Same same, *not* different: Client-Advisor Matching in the Finance Industry

February 29, 2024

Abstract

In an artefactual field experiment online with 131 financial advisors and 441 subjects from the general population, we introduce a matching procedure to assign advisors to clients based on similarity in risk-return attitudes and a risk bearing capacity - a measure for loss aversion. Similarity between clients and advisors in the risk bearing capacity increases delegated investment decisions, and similarity in both characteristics leads to a higher satisfaction with the matched advisor. We find no misreporting of advisors' own risk attitudes to be paired with more clients to increase expected earnings.

JEL: C93, G11, G40 Keywords: experimental finance, financial professionals, financial advice, delegated decisionmaking

1 Introduction

The increasing complexity of financial products highlights the crucial role of financial advisors to guide inexperienced investors. Household investors focus on high expected yields when selecting financial products, but mostly either do not want or are not able to bear the involved high risks. To cater these yield-seeking individuals with a low risk tolerance, involved risks are veiled in products structured in a highly complex way (Célérier and Vallée, 2017). In such an environment, it is the responsibility of ethical financial advisors to properly translate their clients' risk tolerance in suitable financial products.

The economic relevance of advice is reflected in the numbers: the community of financial advisors and intermediaries in Europe consists of approximately 500,000 private individuals, who work in this profession as their main occupation.¹ Statistics show that in Germany alone, where we collect the data for this paper, the percentage of individuals consulting an advisor for their financial affairs is as high as 42%.²

Financial regulations and the law, in particular the Markets in Financial Instruments Directive (MiFID II), make it mandatory for financial advisors to identify their clients' risk taking attitudes, risk bearing capacity, and risk tolerance (Directive 2014/65/EU). Despite these requirements, one of the serious concerns of financial advice is that it is often not tailored to clients' preferences, but is mainly determined by the advisor's preferences (Foerster et al., 2017; Linnainmaa et al., 2021)). This is problematic, since there is no evidence or plausible reasoning that preferences of clients and advisors should be correlated. One consequence of missing customization of advice can be a very limited degree of following proposed strategies: Stolper (2018) finds that two thirds of the households completely ignore the provided advice, and those who follow do this to only a limited extent. In our study, we document improved outcomes in delegation and satisfaction with an advisor that result from client-advisor pairs in which risk profiles of both parties are similar.

Several causes can be responsible for the lack of customization. First, particular incentive structures can drive advisors to take disproportional risks when investing for clients. This is the case where the payment of incentives, such as bonuses, is aligned with the clients' returns on assets (Rajan, 2006; Diamond and Rajan, 2009; Bebchuk and Spamann, 2009; Kleinlercher et al., 2014; Kirchler et al., 2019). Given that financial professionals are, on average, significantly more risk seeking than the average client (see Weitzel et al., 2020, for example), it is very likely that clients end up with unsuitable advice or undesirably risky investments. Second, the so called "false consensus effect" (Roth and Voskort, 2014; Bollen and Posavac, 2018) can cause financial professionals to overestimate the extent to which their own views and preferences reflect those of their

¹https://perma.cc/VX8P-PPXL

²Statista Global Consumer Survey 2020, https://perma.cc/PNG9-WVJ5

clients. This problem arises in situations where advisors are generally striving to implement their clients' preferences, but at some point in the process falsely assume that their clients' preferences are closer to their own than they actually are. Third, even in cases where advisors recognize differences in preferences and aim to act in their client's best interest, they are only partly able to do so (Kling et al., 2022; Holzmeister et al., 2019). One of the reasons why advisors are unable to provide tailored advice effectively is due to the disparities in how clients' preferences are assessed and interpreted, resulting in differences in perceptions, as Holzmeister et al. (2019) argue. As a consequence, potential clients might delegate relatively few decisions to advisors and, if they do, be dissatisfied with the advice.

This paper addresses the limitations of current financial advice practices, such as lack of customization on the advisor side and a low rate of delegation as well as dissatisfaction on the client side. It offers potential solutions from multiple perspectives. We collected unique data from financial advisors (N = 131) from Germany paired with potential clients from the general population (N = 441) in a pre-registered artefactual field experiment online (following the taxonomy of Harrison and List, 2004; and our pre-registration can be found under https://osf.io/zcem5/. Ultimately, we propose and experimentally test a matching mechanism between advisors and their clients based on individual similarity in risk attitudes. A central feature of our design is that we elicit and match upon both the risk bearing capacity and the risk-return preferences. The risk bearing capacity as implemented in our design is a measure for loss aversion. There is ample evidence that in the perception of both the general population but also financial professionals, higher probabilities of losses are what makes one investment "riskier" than the other (see Holzmeister et al., 2020; Zeisberger, 2022a,b, for example). Since the risk bearing capacity as a tool for communicating preferences in a client-advisor setting has been disregarded in the related literature despite its relevance (see Kling et al., 2022; Holzmeister et al., 2019, for example), we include it as a major component in our experiment.

There are three main advantages to conducting an experimental analysis of a matching mechanism based on risk attitudes. First, existing literature on successful client-advisor relationships is limited as it only analyzes pre-existing pairs where endogenous factors, such as trust, have already been established over time (Lachance and Tang, 2012; Germann et al., 2018). Second, there is no existing empirical data available to test a matching mechanism based on risk attitudes as it requires knowledge of both the client's *and* advisor's attitudes. While data on clients' attitudes is mandatory in financial advice, data on advisors' attitudes is not readily available. Third, our experiment enables us to isolate and test the impact of similarity in risk preferences on delegation and satisfaction of potential clients in a controlled and simplified setting.

In our study, we conduct a survey and a main experiment. The survey is independent of the experiment, and no subject participated in more than one part of the study, so a subject either took part in the survey or the main experiment. We collect observations for clients (SURVEY^{CLIENT}) and

financial advisors (SURVEY^{PROF}). SURVEY^{CLIENT} elicits the desirability of the matching criteria and matching process from a clients' perspective. In a set of questions, we elicit which criteria clients perceive as important in being allocated to a financial advisor (e.g., measures for risk preferences, gender, experience), and whether closeness or distance in those criteria is preferred. SURVEY^{PROF} elicits risk attitudes and demographics, which we later use as an unbiased baseline measure for advisor characteristics.

The basic structure of our main experiment follows three steps. In the first step, subjects in the role of clients complete an investment task. In the second step, advisors are paired with clients from the first step according to the matching rule as defined by the treatment - either randomly or based on stated risk preferences. Advisors have to make several decisions: one investment decision for themselves, and investment decisions for each of their clients, one for each client separately. In the third step, clients need to make a decision whether to delegate their investment decision to their matched advisor, based on information about their advisor's risk preferences. In that step, clients are also asked to state their satisfaction with the match. All three steps are run as separate parts in chronological order, since the online nature of the experiment made it impossible to have clients and advisors participate at the same time in one session. Advisors only needed to make decisions in the second step, such that there was lower risk of attrition throughout the study. The investment decision advisors and clients needed to make involved choosing between a risky asset and a risk-free bond. The design of the investment task features a certain level of complexity, taking up a central aspect of the client-advisor relationship, which is a potential information advantage on the advisor side and one potential reason for delegation on the client side.

Clients were paid according to the returns on their investment decisions if they decided not to delegate, and based on the returns on the investment decision of their advisor in case the decided to delegate. Financial advisors received the returns on their own investments based on their investment decision. In addition, in case a client decided to delegate, financial advisors were paid according to the returns of that respective client to mimic a potentially problematic incentive structure in real-life advisor-client relationships. In previous literature, this incentive structure has lead to excessive risk-taking of advisors on behalf of their clients, as advisors are on average more risk seeking than their clients (Rajan, 2006; Diamond and Rajan, 2009; Bebchuk and Spamann, 2009; Kleinlercher et al., 2014; Kirchler et al., 2019).

Financial advisors were assigned to clients based on either RANDOM MATCHING or PREFERENCE-BASED MATCHING, which matched them based on the self-reported risk bearing capacity and riskreturn preferences. The purpose of this was to improve the alignment of preferences and reduce potential conflicts of interest, and to increase the level of delegation of investment decisions to advisors (the latter is suggested by the findings of Stolper and Walter, 2018). Matching based on our two measures is rooted in current regulations of financial advice: the Markets in Financial Instruments Directive (MiFID II) makes it already mandatory for financial advisors to assess the risk bearing capacity as well as the risk return preferences (Directive 2014/65/EU). In addition, the mechanism relies on variables which are unaffected by the advising process in itself (such as trust, for example), and it does not rely on variables that can only be used to match a subset of advisors or clients (such as experience on the job, for example).

In the RANDOM MATCHING treatment, three clients were randomly matched to each advisor, while in the PREFERENCE-BASED MATCHING treatment, each advisor could be matched with up to six clients based on the similarity in their risk characteristics. With the RANDOM MATCHING treatment, we aim to mimic a large part of standard cases with regard to the heterogeneity in preferences between advisors and clients, and it allows us to exploit the exogenous variation of the distance in risk attitudes. Please note that we do not generally assume that the standard case of the allocation process in real-life advice situations is actually truly random: we only assume that in terms of risk preferences, clients and advisors are randomly matched. With the PREFERENCE-BASED MATCHING matching treatment, we address one of the potential drawbacks of such a mechanism: it is open to manipulation by financial advisors who could misreport their attitudes to be matched with more clients.

The results of SURVEY^{CLIENT} indicate that clients consider (i) risk attitudes to be an important factor in the matching process, and (ii) that similarity rather than dissimilarity in those attitudes is preferred. The latter finding addresses the crucial choice of the criterion we adopt in this paper with respect to the quality of an advisor's decision for their clients. From this observation we conclude that the optimal outcome is advisors being able to translate their clients' risk attitudes into a portfolio choice which reflects those attitudes. This contrasts the more paternalistic view on financial advice, where the role of an advisor is to "nudge" - or at least direct - the, on average, relatively risk averse client to select a riskier portfolio with potentially higher returns.

Ultimately, we show that similarity in the risk bearing capacity can substantially increase the fraction of delegated decisions from the client to the advisor in our experiment. We see this as further evidence in favor of giving the risk bearing capacity a more prominent role in the communication of risk attitudes in financial advice. While more directed research is needed to identify this effect of the risk bearing capacity in the communication between clients and advisors, it seems that the risk bearing capacity might serve as an effective tool, allowing advisors to customize their advice to clients (as also suggested by the findings of Duxbury and Summers, 2004; Holzmeister et al., 2020). Our results highlight the importance of including loss aversion in financial advice studies and underscore the potential benefits of incorporating this measure into current practises. In contrast to the findings of Hackethal et al. (2012); Calcagno and Monticone (2015) and Stolper (2018), we do not find that the clients' financial literacy has an impact on the likelihood to delegate. Additionally, the results reveal that general trust in the finance industry does not impact the likelihood to delegate, which contrasts our predictions based on Gennaioli et al. (2015) and Germann et al. (2018). Analyzing the investment decisions of advisors for their clients, we show that clients' risk-return attitudes as well as their risk bearing capacity are a significant and robust predictor for the fraction of endowment invested in the risky asset. Advisors seem to be both willing and able to take clients' individual characteristics into account. We also find that the majority of advisors is able to mimic their clients' investment decision on the basis of the clients' self-reported risk bearing capacity and risk-return scale. Insofar as those are the optimal allocations made by clients, the advisors' decisions are in the client's best interest. This holds despite the advisor's incentives being aligned with the clients' returns on assets. These results are in line with the findings of Rud et al. (2018); Ifcher and Zarghamee (2020); Kling et al. (2022). When comparing the advisors' investment decision for themselves to how they invest for their clients, we find them to invest a significantly higher fraction of their endowment in the risky asset on their own behalf. However, we do find the advisor's risk bearing capacity to be conversely related to the amount invested for the client. This "cautious shift" has also been found in previous studies (see Füllbrunn and Luhan, 2015; Eriksen et al., 2020, for example). Finally, we provide evidence that advisors do not misstate their preferences when in competition for clients, using the PREFERENCE-BASED MATCHING treatment. Overall, our findings point in the direction that similarity in risk characteristics - more precisely, the risk bearing capacity - can be a way to improve the process of financial advice.

This study adds to the literature in several ways in addition to the above-mentioned studies. There is a growing, but still very small body of literature identifying some partly endogenous drivers of the delegation of financial decisions. We add to this literature by developing an exogenous allocation mechanism that potentially increases the quality of advice across a heterogeneous group of clients and advisors. First, several factors have been identified which might lead to a delegation of investment decisions, so far without a clear consensus. Hackethal et al. (2012), for example, find that advisors are matched with wealthier, older, more experienced, single, and female investors. This points to the reason of delegating financial decisions being based not on a lack of experience, but on time-constraints for people that have the experience and knowledge to invest without advice. On the contrary, Gennaioli et al. (2015) argue that the decision to delegate stems from a lack of knowledge about financial decisions, and anxiety about making own investments leads to delegation. A further explanation is trust as the basis for delegation: The more people trust financial advisors, the more they delegate (Lachance and Tang, 2012; Germann et al., 2018). With our paper, we add to this strand of literature by proposing an exogenous mechanism that - by itself - can increase delegation. With our design, we can then measure the lower bound of an increase in delegations: when complemented by an endogenously created higher level of trust between advisor and client, for example, we expect an additional increase in delegations.

Second, our study adds to the literature analyzing the impact of deception or misconduct in finance. In an experiment with financial professionals, Kirchler et al. (2019) find that professionals' investment decisions for their clients are mostly driven by rankings – those lagging behind increase risk-taking and, as a consequence, might take inferior decisions for their customers. Danilov et al. (2013) find, also in an experiment conducted with professionals from the financial services sector, that when group affiliation is strong when team incentives are provided, advisors sell products that are more profitable for them, but inferior for the client side. Using a deception game, Angelova and Regner (2013) show that the quality of financial advice increases if there is a high payment before the investment decision is taken by the advisor, plus a bonus for the decision afterwards. In a more recent study, Tergiman and Villeval (2022) show that fraud on the advisor side is persistent in a finitely repeated experimental game with asymmetric information between advisors and clients. In contrast to those findings, we show that advisors truthfully report their preferences when competing for clients. This adds to the recent findings of Huber and Huber (2020), who find that financial professionals act more honest in a financial and neutral context than in an abstract situation. Our results are in line with the studies that find little misconduct - they suggest that in our context, financial advisors do not misreport to increase their expected earnings.

2 Experimental Design

We conduct an artefactual field experiment online with financial advisors from Germany and subjects from the general population from Prolific.co (Palan and Schitter, 2018). The experiment and the main hypotheses have been pre-registered on OSF.³

We focus on a German sample due to easier access to financial professionals from Germany, therefore the experiment was also conducted in German, and to reduce language barriers for the general population.⁴ Overall, 572 subjects (131 financial professionals and 441 people from the general population) participated in the experiment.

The financial advisors were personally recruited by contacting over 2,500 individual advisors, whose contact information was publicly available on their business homepage. This includes independent advisors as well as employees of large banks and financial institutions. It is important for this type of study to be able to verify that subjects in the role of financial advisors actually are people currently employed as financial advisors, since preferences and observed behavior of financial professionals has been shown to be significantly different from students or the general population (see Kirchler et al., 2018; Weitzel et al., 2020, for example). We ensured this by compiling our own database and verifying the current job profile on the company website of

³Due to a technical problem the pre-analysis plan was not uploaded on December 5, 2019 (when the pre-registry was initiated), but only on January 14, 2020. The date when the PDF document was created and not modified afterwards was, however, December 5, 2019, and therefore before any of the surveys and experiments had been conducted.

 $^{^{4}}$ On Prolific, we selected the following requirements: first language German, approval rate > 95%, and no participation in several treatments of the study.

the advisor('s employer), with the drawback that the desired sample sizes as specified in the pre-analysis plan could not be reached. We refrained from using other online databases, since the distinct job profile cannot be verified.All parts of the experiment were conducted between December 5, 2019 and February 29, 2020. For financial professionals, 83.21% of the participants are male with a mean age of 45.19 years.⁵ In the general population sample, 57.60% are male and the mean age is 30.39 years. A detailed overview of all participant characteristics is provided in section B in the Online Appendix.

The time structure of the experiment (c.f. detailed timeline in figure 9 in the Online Appendix in section A) was determined by the pre-analysis plan, and none of the survey participants participated in any investment experiment, and no participant of the investment experiment participated in more than one of the treatments (RANDOM MATCHING and PREFERENCE-BASED MATCHING). First, we conducted two surveys (SURVEY^{CLIENT} and SURVEY^{PROF}). Second, we collected the data of the investment experiment. This means that the surveys served as a test of the importance of the selected matching criteria as described in more detail below, and did *not* determine the matching procedure.

Throughout the experimental design section, the earnings from the experiment are stated in Euros. In the original surveys and experiments, earnings for the general population were paid in Pounds Sterling, whereas the earnings for financial professionals were paid in Euros. This difference stems from Prolific.co being located in the UK, paying participants in the local currency, and all payments were initiated through the platform. For financial professionals, earnings were paid out via bank transfers in Euro. The exchange rate during the time of the experiment was approximately $\notin 1 = \pounds 0.85$.

2.1 SURVEY^{CLIENT} and SURVEY^{PROF}

We conducted SURVEY^{CLIENT} as a basis for and to validate the matching criteria assigning clients to advisors as used in the subsequent investment experiment. SURVEY^{PROF}, in contrast, serves as a baseline elicitation of financial professionals' characteristics to compare them with characteristics elicited in subsequent treatments, in particular the PREFERENCE-BASED MATCHING, where financial professionals have a potential incentive to misreport their risk attitudes as outlined in section 2.2.2. The surveys were programmed in Qualtrics and distributed via Prolific for the general population, and via e-mail for financial professionals.

SURVEY

In the first part of the survey for the general population, we elicit general demographic information

⁵This sample is comparable to other studies involving financial professionals, as, for example Kirchler et al. (2018, 2019), and Weitzel et al. (2020).

such as age, gender, and the highest level of education. Additionally, we record whether a subject had invested in financial products in the past five years, if they have ever consulted a financial advisor, and their general trust in employees in the finance industry⁶. To assess risk attitudes, we include a question eliciting general risk attitudes using the corresponding survey item from the German Socio-Economic Panel (GSOEP; Dohmen et al., 2011)⁷, a risk-return profile as well as the risk bearing capacity. The risk-return profile is asking subjects to self-asses their risk-return preferences on a scale from $1 = \text{``Lower Risk - typically lower return'' to 7 = ``Higher Risk - typically higher return''. The risk bearing capacity item asks subjects to imagine they had a sum of 1,000 Euro that they want to invest, and then to indicate the percentage of loss they were able to bear on a scale from 0% (= no loss at all) to 100% (= total loss).$

The latter two scales are taken out of actual surveys that banks use to elicit risk attitudes of their customers as regulated by the Markets in Financial Instruments Directive (MiFID II, in particular Directive 2014/65/EU, 2014). We chose to use the same wording for two reasons: (i) to keep the process of advice as close to the current situation in practise as possible, and (ii) to test whether these rather simple measures are indeed able to provide meaningful guidance in the process of advice. We especially expect the latter to be the case, since there is ample evidence that simple survey measures are highly correlated with real-life decision-making (c.f. Falk et al., 2018, for example).

In the second part of the survey, subjects were faced with a subset of the same questions with the only difference that they were asked to indicate the *desired characteristics* of a financial advisor, plus a question about the desired experience in the industry measured in years. Subjects were asked to imagine being in a situation in which they want to entrust a financial advisor with the investment of their wealth. In addition, after each question we elicited the specific weight of this particular characteristic on a scale from 0 = "not at all important to me" to 10 = "very important to me". This weighting then serves as a basis for the matching process used in the subsequent treatments. Also, we can speak to the literature emphasizing the importance of homophily for the decision whether to delegate investment decisions to a financial advisor (c.f., for example, Stolper and Walter, 2018).

This survey was conducted on December 5, 2019. Overall, the average completion time was 4 minutes, participants received approximately $0.60 \in$ for a completed survey. The specific questions asked in the survey can be found in section D.1 of the Online Appendix.

SURVEY^{PROF}

The survey for *financial professionals* consists of only one part which is similar to the first part of

⁶This was elicited on a Likert scale from 0 = "does not describe me at all" to 10 = "describes me perfectly". ⁷How do you see yourself:

Are you generally a person who is fully prepared to take risks or do you try to avoid risks?

⁽Answers possible on a Likert scale from 0 = "not at all willing to take risks" to 10 = "very willing to take risks")

the survey of the general population with the difference that they did not have to indicate their investment experience, their general trust in the finance industry, and whether they have ever consulted (another) financial advisor. In addition, financial professionals had to indicate their experience in the industry measured in years. The survey results serve as a baseline measure of the characteristics of financial professionals to be compared to stated characteristics in the subsequent treatments.

All responses were collected in the period between January 20 and February 6, 2020. On average, it took financial professionals 6 minutes to complete the survey, for which they received a compensation of $5 \in$. The specific questions asked in the survey can be found in section D.2 of the Online Appendix.

2.2 Investment Experiment

2.2.1 Treatment RANDOM MATCHING

In this treatment, clients (subjects from the general population on Prolific.co) are randomly paired with advisors and have to make a decision whether to delegate their investment decision to that advisor. The basic structure consists of three stages, which were conducted chronologically in that order: In Stage I, only clients indicate their characteristics and make an investment decision. In Stage II, clients are assigned to advisors, and only advisors indicate their characteristics and make investment decisions for themselves and on the clients' behalf. In Stage III, clients then decide whether to delegate the investment decision to their assigned advisor and indicate their satisfaction with the match. The structure had two main advantages. First, advisors and clients did not need to be online at the exact same time and day for specific sessions. This also had the advantage that we had the full pool of clients to assign to advisors during Stage II, and not just a subset of clients in a specific session. This made it possible to assign clients to each advisor in both treatments. Second, the time investment necessary on the advisor side was limited to making decisions for themselves and the advice process itself, which reduces attrition rates.

Stage I: Clients' investment decisions

The first part of Stage I is identical to the first part of the SURVEY^{CLIENT}. Subjects are asked to indicate their age, gender, and highest level of education. Additionally, they indicate whether they have invested in financial products in the past five years, if they have ever consulted a financial advisor, and their general trust in employees in the finance industry. We also elicit general risk attitudes, risk-return preferences and the individual risk bearing capacity.⁸

 $^{^8 \}rm The exact wording of all questions together with possible responses can be found in section <math display="inline">\rm D.3.1$ of the Online Appendix.

In the second part of Stage I, we measure financial literacy and numeracy using a 6-item questionnaire by Van Rooij et al. (2011) and an 8-item inventory by Weller et al. (2013), respectively. This aims at being able to relate to the results of Gennaioli et al. (2015), who state that lower financial literacy predicts higher levels of delegation.

The third part of Stage I consists of an investment task. Clients are endowed with 1,000 Taler (experimental currency unit) to invest in a one-shot investment task with a risk-free (safe return of 1.7%) and a risky asset (expected return of 3.2% with a standard deviation of 12.9%). They can invest any Taler amount in the risky asset, the remainder is kept in the risk-free account.

The risk-free return was calculated from the 3-months quarterly returns of the EURIBOR (FIBOR before 1999) in the 20-year period between October 1998 and October 2019. The risky return and standard deviation are calculated from the quarterly returns of the BMW.DE stock in the period between October 1998 and October 2019⁹. As additional information, we provide the Beta of the stock in comparison to the DAX30 as well as the skewness of the distribution.

The purpose of including this information is to highlight a key aspect of financial advice: while clients and advisors are given the same information, advisors typically have an advantage in understanding and interpreting it. As a consequence, clients might not be able to make an informed decision due to inferior knowledge in interpreting information. The structure aims to incorporate the argument of Gennaioli et al. (2015), who point out that investors delegate because they have less knowledge about finance and are consequently too anxious to make investment decisions. The exact wording and examples for a decision screen are given in section D.3.1 of the Online Appendix.

Before making their investment decisions, clients are informed that in Stage II of the experiment a financial professional will make the same investment decision for them and that they can decide to delegate to this advisor in Stage III. Additionally, clients are informed that they will receive information about the risk attitudes of their assigned advisor before their decision in Stage III, but not about the advisor's particular investment decision for them. Clients are explicitly informed about the assignment of their financial advisor being random.

The incentives for this part are a combination of a fixed fee of approximately $1.90 \in$ and the investment outcome in Taler with an exchange rate of 100 Taler = $0.25 \in$ in case the investment is not delegated to the assigned financial advisor. The return determining the investment outcome was randomly drawn from the a distribution with an expected return of 3.2% and a standard deviation of 12.9% (based on the BMW.DE stock in the period between October 1998 and October 2019). All payments are transferred via Prolific at the very end of the experiment. On average, clients completed this part of the experiment in 12 minutes.

⁹This particular stock was chosen with respect to similar return structures as returns used in related experiments (c.f. Kirchler et al., 2018, for example).

Stage II: Advisors' investment decisions

The first and second part of Stage II are identical to SURVEY^{*PROF*}. Financial professionals are asked to indicate their age, gender, and highest level of education together with their experience in the industry measured in years. Additionally, we elicit general risk attitudes, risk-return preferences and the individual risk bearing capacity, as well as financial literacy and numeracy.¹⁰

In the third part of Stage II, advisors are first asked to make the identical investment decision as clients were presented with in Stage I. After that, three different clients are *randomly* assigned to one advisor. The advisor is informed about this procedure and the subsequent investment task on behalf of their client at the very beginning of the experiment, i.e., *before* responding to any demographic questions, in particular reporting their risk attitudes.¹¹ The advisor is then presented with the identical investment decision as for themselves with the added information about the respective clients' risk-return characteristic and risk bearing capacity as elicited in the first part of Stage I. This information is prominently displayed in the upper right corner of the advisor's decision screen when investing for the client.¹² Importantly, the advisors have to make *three separate investment decisions* on subsequent screens, one for each of the assigned clients.

In general, the random assignment procedure mimics the standard protocol of banks and their allocation of incoming clients to advisors in terms of risk attitudes. This allows us to exploit the exogenous difference in distance between preferences of clients and advisors. First, this makes it possible to test whether clients who are similar to their advisor in terms of risk preferences delegate significantly more than the clients who are further apart. Second, we can test whether the satisfaction with the matched advisor in terms of preferences is higher when preferences are more aligned. Additionally, we can explore the advisor's decision making process for their clients, such as whether own preferences or client's preferences are taken into account in the investment decision.

The earnings for this part are the investment outcome of the financial professional's decision for themselves as well as a fixed fee of $1.50 \in$ plus the randomly determined returns for every client who actually delegated the investment decision to them in Stage III. The exchange rate is 100 Taler = $1 \in$. With this scheme, the incentives for financial advisors are four times higher than for clients, which is a common practice also in related experiments with financial professionals (see, e.g. Weitzel et al., 2020). This speaks to the difference in average hourly wages between financial

¹⁰The exact wording of all questions together with possible responses can be found in section D.3.2 of the Online Appendix.

¹¹The exact wording was:

In the course of the experiment, you are asked to make an investment decision for three customers assigned to you. These customers are also experimental participants from the general population and can choose whether they prefer to implement their own decision or the decision you made for them at the end of the experiment.

These clients will be randomly assigned to you. In total, three customers are assigned to you. You receive information about the risk level of your respective client during the decision.

 $^{^{12}}$ The exact wording as well as an example for the decision screen is given in section D.3.2 of the Online Appendix.

professionals and the general population.

On average, financial professionals completed this part of the experiment in 15 minutes, earning \in 12.65.

Stage III: Clients' delegation decision and satisfaction

In Stage III, clients decide whether they want to delegate the investment decision to the assigned advisor. Additionally, we elicit the level of satisfaction with the matched advisor on a scale from 0 = "not satisfied at all" to 10 = "very satisfied". The only information they receive in this stage of the experiment is their assigned advisor's risk-return preference and risk bearing capacity.¹³ In particular, clients are not informed about the outcome of neither their own investment decision, nor the decision the assigned advisor made for them. The reason for not giving clients the information about outcomes or particular choices is based on that aspect of the practicalities in real-world financial advice. The outcomes are unknown by nature when deciding whether to delegate, since returns materialize only in the future, and the actual allocation choices made by the advisor are in most cases not necessarily understood by the client due to the complexity of the environment. In our design, client satisfaction serves as an indicator of the perceived importance of risk-return attitudes and risk-bearing capacity as criteria for matching in both the RANDOM MATCHING and PREFERENCE-BASED MATCHING treatments. In other words, it measures the satisfaction with the matching process itself. From an experimenter perspective, we also want to avoid outcome bias (as extensively studied in psychology, c.f. early work such as Baron and Hershey, 1988, for example).

The earnings for the completion of Stage III were a fixed fee of approximately $0.30 \in$ for an average time of 2.5 minutes. In the investment part of the experiment, clients (whether they delegated or not) received $2.40 \in$ on average. Together with the fixed fee as described before, clients earned $1.90 \in$ (fixed fee Stage I) + $0.30 \in$ (fixed fee Stage III) + $2.40 \in = 4.60 \in$ on average.

2.2.2 Treatment PREFERENCE-BASED MATCHING

The treatment PREFERENCE-BASED MATCHING is identical to the RANDOM MATCHING treatment, except for the allocation mechanism between clients and their advisors. The PREFERENCE-BASED MATCHING allocates advisors to their clients in terms of closeness of stated risk-return preferences and risk bearing capacities. The more similar they are, the higher the likelihood of a match: In this protocol, advisors and clients are only matched if the absolute deviation in their risk-return scale is less than two scaling points, and the absolute deviation in their risk bearing capacity is less

¹³"Your financial advisor's level on the risk-return scale: XX/7."

[&]quot;Your financial advisor can bear a loss of XX% out of 1,000 \in ."

than three scaling points. Scaling points here mean the response options on the Likert scales used for the elicitation of the specific characteristics. For example: If an advisor states to have a risk-return attitude of "7" and the client states a "5", they are defined to be two scaling points apart. The difference in the allowed distances of the characteristics are simply due to the fact that they are measured on different scales (0 to 10 for risk bearing vs. 1 to 7 for risk-return). This procedure was specified in the pre-analysis plan. For every advisor starting with the investment experiment, the program computed the distance in attitudes for all remaining clients in the pool that had not yet been assigned to an advisor, and for all clients falling within the range of the described criteria, at most six were selected at random to be matched with the respective advisor.¹⁴ The higher the number of clients, the higher the expected returns.

There are several reasons why only two criteria are included in the analysis of matching characteristics in the treatments RANDOM MATCHING and PREFERENCE-BASED MATCHING. First and foremost, the risk-return scale as well as the risk bearing capacity of a prospective client are already included in the "Know-Your-Costumer" (KYC) process.¹⁵ Using these characteristics in a matching protocol simplifies a potential implementation in the advisory process considerably compared to including more or different criteria. The higher the number of criteria, the lower the probability of finding a potential match. Also, we focus on criteria that makes it possible to actually match every client with an advisor - and assigns at least one client to every advisor. In general, the aim is to have a matching procedure which does not only match a subset of either clients or advisors. We prespecified only the two final matching criteria (risk-return scale and risk bearing capacity) in the pre-analysis plan. Considering ethical arguments, we refrained from matching upon experience (as a proxy for age) and gender.

Again, advisors are informed about this procedure at the very beginning of the experiment, i.e., *before* reporting their risk attitudes, which potentially allows a misstatement of preferences to be matched with more customers. The reasoning behind this analysis follows results in the previous literature that advisors, on average, are significantly more risk-seeking than their potential clients (see, for example Weitzel et al., 2020). Advisors, knowing that they are matched to their clients upon the two characteristics, could potentially anticipate this difference in the distribution. Since advisors also have an incentive to match with as many customers as possible, they could misrepresent their characteristics to fit the majority of customers. Analog to treatment RANDOM MATCHING, the advisors had to make *separate investment decisions* on subsequent screens, one for each of the assigned clients.

With this treatment we can test whether advisors actually misreport their own preferences to have

¹⁴Less than six clients were assigned in all the cases where not enough clients could be found who were within the required distance of the self-assessed risk attitudes.

¹⁵This is regulated by the Markets in Financial Instruments Directive (MiFID II), which makes it mandatory for financial advisors to assess their clients' risk taking attitudes, risk bearing capacity, and risk tolerance (Directive 2014/65/EU).

a competitive advantage to get paired with more clients in comparison to the distribution of risk attitudes as elicited in the SURVEY^{PROF}.

3 Results

In total, 572 subjects (131 financial professionals and 441 people from the general population) participated in the experiment. In the SURVEY^{CLIENT}, we have 250 participants from the general population, in the SURVEY^{PROF} 67 financial professionals, in the RANDOM MATCHING treatment, we have 155 participants (40 financial professionals, 115 general population), in the PREFERENCE-BASED treatment, we have 100 participants (24 financial professionals, 76 general population). For the results of the RANDOM MATCHING and PREFERENCE-BASED MATCHING treatment, we only use those observations of client-advisor pairs where both parties completed the whole experiment. The actual number of professional participants in all parts of the surveys and investment experiments are lower than the sample sizes as aimed for in the pre-analysis plan. This is due to a relatively low response rate of 5% of all contacted financial professionals in the final sample without incomplete observations, when recruited via personalized e-mail invitations. We did not use subjects from additional existing online databases due to the reasons outlined in the description of the experimental design in section 2.

3.1 Survey Results: Preferred Advisor Characteristics

To verify the importance of the risk-return preferences as well as the risk bearing capacity in the desired design of the matching process between clients and advisors from the client's point of view, Figure 1 displays the mean elicited weights of the potential characteristics of a financial advisor in the $SURVEY^{CLIENT}$. Weights were indicated on a scale from 0 = "not at all important to me" to 10 = "very important to me", a full overview of all desired characteristics as well as their indicated weights are included in section D.1 of the Online Appendix.¹⁶

The results show that the risk bearing capacity and the risk-return preferences are indeed ranked as two of the most important characteristics with a mean weight of 6.52 (risk bearing) and 6.25 (risk-return). As evident from Figure 1, the majority of characteristics are weighted similarly. The advisor's education, general risk attitudes, and experience expressed in years in the job are also stated to be of high importance.

Relating these findings to previous literature, it stands out that the desired gender of the advisor

¹⁶Please note that this survey was not conducted as a basis to decide on the matching criteria that were later used in the experiment, but merely as a verification that these are indeed criteria that are relevant from a client's perspective.



Figure 1: Mean weights of potential advisor characteristics: This figure illustrates the mean weights for each of the possible characteristics that a prospective client is matched upon with a prospective advisor. Error bars indicate standard errors of the mean, N = 250.

does not seem to be important when choosing an optimal prospective advisor. In contrast to that finding, Stolper and Walter (2018) report that male advisors delegate decisions more frequently if their advisor is male compared to being with a female advisor. However, this finding seems striking in a sense that the mean weight of gender is 2.39, which is significantly lower than the second-lowest ranked characteristic education (p < 0.01, two-sided t-test). This result is not driven by a difference in the weights between male and female prospective clients in our data. Prospective female clients rank "gender" as a matching criterion similarly as prospective male clients (p = 0.89, two-sided t-test). However, even though all survey responses were collected anonymously, participants still might refrain from selecting "gender" as an important matching criterion, since in practise discrimination based on this attribute is controversial.

Figure 2 takes a closer look on what particular level of risk-return preferences and risk bearing capacity clients actually desire their prospective advisor to have. Own characteristics are plotted on the x-axis relative to the desired advisor's characteristics (y-axis). The size of the dots represents the weights (i.e., number of respective observations), the black line represents the 45-degree line where the desired advisor's characteristics are identical to the client's own characteristics.

Both graphs illustrate that the majority of the observations is close to or on the 45-degree line. This means that clients prefer an advisor who is very close to them, even more so for the risk



Figure 2: **Desired closeness in risk attitudes:** This figure illustrates the desired risk attitudes of the advisor, stated by the client, conditional on the clients' own attitude (left panel: risk bearing capacity, right panel: risk-return preferences). The size of the dots represents the respective number of observations, the black line is the 45-degree line where clients' own characteristics and desired characteristics are identical. N = 250.

bearing capacity compared to the risk-return preferences. For both risk measures the median desired distance to the advisor is 0.00. For the risk bearing capacity, 83.2% of the subjects indicate a maximum absolute desired distance of 2 points on the response scale, and for the risk-return scale, 76.0% of the subjects indicate a maximum desired absolute distance of 1 scaling point.

Overall, the graphs also illustrate that the majority of subjects indicates a relatively low level of risk bearing capacity with a median of 3. Since the risk bearing capacity is in its measurement de facto a question about losses, the results relate and correspond to the findings of the literature on individual loss aversion measured in incentivized tasks in the laboratory (c.f., for example, Gächter et al., 2022).

3.2 Results Random Matching

The following results and analyses presented are based on the results of the RANDOM MATCHING treatment only. We make use of the exogenous variation in the distance between advisor and client in terms of self-reported risk-return attitudes and the risk bearing capacity. As specified in the pre-analysis plan, the measure of closeness we use in all analyses in the paper is binary, where "close" means that the distance in the criteria is less or equal to the median distance of the risk measure. We provide robustness checks for our results using the absolute distance in risk attitudes between advisors and clients in the Online Appendix in section C.

3.2.1 Investment Behavior of Clients and Advisors for Clients

Using the data of the RANDOM MATCHING treatment, we analyze in how far clients invest differently from their advisors and to what extent advisors are actually willing and able to account for their clients' preferences when investing on their behalf.

As a first observation from Figure 3, we see that investors are significantly more willing to bear risk and put up with a higher expected level of risk for a higher expected return (p < 0.01 for risk bearing, p < 0.01 for risk-return, two-sided t-tests). These findings are in line with previous findings in the literature, such as Weitzel et al. (2020).



Figure 3: **Differences in risk attitudes between clients and advisors:** This figure shows the mean scale for the risk bearing capacity (left) and the risk-return preferences (right) for advisors (teal-colored) and clients (rose-colored). The risk bearing capacity was measured on a scale from 0 to 10, the risk-return preferences on a scale from 1 to 7. Error bars indicate standard errors of the mean, N = 115 clients, N = 40 financial professionals.

Another finding revealed by Figure 4 is the observation that advisors invest a significantly higher fraction of their endowment (73.15%) in the risky asset compared to what clients do for themselves (54.19%) (p < 0.01, two-sided t-test). This is illustrated in Figure 4, which shows the mean percentage of the endowment invested in the risky asset subdivided into clients and advisors for themselves, and advisors for their assigned clients.

In addition, *on average*, financial professionals invest almost the same fraction of endowment in the risky asset when investing for their assigned clients as the clients invest for themselves: while clients invest 54.19% of their endowment into the risky asset, advisors invest 57.57% for their



Figure 4: **Investment in the risky asset:** This figure illustrates the mean percentage of endowment invested in the risky asset divided in clients' investments on their own behalf, advisors investing for clients, and advisors investing for themselves. Error bars indicate standard errors of the mean, N = 115 clients, N = 40 financial professionals (each professional included three times for different clients, unless clients did not complete the full experiment).

respective clients (p = 0.30, two-sided t-test).

Figure 5 illustrates the investment of the advisor for an assigned client in comparison to the investment of the client for themselves per matched client-advisor pair. The size of the dots represents the weights (i.e., number of respective observations), the black line represents the 45-degree line where the investment of the advisors for a client is identical to the client's own investment. We see that a high number of observations is actually on the, or close to the, 45-degree line. In total, 59% of advisor-client pairs have an absolute difference of \leq 25 percentage points. The correlation between the advisors' investment for clients and the clients' investments for themselves is positive and significant (r = 0.278, p = 0.003, Pearson correlation coefficient).

Overall, we have two main conclusions from the results so far. First, financial professionals are able and willing to take their prospective clients' preferences into account. This is an important result in this environment, where the incentives are set in a way that professionals also receive monetary gains from their clients' potential positive returns.¹⁷ Second, advisors are able to mimic clients' investments solely based on self-reported measures for the clients' risk bearing capacity as

¹⁷In particular, if clients chose to delegate the investment decision to their assigned advisor, advisors receive a fixed fee of 1.50€ for their decision **plus** the randomly determined return for the respective client. This is outlined in the experimental design section in more detail.



Figure 5: **Differences in investments:** This figure illustrates the investment of the client (measured in the percentage of the endowment invested in the risky asset), conditional on the advisors' investment for the client. The size of the dots represents the respective number of observations, the black line is the 45-degree line where both investments are identical. N = 115 clients, N = 40 financial professionals (each professional included three times for different clients, unless clients did not complete the full experiment).

well as their risk-return preferences. Insofar as those are the optimal allocations made by clients, the advisors' decisions are in the client's best interest.

These conclusions are are partly in contrast to previous findings. Holzmeister et al. (2019), for example, find a high variability among professionals' perception of delegated risk levels and, as a consequence, high overlaps in portfolio risk across self-reported risk-levels of clients. They conclude that this indicates a problem in the communication of risk levels between clients and professionals. In contrast, our findings suggest that the communication of risk attitudes works well between clients and financial professionals, even in a way that professionals are able to mimic client's own decisions. However, there is one potentially quite important design choice that is different between the study of Holzmeister et al. (2019) and the present study. Instead of communicating both the risk bearing capacity and the risk-return preferences as in our study, advisors were only presented with a general risk level of their clients indicated on a scale from 1 to 4. Our findings therefore suggest that for a successful communication of investment preferences, an important additional factor is the inclusion of an individual risk bearing capacity. This is backed up by the loss probability being an important component in what both the general population as well as financial professionals perceive as "risk" in investment decisions, rather than measures that capture volatility only (c.f. Holzmeister et al., 2020; Zeisberger, 2022a,b, for example). Kling et al. (2022) find that advisors show a high willingness to implement their clients' preferences. However, advisors' investments for their clients are also driven by their own investment preferences.

Again, this only partly corresponds to our findings: Advisors do take their clients' preferences into account, and the vast majority is not impacted by their own investment preferences.

Table 1 shows the results of OLS regressions, identifying determinants of the investment decision of clients for themselves, and advisors for their assigned clients. The dependent variable is the percentage of endowment invested in the risky asset by clients for themselves (columns 1a - 3a) and by advisors for their respective clients (columns 1b - 3b). Since more than one client is alloacted per advisor, the standard errors for regressions taking advisor characteristics into account (columns 3a and 3b) are clustered on the advisor level.

The predictor for the percentage of endowment invested in the risky asset for clients which is significant on the 1%-level in all three models is the individual risk bearing capacity. In contrast, the risk-return preferences do not play a significant role. When controlling for individual factors, a higher level of education predicts a higher investment in the risky asset. However, neither age nor gender have an impact on the investment decision.¹⁸ The observation of the risk bearing capacity being a highly relevant predictor in the investment decision for clients again suggests that this can be an important characteristic to be communicated to a prospective advisor.

In the investment decisions of financial professionals for their assigned clients (columns 1b - 3b), we find that both the clients' risk bearing capacity and the risk-return preferences are significant determinants. The more risk the individual is able to bear/the higher the risk-return preferences, the more is invested in the risky asset. This holds across all model specifications and is significant at the 1%-level. Including the advisor's own preferences in the model, it shows that advisors also take their own risk bearing capacity into account when investing for their clients. What we observe is a *negative* relationship between the percentage of endowment invested and the advisor's risk bearing capacity. The more the advisor is able to bear risk, the less they invest for their clients.¹⁹ This finding can, in line with related experimental literature, be interpreted as a "cautious shift" in the investment decision for others (c.f. Füllbrunn and Luhan, 2015, for example). Additionally controlling for individual factors, we find that the advisor's education is a further relevant predictor (significant on the 1%-level). The higher the level of education, the higher the percentage invested in the risky asset for the assigned client. Overall, these results support the view that advisors are willing to and successful in incorporating their client's preferences into the investment decisions for them. It holds despite the incentive scheme for advisors, which is aligned with their clients' returns on investments.

¹⁸We do find a significant difference in the distributions of the indicated risk bearing capacity (p = 0.0004) and riskreturn preferences (p = 0.0029, both Mann-Whitney U tests) between male and female participants, which confirms that our sample has similar properties as found in previous literature (c.f. Charness and Gneezy, 2012, for example).

¹⁹At first glance, this might seem to be a purely mechanic result due to a potential negative correlation of clients' and advisors' risk bearing capacities. Testing for multicollinearity in the regression using the variance inflation factor (VIF), it shows that this is not a concern (mean VIF: 1.56, highest VIF: 2.44).

	Dependent variable: Percentage of endowment invested in the risky asset					
		client own		advisor for client		
	(1a)	(2a)	(3a)	(1b)	(2b)	(3b)
RISK_BEARING	4.447***	4.382***	3.968***	4.637***	4.370***	3.585***
	(1.111)	(1.214)	(1.296)	(1.027)	(1.082)	(1.214)
RISK_RETURN	1.655	3.370	3.761	6.232***	6.665***	6.992***
	(1.738)	(2.577)	(2.724)	(2.042)	(2.061)	(1.956)
RISK_GEN		-1.053	-1.572			
		(1.488)	(1.442)			
NUM_INDEX		1.689	1.286			
		(1.804)	(1.857)			
FIN_INDEX		-1.641	-3.112			
		(2.209)	(2.483)			
l5_invested			4.696			
			(5.917)			
EVER_CONSULTED			4.847			
			(6.237)			
AGE			-0.282			
			(0.278)			
FEMALE			-5.051			
			(4.840)			
EDUCATION			2.812			
			(1.690)			
ADVISOR_RISK_BEARING					-2.032**	-2.484**
					(0.901)	(0.931)
ADVISOR_RISK_RETURN					-0.860	1.359
					(1.734)	(2.200)
ADVISOR_RISK_GEN						-2.895
						(2.643)
ADVISOR_NUM_INDEX						4.545
						(2.889)
ADVISOR_FIN_INDEX						0.330
						(4.750)
ADVISOR_AGE						-0.213
						(0.309)
ADVISOR_FEMALE						7.729
						(9.952)
ADVISOR_EDUCATION						5.428***
						(1.952)
CONSTANT	32.39***	28.59**	38.46*	15.92**	30.80**	-12.89
	(6.435)	(13.44)	(21.24)	(6.270)	(14.60)	(28.23)
ORSERVATIONS	115	115	114	115	115	115
R-squared	0.228	0.240	0.282	0.361	0.417	0.507

Table 1: Determinants for clients' own investment and advisor's investment for their respective clients in treatment RANDOM MATCHING: This table outlines the results of OLS regressions measuring the impact of risk attitudes, individual numeracy and financial literacy, investment experience, experience with financial advisors, age, gender, and education on the decision of the percentage invested in the risky asset for clients' own investments (columns 1a - 3a) and for advisors on the behalf of clients (columns 1b - 3b). RISK_BEARING is measured on a scale from "0" (=not able to bear any loss) to 10 (=able to bear a total loss), RISK_RETURN is measured on a scale from "1" (= Lower Risk – typically lower return) to "7" (= Higher Risk - typically higher return). The numeracy and financial literacy index are calculated as the sum of correctly answered items to the respective questions (eight and six items, respectively). L5_INVESTED indicates whether a client has invested in financial advisor. Columns 3a only has 114 observations due to one missing observation for the variable L5_INVESTED. Standard errors (in parentheses) in columns 1b - 3b are clustered on the advisor level since each advisor is assigned to at most three clients, standard errors in columns 1a to 3a are robust. *** p < 0.01, *** p < 0.05, * p < 0.1

3.2.2 Delegation Decision and Satisfaction

Despite the positive result that advisors are both able and willing to incorporate their assigned client's preferences, it is important to analyze under what circumstances the investment decision is actually delegated to a financial professional. The subsequent findings show that matching upon similarity in risk attitudes can indeed achieve a higher likelihood of delegating to a professional in our setting. Also here, the risk-bearing capacity is an important predictor.

Figure 6 shows the difference in the fraction of delegated decisions for client-advisor pairs who are "close" and "further away" in terms of both the risk bearing capacity and the risk-return preferences. Closeness is defined as an indicator variable, taking on "1" if the difference in the respective characteristic is below or equal to the median difference and "0" otherwise, as defined in the pre-analysis plan.²⁰ The results show that clients who are close to their advisor in terms of the risk bearing capacity are delegating their investment decisions significantly more often (56.9% of subjects delegate in this group) than those who are further away (36.8% of subjects decide to delegate, p = 0.03, proportion test). However, there is no difference in the fraction of delegated decisions between the closer and further away client-advisor pairs for the risk-return preferences (p = 0.66, proportion test).²¹

These findings seem surprising in a sense that both characteristics have been indicated to be of high importance when being able to choose a desired advisor (c.f. the analysis of the SURVEY^{CLIENT} treatment). However, the results are supporting our findings on the investment behavior of clients on their own behalf, where we show that only the risk bearing capacity as a measure for loss aversion is a significant predictor.²²

Next, we discuss the results for the clients' satisfaction with the matched advisor. Note that this variable measures the satisfaction with the assigned advisor's risk-return preferences and risk bearing capacity.²³ Subjects were only informed about the outcome of the investment decision (i.e., the realized returns) *after* making the delegation decision and being asked about their satisfaction.²⁴ The satisfaction variable is thus a proxy that allows us to test whether prospective clients desire an advisor who is similar to them in terms of risk attitudes, which we found in the SURVEY^{CLIENT} results when explicitly asking for there preferences, but disconnected from an

²⁰The median difference for the risk bearing capacity is 3, and 2 for the risk-return preferences. Note that the risk bearing capacity was measured on a scale from 0 to 10; the risk-return preferences on a scale from 1 to 7.

²¹We provide a robustness check of this result in the Online Appendix C in figure 10, taking the absolute distance in risk attitudes instead of the binary indicator as the measure of closeness. The results confirm our findings.

²²The question specifically asked about how much *loss* an individual is able to bear when investing a sum of \in 1000. ²³On the decision screen, subjects were informed about their respective advisor's risk-return attitudes and risk bearing capacity. Then, they were asked the following question: "*How satisfied are you, indicated on the following scale, with the allocation of your financial advisor*?" (Scale from 0 = "not satisfied at all" to 10 = "very satisfied")

²⁴One of the reasons for this design choice was that subjects would have otherwise potentially delegated only deciding on whether their own investment or the advisor's investment for them was more profitable, and we wanted to avoid outcome bias c.f. early work in psychology such as Baron and Hershey, 1988, for example.



Figure 6: **Delegation fraction:** This figure depicts the share of subjects opting to delegate the investment decision to their assigned advisor conditional on the absolute difference between advisors and clients in their self-reported risk attitudes (below or equal to median difference: teal-colored, above median difference: rose-colored, where below median difference means that advisor-client pairs were similar according to the applied characteristics). Error bars indicate standard errors of the mean, N = 115 clients.

investment decision.

Figure 7 shows the difference in the mean self-reported satisfaction with the matched advisor for client-advisor pairs who are "close" and "further away" in terms of both the risk bearing capacity and the risk-return preferences. Closeness is defined in the same way as in Figure 6. The findings show that for both variables of interest, clients who are close to their advisor are significantly more satisfied on average. On a scale from 0 to 10 (0 = "not satisfied at all", 10 = "very satisfied"), the average satisfaction with the matched advisor in terms of the risk bearing capacity for close client-advisor pairs was 6.41, for those further away it was 4.96 (p = 0.01, two-sided t-test). For the risk-return scale, clients indicated a mean satisfaction of 6.01 when close to the advisor, and of 5.00 if further away (p = 0.05, two-sided t-test)²⁵. These results support our findings of the desired advisor characteristics in the SURVEY^{CLIENT}, where both variables are ranked as highly important determinants in the choice of a desired advisor.²⁶

Probit and OLS regressions presented in table 2 further support the findings. The variables DIS-TANCE_RISK_BEARING and DISTANCE_RISK_RETURN are dummy variables, taking value "0" in case

²⁵Since "satisfaction" is measured on an ordinal scale, we also used Mann-Whitney U tests for a robustness check, results remain the same.

 $^{^{26}}$ We provide a robustness check of this result in the Online Appendix C in figure 11, taking the absolute distance in risk attitudes instead of the binary indicator as the measure of closeness. The results confirm our findings.



Figure 7: Mean satisfaction with matched advisor: This figure depicts the clients' mean satisfaction with the assigned advisor conditional on the absolute difference between advisors and clients in their self-reported risk attitudes (below or equal to median difference: teal-colored, above median difference: rose-colored, where below median difference means that advisor-client pairs were similar according to the applied characteristics). Error bars indicate standard errors of the mean, N = 115 clients.

the difference in the respective characteristic between advisor and client is below or equal to the median, and "1" otherwise. The decision whether to delegate is impacted by the distance in the risk bearing capacity but not by the distance in the risk-return preferences as found in the descriptive results above. The satisfaction with the allocated match is determined by *both* the distance in the risk bearing capacity and the distance in risk-return preferences. If the difference is above the median, then clients delegate significantly less often. In the full model, we do not find that any other individual characteristics impact the likelihood to delegate or the satisfaction with the matched advisor.²⁷

Overall, these results support that a matching of an advisor with a client on the basis of desired advisor characteristics as stated by the client can improve financial advice in particular aspects. What again stands out is the relevance of the risk bearing capacity - it seems that this variable is an important predictor in the decision to delegate, while our results suggest that the risk-return

²⁷The analysis corresponds to the pre-registration, where we specify the binary indicator for "closeness" in risk attitudes as we use it in the main anlyses here. A robustness check with identical regressions but the absolute distance in client-advisor attitudes instead of the binary measure can be found in the Online Appendix C in table 6. The risk-bearing capacity remains a significant predictor of the likelihood to delegate when including both risk measures. In the full model, the size of the coefficient for the distance between advisors and clients in the risk bearing capacity is similar, but is not significant.

Dependent variable	delegation decision		satisfaction with match		
	(1a)	(2a)	(1b)	(2b)	
DISTANCE_RISK_BEARING	-0.511**	-0.491**	-1.443***	-1.479***	
	(0.238)	(0.245)	(0.464)	(0.471)	
DISTANCE_RISK_RETURN	0.118	0.127	-1.004*	-0.889*	
	(0.256)	(0.276)	(0.493)	(0.517)	
NUM_INDEX		-0.014		-0.226	
		(0.088)		(0.162)	
FIN_INDEX		-0.202		-0.165	
		(0.138)		(0.222)	
L5_INVESTED		-0.086		0.376	
		(0.311)		(0.608)	
EVER_CONSULTED		0.403		-0.403	
		(0.321)		(0.634)	
TRUST_FINANCE		0.053		0.020	
		(0.058)		(0.112)	
AGE		-0.012		-0.002	
		(0.014)		(0.029)	
FEMALE		-0.205		-0.212	
		(0.266)		(0.482)	
EDUCATION		-0.108		0.043	
		(0.101)		(0.190)	
CONSTANT	0.137	1.947*	6.725***	8.618***	
	(0.184)	(1.009)	(0.319)	(2.089)	
OBSERVATIONS	115	114	115	114	
(Pseudo) R-squared	0.031	0.086	0.110	0.133	

Table 2: **Determinants for delegation and satisfaction:** This table outlines the results of Probit (columns 1a and 2a) and OLS (columns 1b and 2b) regressions measuring the impact of the distance in risk attitudes, individual numeracy and financial literacy, investment experience, experience with financial advisors, age, gender, and education on the decision whether to delegate the investment decision to the financial advisor (columns 1a and 2a) and the satisfaction with the matched advisor (column 1b and 2b). DISTANCE_RISK_BEARING and DISTANCE_RISK_RETURN are indicator variables, taking value "0" when the absolute distance between the advisor and client characteristics are below or equal to the median for the respective variable, and "1" otherwise. The numeracy and financial literacy index are calculated as the sum of correctly answered items to the respective questions (eight for numeracy, six for financial literacy). L5_INVESTED indicates whether a client has invested in financial products of any kind during the past five years, EVER_CONSULTED indicates whether a client has ever consulted a financial advisor. TRUST_FINANCE is a measure of trust in employees of the finance industry in general, measured on a scale from 0 (="does not describe me at all") to 10 (="describes me perfectly"). Columns 2a and 2b only have 114 observations due to one missing observation for the variable L5_INVESTED. Robust standard errors in parentheses.*** p < 0.01, ** p < 0.05, * p < 0.1

preferences play a much less important role.

3.3 Results Preference-Based Matching: Potential Misrepresentation on the Advisor Side

Given the advantages of a matching mechanism on the basis of the risk bearing capacity as well as the risk-return preferences, we present the results on the stability of such a client-advisor matching. The reasoning behind this analysis follows the the observation that advisors are, on average, significantly more able to bear risk and have a higher score on the risk-return scale than potential clients (see Weitzel et al., 2020, for example, and as we also find in our sample, see Figure 3). This creates room for a potential pitfall in the matching procedure: advisors, knowing that they are matched to their clients upon the two characteristics, could anticipate this difference in the distribution. Since advisors also have an incentive to match with as many customers as possible, they could misrepresent their characteristics to fit the majority of customers.²⁸

Figure 8 shows the comparison of cumulative distribution functions of advisors' stated risk-return scales and the risk bearing capacity between the $SURVEY^{PROF}$ (the neutral baseline without any investment decision) and PREFERENCE-BASED MATCHING treatment. In contrast to our prediction, we do not find any difference in the distributions for both variables (p = 0.38 for risk-return, p = 0.85 for risk bearing, Kruskal-Wallis test).

This result supports the view that in our setting, where incentives to misreport characteristics to attract clients were given²⁹, the matching is still stable in that aspect. Overall, combined with the results in the previous subsections, we find support for the relevance of the suggested matching mechanism.

4 Discussion

We report the results of three treatments with both potential clients and financial advisors from Germany in a sample of 572 subjects in total. We analyzed (i) whether similarity in risk attitudes is a relevant criterion for a matching mechanism from the clients' perspective, (ii) the degree of customization of advisors' investments for clients, (iii) whether closeness in risk attitudes improves

²⁸Note that in the PREFERENCE-BASED MATCHING treatment, advisors are informed about the matching procedure based on closeness to their prospective clients in the risk bearing capacity and the risk-return preferences *before* reporting their own characteristics. Additionally, they are informed that they can advise up to six different clients in competition with other advisors. For the exact wording of the instructions, please see the instructions in section D.3.2 of the Online Appendix.

 $^{^{29}}$ Each advisor receives $1.50 \in$ for each client who delegates the investment decision to them plus the realization of the respective returns for the amount invested for the client.



Figure 8: Advisors' reported risk attitudes: This figure illustrates the differences in the cumulative density functions for advisors' stated risk-return preferences (left) and risk bearing capacities (right) between the $SURVEY^{PROF}$ (teal-colored, dashed) and PREFERENCE-BASED MATCHING (rose-colored). N = 67 for $SURVEY^{PROF}$, N = 24 for PREFERENCE-BASED MATCHING.

the client advisor pairing in terms of increased delegation probability and satisfaction, and (iv) whether advisors misreport their preferences if they are aware of this process and in competition for clients.

We find that similarity in individual risk-return preferences as well as the risk bearing capacity to an assigned advisor are considered important matching criteria for clients. While our results show that advisors are both willing and able to take their client's preferences into account, an increased likelihood of delegating an investment decision to the advisor by clients is predicted by the risk bearing capacity only. Clients who indicate a similar capacity to bear a particular risk delegate significantly more often to their advisor than clients who are more different to their advisor in that regard - the similarity in that characteristic increases the fraction of delegated investment decisions by 54.62%.

We see the importance of the risk bearing capacity in delegation decisions as one of the major findings of our paper. This variable is a proxy for loss aversion, as it specifically asks for the amount of money that an individual is able to bear losing out of an endowment of 1,000. While previous literature in finance has shown that losses, rather than variance as the risk measure in the classic finance literature, are what the general population as well as financial professionals perceive as "risk" (see Zeisberger, 2022b; Holzmeister et al., 2020, for example), it has not yet gained the same prominence. The elicitation of individual attitudes and decisions of advisors

are still mainly focused and based on those classic risk measures and in general not very clearly defined (see the regulations for financial advice such as Directive 2014/65/EU, 2014), which is a potential reason of low delegation rates and satisfaction in practise. One implication of this can be that a measure of loss aversion is included with more prominence in financial advice, the causal effects of which can be tested in detail by future laboratory and field studies.

We see several points to discuss when interpreting our results based on the experimental design and framework of our study, including the incentive structure, the one-shot structure of our anonymous game, our measure of satisfaction, and the stability of our proposed matching procedure.

With respect to the incentive structures, there are a number of design choices that likely impact our results. First, we chose to align the the advisor's returns when investing for their clients with the client's returns on investments, which they receive in addition to a fixed amount an advisor receives when a client delegates. While this aims to represent one problematic aspect of incentives in financial advice that has been shown to impact decisions (see Rajan, 2006; Diamond and Rajan, 2009; Bebchuk and Spamann, 2009, for example), it certainly cannot fully account for many other aspects of a real-world incentive structure as discussed further below. Second, one can argue that incentives for financial advisors are not substantial in our experiment. While real-world returns are substantially higher in magnitude for an individual investment decision, it also involves a substantially higher time investment to make those decisions. Converted to hourly wages, we paid approximately 50€, which is comparable to related studies (see Weitzel et al., 2020, for example) and substantially higher than the average gross earnings per hour of 35€ in the finance and insurance sector as reported by the Federal Statistical Office of Germany (Destatis)³⁰. Third, clients do not have to pay for financial advice in our experiment. While this is a feature that is in contrast to real-life financial advice situations, we expect, based on related literature, that observed delegation rates would be lower with costly advice, but that it would not impact our main results. Our main results are based on comparisons between client-advisor pairs who are more similar in terms of risk attitudes versus further apart in terms of risk attitudes - decisions to delegate should affect both groups in the same direction, so that we expect level effects only.

It is important to note that non-monetary incentives can also play a large role in financial advice, which can be aligned or misaligned with clients' interests. A first important candidate are rankings, as they are often used in finance: in addition to bonus and tournament-like payment schemes, the presence of rankings themselves have been shown to lead to significant increases in risk taking among financial professionals who are in the bottom part of the ranking (Kirchler et al., 2018, 2019). If such incentives are present, our mechanism can still provide an improvement to the current situation. Aligning clients' risk attitudes with their advisors' risk attitudes overall still leads to advice that is closer to clients' preferences compared to a situation where a substantially

³⁰Federal Statistical Office of Germany, Destatis 2022, https://perma.cc/F6V9-DKGW

more risk (loss) averse client is paired with a substantially more risk seeking (less loss averse) advisor. A second candidate are reputational concerns. In real-life situations, interactions are often dynamic, and there is frequent interaction between advisors and clients. If advice is very clearly not tailored to the client's needs, the client will not seek that same advisor's advice in the future again. While this is an important point we do not model in our experiment, we predict that the effects of reputational concerns are either not too strong (as it is hard to verify whether advice is actually customized), or go in the same direction as our results, where we find a high degree of customization. Related literature on credence goods, which are characterized by an information asymmetry between buyers and sellers, shows that there is limited evidence that reputational concerns matter in these settings (see Balafoutas and Kerschbamer, 2020, for a discussion).

Another particular feature of our design is the one-shot structure of the game without repeated interactions. In real-life settings, advisors and clients interact dynamically, which can build up trust over time. Of course, these interactions also do not happen in an anonymous way, but often in personal face-to-face meetings. These elements are important factors of a client-advisor relationship which we have not included in our design. We acknowledge that particularly trust is vital in real-world financial advice: as Lachance and Tang (2012) and Germann et al. (2018) show, for example, it is a main predictor of delegating decisions to a financial advisor. We anticipate that in real-world scenarios, the direction of the effect of trust and our proposed matching would be aligned, leading to an increased probability of delegation. As a result, these two factors could complement each other. However, what makes the one-shot structure of our experiment a strength is that it biases against advisors catering towards their clients' preferences, since there are no reputational concerns. In that sense, it strengthens our findings on the high level of customization of advisor's investment decisions on behalf of their clients.

With the one-shot structure of our game, we also elicited a very particular form of client satisfaction. The client satisfaction in our design is a measure for the satisfaction with the matching procedure or, in other words, a proxy for how important clients perceive risk-return attitudes and the risk bearing capacity as matching criteria in our RANDOM MATCHING and PREFERENCE-BASED MATCHING treatments. In real life interactions, "satisfaction" is a much richer concept, which is determined by many factors, among which the realization of past returns and other factors in the client-advisor relationship, such as trust and reputation. We purposely refrained from eliciting satisfaction based on realized returns or other outcomes. Realized returns in our setting would potentially lead to results that are merely based on financial outcomes: if the allocation by the advisor gives a higher payoff, clients are more satisfied, no matter whether advice is actually tailored to client's preferences due to outcome bias c.f. early work in psychology such as Baron and Hershey, 1988, for example.

While we cannot control for all of these above-mentioned factors in our simplified environment and acknowledge their importance in real-life settings, we see it as a first important step of analyzing factors that can improve client delegation and customization of advice to individual clients. Regarding future directions of research, we can immediately see avenues for both laboratory studies as well as field studies that can further analyze our proposed mechanism. Follow-up laboratory studies can test the effects of repeated interactions, which can build trust but also include the effect of the materialization of realized returns on delegation and satisfaction with the given advice (and not only with the matching criteria as in our study) over time. In field studies, we see the possibility to elicit advisor's risk-return attitudes and the risk bearing capacity to exploit existing real-life data on financial advice in a similar fashion as in our study, but with a richer dataset on individual characteristics, advice, and investments over time. This can help to analyze whether the risk bearing capacity is also a useful tool in real-life communication of investment preferences between advisors and clients.

References

- Angelova, V. and Regner, T. (2013). Do voluntary payments to advisors improve the quality of financial advice? An experimental deception game. *Journal of Economic Behavior & Organization*, 93:205–218.
- Balafoutas, L. and Kerschbamer, R. (2020). Credence goods in the literature: What the past fifteen years have taught us about fraud, incentives, and the role of institutions. *Journal of Behavioral and Experimental Finance*, 26:100285.
- Baron, J. and Hershey, J. C. (1988). Outcome bias in decision evaluation. *Journal of personality and social psychology*, 54(4):569.
- Bebchuk, L. A. and Spamann, H. (2009). Regulating bankers' pay. *Georgetown Law Journal*, 98(2):247–287.
- Bollen, N. P. and Posavac, S. (2018). Gender, risk tolerance, and false consensus in asset allocation recommendations. *Journal of Banking & Finance*, 87:304–317.
- Calcagno, R. and Monticone, C. (2015). Financial literacy and the demand for financial advice. *Journal of Banking & Finance*, 50:363–380.
- Célérier, C. and Vallée, B. (2017). Catering to investors through security design: Headline rate and complexity. *The Quarterly Journal of Economics*, 132(3):1469–1508.
- Charness, G. and Gneezy, U. (2012). Strong evidence for gender differences in risk taking. *Journal of Economic Behavior & Organization*, 83(1):50–58.
- Danilov, A., Biemann, T., Kring, T., and Sliwka, D. (2013). The dark side of team incentives: Experimental evidence on advice quality from financial service professionals. *Journal of Economic Behavior & Organization*, 93:266–272.
- Diamond, D. W. and Rajan, R. G. (2009). The credit crisis: Conjectures about causes and remedies. *American Economic Review*, 99(2):606–10.
- Directive 2014/65/EU (2014). Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance. *Official Journal*, L 173(12.6.2014):349–496.
- Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., and Wagner, G. G. (2011). Individual risk attitudes: Measurement, determinants, and behavioral consequences. *Journal of the European Economic Association*, 9(3):522–550.

- Duxbury, D. and Summers, B. (2004). Financial risk perception: Are individuals variance averse or loss averse? *Economics Letters*, 84(1):21–28.
- Eriksen, K. W., Kvaløy, O., and Luzuriaga, M. (2020). Risk-taking on behalf of others. *Journal of Behavioral and Experimental Finance*, 26:100283.
- Falk, A., Becker, A., Dohmen, T., Enke, B., Huffman, D., and Sunde, U. (2018). Global evidence on economic preferences. *The Quarterly Journal of Economics*, 133(4):1645–1692.
- Foerster, S., Linnainmaa, J. T., Melzer, B. T., and Previtero, A. (2017). Retail financial advice: does one size fit all? *The Journal of Finance*, 72(4):1441–1482.
- Füllbrunn, S. and Luhan, W. J. (2015). Am I my peer's keeper? Social responsibility in financial decision making. *Ruhr Economic Paper*, (551).
- Gächter, S., Johnson, E. J., and Herrmann, A. (2022). Individual-level loss aversion in riskless and risky choices. *Theory and Decision*, 92(3):599–624.
- Gennaioli, N., Shleifer, A., and Vishny, R. (2015). Money doctors. *The Journal of Finance*, 70(1):91–114.
- Germann, M., Loos, B., and Weber, M. (2018). Trust and delegated investing: A money doctors experiment. *Available at SSRN 3187189*.
- Hackethal, A., Haliassos, M., and Jappelli, T. (2012). Financial advisors: A case of babysitters? *Journal of Banking & Finance*, 36(2):509–524.
- Harrison, G. W. and List, J. A. (2004). Field experiments. *Journal of Economic literature*, 42(4):1009–1055.
- Holzmeister, F., Holmén, M., Kirchler, M., Stefan, M., and Wengström, E. (2019). Delegated decision-making in finance. *Available at SSRN 3498890*.
- Holzmeister, F., Huber, J., Kirchler, M., Lindner, F., Weitzel, U., and Zeisberger, S. (2020). What drives risk perception? a global survey with financial professionals and laypeople. *Management Science*, 66(9):3977–4002.
- Huber, C. and Huber, J. (2020). Bad bankers no more? truth-telling and (dis)honesty in the finance industry. *Journal of Economic Behavior & Organization*, 180:472 493.
- Ifcher, J. and Zarghamee, H. (2020). Behavioral economic phenomena in decision-making for others. *Journal of Economic Psychology*, 77:102180.
- Kirchler, M., Lindner, F., and Weitzel, U. (2018). Rankings and risk-taking in the finance industry. *The Journal of Finance*, 73(5):2271–2302.

- Kirchler, M., Lindner, F., and Weitzel, U. (2019). Delegated decision making and social competition in the finance industry. *Available at SSRN 3177459*.
- Kleinlercher, D., Huber, J., and Kirchler, M. (2014). The impact of different incentive schemes on asset prices. *European Economic Review*, 68:137–150.
- Kling, L., König-Kersting, C., and Trautmann, S. T. (2022). Investment preferences and risk perception: Financial agents versus clients. *Journal of Banking & Finance*, page 106489.
- Lachance, M.-E. and Tang, N. (2012). Financial advice and trust. Financial Services Review, 21(3).
- Linnainmaa, J. T., Melzer, B. T., and Previtero, A. (2021). The misguided beliefs of financial advisors. *The Journal of Finance*, 76(2):587–621.
- Palan, S. and Schitter, C. (2018). Prolific. ac—a subject pool for online experiments. *Journal of Behavioral and Experimental Finance*, 17:22–27.
- Rajan, R. G. (2006). Has finance made the world riskier? *European Financial Management*, 12(4):499–533.
- Roth, B. and Voskort, A. (2014). Stereotypes and false consensus: How financial professionals predict risk preferences. *Journal of Economic Behavior & Organization*, 107:553–565.
- Rud, O. A., Rabanal, J. P., and Horowitz, J. (2018). Does competition aggravate moral hazard? a multi-principal-agent experiment. *Journal of Financial Intermediation*, 33:115–121.
- Stolper, O. (2018). It takes two to tango: Households' response to financial advice and the role of financial literacy. *Journal of Banking & Finance*, 92:295–310.
- Stolper, O. and Walter, A. (2018). Birds of a feather: The impact of homophily on the propensity to follow financial advice. *The Review of Financial Studies*, 32(2):524–563.
- Tergiman, C. and Villeval, M. C. (2022). The way people lie in markets: Detectable vs. deniable lies. *Management Science*.
- Van Rooij, M., Lusardi, A., and Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, 101(2):449–472.
- Weitzel, U., Huber, C., Huber, J., Kirchler, M., Lindner, F., and Rose, J. (2020). Bubbles and financial professionals. *The Review of Financial Studies*, 33(6):2659–2696.
- Weller, J. A., Dieckmann, N. F., Tusler, M., Mertz, C., Burns, W. J., and Peters, E. (2013). Development and testing of an abbreviated numeracy scale: A Rasch analysis approach. *Journal of Behavioral Decision Making*, 26(2):198–212.

- Zeisberger, S. (2022a). Do people care about loss probabilities? *Journal of Risk and Uncertainty*, 65(2):185–213.
- Zeisberger, S. (2022b). What is risk? How investors perceive risk in return distributions. *Available at SSRN 2811636*.

Online Appendix to 'Client-Advisor Matching in the Finance Industry'

A Timeline - Surveys and Experiment



Figure 9: Timeline of Study
B Summary Statistics

	SUR	VEY	RANDOM	MATCHING	PREFEREN	CE-BASED MATCHING	p-value	p-value	p-value
	gen	prof	gen	prof	gen	prof	gen	prof	gen vs prof
MALE	57.20%	79.10%	53.04%	85.00%	65.79%	91.67%	0.452	0.345	0.000
AGE	31.11	46.54	29.32	42.63	29.59	45.7	0.220	0.306	0.000
EDUCATION							0.865	0.685	0.000
SECONDARY SCHOOL	2.80%	-	3.48%	-	1.32%	-			
TECHNICAL COLLEGE	4.00%	5.97%	4.35%	7.50%	2.63%	8.33%			
APPRENTICESHIP	6.40%	4.48%	3.48%	5.00%	11.84%	4.17%			
HIGH SCHOOL	28.80%	7.46%	26.96%	17.50%	23.68%	16.67%			
UNIVERSITY, BSC	30.00%	26.87%	32.17%	20.00%	32.89%	4.17%			
UNIVERSITY, MSC	24.00%	43.28%	26.09%	42.50%	25.00%	54.17%			
UNIVERSITY, PHD	2.40%	8.96%	2.61%	7.50%	2.63%	8.33%			
PREFER NOT TO SAY	1.60%	2.99%	0.87%	-	-	4.17%			
l5_invested	50.00%		49.12%		47.37%		0.922		
EVER_CONSULTED	20.40%		27.83%		19.74%		0.242		
TRUST_FINANCE	3.66		3.89		3.91		0.558		
GENERAL RISK	4.90	6.67	4.84	7.10	5.83	6.79	0.000	0.413	0.000
RISK BEARING CAPACITY	3.64	6.34	3.34	5.35	4.92	6.17	0.0003	0.258	0.000
RISK-RETURN PROFILE	4.17	5.34	4.20	5.50	5.08	5.50	0.000	0.511	0.000
N	250	67	115	40	76	24			

Table 3: **Summary statistics across treatments:** This table includes the means/percentages of elicited variables from all three treatments. L5_INVESTED indicates what percentage of clients has invested in financial products of any kind during the past five years. EVER_CONSULTED indicates the fraction of clients who have ever consulted a financial advisor. TRUST_FINANCE indicates the self-assessment of the statement "I trust employees of the finance industry in general" (answers possible on a scale from "0" - 'does not describe me at all' to "10" - 'describes me perfectly'). GENERAL RISK and the RISK BEARING CAPACITY were elicited on a scale from "0" (= not at all willing to take risks/I am not able to bear any loss) to "10" (= very willing to take risks/I am able to bear a total loss). The RISK-RETURN PROFILE was elicited on a scale from "1" (= Lower Risk - typically lower return) to "7" (= Higher Risk - typically higher return). *p*-values are the results of χ^2 tests (whenever proportions are tested) and Kruskall-Wallis tests.

Desired characteristics of a financial advisor							
	mean	weight	median difference	p-value			
			to own attitude				
RISK BEARING CAPACITY	3.31	6.52	0.00	0.070			
RISK-RETURN PROFILE	4.02	6.25	0.00	0.133			
GENERAL RISK	4.48	6.06	0.00	0.014			
YEARS IN THE INDUSTRY		6.61					
at least 0 - 5 years	13.60%						
at least 5 - 10 years	56.00%						
AT LEAST 10 - 15 YEARS	23.60%						
AT LEAST 15 - 20 YEARS	4.80%						
More than 20 years	2.00%						
EDUCATION		5.92					
SECONDARY SCHOOL	0.80%						
TECHNICAL COLLEGE	5.20%						
APPRENTICESHIP	4.00%						
HIGH SCHOOL	13.20%						
UNIVERSITY, BSC	30.40%						
UNIVERSITY, MSC	39.60%						
UNIVERSITY, PHD	6.80%						
GENDER		2.39					
MALE	41.60%						
FEMALE	35.20%						
INDIFFERENT	23.20%						

Table 4: **Desired characteristics of a financial advisor:** This table shows the mean results/percentages together with the individual mean weights and the difference to the own attitude of the indicated characteristics of an optimal financial advisor as elicited on the client side in SURVEY^{CLIENT}. GENERAL RISK and the RISK BEARING CAPACITY were elicited on a scale from "0" (= not at all willing to take risks/I am not able to bear any loss) to "10" (= very willing to take risks/I am able to bear a total loss). The RISK-RETURN PROFILE was elicited on a scale from "1" (= Lower Risk - typically lower return) to "7" (= Higher Risk - typically higher return). *p*-values are the results from Wilcoxon signed-rank tests.

	RANDOM MATCHING		PREFERENC	EFERENCE-BASED MATCHING		p-value	p-value
	GEN	PROF	GEN	PROF	GEN	PROF	GEN VS PROF
INVESTMENT RISKY	54.19%	73.15%	58.17%	72.92%	0.321	0.978	0.000
NUMERACY INDEX	5.37	5.85	5.41	6.17	0.928	0.401	0.002
FINANCIAL LITERACY INDEX	4.37	5.80	4.54	5.88	0.418	0.730	0.000
DELEGATE	46.96%		50.00%		0.680		
SATISFACTION	5.70		6.80		0.004		
N	115	40	76	24			

Table 5: **Summary statistics across treatments:** This table includes the means of elicited variables across treatments. INVESTMENT RISKY indicates the mean percentage invested in the risky asset. The NUMERACY INDEX and FINANCIAL LITERACY INDEX are the mean overall scores counting the number of correct answers to the respective questions (eight questions for numeracy, six questions for financial literacy). DELEGATE indicates the fraction of subjects choosing to delegate the investment decision to the assigned advisor at the end of the experiment. SATISFACTION indicates the mean satisfaction with the matched advisor on a scale from "0" - 'not satisfied at all' to "10" - 'very satisfied". *p*-values are the results of χ^2 tests (whenever proportions are tested) and Kruskall-Wallis tests.

C Robustness Checks

In addition to the pre-registered analyses using a binary indicator for "closeness" between clients and their respective advisors, we provide robustness checks of our main results using the absolute distance in attitudes below.

Absolute difference in risk attitudes between advisors and clients and delegation

As a robustness check, we zoom in on the effect of the absolute differences in the risk bearing capacity and the risk return scale between advisors and their respective clients on the delegation decision. The results confirm the findings of the aggregate analysis. The mean distance in the risk bearing capacity is significantly lower for subjects who delegate compared to those who do not delegate (p = 0.03, one-sided t-test). For the risk-return scale, the mean distance for those subjects delegating is not significantly higher (p = 0.72, one-sided t-test), which is in line with our results from figure 6 in the main text.



Figure 10: **Comparison of distributions, absolute differences in risk attitudes and delegation decisions:** This figure illustrates the distributions of the absolute differences between advisors and clients in the risk bearing capacity (left) and the risk return scale (right), by subjects who decided not to delegate the investment decision to their advisor and those who delegated.

Absolute difference in risk attitudes between advisors and clients and satisfaction

Similar to the delegation decision above, we also give a graphical overview of the distribution of the absolute distances in the risk bearing capacity and the risk return scale between advisors and their respective clients over all self-reported levels of satisfaction with the match. We see that for the risk bearing capacity as well as the risk-return scale, higher levels of satisfaction are associated with a lower absolute distance in the characteristic (r = -0.289, p = 0.002 – risk bearing capacity; r = -0.240, p = 0.010 – risk-return scale, Pearson correlation coefficients). This confirms our results in the main text as shown in figure 7.



Figure 11: Comparison of distributions, absolute differences in risk attitudes and satisfaction with the matched advisor: This figure illustrates the distributions of the absolute differences between advisors and clients in the risk bearing capacity (top) and the risk return scale (bottom), by self-reported satisfaction level. Satisfaction was measured on a Likert scale from 0 = "not satisfied at all" to 10 = "very satisfied".

Dependent variable	DELEGATIO	N DECISION	DECISION SATISFACTION WITH M	
	(1a)	(1b)	(2a)	(2b)
DISTANCE_RISK_BEARING	-0.0770*	-0.0689	-0.238***	-0.227***
	(0.0412)	(0.0423)	(0.0713)	(0.0746)
DISTANCE_RISK_RETURN	0.0653	0.0615	-0.431**	-0.406**
	(0.0903)	(0.0970)	(0.174)	(0.178)
NUM_INDEX		-0.00589		-0.120
		(0.0898)		(0.162)
FIN_INDEX		-0.200		-0.183
		(0.136)		(0.218)
l5_invested		-0.127		0.268
		(0.306)		(0.614)
EVER_CONSULTED		0.430		-0.418
		(0.322)		(0.640)
TRUST_FINANCE		0.0478		0.0163
		(0.0578)		(0.109)
AGE		-0.0104		-0.00388
		(0.0139)		(0.0289)
FEMALE		-0.191		-0.187
		(0.264)		(0.477)
EDUCATION		-0.109		-0.0279
		(0.104)		(0.189)
CONSTANT	0.0924	1.811*	7.418***	9.189***
	(0.248)	(1.007)	(0.451)	(2.004)
OBSERVATIONS	115	114	115	114
(Pseudo) R-squared	0.026	0.079	0.132	0.142

Table 6: Determinants for delegation and satisfaction: This table outlines the results of Probit (columns 1a and 2a) and OLS (columns 1b and 2b) regressions measuring the impact of the distance in risk attitudes, individual numeracy and financial literacy, investment experience, experience with financial advisors, age, gender, and education on the decision whether to delegate the investment decision to the financial advisor (columns 1a and 2a) and the satisfaction with the matched advisor (column 1b and 2b). DISTANCE_RISK_BEARING and DISTANCE_RISK_RETURN measure the absolute distance in attitudes between advisor and client in the respective measure. The numeracy and financial literacy index are calculated as the sum of correctly answered items to the respective questions (eight for numeracy, six for financial literacy). L5_INVESTED indicates whether a client has invested in financial products of any kind during the past five years, EVER_CONSULTED indicates whether a client has ever consulted a financial advisor. TRUST_FINANCE is a measure of trust in employees of the finance industry in general, measured on a scale from 0 (="does not describe me at all") to 10 (="describes me perfectly"). Columns 2a and 2b only have 114 observations due to one missing observation for the variable L5_INVESTED. Robust standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1

D Experimental Instructions

D.1 SURVEY^{CLIENT}

Welcome!

Dear participant,

Thank you very much for accepting our invitation to participate in this study. I am a researcher from the University of Innsbruck and conduct a short study, which will take approximately 5 minutes. With your participation, you make an important contribution to research. All data is anonymous and no individual results are made public. The data is exclusively used for research purposes.

** Please note that you cannot go back to previous pages throughout the whole study. *** Thank you very much for your participation!

Julia Rose PhD Candidate **University of Innsbruck**

— New Page —

Please enter your Prolific ID. This step is very important for your payment.

— New Page —

In the following, I ask you to honestly answer a few personal questions. Honest answers to these questions are very important for my research question.

Your age:

Your gender: (Options: male, female, other)

What is your highest level of education? (Options: Middle School, Apprenticeship, Technical College, High School, University, BSc, University, MSc, University, PhD)

— New Page —

How do you see yourself:

Are you generally a person who is fully prepared to take risks or do you try to avoid risks? (Answers possible on a Likert scale from 0 = 'not at all willing to take risks' to 10 = 'very willing to take risks')

— New Page —

How would you rate yourself on the following scale:

Lower Risk					Higher F	Risk		
typically typic								
lower return higher r						er return		
1	2	3	4	5	6	7		

(Answers possible on a Likert scale from 1 ='Lower Risk – typically lower return' to 7 = 'Higher Risk – typically higher return')

- New Page -

Imagine you had a sum of 1,000 Euro that you want to invest.

I could bear a loss of the invested sum up to the following percentage: (Answers possible on a Scale from 0% = 'no loss at all' to 100% = 'total loss' in 10%-increments)

Have you invested in financial products of any kind during the last 5 years? *(Options: yes, no)*

Have you ever consulted a financial advisor? (Options: yes, no)

I trust employees of the finance industry in general. (Answers possible on a Likert scale from 0 = 'does not describe me at all' to 10 = 'describes me perfectly')

- New Page -

On the following pages you have the possibility to choose characteristics of a financial advisor that is optimal in your view. Please dedicate the needed attention and time to this process. Imagine, you were in a situation, in which you want to entrust a financial advisor with the investment of your wealth.

— New Page —

If you could choose your optimal financial advisor...

... which **gender** should they have? (Options: male, female, diverse)

This characteristic is (Answers possible on a Likert scale from 0 = 'not at all important to me' to 10 = 'very important to me')

... which **level of education** should they have?

(Options: Middle School, Apprenticeship, Technical College, High School, University, BSc, University, MSc, University, PhD)

This characteristic is (Answers possible on a Likert scale from 0 = 'not at all important to me' to 10 = 'very important to me')

... how many **years of work experience** in the specific field should they have? (Options: at least 0 - 5 years, at least 5 - 10 years, at least 10 - 15 years, at least 15 - 20 years, more than 20 years) This characteristic is (Answers possible on a Likert scale from 0 = 'not at all important to me' to 10 = 'very important to me')

— New Page —

My financial advisor should answer the following question the following way:

How do you see yourself:

```
Are you generally a person who is fully prepared to take risks or do you try to avoid risks? (Answers possible on a Likert scale from 0 = 'not at all willing to take risks' to 10 = 'very willing to take risks')
```

This characteristic is (Answers possible on a Likert scale from 0 = 'not at all important to me' to 10 = 'very important to me')

— New Page —

My advisor should rank himself on the following scale as follows:

Lower Risk Hig				Higher F	Risk		
typically typical							
lower return higher retur						er return	
1	2	3	4	5	6	7	

(Answers possible on a Likert scale from 1 ='Lower Risk – typically lower return' to 7 = 'Higher Risk – typically higher return')

This characteristic is (Answers possible on a Likert scale from 0 = 'not at all important to me' to 10 = 'very important to me')

— New Page —

My financial advisor should reply to the following question in the following way:

Imagine you had a sum of 1,000 Euro that you want to invest.

I could bear a loss of the invested sum up to the following percentage: (Answers possible on a Scale from 0% = 'no loss at all' to 100% = 'total loss' in 10%-increments) This characteristic is (Answers possible on a Likert scale from 0 = 'not at all important to me' to 10 = 'very important to me')

— New Page —

Thank you very much for your participation!

If you have any comments, please use the box below.

D.2 SURVEY^{PROF}

Welcome!

Dear participant,

Thank you very much for following our invitation to participate in this study. I am a researcher from the University of Innsbruck and conduct a short study, which will take approximately 3 minutes. With your participation, you make an important contribution to research, and in addition, you can earn money: You receive \in 5 for your participation.

To be able to pay out your earnings from this study, I ask you for your e-mail address at the end of the study, with which I can contact you after the experiment is finished. All payments will be transferred; you also have the opportunity to forgo any payment.

The data is anonymous and no individual results will be made public. The data is exclusively used for research purposes.

** Please note that you cannot go back to previous pages throughout the whole study. *** Thank you very much for your participation!

Julia Rose PhD Candidate University of Innsbruck

— New Page —

In the following, I ask you to honestly answer a few personal questions. Honest answers to these questions are very important for my research question.

— New Page —

Your age:

Your gender: (Options: male, female, other)

What is your highest level of education? (Options: Middle School, Apprenticeship, Technical College, High School, University, BSc, University, MSc, University, PhD

— New Page —

How do you see yourself:

Are you generally a person who is fully prepared to take risks or do you try to avoid risks? (Answers possible on a Likert scale from 0 = 'not at all willing to take risks' to 10 = 'very willing to take risks')

- New Page -

How would you rate yourself on the following scale:

Lower Risk					Higher F	Risk
typically typic						
lower re	r return nigner return					er return
1	2	3	4	5	6	7

(Answers possible on a Likert scale from 1 ='Lower Risk – typically lower return' to 7 = 'Higher Risk – typically higher return')

— New Page —

Imagine you had a sum of 1,000 Euro that you want to invest.

I could bear a loss of the invested sum up to the following percentage: (Answers possible on a Scale from 0% = 'no loss at all' to 100% = 'total loss' in 10%-increments)

Thank you very much for your participation!

Please state whether you want the payment for this study: (Options: yes, no)

Please state whether you want to participate in further studies of this kind: *(Options: yes, no)*

Please insert your e-mail address, if you want to receive your payment and/or you want to receive further invitations to studies of this kind.

D.3 RANDOM MATCHING and PREFERENCE-BASED MATCHING

The baseline instructions are identical for both treatment RANDOM MATCHING and PREFERENCE-BASED MATCHING. Differences are coloured blue for treatment RANDOM MATCHING and orange for treatment PREFERENCE-BASED MATCHING.

D.3.1 Instructions I: Customers

Welcome!

Dear participant,

Thank you very much for following our invitation to participate in this study. I am a researcher from the University of Innsbruck and conduct a short study, which will take approximately 15 minutes. With your participation, you make an important contribution to research, and in addition, you can earn money: You receive £3.50 on average (**including** your fixed fee as given by Prolific) for your participation in that survey.

Please note:

This study consists of two parts. The second part of the study will take place between the 02/27/2020 and 02/29/2020. Please participate in this study only if you can also work on the second part. You will receive the bonus payments for the whole study only after the participation in the second part!

The data is anonymous and no individual results will be made public. The data is exclusively used for research purposes. This online study adheres to the principles of economic studies: Participants are not deceived and all payments are made. In each stage of the data analysis it is guaranteed that we do not combine the decisions of the study with the identity of participants.

*** Please note that you cannot go back to previous pages throughout the whole study. ***

Thank you very much for your participation!

Julia Rose PhD Candidate University of Innsbruck

Registration

Please insert your Prolific ID

— New Page —

Confirm

In the following, I ask you to honestly answer a few personal questions. Honest answers to these questions are very important for my research question.

— New Page —

Age

Gender (Options: male, female, other)

Highest level of education?

(Options: Middle School, Apprenticeship, Technical College, High School, University, BSc, University, MSc, University, PhD)

— New Page —

How do you see yourself:

Are you generally a person who is fully prepared to take risks or do you try to avoid risks? (Answers possible on a Likert scale from 0 = 'not at all willing to take risks' to 10 = 'very willing to take risks')

How would you rate yourself on the following scale:

Lower Risk					Higher F	Risk
typically typica						
lower re	lower return higher retu					er return
1	2	3	4	5	6	7

(Answers possible on a Likert scale from 1 ='Lower Risk – typically lower return' to 7 = 'Higher Risk – typically higher return')

— New Page —

Imagine you had a sum of 1,000 Euro that you want to invest.

I could bear a loss of the invested sum up to the following percentage: (Answers possible on a Scale from 0% = 'no loss at all' to 100% = 'total loss' in 10%-increments)

— New Page —

Questions

Have you invested in financial products of any kind during the last 5 years? *(Options: yes, no)*

Have you ever consulted a financial advisor? (Options: yes, no)

I trust employees of the finance industry in general. (Answers possible on a Likert scale from 0 = 'does not describe me at all' to 10 = 'describes me perfectly')

Instructions

Please answer the following questions thoroughly and devote the necessary time to them, since they are important for my research question.

— New Page —

Questions

Suppose you have a close friend who has a lump in her breast and must have a mammogram. Of 100 women like her, 10 of them actually have a malignant tumor and 90 of them do not. Of the 10 women who actually have a tumor, the mammogram indicates correctly that 9 of them have a tumor and indicates incorrectly that 1 of them does not. Of the 90 women who do not have a tumor, the mammogram indicates correctly that 81 of them do not have a tumor and indicates incorrectly that 9 of them do have a tumor. Imagine that your friend tests positive (as if she had a tumor), what is the likelihood that she actually has a tumor?

_____ percent

(Correct answer: 50)

— New Page —

Questions

If John can drink one barrel of water in 6 days, and Mary can drink one barrel of water in 12 days, how long would it take them to drink one barrel of water together?

_____ Days

(Correct answer: 4)

Questions

A man buys a pig for 60 Euro, sells it for 70 Euro, buys it back for 80 Euro, and sells it finally for 90 Euro. How much has he made?

_____ Euro

(Correct answer: 20)

— New Page —

Questions

In a lottery, the chance of winning a car is 1 in 1000. What percent of lottery tickets win a car?

_____ Percent

(Correct answer: 0.1)

— New Page —

Questions

In a lottery, the chances of winning a 10.000 Euro prize are 1%. What is your best guess about how many people would win a 10.000 Euro prize if 1000 people each buy a single lottery ticket?

_____ People

(Correct answer: 10)

Questions

Imagine that we roll a fair, six-sided die 1000 times. Out of 1000 rolls, how many times do you think the die would come up as an even number?

_____ Times

(Correct answer: 500)

— New Page —

Questions

If the chance of getting a disease is 20 out of 100, this would be the same as having a ... chance of getting the disease.

_____ Percent

(Correct answer: 20)

— New Page —

Questions

If the chance of getting a disease is 10%, how many people would be expected to get the disease out of 1000?

_____ People

(Correct answer: 100)

Questions

Suppose you had 1,000 Euro in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. After 5 years, how much would you have on this account in total?

- more than 2,000 Euro
- exactly 2,000 Euro
- less than 2,000 Euro
- do not know

— New Page —

Questions

Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?

- more than today
- exactly the same
- less than today
- do not know

— New Page —

Questions

Suppose that in the year 2025, your income after tax has doubled and prices of all goods have doubled too. In 2025, how much will you be able to buy with your income?

- more than today
- exactly the same
- less than today

• do not know

— New Page —

Questions

When an investor spreads his money among different assets, does the risk of losing money in general:

- increase
- decrease
- stay the same
- do not know

— New Page —

Questions

If the interest rate falls, what should happen to bond prices?

- rise
- fall
- stay the same
- none of the above
- do not know

— New Page —

Questions

Which of the following statements is correct? If somebody buys the stock of firm B in the stock market:

- he owns a part of firm B
- he has lent money to firm B

- he is liable for the firm B's debt
- none of the above
- do not know

Instructions

In this part of the experiment we ask you to make an investment decision. In the beginning, you receive 1,000 Taler. You then have to make a decision about which percentage you want to invest at a risk-free interest rate of 1.7%, and which percentage you want to invest in an asset. The distribution of the asset returns is based on historical data from the past 20 years. The price development of this data is characterized by fluctuations. In this period, the asset reached an expected return of 3.2% (quarterly compounding) and had a standard deviation of 12.9%.

Further key figures of the distribution:

- The beta of the asset in comparison to the DAX during the whole time period is 1.00
- The skewness of the distribution in during the whole time period is 0.166

The actual return of the asset is determined by the key figures as described above, and your earnings will be determined by your investment in the risk-free investment and the risky asset.

At the end of the experiment, your earnings will be converted from Taler to Pounds. Therefore, the following exchange rate applies:

100 Taler = £0.20

— New Page —

Important Information

Between the first and the second part of this experiment, a financial advsior will make the same investment decision for you. In the second part of the experiment, you can decide whether you will be paid according to your own decision, or whether you want to be paid for the decision that was taken for you by the financial advisor. You will also receive information about the risk attitudes of your assigned advisor before your decision in the second part, **but not about his investment decision for you**. The assignment of your financial advisor is random. The assignment of your financial advisor is based on your similarity in risk attitudes. You are assigned the advisor that is closest to you in terms of risk attitudes.

In the rare case that there is no financial advisor available for you, you will be paid according to your own decision.

The final amount of your earnings will be calculated with respect to your decision in the second part of the experiment.





Thank you very much for your participation in the study!

In the following, you receive information about the payments for this part of the experiment. Please note that you will receive your bonus payments from this experiment only after the second part (02/27/2020 - 02/29/2020) is finished, as described in the beginning of the experiment.

In the last part, you invested as follows:



Reminder: The exchange rate is $100 \text{ Taler} = \pounds 0.20$

You will only learn about the exact result of your decision and the materialization of the returns in the second part of the experiment, after you either decided for the implementation of your own decision or the decision of the financial advisor.

— New Page —

Again, thank you very much for your participation in the study!

The study is now finished.

To go back to Prolific, please click on the following Link:

Back to Prolific

D.3.2 Instructions II: Financial Advisors

Dear participant,

Thank you very much for following our invitation to participate in this study. I am a researcher from the University of Innsbruck and conduct a short study, which will take approximately 15 minutes. With your participation, you you make an important contribution to research, and in addition, you can earn money: You receive \in 15 on average for your participation in that survey. Additionally, you receive personal feedback about the results if you want to. You can indicate this at the end of the study.

To be able to transfer the earnings of this study, I ask you for an e-mail address again at the and of the study, with which I can contact you after the end of this experiment. All earnings are transferred via bank transfer; you also have the possibility to forego any payments.

The data is anonymous and no individual results will be made public. The data is exclusively used for research purposes. This online study adheres to the principles of economic studies:Participants are not deceived and all payments are made. In each stage of the data analysis it is guaranteed that we do not combine the decisions of the study with the identity of participants.

*** Please note that you cannot go back to previous pages throughout the whole study. ***

Thank you very much for your participation!

Julia Rose PhD Candidate University of Innsbruck

— New Page —

In the course of the experiment, you are asked to **make an investment decision for three customers assigned to you.** These customers are also **experimental participants** from the general population and can choose whether they prefer to implement their own decision or the decision you made for them at the end of the experiment.

These clients will be **randomly** assigned to you. In total, **three customers** are assigned to you. You receive information about the risk level of your respective client during the decision.

In the course of the experiment, you are asked to **make an investment decision for at most six customers assigned to you.** These customers are also **experimental participants** from the general population and can choose whether they prefer to implement their own decision or the decision you made for them at the end of the experiment.

These clients will be assigned to you according to your similarity in risk attitudes. In total, at most six customers are assigned to you. The exact number of clients is dependent on how close you are in your risk attitudes to the risk attitudes indicated by the clients. You receive information about the risk level of your respective client during the decision.

In the following, I ask you to honestly answer a few personal questions. Honest answers to these questions are very important for my research question.

— New Page —

Age

Gender (Options: male, female, other)

Highest level of education?

(Options: Middle School, Apprenticeship, Technical College, High School, University, BSc, University, MSc, University, PhD)

— New Page —

How do you see yourself:

Are you generally a person who is fully prepared to take risks or do you try to avoid risks? (Answers possible on a Likert scale from 0 = 'not at all willing to take risks' to 10 = 'very willing to take risks')

— New Page —

How would you rate yourself on the following scale:

Lower R	lisk		Higher Risk			Risk	
typically typically							
lower return higher retur						er return	
1	2	3	4	5	6	7	

(Answers possible on a Likert scale from 1 ='Lower Risk – typically lower return' to 7 = 'Higher Risk – typically higher return')

Imagine you had a sum of 1,000 Euro that you want to invest. I could bear a loss of the invested sum up to the following percentage: (Answers possible on a Scale from 0% = 'no loss at all' to 100% = 'total loss' in 10%-increments)

— New Page —

For how many years have you already been working in your field?

— New Page —

Questions

Suppose you have a close friend who has a lump in her breast and must have a mammogram. Of 100 women like her, 10 of them actually have a malignant tumor and 90 of them do not. Of the 10 women who actually have a tumor, the mammogram indicates correctly that 9 of them have a tumor and indicates incorrectly that 1 of them does not. Of the 90 women who do not have a tumor, the mammogram indicates correctly that 81 of them do not have a tumor and indicates incorrectly that 9 of them do have a tumor. Imagine that your friend tests positive (as if she had a tumor), what is the likelihood that she actually has a tumor?

_____ percent

(Correct answer: 50)

— New Page —

Questions

If John can drink one barrel of water in 6 days, and Mary can drink one barrel of water in 12 days, how long would it take them to drink one barrel of water together?

_____ Days

(Correct answer: 4)

Questions

A man buys a pig for 60 Euro, sells it for 70 Euro, buys it back for 80 Euro, and sells it finally for 90 Euro. How much has he made?

_____ Euro

(Correct answer: 20)

— New Page —

Questions

In a lottery, the chance of winning a car is 1 in 1000. What percent of lottery tickets win a car?

_____ Percent

(Correct answer: 0.1)

— New Page —

Questions

In a lottery, the chances of winning a 10.000 Euro prize are 1%. What is your best guess about how many people would win a 10.000 Euro prize if 1000 people each buy a single lottery ticket?

_____ People

(Correct answer: 10)

Questions

Imagine that we roll a fair, six-sided die 1000 times. Out of 1000 rolls, how many times do you think the die would come up as an even number?

_____ Times

(Correct answer: 500)

— New Page —

Questions

If the chance of getting a disease is 20 out of 100, this would be the same as having a ... chance of getting the disease.

_____ Percent

(Correct answer: 20)

— New Page —

Questions

If the chance of getting a disease is 10%, how many people would be expected to get the disease out of 1000?

_____ People

(Correct answer: 100)

Questions

Suppose you had 1,000 Euro in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. After 5 years, how much would you have on this account in total?

- more than 2,000 Euro
- exactly 2,000 Euro
- less than 2,000 Euro
- do not know

— New Page —

Questions

Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?

- more than today
- exactly the same
- less than today
- do not know

— New Page —

Questions

Suppose that in the year 2025, your income after tax has doubled and prices of all goods have doubled too. In 2025, how much will you be able to buy with your income?

- more than today
- exactly the same
- less than today

• do not know

— New Page —

Questions

When an investor spreads his money among different assets, does the risk of losing money in general:

- increase
- decrease
- stay the same
- do not know

— New Page —

Questions

If the interest rate falls, what should happen to bond prices?

- rise
- fall
- stay the same
- none of the above
- do not know

— New Page —

Questions

Which of the following statements is correct? If somebody buys the stock of firm B in the stock market:

- he owns a part of firm B
- he has lent money to firm B

- he is liable for the firm B's debt
- none of the above
- do not know

Instructions

In this part of the experiment we ask you to make an investment decision. In the beginning, you receive 1,000 Taler. You then have to make a decision about which percentage you want to invest at a risk-free interest rate of 1.7%, and which percentage you want to invest in an asset. The distribution of the asset returns is based on historical data from the past 20 years. The price development of this data is characterized by fluctuations. In this period, the asset reached an expected return of 3.2% (quarterly compounding) and had a standard deviation of 12.9%.

Further key figures of the distribution:

- The beta of the asset in comparison to the DAX during the whole time period is 1.00
- The skewness of the distribution in during the whole time period is 0.166

The actual return of the asset is determined by the key figures as described above, and your earnings will be determined by your investment in the risk-free investment and the risky asset.

At the end of the experiment, your earnings will be converted from Taler to Pounds. Therefore, the following exchange rate applies:

100 Taler = $\in 1$



In this part of the experiment, you are asked to make an investment decision for **three clients X clients**. These are based on the same procedure as your own decision.

Please note:

After your decision for your clients, the clients then decide whether they want to implement their own decision or the decision you made for them. The only information the clients receive will be the risk attitudes, which were elicited at the beginning of this survey.

Reminder:

At the beginning you receive 1,000 Taler of **your respective client**. All three clients are randomly allocated to you. All X clients are allocated to you based on the closeness to your indicated risk attitudes. You then have to make a decision about which percentage you want to invest at a risk-free interest rate of 1.7%, and which percentage you want to invest in an asset. The distribution of the asset returns is based on historical data from the past 20 years. The price development of this data is characterized by fluctuations. In this period, the asset reached an expected return of 3.2% (quarterly compounding) and had a standard deviation of 12.9%.

Further key figures of the distribution:

- The beta of the asset in comparison to the DAX during the whole time period is 1.00
- The skewness of the distribution in during the whole time period is 0.166

The actual return of the asset is determined by the key figures as described above. You will receive a fixed fee of \in 1.50 for your decision as well as the randomly determined return for each of the customers who delegate their decision to you at the end of the experiment.

At the end of the experiment, this return will be converted from Taler to Euro. The following exchange rate applies:



The following screen is shown for every assigned client separately.



— New Page —

Thank you very much for your participation in the study!

In the following, you receive information concerning your payment. I am additionally asking for your e-mail address. This enables me to contact you for the payment via bank transfer.

— New Page —

You invested in the investment part as follows:



The return for the risk free asset is 1.7%.

The randomly determined return for the risky asset is XX%.

Reminder: The exchange rate is 100 Taler = $\in 1$

We will inform you after the end of the whole experiment about the payment you will receive in addition for the decision for your clients.

Your overall payment, as of today, is as follows:

Payment from your investment: $\in XXX$

The earnings from your decision for your clients will then be added to this.

— New Page —

Do you want to receive your payment for this study? (yes/no)

Please indicate whether you want to receive further invitations for studies of this kind. (yes/no)

Please indicate whether you want to receive a report about the results of this study. (yes/no)

Please give your e-mail address so that I can contact you for your payment/the individual feedback/new studies.

— New Page —

Thank you very much again for your participation in this study!

I will contact you after the end of this study for your payment and/or your personal feedback.

D.3.3 Instructions III: Customers

Welcome!

Dear participant,

Thank you very much for following our invitation to participate in the second part of this study. This part of the study only takes approximately 3 minutes. After this part of the experiment, you will also receive the bonus payments from part one of the experiment.

The data is anonymous and no individual results will be made public. The data is exclusively used for research purposes. This online study adheres to the principles of economic studies: Participants are not deceived and all payments are made. In each stage of the data analysis it is guaranteed that we do not combine the decisions of the study with the identity of participants.

*** Please note that you cannot go back to previous pages throughout the whole study. ***

Thank you very much for your participation!

Julia Rose PhD Candidate University of Innsbruck

— New Page —

A financial advisor made the identical decision that you yourself made in the investment part of the experiment. You can decide now whether you prefer to receive the payment for the decision the financial advisor made for you, or for your own decision.

Reminder:

You made the following decision:


Do you want to receive **your own payment**, or the payment **of your financial advisor in the decision for you**?

Your financial advisor has the following characteristics:

Your financial advisor can bear a loss of **XX%** out of \in 1,000. Your financial advisor's level on the risk-return scale: **XX**/7

If you decide for the payment of the financial advisor's decision, you receive her/his returns as a bonus payment.

(1 = own payment / 2 = financial advisor)

How satisfied are you, indicated on the following scale, with the allocation of your financial advisor?

Scale from 0 = "not satisfied at all" to 10 = "very satisfied"

- New Page -

You decided to receive the **payment of the financial advisor's decision.** The financial advisor invested in the relevant decision for you as follows:



The return for the risk free asset is 1.7%.

The randomly determined return for the risky asset is XX%.

Reminder: The exchange rate is $100 \text{ Taler} = \pounds 0.20$

Your total payment for the bonus (as of today) is therefore: £XX



You chose your own decision.



The return for the risk free asset is 1.7%.

The randomly determined return for the risky asset is XX%.

Reminder: The exchange rate is $100 \text{ Taler} = \pounds 0.20$

Your total payment for the bonus (as of today) is therefore: £XX

— New Page —

The whole study is finished now.

Thank you very much for your participation again!

To go back to Prolific, please click on the following link:

Back to Prolific