristics amounts to a total price of €0.99.²¹ This means, for example, that an advisor pays €0.06 if he or she wants to see 'age', 'gender' and 'income'. For each new profile advisors can make their payment decision, which amounts to four decisions. Advisors can win a maximum of €1 per profile by assessing both risk questions correctly. The total price of the characteristics therefore never exceeds the maximum earnings. In contrast to the RANK treatment, it is not possible to obtain a ranking over the bought characteristics in this treatment. The advisor's observed decisions to buy a characteristic indicate the informational value coming from this sociodemographic characteristic.

Results: RANK As outlined above, in the RANK treatment advisors state a ranking to affect the probability that a category is visible. Figure 8 displays the average rank of these categories assessed by the three groups of advisors

²¹Price for the second characteristic: €0.02, the third: €0.03, the fourth: €0.06, the fifth: €0.12, the sixth: €0.24, the seventh: €0.50. Since advisors earn at least €4 before entering the treatments in SIMULT, we insure that there are non-negative net earnings. Advisors are informed about this.

separately.²² Table 4 shows the significance of differences between ranks according to the Joanes’s rank sum test²³ and displays the average position of the ranked category.

For the highest average rank, we observe agreement among the groups that ‘risk index’, the self-assessment of risk preferences regarding financial matters, is on average the most important category. While 64% of the non-professionals and 58% of the junior professional choose ‘risk index’ on the first position, only 32% of senior professionals do so. In addition, the average rank of the risk index is significantly lower for senior professionals than for the other two groups. All advisors on average agree that ‘gender’ and ‘income’ are ranked on the second or third position, while for ‘family status’, ‘education’, ‘parenthood’ and ‘age’, no clear pattern can be observed.

Figure 8: RANK & PAY

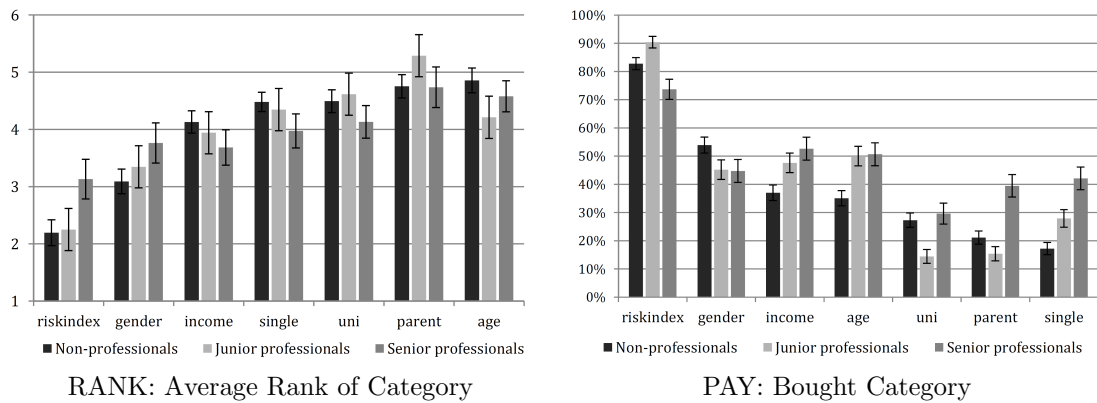


Table 4: Joanes Rank Sum Test

	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen
aver. rank	1	1	1	2	2	3	3	3	2	4	5	4	5	6	5	6	7	7	7	4	6
	riskindex			gender			income			fam.stat.			educ			parenthood			age		
age	***	***	***	***	*	*	**		*										***		
parenthood	***	***	***	***	***	**	*	***	**	***											
educ	***	***	**	***	***																
fam. stat.	***	***	*	***	*																
income	***	***		***																	
gender		***																			

*** indicate a significance level of 1%, ** of 5% and * of 10% (c.f. Christensen et al. 2006)

The rank sum test in Table 4 confirms these findings. It indicates that the average rank of the risk index is significantly different from the rank of ‘age’,

²²For the interpretation, a “higher” average rank indicates that the respective variable is ranked at a position that is revealed more often. A rank of 2 is thus “higher” than a rank of 3.

²³This test takes the difference in the total rank sum of the objects as an indicator of significant differences in ranks (Joanes 1985).

'parenthood', 'education', 'family status' and 'income' at the 1%-level for non-professionals and junior professionals. However, the average rank sum is not significantly different from 'gender' for non-professionals. The rank of gender is significantly different from 'age', 'parenthood', 'education' and 'family status' at least at the 10%-level for non-professionals and junior professionals. Junior professionals consider the information regarding the correlation between risk preferences and parenthood less valuable, because this category significantly ranks at the last position. Regarding senior professionals, the significance of the differences in the ranks is lower, although 'risk index', 'income' and 'gender' are significantly different from several other categories, especially, 'age' and 'parenthood'.

We check whether the fact that advisors do not or cannot attach informational content to a variable in the SINGLE treatment, i.e., choosing “both groups switch at the same time/invest the same amount” as an answer, has an influence on the ranking decision. Table 5 shows the results of an OLS regression. As a dependent variable we include the rank of a certain category. The independent variables carry a value of one if in the treatment SINGLE, the advisor’s answer is “both equal” for the specific category.²⁴ Standard errors are clustered at the advisors level and separate regression for the answers in the HL-lottery and the €100,000 question of the SINGLE treatment are executed. Furthermore, we control for the advisors’ type by including dummy variables for junior and senior professionals. The positive sign of the coefficient 'SINGLE' indicates that if the informational content of a sociodemographic variable is not clear to the advisor, indeed, the variable ranks lower. In other words, if an individual attaches informational content to a category, the category is likely to rank at a higher position. The results thereby confirm consistency of behavior across treatments. The coefficients are remarkably close in both regressions, consistency across mechanisms is thus confirmed as well.

Optimal Ranking Given the design of the experiment, the optimal ranking decision is of interest. A prerequisite to answer this from a theoretical standpoint would be information on the subject’s perceived correlations between the ranked characteristics. However, this information can not be observed. There-

²⁴Note that in the SINGLE treatment, the effect of the variable risk index has not been answered.

Table 5: Informational Content and Decision on Ranking of Variables

Risk measure	100,000	HL
SINGLE	0.644*** (0.155)	0.654*** (0.123)
Constant	4.178*** (0.049)	4.134*** (0.053)
Observations	1,002	1,002
R ²	0.016	0.021
Controls for advisors' type	YES	YES

Note: OLS regression. *** indicate significance at the 1%-level. Dependent variable: Rank of sociodemographic variable in treatment RANK. Six choices (the effect of the risk index has not been asked in the SINGLE treatment) in the SINGLE treatment per risk elicitation mechanism and 167 advisors in total sum up to 1002 decisions. SINGLE takes a value of one if the decision in the SINGLE treatment is "both equal" for the respective category. Clustered standard errors on advisors are employed. Category left out when controlling for advisors type: Non-professional.

fore we provide an empirical explanation to this. An advisor expects to see four (3.5 which is rounded to the next integer) categories. Given the SOEP data, we run regressions for any combination of four variables to explain the €100,000 question. The combination of 'risk index', 'gender', 'year of birth' and 'education' jointly explain most of the variation of the answer in the €100,000 question. Hence, from an empirical perspective, it would be an optimal strategy to place these four variables on the first four ranks. Figure 8 shows that risk index and gender are - on average - on the first two ranks. Education and age however, are not allocated optimally.

Overall, the results of the RANK treatment show that the 'risk index' ranks at the first position, and is observed as the most important characteristic on average. 'Gender' and 'income' rank with lower significance at the second or third position by all groups of participants. For all other categories no clear-cut and statistically significant distinction between ranks can be identified. Although especially for 'income' and 'education' the knowledge about the correlation with risk preferences as shown in the SINGLE treatment is less pronounced as for the other categories, 'income' is chosen at a high ranks. The senior professionals' choices indicate a less obvious ranking among the categories. Results from the SINGLE treatment and the RANK treatment are consistent as categories with unknown informational content in the SINGLE treatment (i.e., choosing the answer 'both equal') rank lower in the RANK treatment.

Results: PAY Since the advisor is free to buy each sociodemographic variable for every advisee profile separately, in total, four payment decisions have to be made. On average, 2.93 categories per profile are bought. The average number of categories seen in the RANK treatment is 3.88. Thus advisors in the PAY treatment have significantly less variables at hand than in the RANK treatment. Non-professionals buy 2.74 categories, junior professionals 2.91. In contrast, senior professionals purchase significantly more categories, on average 3.33. Over the four decisions, the number of categories bought does not differ significantly. The percentage of advisors buying certain categories is similar over the four purchase decisions of the treatment. This indicates that advisors are confident in their choice of categories. It is also reasonable since the advisors do not get any feedback about their success in the assessment, so learning effects from being informed about the correct belief cannot occur. However, subjects might discover which characteristics are more helpful than others when forming their belief, but given the results, this is obviously not the case.

Averaged over all four rounds, Figure 8 shows the fraction of subjects that buy a certain category for every subject type. Table 6 shows the significance levels of a paired t-test on the purchase differences in the bought categories. The row named 'Position' indicates the position of the characteristic according to the percentage of advisors buying it. In line with the RANK treatment, 'risk index' is the most important category, bought significantly more often than any other category (in 83% of the cases). While most of the advisors choose the 'risk index', 'gender' is bought by the second largest group of advisors. For non-professionals, the distribution of the categories in the PAY treatment is similar to the distribution in the RANK treatment. 'Gender' ranges at the second position and is bought significantly more often than the 'income' category. For 'income', 'family status', and 'parenthood' no clear-cut statements can be made.

For the junior professionals, the categories can be divided into two subgroups in which no significant purchase differences can be observed. The categories 'gender', 'income' and 'age' are bought in more than 45% of cases. In contrast 'education', 'family status' and 'parenthood' are less valuable to this advisor group and bought significantly less often (each less than 27%). For the senior professionals, as observed in the RANK treatment, the distribution of choices is rather uniform apart from the risk index. 'Gender', 'income', 'age', 'parenthood' and 'family status' are bought in 40 to 53% of the cases, and only 'education' is

Table 6: PAY: Test of Differences in Categories Bought

	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen	Non	Jun	Sen
position	1	1	1	2	4	4	3	3	2	4	2	3	5	7	7	6	6	6	7	5	5
	riskindex			gender			income			age			educ			parenthood			fam.stat.		
fam.stat.	***	***	***	***	**		***	**		***	**		*	*							
parenthood	***	***	***	***	***		*	***		**	***										
educ	***	***	***	***	***	*		***	***		***	***									
age	***	***	**	***																	
income	***	***	**	**																	
gender	***	***	***																		

*** indicate a significance level of 1%, ** of 5% and * of 10% of a paired t-test.

bought significantly less often (30%) than 'age' and 'income'. Consistent with the RANK treatment, senior professionals buy the 'risk index' significantly less often than advisors of the other two groups.

Most important, the fact that on average three categories are bought demonstrates that advisors attach informational value to sociodemographic information. Our results suggest that advisors perceive a causal relationship between the categories, i.e., characteristics, they buy and the risk measure. This finding generates external validity for the empirical literature that finds correlations between sociodemographic information and risk attitudes, but so far cannot report a causal interpretation (c.f. Dohmen et al. 2011, von Gaudecker et al. 2011).

As in the RANK treatment, we check whether the fact that advisors do not attach informational content to a variable in the SINGLE treatment has an effect on the purchase decision. Table 7 shows the results of a probit regression. Here, as the dependent variable we include the investor's choice to buy a certain category for the first profile of treatment PAY.²⁵ In line with previous findings, the results indicate that if the informational content is not clear to the advisor, indeed, the variable is bought up to 16.3% less often.

To strengthen our results and to verify that behavior in the overall experiment is consistent, we investigate whether choices in the RANK and PAY treatments coincide. Figure 9 presents the fraction of advisors in PAY that buys a category given its rank in the RANK treatment.²⁶ The figure indicates, e.g., that 88% of advisors in the PAY treatment buy the category which they rank on the first position in the RANK treatment. The higher a category ranks, the higher is the

²⁵Regressions with the purchase decisions in round 2 to 4 reveal similar results.

²⁶We display the choice for the purchase decision of the first profile. Figures for purchase decisions 2 to 4 are similar.

Table 7: Informational Content and Decision to Buy

Risk measure	100,000	HL
SINGLE	-0.161*** (0.036)	-0.103*** (0.037)
Observations	1,002	1,002
Pseudo R ²	0.019	0.013
Controls for advisors' type	YES	YES

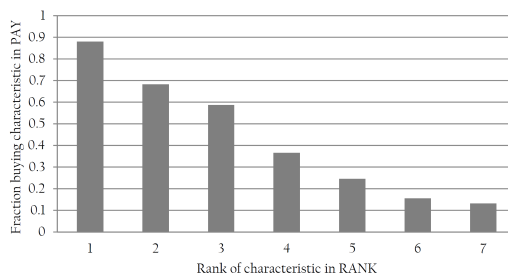
Note: Probit regression, results are marginal effect. *** indicate significance at the 1%-level. Dependent variable: Choice in treatment PAY, first round, to buy a category. SINGLE takes a value of one if the decision in the SINGLE treatment is "both equal" for the respective category. Clustered standard errors on advisors level. Category left out when controlling for advisors type: Non-professional.

probability that it is bought. Characteristics at the seventh rank are bought by less than 15% of advisors. The differences between the purchase decisions of rank one to six are significantly different at least at the 10% level. No significant difference can be observed for the last two ranks.

The results from the PAY treatment are threefold. First, they back the findings from the RANK treatment. 'Risk index' carries the highest informational value for the subjects as it is bought most often. 'Gender' (48%), 'income' (43%) and 'age' (43%) are bought more often than the categories 'education' (24%), 'parenthood' (23%) and the 'family status' (26%). Second, while non-professionals exhibit a clear pattern similar to the RANK treatment, no clear distribution can be found for junior and senior professionals.

Finally, we find a consistent behavior across treatments. Categories for which advisors choose "both equal" in SINGLE are bought significantly less often. Categories that are ranked at higher positions in RANK are bought significantly more often in PAY.

Figure 9: Fraction that Buys Category Dependent on Rank of Category



5 Conclusion

The results of this study contribute to the existing literature in several ways. A major advantage of our data is that we observe decisions of three relevant groups of subjects: non-professionals, junior financial professionals and senior financial professionals.

All subject groups show stereotypes of sociodemographics on risk preferences that largely coincide with the true correlations. Subjects are able to identify the relationship of risk attitudes and gender, age, family status and parenthood correctly. Interestingly, subjects are aware of how their own risk preferences rank compared to the mean of a representative sample of the population.

Our design allows to investigate to which sociodemographic characteristics subjects attach informational value when assessing the risk attitude of another person. Especially, gender and a person's self-assessment of risk preferences turns out to be a major source of information. We find that subjects pay to gain information on sociodemographics of the person evaluated. This clearly demonstrates that subjects attach an informational value to the characteristics they buy. Hence, such a behavior provides external validity to the strand of literature that finds only correlations between risk preferences and sociodemographic characteristics.

We find significant differences in the behavior of different subject groups. Professionals are slightly more risk averse than non-professionals. Junior professionals exhibit the most accurate stereotypes. With respect to regulatory issues, a person's self-assessment can be a useful tool. However, we find that especially experienced professionals are less willing to make use of it. The fact that the group with the highest counseling experience trusts less in the self-reported risk measure is interesting from a regulatory perspective as well.

References

- [1] Alevy, J. E., Haigh, M. S., List, J. A. (2007). Information Cascades: Evidence From a Field Experiment with Financial Market Professionals, *The Journal of Finance*, 62(1), 151-180
- [2] Allen, F. (2001). Do Financial Institutions Matter?, *The Journal of Finance*, 56(4), 1165-1175
- [3] Andersen, S., Harrison, G. W., Lau, M. I., Rutström, E. E. (2006). Elicitation Using Multiple Price List Formats, *Experimental Economics*, 9(4), 383-405
- [4] Barsky, R. B., Juster, F. T., Kimball, M. S., Shapiro, M. D. (1997). Preference Parameters and Behavioral Heterogeneity: An Experimental Approach in the Health and Retirement Study, *Quarterly Journal of Economics*, 112(2), 537-579
- [5] Bhattacharya, U., Hackethal, A., Kaesler, S., Loos, B., Meyer, S. (2012). Is Unbiased Financial Advice to Retail Investors Sufficient? Answers from a Large Field Study, *Review of Financial Studies*, 25(4), 975-1032
- [6] Belzil, C., Leonardi, M. (2007). Can Risk Aversion Explain Schooling Attainments? Evidence from Italy, *Labour Economics*, 14(6), 957-970
- [7] Bonin, H., Dohmen, T., Falk, A., Huffman, D., Sunde, U. (2007). Cross-Sectional Earnings Risk and Occupational Sorting: The Role of Risk Attitudes, *Labour Economics*, 14(6), 926-937
- [8] Byrnes, J. P., Miller, D. C., Schafer, W. D. (1999). Gender Differences in Risk Taking: A Meta-Analysis, *Psychological Bulletin*, 125(3), 367-383
- [9] Charness, G., Villeval, M. C. (2009). Cooperation and Competition in Intergenerational Experiments in the Field and the Laboratory, *The American Economic Review*, 99(3), 956-978
- [10] Christensen, Z. T., Ogden, L. V., Dunn, M. L., Eggett, D. L. (2006). Multiple Comparison Procedures for Analysis of Ranked Data, *Journal of Food Science*, 71(1), 132-143
- [11] Croson, R., Gneezy, U. (2009). Gender Differences in Preferences, *Journal of Economic Literature*, 47(2), 448-474
- [12] DeLeire, T., Levy, H. (2004). Worker Sorting and the Risk of Death on the Job, *Journal of Labor Economics*, 22(4), 925-954
- [13] Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., Wagner, G. (2011). Individual Risk Attitudes: Measurement, Determinants, and Behavioral Consequences, *Journal of the European Economic Association*, 9(3), 522-550

- [14] Dohmen, T., Falk, A. (2011). Performance Pay and Multidimensional Sorting: Productivity, Preferences, and Gender, *American Economic Review*, 101(2), 556-590
- [15] Eckel, C. C., Grossman, P. J. (2008). Forecasting Risk Attitudes: An Experimental Study Using Actual and Forecast Gamble Choices, *Journal of Economic Behavior and Organization*, 68(1), 1-17
- [16] Eriksen, K. W., Kvaløy, O. (2009). Myopic Investment Management, *Review of Finance*, 14(3), 521-542
- [17] Fehr, E., List, J. A. (2004). The Hidden Costs and Returns of Incentives—Trust and Trustworthiness Among CEOs, *Journal of the European Economic Association*, 2(5), 743-771
- [18] Fuchs-Schündeln, N., Schündeln, M. (2005). Precautionary Savings and Self-Selection: Evidence from the German Reunification “Experiment”, *Quarterly Journal of Economics*, 120(3), 1085-1120
- [19] von Gaudecker, H. M., van Soest, A., Wengström, E. (2011). Heterogeneity in Risky Choice Behavior in a Broad Population, *American Economic Review*, 101(2), 664-694
- [20] Grund, C., Sliwka, D. (2010). Evidence on Performance Pay and Risk Aversion, *Economics Letters*, 106(1), 8-11
- [21] Haigh, M. S., List, J. A. (2005). Do Professional Traders Exhibit Myopic Loss Aversion? An Experimental Analysis, *The Journal of Finance*, 60(1), 523-534
- [22] Harrison, G. W., List, J. (2004). Field experiments, *Journal of Economic Literature*, 42(4), 1009-1055
- [23] Harrison, G. W., List, J. A., Towe, C. (2007). Naturally Occurring Preferences and Exogenous Laboratory Experiments: A Case Study of Risk Aversion, *Econometrica*, 75(2), 433-458
- [24] Harrison, G. W., Rutström, E. ”Risk Aversion in the Laboratory,” in Cox, G.W., Harrison, G., (eds.), *Risk Aversion in Experiments*, Bingley, UK: Emerald, Research in Experimental Economics, 12, 2008
- [25] Hartog, J., Ferrer-i-Carbonell, A., Jonker, N. (2002). Linking Measured Risk Aversion to Individual Characteristics, *Kyklos*, 55(1), 3-26
- [26] Holt, C., Laury, S. K. (2002). Risk Aversion and Incentive Effects, *American Economic Review*, 92(5), 1644-1655

- [27] Hsee, C. K., Weber, E. U. (1999). Cross-National Differences in Risk Preference and Lay Predictions, *Journal of Behavioral Decision Making*, 12, 165-179
- [28] Joanes, D. N. (1985). On a Rank Sum Test Due to Kramer, *Journal of Food Science*, 50(5), 1442-1444
- [29] Kaustia, M., Alho, E., Puttonen, V. (2008). How Much Does Expertise Reduce Behavioral Biases? The Case of Anchoring Effects in Stock Return Estimates, *Financial Management*, 37(3), 391-412
- [30] Leuermann, A., Roth, B. (2012). Does Good Advice Come Cheap? On the Assessment of Risk Preferences in the Lab and in the Field, *AWI Discussion Paper*, No. 534, Heidelberg University
- [31] Masclet, D., Colombier, N., Denant-Boemont, L., Loheac, Y. (2009). Group and Individual Risk Preferences: A Lottery-Choice Experiment with Self-Employed and Salaried Workers, *Journal of Economic Behavior and Organization*, 70(3), 470-484
- [32] Nofsinger, J. R., Varma, A. (2007). How Analytical is Your Financial Advisor?, *Financial Services Review*, 16, 245-260.
- [33] Siegrist, M., Cvetkovich, G., Gutscher, H. (2002). Risk Preference Predictions and Gender Stereotypes, *Organizational Behavior and Human Decision Processes*, 87(1), 91-102

For Online Publication only

A Instructions of Web Survey

Regarding this survey: Please try to answer all questions. If you do not know an answer or if you prefer not answer a question please skip it.

General Questions

- Please state: Year of birth, Federal state of birth, Gender, Mother tongue, Nationality, Religion
- Please state: Do you speak other languages? If so, which?
- Family status: (Please choose: single, divorced, partner, living separated, married, widowed)
- Number of children: (Please choose: 1, 2, 3, 4, 5 or more, none)

Education

- Highest school degree: (Please choose: Abitur, Realschule, Hauptschule, Sonderschule, no school graduation)
- Please state: How many years have been in school till your highest degree?
- Education: (Please choose: University, Advanced training, Training, in training, no training)
- State the name/title of your last training:
- Job: (Please choose: Worker, Employee, Employee in public sector, Civil Servant, in education/training, self-employed, working at my own household, unemployed, disabled, other)
- Working time: (Please choose: full-time, half-time, part-time but less than half-time, not working)
- Last executed job (Please state):
- Monthly net income: (Please choose: up to €1,000, €1,001-€3,000, €3,001-€6,000, more than €6,000)
- Do you own: (Please choose: Bonds, Properties, Security funds, Stocks or derivatives)

Lotteries

Lottery 1

You will have to make ten decisions in the table below. In every row of the table you can choose either Option A or Option B. Option A and Option B are two lotteries. Your job is to decide on one lottery (either Option A or Option B). Consider the first row for example: In Option A you receive a payment of €2 with a probability of 10% and a payment of €1.60 with a probability of 90%. If you imagine a ten-sided-dice this would mean that you receive €2 if you rolled a 10 and €1.60 for rolling any number between 1 and 9. If you choose Option B you will receive €3.85 with a probability of 10% and €0.10 with a probability of 90%. If you again imagine the ten-sided-dice, this would indicate that you receive €3.85 if you roll a 10 and €0.10 if you roll a number between 1 and 9. Please decide whether you would choose Option A or Option B in each of the 10 rows:

Your Choice		Option A				Option B				
A	B	Nr.	Probability	Payment	Probability	Probability	Probability	Probability	Probability	
<input type="radio"/>	<input type="radio"/>	1	10%	2 €	90%	1,60 €	10%	3,85 €	90%	0,10 €
<input type="radio"/>	<input type="radio"/>	2	20%	2 €	80%	1,60 €	20%	3,85 €	80%	0,10 €
<input type="radio"/>	<input type="radio"/>	3	30%	2 €	70%	1,60 €	30%	3,85 €	70%	0,10 €
<input type="radio"/>	<input type="radio"/>	4	40%	2 €	60%	1,60 €	40%	3,85 €	60%	0,10 €
<input type="radio"/>	<input type="radio"/>	5	50%	2 €	50%	1,60 €	50%	3,85 €	50%	0,10 €
<input type="radio"/>	<input type="radio"/>	6	60%	2 €	40%	1,60 €	60%	3,85 €	40%	0,10 €
<input type="radio"/>	<input type="radio"/>	7	70%	2 €	30%	1,60 €	70%	3,85 €	30%	0,10 €
<input type="radio"/>	<input type="radio"/>	8	80%	2 €	20%	1,60 €	80%	3,85 €	20%	0,10 €
<input type="radio"/>	<input type="radio"/>	9	90%	2 €	10%	1,60 €	90%	3,85 €	10%	0,10 €
<input type="radio"/>	<input type="radio"/>	10	100%	2 €	0%	1,60 €	100%	3,85 €	0%	0,10 €

Lottery 2

Please now consider that it is not possible for you to answer the lottery. You ask a close confidant to make the following decision for you. On your behalf, the close confidant is asked to name the preferred option in every row. Please remind yourself of the persons image and name. You are not able to communicate with your close confidant, you are not able to inform him/her about your decision. What do you think, how would this close confidant take the decisions in the following lottery?

Again you find the same table as before in which we ask you for 10 decisions. As before, you can either choose Option A or Option B. You make your decision by crossing the option in the column "Your choice".

Which relationship do you have with the person (e.g., partner, friend, relative etc.)?

Your Choice		Option A				Option B				
A	B	Nr.	Probability	Payment	Probability	Probability	Probability	Probability	Probability	Probability
<input type="radio"/>	<input type="radio"/>	1	10%	2 €	90%	1,60 €	10%	3,85 €	90%	0,10 €
<input type="radio"/>	<input type="radio"/>	2	20%	2 €	80%	1,60 €	20%	3,85 €	80%	0,10 €
<input type="radio"/>	<input type="radio"/>	3	30%	2 €	70%	1,60 €	30%	3,85 €	70%	0,10 €
<input type="radio"/>	<input type="radio"/>	4	40%	2 €	60%	1,60 €	40%	3,85 €	60%	0,10 €
<input type="radio"/>	<input type="radio"/>	5	50%	2 €	50%	1,60 €	50%	3,85 €	50%	0,10 €
<input type="radio"/>	<input type="radio"/>	6	60%	2 €	40%	1,60 €	60%	3,85 €	40%	0,10 €
<input type="radio"/>	<input type="radio"/>	7	70%	2 €	30%	1,60 €	70%	3,85 €	30%	0,10 €
<input type="radio"/>	<input type="radio"/>	8	80%	2 €	20%	1,60 €	80%	3,85 €	20%	0,10 €
<input type="radio"/>	<input type="radio"/>	9	90%	2 €	10%	1,60 €	90%	3,85 €	10%	0,10 €
<input type="radio"/>	<input type="radio"/>	10	100%	2 €	0%	1,60 €	100%	3,85 €	0%	0,10 €

Other Questions

People can behave differently in different situations.

How would you describe yourself? Are you a risk loving person or do you try to avoid risks? People behave differently in different areas. How would you assess your own risk tolerance in the following areas? Please choose a number on a scale between 0 and 10. A 0 denotes “risk averse” and 10 indicates “fully prepared to take risks”. You can gradate your assessment with the values in between. Your risk tolerance....

- when driving? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- in leisure and sports? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- in your career? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- concerning your health? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- in your trust in unfamiliar people? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- in financial investments? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)

Another question regarding your risk preferences:

Please consider what you would do in the following situation:

Imagine that you had won €100,000 in the lottery. Almost immediately after you collect the winnings, you receive the following financial offer, the conditions of which are as follows: There is the chance to double the money. It is equally possible that you could lose half of the amount invested. You have the opportunity to invest the full amount, part of the amount or reject the offer.

What share of your lottery winnings would you be prepared to invest in this financially risky, yet lucrative investment?

What fraction of your winnings do you want to wager on the risky but also profit-promising lottery?

(Please choose: €100,000; €80,000; €60,000; €40,000; €20,000; nothing, I would decline the offer)

What is your opinion on the following three statements?

- On the whole one can trust people (Please choose: Totally Agree, agree slightly, slightly disagree, Disagree Totally)
- Nowadays one can't rely on anyone (Please choose: Totally Agree, agree slightly, slightly disagree, Disagree Totally)
- If one is dealing with strangers, it is better to be careful before one can trust them (Please choose: Totally Agree, agree slightly, slightly disagree, Disagree Totally)

Would you say that for most of the time, people *(Please choose on of the two possibilities)*

- attempt to be helpful?
- or only act in their own interests?

Do you believe that most people *(Please choose on of the two possibilities)*

- would exploit you if they had the opportunity
- or would attempt to be fair towards you?

What would you say: How many close friends do you have?

How often does it occur that,

- that you lend your friends your personal belongings (i.e., CDs, books, car, bicycle)? (Please choose: Very Often, Often, Sometime, Seldom, Never)
- that you lend your friends money? (Please choose: Very Often, Often, Sometime, Seldom, Never)
- that you leave the door to your apartment unlocked? (Please choose: Very Often, Often, Sometime, Seldom, Never)

B Instructions of Lab Experiment

Please note:

- Comments to the instructions are printed in *italic* and were not presented to the subjects.
- A horizontal line indicates whenever a new window was presented to advisors.
- To ease orientation, treatments as mentioned in the paper are identified by TREATMENT X.

Instructions of the Lab Experiment:

Goal and Process of the Experiment

The experiment consists of a total of two phases, in each of which you will have to make decisions. In the first phase we will ask you a number of questions and you will make two decisions. In the second phase of the experiment you will make the same set of decisions for other people and your payment will depend on the accuracy of your decisions.

The €2.65 that you receive for your participation can be used during the experiment - more on that later. You can make money with every decision you make. We will inform you about your compensation in every round as well as your total compensation for the entire experiment only **after the completion of the experiment**.

Basic Information

Please answer the following general questions. The success of the experiment depends on you answering the questions carefully.

General Information

- Year of Birth:
- Height in cm:
- Gender: (please choose: male/ female)
- Marital Status: (please choose: Single, Divorced, In a relationship, Living Separately, Married, Widowed)

- How many children do you have?: (please choose: no children, one child, two children, three children, four children, five or more children)
- Enter your highest level of education: (please choose: University, Technical College, Apprenticeship, Currently a student, Completed Economics Major, Currently an Economics Major, No vocational education)
- What is your current occupation?: (please choose: white-collar employee, white-collar civil servant, blue-collar employee, blue-collar civil servant, civil servant with tenure, student, self-employed, working at home, unable to work, unemployed, other)
- What are your current working hours?: (please choose: full-time, half-time, part-time (less than halftime), not employed)
- What is your monthly net income in Euro?: (please choose: Up to €1,000, €1,001 - €3,000 , €3,001 - €6,000, over €6,000)

How would you describe yourself?

Are you a risk loving person or do you try to avoid risks?

People behave differently in different areas. How would you assess your own risk tolerance in the following areas?

Please choose a number on a scale between 0 and 10. A 0 denotes "risk averse" and 10 indicates "fully prepared to take risks". You can gradate you assessment with the values in between.

You risk tolerance?

- In general? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- When driving? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- In leisure and sports? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- In your career? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- Concerning your health? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- In your trust in unfamiliar people? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)
- In financial investments? (Please choose: 0,1,2,3,4,5,6,7,8,9,10)

Game Decision I

We will now begin with the first game decision. Please read the instructions carefully; it is very important that you understand the question.

Game Decision I

Please consider what you would do in the following situation:

Imagine that you had won €100,000 in the lottery. Almost immediately after you collect the winnings, you receive the following financial offer, the conditions of which are as follows: There is the chance to double the money. It is equally possible that you could lose half of the amount invested. You have the opportunity to invest the full amount, part of the amount or reject the offer. What share of your lottery winnings would you be prepared to invest in this financially risky, yet lucrative investment?

Your Compensation

In terms of your actual compensation, the €100,000 are equivalent to €2.50 (€80,000 correspond to €2, etc.). Your chosen amount will be entered into the lottery; the computer draws lots to see if you double or half your wagered amount.

Your Decision

What fraction of your winnings do you want to wager on the risky but also profit-promising lottery?

(Please choose: €100,000; €80,000; €60,000; €40,000; €20,000; nothing, I would decline the offer)

By clicking on NEXT your choices are saved. You cannot change your choices afterwards. Your compensation will be revealed at the end of the experiment.

Game Decision II

The second game decision is up next. Please read the instructions carefully. Take your time. It is very important that you thoroughly understand the question, since this question will be repeated in different variations throughout the rest of the experiment.

Game decision II

You will have to make ten decisions in the table below. In every row of the table you can choose either Option A or Option B. Option A and Option B are two lotteries. Your job is to decide on one lottery (either Option A or Option B). Consider the first row for example: In Option A you receive a payment of €2

with a probability of 10% and a payment of €1.60 with a probability of 90%. If you imagine a ten-sided-dice this would mean that you receive €2 if you rolled a 10 and €1.60 for rolling any number between 1 and 9. If you choose Option B you will receive €3.85 with a probability of 10% and €0.10 with a probability of 90%. If you again imagine the ten-sided-dice, this would indicate that you receive €3.85 if you roll a 10 and €0.10 if you roll a number between 1 and 9. There are two rational strategies in this game:

- you choose Option A at the beginning before switching to Option B for the rest of the rows
- you choose Option B for all of the rows

We are interested in finding out in which row you first choose Option B. Please specify the row in which you will first choose Option B below the table. If you only choose Option B, please enter a 1.

Your Compensation

A random row will be chosen for your actual Euro-payment. Your chosen option will be applied to this row. The realization of either the higher or the lower payment for a certain option will be chosen randomly. If the seventh row is chosen for example and you have decided on option A, you will receive €2 with a 70% probability and €1.60 with a 30% probability.

Nr.	Payoff	Option A		Payoff	Payoff	Option B		Payoff
		Probability				Probability		
1	2 Euro	10%	90%	1,60 Euro	3,85 Euro	10%	90%	0,10 Euro
2	2 Euro	20%	80%	1,60 Euro	3,85 Euro	20%	80%	0,10 Euro
3	2 Euro	30%	70%	1,60 Euro	3,85 Euro	30%	70%	0,10 Euro
4	2 Euro	40%	60%	1,60 Euro	3,85 Euro	40%	60%	0,10 Euro
5	2 Euro	50%	50%	1,60 Euro	3,85 Euro	50%	50%	0,10 Euro
6	2 Euro	60%	40%	1,60 Euro	3,85 Euro	60%	40%	0,10 Euro
7	2 Euro	70%	30%	1,60 Euro	3,85 Euro	70%	30%	0,10 Euro
8	2 Euro	80%	20%	1,60 Euro	3,85 Euro	80%	20%	0,10 Euro
9	2 Euro	90%	10%	1,60 Euro	3,85 Euro	90%	10%	0,10 Euro
10	2 Euro	100%		1,60 Euro	3,85 Euro	100%		0,10 Euro

I choose option B the first time in row:

Your Decision

I choose option B the first time in row: (Please choose: 1,2,3,4,5,6,7,8,9,10)

By clicking on NEXT your choices are saved. You cannot change your choices afterwards. Your profit and your compensation will be revealed at the end of the experiment.

How do other people decide?

In the rest of the experiment you will have to estimate how other people made the game decisions that you just made.

Game Decision 1

Ca. 22,000 participants answered the Game Decision I in a preliminary survey. Remember, the wording of Game Decision 1 was:

To shorten the experimental instructions, we will subsequently refer to this description of Game Decision 1 as “DESCRIPTION GAME DECISION 1”.

Please consider what you would do in the following situation: Imagine that you had won €100,000 in the lottery. Almost immediately after you collect the winnings, you receive the following financial offer, the conditions of which are as follows: There is the chance to double the money. It is equally possible that you could lose half of the amount invested. You have the opportunity to invest the full amount, part of the amount or reject the offer. What share of your lottery winnings would you be prepared to invest in this financially risky, yet lucrative investment?

- €100,000
- €80,000
- €60,000
- €40,000
- €20,000
- Nothing, I would decline the offer

Your Compensation

You will receive €0.25 for every correct assessment.

Do you think the average participant of the preliminary survey wagered more, less, or the same amount of money as you did in the first game decision?

Your Decision

I think that the average participant of the preliminary survey wagered

(Please Choose: More, less, the same amount of) money as I did in the first game decision.

How do you think certain groups within the preliminary survey decided?

Your Decision

Who wagered more money in the lottery?

- Gender: (please choose: men, women, both groups wagered the same amount)
- Age: (please choose: older (40 and up), younger (below 40), both groups wagered the same amount)
- Marital Status: (please choose: single, married or in a relationship, both groups wagered the same amount)
- Level of Education: (please choose: participants with a university degree, participants without a university degree, both groups wagered the same amount)
- Number of Children: (please choose: participants with children, participants without children, both groups wagered the same amount)
- Income Category: (please choose: participants with a net monthly income up to €1,000, participants with a net monthly income above €1,000, both groups wagered the same amount)

By clicking on NEXT your choices are saved. You cannot change your choices afterwards. Your compensation will be revealed at the end of the experiment.

How do other people decide?

Game Decision II

In another survey 190 people responded to Game Decision II. The characteristics of the participants were also documented.

Remember, the wording of Game Decision 2 was:

To shorten the experimental instructions, we will subsequently refer to this description of Game Decision 1 as “DESCRIPTION GAME DECISION 2”.

You will have to make ten decisions in the table below. In every row of the table you can choose either Option A or Option B. Option A and Option B are two lotteries. Your job is to decide on one lottery (either Option A or Option B). Consider the first row for example: In Option A you receive a payment of €2 with a probability of 10% and a payment of €1.60 with a probability of 90%. If you imagine a ten-sided-dice this would mean that you receive €2 if you rolled a 10 and €1.60 for rolling any number between 1 and 9. If you choose Option B you will receive €3.85 with a probability of 10% and €0.10 with a probability of 90%. If you again imagine the ten-sided-dice, this would indicate that you receive €3.85 if you roll a 10 and €0.10 if you roll a number between 1 and 9. We are interested in finding out in which row you first choose Option B. Please specify the row in which you will first choose Option B below the table. If you only choose Option B, please enter a 1.

Nr.	Option A			Option B				
	Payoff	Probability		Payoff	Payoff	Probability	Payoff	
1	2 Euro	10%	90%	1,60 Euro	3,85 Euro	10%	90%	0,10 Euro
2	2 Euro	20%	80%	1,60 Euro	3,85 Euro	20%	80%	0,10 Euro
3	2 Euro	30%	70%	1,60 Euro	3,85 Euro	30%	70%	0,10 Euro
4	2 Euro	40%	60%	1,60 Euro	3,85 Euro	40%	60%	0,10 Euro
5	2 Euro	50%	50%	1,60 Euro	3,85 Euro	50%	50%	0,10 Euro
6	2 Euro	60%	40%	1,60 Euro	3,85 Euro	60%	40%	0,10 Euro
7	2 Euro	70%	30%	1,60 Euro	3,85 Euro	70%	30%	0,10 Euro
8	2 Euro	80%	20%	1,60 Euro	3,85 Euro	80%	20%	0,10 Euro
9	2 Euro	90%	10%	1,60 Euro	3,85 Euro	90%	10%	0,10 Euro
10	2 Euro	100%		1,60 Euro	3,85 Euro	100%		0,10 Euro

I choose option B the first time in row:

Your Compensation

You will receive €0.25 for every correct assessment.

Do you think the participants in the preliminary survey switched to Option B earlier (so in a row with a smaller row number), later, or at the same time as you did?

Your decision

I think that on average, the participants in the preliminary survey switched to option B Please Choose (earlier, later, at the same place) as I did.

How do you think certain groups within the preliminary survey decided?

Your decision

Which group switched to option B earlier (so in a row with a smaller row number)?

- Gender: (please choose: men, women, both in the same row)
 - Age: (please choose: older (40 and up), younger (below 40), both in the same row)
 - Marital Status: (please choose: single, married or in a relationship, both in the same row)
 - Level of Education: (please choose: participants with a university degree, participants without a university degree, both in the same row)
 - Number of Children: (please choose: participants with children, participants without children, both in the same row)
 - Income Category: (please choose: participants with a net monthly income up to €1,000, participants with a net monthly income above €1,000, both in the same row)
-

TREATMENT SIMULT RANK

In this section you are supposed to estimate how other people decided in the Game Decisions that you have just made. The better your estimation, the higher your compensation will be. You will receive some information about the persons whose decision behavior you are trying to predict.

It is important to understand what information is subsumed in certain characteristics. Please carefully read the characteristics and the possible manifestations of these characteristics.

The following characteristics are available:

1. Age
2. Level of Education
 - University
 - Technical College
 - Apprenticeship
 - Still in Apprenticeship
 - Currently an Economics Major
 - No vocational education
3. Income (current monthly net income)
 - Up to €1,000
 - €1,001 -€3,000
 - €3,001 -€6,000
 - over €6,000
4. Marital Status
 - Single
 - Divorced
 - In a relationship
 - Living Separately
 - Married
 - Widowed
5. Gender
 - Male
 - Female

6. Children

- Has children
- Has no children

7. Risk disposition concerning financial investments

- Answer to the question: Are you risk loving when it comes to financial investments or do you try to avoid financial risks? Please choose a number on a scale between 0 and 10. A 0 denotes "risk averse" and a 10 indicates "fully prepared to take risks".

You will only have to assess how a single person decided in the two Game Decisions, so you will have to evaluate a specific person. You are paid according to the accuracy of your assessment. If you correctly assess how the presented person acted in both decisions, you will receive €0.50 for every correct prediction. In order to make your assessment, you will make the decisions you previously made for yourself for the specific person instead.

The information available for assessing the person will consist of a selection of the seven characteristics presented above. You will not receive all seven of the person's characteristics. Instead, we will generate a random number between 1 and 7 that corresponds with the number of revealed characteristics. If the randomly generated number is a 3, for example, you will receive the first three characteristics of the person that you are assessing.

You can now decide which characteristic you want to assign to the first position, the second position, all the way to the seventh position. Make your decisions carefully; characteristics with a higher position are revealed with a higher probability.

Your Decision

Sort the characteristics by clicking and dragging the characteristics to the positions you want them in.

The characteristic at the top of the list has the highest prioritization; the second characteristic has the second-highest characterization etc.

Note: The characteristics are presented in alphabetic order

- Level of Education
- Income category
- Marital Status
- Year of Birth
- Gender
- Has Children

- Risk disposition concerning financial investments

This window appeared 4 times with differing number of characteristics shown

How do you assess other people?

The person has the following characteristics: Since x was drawn as the random number you receive the first x of the characteristics that you had chosen for the person that you are assessing.

- ...
- ...

Game Decision I

What decision do you think the person above made in the game's first round? Remember, the wording of Game Decision I was:

DESCRIPTION GAME DECISION 1

Your Compensation

If you make exactly the same decision as the described person, you will receive €0.50. If your decision does not correspond with the described person's decision, you will not receive any money.

Your Decision

What fraction of your winnings do you want to wager on the risky but also profit-promising lottery?
(Please choose: €100,000; €80,000; €60,000; €40,000; €20,000; nothing, I would decline the offer)

Game Decision II

What decision do you think the person described above made in the game's second round? Remember, the wording of Game Decision 2 was:

DESCRIPTION GAME DECISION 2

Your Compensation

If you make exactly the same decision as the described person, you will receive €0.50. If your decision does not correspond with the described person's decision, you will not receive any money.

Your Decision

Please try to make the same decision as the person described above made. We

are interested in finding out in which row you first choose Option B. Please specify the row in which you will first choose Option B.

The person chooses Option B for the first time in row: (Please choose: 1,2,3,4,5,6,7,8,9,10)

By clicking on NEXT your choices are saved. You cannot change your choices afterwards. Your compensation will be revealed at the end of the experiment.

TREATMENT SIMULT PAY

This and the following window appeared 4 times.

How do you assess other people?

In this round you will have to assess four other people again. As in the previous round, you will be given a selection of the seven characteristics shown above to help facilitate your decision-making process. This time, however, you can choose which of the characteristics of the person you are assessing you want to have revealed. You have to pay for every revealed characteristic.

As you can garner from the table below, the costs of the characteristics vary. The first characteristic costs €0.01, die second €0.02 etc. The seventh characteristic costs €0.50. The right-hand column of the table displays the total costs. If you want to see all seven characteristics of the person you are assessing, for example, you will be charged €0.99.

	Cost of Characteristic	Total cost
1. Characteristic	€0.01	€0.01
2. Characteristic	€0.02	€0.03
3. Characteristic	€0.03	€0.06
4. Characteristic	€0.06	€0.12
5. Characteristic	€0.12	€0.24
6. Characteristic	€0.25	€0.49
7. Characteristic	€0.50	€0.99

Your compensation is as follows:

Compensation for Game Decision I + Compensation for Game Decision II - Payment for Characteristics

As in the previous round you will receive €0.50 for Game Decision 1 and €0.50 for Game Decision 2 if your assessment proves to be correct.

The costs of buying certain characteristics will be subtracted from your compensation. If, for example, your assessment for Game Decision I is correct and your evaluation for Game Decision II is not and you have bought three characteristics, you will receive ($€0.50 + €0 - €0.06 = €0.44$).

Please note: Since you have winnings from previous rounds and the €2.65 that we put at your disposal at the beginning of the game, your total compensation cannot be negative.

Please decide on the characteristics that you want to buy now:

- Age
- Level of Education

- Income
- Marital Status
- Gender
- Children
- Risk disposition concerning financial investments

By clicking on NEXT your choices are saved. You cannot change your choices afterwards. Your compensation will be revealed at the end of the experiment.

How do you assess other people?

The person has the following characteristics:

You have bought x characteristics. The person you are supposed to assess has the following characteristics:

- ...
- ...

Game Decision I

What decision do you think the person above made in the game's first round? Remember, the wording of Game Decision I was:

DESCRIPTION GAME DECISION 1

Your compensation

If you make exactly the same decision as the described person, you will receive €0.50. If your decision does not correspond with the described person's decision, you will not receive any money.

Your Decision

What fraction of your winnings do you want to wager on the risky but also profit-promising lottery?

(Please choose: €100,000; €80,000; €60,000; €40,000; €20,000; nothing, I would decline the offer)

Game Decision II

What decision do you think the person described above made in the game's second round?

Remember, the wording of Game Decision 2 was:

DESCRIPTION GAME DECISION 2

Your Compensation

If you make exactly the same decision as the described person, you will receive €0.50. If your decision does not correspond with the described person's decision, you will not receive any money.

Your Decision

Please try to make the same decision as the person described above made. We are interested in finding out in which row you first choose Option B. Please specify the row in which you will first choose Option B.

The person chooses Option B for the first time in row:

(Please choose: 1,2,3,4,5,6,7,8,9,10)

By clicking on NEXT your choices are saved. You cannot change your choices afterwards. Your compensation will be revealed at the end of the experiment.

Questions

Please answer the following questions.

Note: The questions refer to the entire experiment.

1. Do you know one of the persons on the pictures? If yes, which one(s)?
2. Which of the people on the pictures would you trust most with you money?
Please indicate a picture number.
3. Do you think that the provided information was sufficient? What additional information about the individuals you assessed would you have liked to have had?
4. Do you generally believe that it is possible to evaluate the decisions of other people?
5. Were you more confident making you assessments on the basis of the picture or of the profile (with the characteristics)?
6. Did you have a certain strategy in making your assessments? If yes, please describe briefly.
7. When you think back to your last counseling session at your bank, did you have the feeling that you counselor could assess your preferences/wishes well?

By clicking on NEXT your choices are saved. You cannot edit your answers afterwards.

Your compensation

Calculation of your compensation

You total payment comprises the compensation for every single round.

Basic amount		€x
Part 1		
Game Decision 1		€x
Game Decision 2		€x
Part 2		
Pre-survey Assessment	Game Decision I	€x
	Game Decision II	€x
Part 3		
Ordering Characteristics	Round 1:	€x
	Round 2:	€x
	Round 3:	€x
	Round 4	€x
Buying	Round 1:	€x
	Purchase Price:	€x
	Round 2:	€x
	Purchase Price:	€x
	Round 3:	€x
	Purchase Price:	€x
	Round 4	€x
	Purchase Price:	€x
Pictures	Round 1:	€x
	Round 2:	€x
	Round 3:	€x
	Round 4:	€x
Total Compensation		€x

Payment Procedure

We will make the payments according to your ID (identification number)
 You will find a receipt among the documents in front of you. Please enter your total compensation, your ID, and selected other information in the acknowledgment form.

Important: Do not close the browser window. Raise your hand as soon as you are finished.

Thank you for your participation