

# **What renders financial advisors less treacherous?**

## **On commissions and reciprocity**

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### Abstract

An advisor is supposed to recommend a financial product in the best interest of her client. However, the best product for the client may not always be the product yielding the highest commission to the advisor. Do advisors nevertheless provide truthful advice? If not, will a voluntary or obligatory upfront payment by clients induce more truthful advice? According to the results, both types of payment lead to more truthful advice. More generally, in a sender-receiver game with conflict of interest, an upfront payment to the sender by the receiver improves information transmission.

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Keywords: financial advisors, asymmetric information, sender–receiver game, reciprocity, experiments

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# 1 Introduction

Financial advisors are individuals who give advice concerning financial products to private persons and companies (clients). Financial products are, e.g., insurance policies, stocks, bonds, mortgages, pensions. In exchange for their services, financial advisors receive either commissions or fees, or a combination of both. Commissions are paid by product providers per financial product sold to clients. Fees are paid by clients per hour of consulting.

In some countries, like the U.S.A. and the U.K., all three ways of payment coexist. In others, like the Scandinavian countries, commissions are forbidden. In Germany, almost all advisors are paid commissions. For years, the incentives generated by commissions have been a topic of lively debates in the German and the international press.<sup>1</sup> In the light of the financial crisis concerns have become even more severe.

Critics point at the conflict of interest that commissions create for advisors. If differently attractive commissions relate to the different financial products, advisors have an incentive to recommend those products that yield the highest commissions and not necessarily the products that are in the best interest of their clients. As a consequence, clients lose money. Inderst and Ottaviani (2010) investigate the role of commissions theoretically and show that commissions are indeed used to steer the advisor's recommendations.

This situation is an example of a principal-agent problem arising because of asymmetric information and a conflict of interest (see, e.g., Holmstrom, 1979; Eisenhardt, 1989). In the context of the financial market, a client (principal) looks for (hires) an advisor (agent) and hopes to receive truthful advice<sup>2</sup> (high effort). Since the client lacks expertise on financial matters, she is not able to judge the quality of advice given.<sup>3</sup> If the advisor's interest is in conflict with that of the client, there is an incentive for the advisor to exploit the client by providing misleading advice. Assuming that the advisor is competent and well-informed, she would not suffer the cost of effort when providing truthful advice. However, she would forgo profits. Of course, the client can still decide whether to follow the advisor's recommendation or not. Furthermore, knowing the best product for the client and recommending something else may be viewed as immoral, similar to a lie.

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<sup>1</sup>A list of references to German newspaper articles and web pages can be found at the end of section *References*. Further examples from the U.K. and the U.S.A. along with many references are given in Inderst and Ottaviani (2010).

<sup>2</sup>For reasons of parsimony, I will use the term "truthful advice" instead of "advice in the best interest of the client" throughout this paper. Also, "recommendation" and "advice" will be used interchangeably. The term "truthful advice" is warranted in the context of my experiment: due to the fixed wording of the recommendation the advisor can give only one type of recommendation which is truthful while the others are misleading.

<sup>3</sup>It is assumed that the client does not have enough time and/or a good education to compare the attributes of complicatedly designed products on a very diversified market ex-ante and the returns ex-post. This assumption is safe because otherwise the client will most probably not seek financial advice but select a financial product on her own.

Traditional remedies for the principal-agent problem are, for instance, incentive contracts which align the interests of principals and agents. An alternative that has attracted much attention is to address social preferences, in particular reciprocity, which is an intrinsic concern of many individuals. Along these lines, Akerlof (1982); Akerlof and Yellen (1988, 1990) state the fair-wage hypothesis suggesting that generous wages (often above marginal product) that are perceived as fair will increase the moral of agents and therefore their productivity. Experimental evidence in favor of this view shows that principals prefer to offer wages above competitive levels especially when agents have discretion over their effort because higher wages lead to the supply of more costly effort (see, e.g., Fehr et al., 1993, 1998; Fehr and Falk, 1999).

This study proposes a new remuneration mode for advisors which addresses the fact that many individuals are reciprocators. The effectiveness of this mode in mitigating the conflict of interest faced by advisors is tested experimentally and compared to two existing modes – commissions only and commissions complemented with a fee (hereafter obligatory payment). The proposed remuneration mode consists of commissions complemented with a *voluntary* payment by clients. The introduction of a voluntary payment is motivated by the following idea:

*“And in both, traditional and modern societies, gift giving is likely to be part of an exchange process. The motive may be more to create an obligation than to improve the welfare of the recipient.” (Axelrod, 1984, p.135)*

In this sense, the voluntary payment by the client is expected to create an obligation for the advisor to reciprocate with truthful advice.

It is true that the model introduced in the Scandinavian countries consists of a fixed compensation (fee) by clients only, instead of commissions by financial institutions combined with fees by clients. However, at least in Germany the proposal to forbid commissions meets great resistance. Given that the conflict of interest is so obvious and arguments against fees are either seldom given or not entirely convincing, the inactiveness of policy makers is attributed to lobbying by the financial industry.<sup>4</sup> One example for an unconvincing argument in favor of keeping the status quo is the claim that regulation is not necessary because the majority of advisors represent one financial institution and hence the conflict of interest does not apply to them. A valid objection is that also these advisors may only be interested in earning money at the expense of clients, this time for their employer. The probably most convincing argument against fees is the fear that clients once used to get advice ‘for free’, will not be willing to pay fees that are high enough to enable advisors to make a living. Another concern is that fees-based advising may not become a common practice if the advising effort is too high in comparison to the planned investment; fees-based advice would then be worth it only for very wealthy clients. Moreover, advisors who earn per hour of consulting may

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<sup>4</sup>See the newspaper Handelsblatt, August 2010.

be tempted to present matters complicatedly so that clients will have to seek advice more often. Despite all these more or less valid concerns, in the current situation with commissions being the common way for remunerating advisors, clients in Germany lose 20–30 billion euros per year due to misleading financial advice.<sup>5</sup> This fact and the positive experience with fees from Scandinavia speak again in favor of the prohibition of commissions and the introduction of fees.

This study explores the effect of a policy that strikes a balance between fees and commissions: commissions (and hence the conflict of interest) is preserved but a remedy (an upfront payment) is added. Removing the conflict of interest would render the case trivial anyway. The design of the experiment relies on a sender-receiver game<sup>6</sup> similar to Gneezy (2005). An advisor has private information about the monetary outcomes related to three different options, each specifying a payoff for the advisor and the client. Payoffs are such that interests of clients and advisors are misaligned. The advisor has to recommend one of the options to a client who is completely ignorant about the payoffs related to each option. The option chosen by the client determines the final payoffs for both. Before the advisor decides on her recommendation, depending on the treatment, the client may either be required to provide a payment for advice or offer a voluntary payment. Again, depending on the treatment, the payment may either be low or high. The experiment allows to test whether an upfront payment will lead to more truthful advice. The experimental design provides a worst-case scenario: the imposed one-shot interaction does not allow confounds like reputation concerns to influence behavior in favor of the hypothesis under test. In the same way, punishments for misleading recommendations are not possible in order to eliminate strategic incentives to provide truthful advice. Hence, if the (voluntary) payments enhance the provision of truthful advice under these (tough) conditions, they will most probably work in an environment, where it is possible to develop reputation and/or to punish.

The similarities between the experimental design and the situation at the financial market are easily recognizable. The three options represent three distinct financial products, e.g. insurances. The payoffs of the advisor stand for the commissions offered by financial institutions per insurance sold. The payoffs of the client represent the utility for the client from each insurance. In the realistic situation, most clients will not know the true alignment of interests and the commissions advisors receive, nor their own payoff from each insurance. Clients are assumed to be unable to gather information about the different options due to time and/or educational constraints. The obligatory payment is simply the fee that clients pay per hour of consulting. The voluntary payment may create an obligation, or may be interpreted as a signal of good will and trust, or a kind gesture calling for reciprocation in terms of a truthful recommendation.<sup>7</sup>

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<sup>5</sup>Handelsblatt, August 2010.

<sup>6</sup>The sender-receiver game is only used as a workhorse here. For more details on strategic information transmission, see Crawford and Sobel (1982).

<sup>7</sup>One could also argue that the voluntary payment will increase the second order belief of advisors and therefore lead to more truthful advice. If advisors believe that clients believe that advisors will provide more truthful advice,

However, the voluntary payment may also have a negative effect on the provision of truthful advice for several reasons. First, it may crowd out advisor's intrinsic motivation to provide truthful advice (Frey and Jegen, 2000). Second, it may be perceived as an unkind gesture aimed at increasing the payoff of the client at the expense of the advisor.<sup>8</sup> Reciprocity in this case means to respond to unkindness with unkindness (see Rabin, 1993; Dufwenberg and Kirchsteiger, 2004). Third and last, advisors may act strategically: if they believe that clients, having paid for advice are more likely to follow it, they may provide truthful recommendations less often in the presence of payment.

The specific research questions are as follows: Given the conflict of interest for advisors created by commissions, will an upfront payment by clients lead to more truthful advice? Will a voluntary payment be equally or more effective than an obligatory payment in inducing advisors to provide truthful recommendations? Will clients trust advisors and therefore follow recommendations more frequently, having offered a voluntary payment as opposed to an obligatory payment or no payment at all?

According to the results, all types of payment increase the frequency of truthful advice. Clients follow advice more often given they paid (or had to pay) for it with one exception: the high obligatory payment does not trigger higher frequencies of advice implementation. While clients believe that the payment will improve advice quality, advisors believe in higher frequencies of advice implementation only when the payment is voluntary.

The novelty of this study is that it investigates the problem of moral hazard on the market for financial consulting, a topic that, to the best of my knowledge, has not been explored yet, at least experimentally. In a controlled laboratory environment, I study the behavior of agents under the prevailing payment mechanisms and compare it to an alternative to check whether market failure occurs, and if so, whether and how it can best be fought.

More generally, this paper adds to the literature on social preferences in games of strategic information transmission (i.e. communication or also sender-receiver games). Here, I ask whether upfront payments from the receiver to the sender reduce the strategic behavior of the sender. This may be the case because the payment is interpreted as inequality-reducing and/or as a kind gesture that deserves to be rewarded with a truthful message.

The theoretical literature on strategic information transmission initiated by Crawford and Sobel (1982) was followed by a great amount of experimental work, predominantly on the role of social preferences in situations characterized by a conflict of interest. For instance, Sánchez-Pagés and

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given the client paid voluntarily, then advisors may feel guilt, if they do not live up to the client's expectations. To avoid guilt, advisors will try not to disappoint the client (see Charness and Dufwenberg, 2006).

<sup>8</sup>In this setting, the advisor earns more when she is not offered a payment and gives misleading advice than when she is offered a payment and gives truthful advice. In this sense, offering a payment that obliges the advisor to give truthful advice and hence lose money may be perceived as unkind.

Vorsatz (2007) show that over communication in sender-receiver games is due to the adherence of people to social norms, in particular truth-telling. Sánchez-Pagés and Vorsatz (2009) tease apart this preference for truth-telling from lying aversion and investigate the impact of sanctions on truth-telling. Gneezy (2005) finds that the sender’s propensity to lie depends on what she would earn but also on what the receiver would lose. Hurkens and Kartik (2009) show experimental evidence in favor of the hypothesis that people will either never lie or always lie when it is beneficial to them, independently of the harm caused to others. Erat and Gneezy (2011) classify lies in four types depending on whether lies benefit or hurt the sender or receiver. Sutter (2009) replicates the experiment of Gneezy (2005) and additionally measures beliefs to show that it is possible to send a truthful message and at the same time mean to deceive. Rode (2010) studies the effect of competitive versus cooperative context on truth-telling and trust. Finally, without using a sender-receiver game but very related to the topic of deception and (un)successful remedies, Cain et al. (2005) show experimentally that disclosures of conflict of interest designed to protect clients fail to do so because (i) clients are not able to adjust their behavior sufficiently or in the right direction given disclosures; (ii) disclosures give advisors a license to depart from moral standards and strategically adjust their advice to compensate for the disclosure.

The paper is organized as follows. Section 2 describes the experimental design, procedures, and behavioral predictions. Section 3 presents the results. Section 4 discusses the findings, and section 5 concludes.

## 2 Experiment

### 2.1 Design

A cheap talk sender-receiver game was used as a workhorse. Subjects were randomly matched in pairs for an anonymous, one-shot interaction. In the instructions, one subject was assigned the role of “advisor” and the other of “decision maker” (hereafter client). The advisor faced three options, A, B, and C. Each option listed a monetary payoff for the advisor and a monetary payoff for the client. Payoffs were such that the best option for the client was not at the same time the best option for the advisor (see Table 1). In this sense interests were misaligned. Total welfare from option A equaled total welfare from option B. This way choosing one option over another could not be explained with a preference for efficiency. Ruling out additional explanations allowed to concentrate on the conflict of interest for advisors.

The Pareto-dominated option C was added to limit strategic behavior by advisors (as in Rode, 2010) and to increase the external validity of the experiment. In a two options environment Sutter (2009) observes that a considerable share of advisors provide truthful advice, believing that their

Option	Payoff for advisor	Payoff for client
A	10 euros	5 euros
B	5 euros	10 euros
C	3 euros	3 euros

Table 1: Information for advisors: payoff distribution for the two subjects

client will invert it, i.e. select the other, not recommended option. In the presence of option C, advisors do not have any incentive to recommend option B if they actually want to deceive. More options increase the external validity since, in reality, there are more than three different funds, stocks, insurances which advisors can recommend to their clients, and inverting is therefore not possible.

Similar to Gneezy (2005), Rode (2010) and Sutter (2009), the client faced full uncertainty about own and advisor’s payoffs, as well as the alignment of interests.<sup>9</sup> The client only knew that there were three options available (i.e. she did not know the payoff related to the different options, neither for the advisor, nor for herself). The task of the advisor was to recommend one of the three options to the client. There were three possible recommendations, each stating one of the three options as the most profitable for the client. For example, recommendation 1 read: “Option A will earn you more money than the other two options.” Instead of showing the recommended option to the client, she was asked whether she wanted to follow the recommendation. If the answer was yes, the recommended option was implemented as her decision. If it was no, one of the other two options was randomly selected to be implemented as her decision. In the end, the client received feedback only about her own payoff from the chosen option. She never learned her payoffs from the other two not selected options. Moreover, she never learned the potential and actual payoffs of her advisor.

The experiment consisted of four different treatments summarized in Table 2. 32 advisors and 32 clients participated in each treatment.<sup>10</sup>

The setup described so far was common to all treatments. In the following, the differences between treatments will be described.

Treatment	Abbrev.	Subjects	Sessions
Obligatory payment, 1 euro	O1	64	2
Obligatory payment, 2 euros	O2	64	2
Voluntary payment, 1 euro	V1	62	2
Voluntary payment, 2 euros	V2	64	2

Table 2: Treatments

<sup>9</sup>This design does not only ensure comparability to previous literature. In reality, financial products are numerous and difficult to judge for laymen. Awareness of the conflict of interest of advisors is unlikely to help clients choose more suitable products for themselves, see Cain et al. (2005) and the discussion in the German press.

<sup>10</sup>In V1, there was one pair less.



First, consider treatments “Obligatory.” Both client and advisor were told that with an equal probability, advice would either be free of charge or available at a cost. Depending on the treatment, the cost was either one or two euros. Prior to their decisions neither the advisor nor the client were informed about the realization of the random move determining whether advice would be costly or not. The advisor was asked to provide two recommendations, one for each realization (strategy method, Selten, 1967).<sup>11</sup> Likewise, the client was asked to state whether she would follow the recommendation for each realization. At the end of the experiment, everyone received feedback about their own payoff and whether advice was costly. The advisor was additionally informed whether the client followed her advice. (Of course, the advisor was able to infer whether advice was followed only by looking at her own payoff.)

In treatments “Voluntary,” the client could offer a voluntary payment for advice before the advisor provided the recommendation. Again, depending on the treatment, the payment amounted to one or two euros. It was common knowledge that the advisor was obliged to advise in any case, even if not offered a payment. At this point, the advisor was not informed whether she had been offered a payment. Like in the O-treatments, she provided a recommendation both for the case of payment and no payment. The client received only the recommendation that corresponded to her actual decision to offer a payment or not. Feedback at the end of the experiment was the same as in the O-treatments.

After the decision task, subjects were asked to state their belief about the behavior of subjects in the other role and the same session.<sup>12</sup> Each subject stated two beliefs: one for the case a payment was made (voluntary or obligatory) and one for the case, no payment was made. Clients guessed the share of advisors who advise in the best interest of clients. Advisors guessed the share of clients who follow the recommendation. In the V-treatments advisors also judged the share of clients who offer a payment. Beliefs were incentivized in the following way. One guess was randomly selected. If the guess was within 5% points of the realization, the participant received one euro (as in Charness and Dufwenberg, 2006).<sup>13</sup> Since asking for beliefs may influence behavior, beliefs were mentioned after decisions were made and before feedback on final payoffs was given. The instructions only stated that there would be an additional opportunity to earn money later on and that detailed information would be provided on the computer screens. The sequence of events in all treatments

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<sup>11</sup>Evidence on the equivalence of the strategy method and the direct response method is not conclusive. However, so far there has not been any instance where a treatment effect found with the strategy method, was not also found with direct responses (Brandts and Charness, 2009).

<sup>12</sup>Giving subjects the possibility to state beliefs may lead them to ex-post rationalize their behavior. However, information on beliefs helps to better understand decisions. Paying for correct beliefs and (safely) assuming that subjects are interested in material payoffs mitigates the problem of ex-post rationalization.

<sup>13</sup>As pointed out by Charness and Dufwenberg (2006), the procedure excludes rational responses below 5% and above 95%. Nevertheless, I chose to use this incentive mechanism because of its simplicity, especially compared to the widely used quadratic scoring rule. (For an interesting discussion of the quadratic scoring rule, see Artinger et al. (2010).)

is summarized in Table 3. In addition to their earnings from the game, clients and advisors earned a show-up fee of 2.5 euros.<sup>14</sup>

<b>Treatment Obligatory</b>
<p>Chance determines whether CL has to pay for advice (P) or not (NP).</p> <p>Neither AD nor CL are informed whether the outcome of the chance move is P or NP.</p> <p>AD gives advice for P and NP. (2 decisions)</p> <p>CL decides whether to follow advice for P and NP. (2 decisions)</p> <p>AD states beliefs about advice implementation and CL about quality of advice for P and NP.</p> <p>Everyone learns the outcome of the chance move and their own payoff.</p>
<b>Treatment Voluntary</b>
<p>CL decides whether to offer a payment (P) or not (NP). (1 decision)</p> <p>AD is not informed about the decision of CL.</p> <p>AD gives advice for both P and NP. (2 decisions)</p> <p>CL decides whether to follow advice. (1 decision).</p> <p>AD states beliefs about advice implementation and CL about quality of advice for P and NP.</p> <p>Everyone learns their own payoff. AD learns whether she was offered a payment.</p>

Table 3: Course of events

Note: AD = Advisor, CL = Client, P = Payment, NP = No payment

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<sup>14</sup>I ran two pilot sessions of the V2 treatment, in which subjects interacted for five rounds in a complete stranger design. My intention was to check whether feedback and/or experience with playing the game would change behavior. V2 was conducted in two different conditions: once with full feedback for advisors (i.e. advisors were told after each round whether the client had offered a payment and whether she had followed the recommendation) and once with no feedback for advisors. Advisors in the latter condition and clients in both conditions received feedback only at the end of the experiment and only about the one randomly selected round relevant for their payment. Subjects were asked to state their beliefs in each round after the decisions were made. Since the results of these sessions did not give any indication that behavior changed over time, the treatments of the main experiment were conducted as a one-shot game.

## 2.2 Procedures

I performed 2 sessions per treatment or 8 sessions altogether, yielding 64 observations per treatment.<sup>15</sup> I recruited 254 undergraduate students from the University of Jena for this experiment (30 or 32 per session) using the online recruitment system for economic experiments ORSEE (Greiner, 2004). An additional 60 subjects took part in the pilot sessions. On average, they earned 8.9 euros and spent 40 minutes (15 minutes of which on the instructive part) in the laboratory of the Max Planck Institute of Economics in Jena, Germany. The main sessions took place in January 2010 and the pilot sessions in September, October, and November 2009.

Upon arrival in the laboratory, subjects were randomly assigned to a cubicle, where they individually read the instructions.<sup>16</sup> Then they participated in the computerized<sup>17</sup> experiment. During the experiment, eye contact was not possible. Although participants saw each other at the entrance of the lab, there was no way for them to guess with whom of the 32 students they would be matched later on. All subjects had participated in at least one experiment before.

## 2.3 Behavioral predictions

Game theoretically, the upfront payments do not matter. The players face the following (simultaneous) game:

		Client	
		Follow	Not follow
Advisor	Recommendation		
	A	10, 5	4, 13/2
	B	5, 10	13/2, 4
	C	3, 3	15/2, 15/2

The only equilibrium in pure strategies is (C, not follow), i.e. advisors recommend C and clients do not follow the recommendation.<sup>18</sup>

Behaviorally, however, the payments may have an effect on behavior, in particular they may increase the rate of truthful advice. This may be the case if individuals hold preferences for fairness and/or reciprocity.<sup>19</sup>

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<sup>15</sup>In the last session of V1 only 30 subjects showed up. Consequently, in this treatment there are 62 observations.

<sup>16</sup>For a translation of the instructions from the German, see Appendix A.

<sup>17</sup>The experiment was programmed in z-Tree (Fischbacher, 2007).

<sup>18</sup>There is also an equilibrium in mixed strategies, where the advisor recommends A with any probability  $p \in [0, 1]$ , B with probability  $q \in [1/7, 3/7]$ , and C with probability  $1 - p - q \in [4/7, 6/7]$ .

<sup>19</sup>Lying aversion (see Hurkens and Kartik, 2009; Gneezy, 2005) may also play a role but not for the comparison

Preferences for outcome fairness alone may lead to higher rates of truthful advice in the presence of payment (no matter whether obligatory or voluntary). This is because the combination of upfront payment ( $p$ ) and truthful advice that is followed leads to more equal overall earnings than an upfront payment in combination with misleading advice that is followed (compare  $5+p$  for advisor and  $10-p$  for client in the first case to  $10+p$  for advisor,  $5-p$  for client in the second case). Using the model of Fehr and Schmidt (1999), one can compare the final profits of inequity averse advisors from the implementation of option A versus option B for the three values  $p$  can take:  $p \in \{0, 1, 2\}$ . It turns out that option B may be preferred to option A by inequity advisors for upfront payments of size 2.<sup>20</sup>

The voluntary payments may trigger higher rates of truthful advice out of positive reciprocity (see, e.g., Rabin, 1993; Charness and Dufwenberg, 2006) and/or guilt aversion (Battigalli and Dufwenberg, 2009). In the first case, if the voluntary payment is perceived as a kind gesture it may lead to a positive reaction (truthful advice) by a reciprocal advisor. In the second case, depending on the size of the voluntary payment, the advisor's sensitivity to guilt, and her second-order beliefs, it is possible that the rates of truthful advice increase. However, since (at least) data on second-order beliefs is missing, it is not possible to compute exactly for which values of the voluntary payment, one can expect an effect on the quality of advice.

If intentions matter and the voluntary payment is not perceived as a kind gesture but as a bribe or as an attempt to oblige the advisor to act against her own interest<sup>21</sup>, the voluntary payment will lead to even less truthful advice than no payment at all.

In summary, if higher rates of truthful advice occur as a result of the upfront payment, they can be explained with social preferences of advisors, like fairness, reciprocity, guilt aversion. Predominantly rational advisors will play their equilibrium strategy independently of the upfront payment. Inequity averse advisors may provide more truthful advice only when offered the high upfront payment (no matter whether it is obligatory or voluntary). Reciprocal advisors may provide truthful advice given the voluntary payments. What payment type (voluntary or obligatory), what amount (low, high), and what combination of type and amount will be most effective in raising the rate of truthful advice is an empirical question, which depends on the social preferences of advisors.

Whether clients will follow advice or not, depends on their beliefs about (i) the nature of advisors and (ii) how the payment will be perceived by advisors (as a kind gesture, bribe, etc.).

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across treatments and conditions in this experiment (since it is held constant here).

<sup>20</sup>For upfront payments of 0 and 1, the requirements for the model parameters are not satisfied. This means that even inequality averse advisors will never prefer option B to option A, given an upfront payment of 0 or 1.

<sup>21</sup>Remember that a payment by the client in combination with truthful advice yields a *lower* payoff for the advisor than no payment and misleading advice.

### 3 Results

Figure 1 reports the behavior and beliefs of advisors and clients conditional on payment for each treatment. Graph I shows the share of truthful advice, and graph II – the share of clients who follow advice. Graph III reports the average beliefs of all clients about the rates of truthful advice, and Graph IV – the average beliefs of all advisors about the rate of advice implementation.

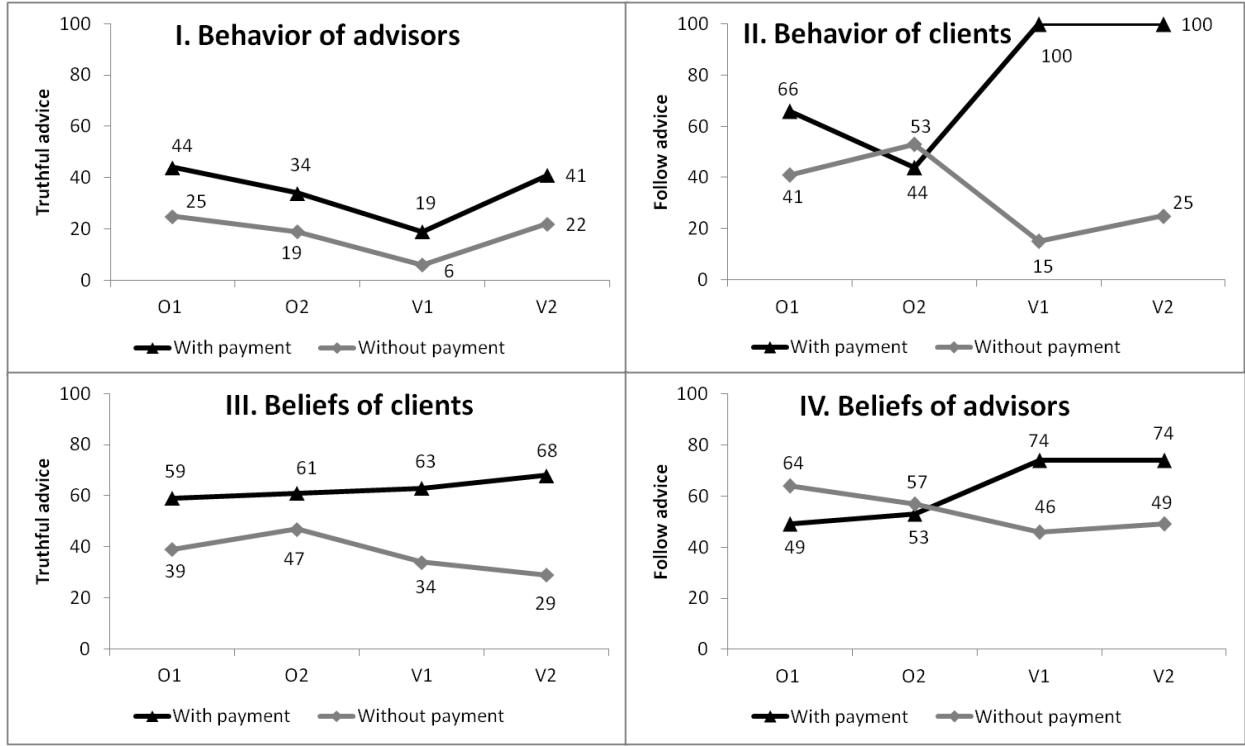


Figure 1: I. Percentage of truthful recommendations; II. Percentage of clients who follow advice; III. Average beliefs of clients about the percentage of truthful recommendations; IV. Average beliefs of advisors about the percentage of clients who follow advice.

Note: In graphs I, III, and IV, each number is based on 32 observations (31 in V1). In graph II, there are 32 observations per number in O1 and O2. In V1, 11 subjects paid for advice and all of them followed it; 20 subjects did not pay for advice and only 3 of them followed it. In V2, 4 subjects paid for advice and all of them followed it; 28 did not pay for advice and only 4 of them followed it.

### 3.1 Behavior of advisors and clients

#### Advisors

**Result 1 :** *In all treatments the frequency of truthful advice is higher with payment than without payment. However, the result is only weakly significant in O2.*

The comparisons between “payment” and “no payment” within each treatment (V1, V2, O1, O2) are based on one-tailed McNemar’s tests for paired samples. Recall that because of the strategy method each advisor gives two recommendations, one for the case that the client pays and one for the case that the client does not pay. Hence, each advisor is present in each sample. Therefore, the two samples are paired. P-values: V1 – 0.0455, V2 – 0.0578, O1 – 0.0578, O2 – 0.0956. The Logit random effects regression I ran as an additional check yields a nonsignificant coefficient for the payment–dummy in O2 (see Table 5, Appendix, section B). Although statistically weakly significant or nonsignificant, the payment still increases the frequency of truthful advice in O2 from 19% to 34%.

**Result 2 :** *Across the treatments O1, V1, and V2, the payment induces the lowest frequency of truthful advice in V1.*

Keeping the condition constant and using one-sided Fisher’s exact tests, one obtains the following results. Given payment, the shares of truthful advice in O1, O2 and V2 are identical. The same is true for the condition no payment. Given payment, advisors in V1 provide truthful advice less often than advisors in O1 ( $p = 0.034$ ) and V2 ( $p = 0.058$ ). Also given no payment, the share of truthful advice in V1 is lower than in O1 ( $p = 0.046$ ) and V2 ( $p = 0.081$ ).

#### Clients

**Result 3 :** *When clients pay voluntarily for advice, they are more likely to follow it than when paying is exogenously imposed. An exception is treatment O2, where the payment does not affect the behavior of clients.<sup>22</sup>*

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<sup>22</sup>A Fisher’s exact test for independent samples was performed in the V–treatments to compare the behavior of clients who paid for advice to the behavior of clients who did not pay. The  $p$ -values resulting from the one-tailed test are:  $p = 0$  for V1 and  $p = 0.009$  for V2. A McNemar’s test for dependent samples was used to compare the behavior of clients in the O–treatments given payment and given no payment. Remember that there, every client submits a decision for both conditions because of the strategy method. The obtained  $p$ -values from the one-tailed test are:  $p = 0.0325$  for O1 and  $p = 0.6$  for O2.

The overall rates of advice implementation show less trust in the quality of advice in the V-treatments than in the O-treatments. More specifically, the share of clients who choose to follow advice is 53% in O1 vs. 59% in O2 vs. 45% in V1 vs. 34% in V2.

All clients who voluntarily pay for advice also follow it. This is very different in the O-treatments: there, by far not everyone who has to pay for advice also follows it.<sup>23</sup> At the same time, significantly more clients follow advice in the O-treatments than in the V-treatments, given that they did not (have to) offer a payment.<sup>24</sup>

**Result 4 :** *The intention to pay for advice leads to full advice implementation, while the obligation to pay for advice achieves lower rates of implementation. When subjects do not pay for advice, they are more willing to follow it in the O-treatments than in the V-treatments.*

## 3.2 Beliefs of advisors and clients

### Advisors

Advisors guessed that 35% of clients in V1 and 40% in V2 would pay for advice. In reality, 45% of clients in V1 and only 13% in V2 offer a payment.<sup>25</sup> One explanation for the observed behavior may be the relatively high amount of 2 euros, compared to the show-up fee of 2.5 euros, combined with the high uncertainty about the possible earnings in the experiment.

The voluntary payments significantly increase the average beliefs of advisors about advice implementation.<sup>26</sup> While the small obligatory payment significantly decreases the average belief,<sup>27</sup> the high obligatory payment does not cause a change.

**Result 5 :** *The voluntary payments raise the belief of advisors in advice implementation compared to no payment at all. The large obligatory payment does not change beliefs in advice implementation, and the small one decreases beliefs.*

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<sup>23</sup>According to a one-tailed Fisher's exact test, V1 differs from O1 ( $p = 0.022$ ) and O2 ( $p = 0.001$ ), and V2 differs from O2 ( $p = 0.052$ ). Distributions are compared for the case of payment.

<sup>24</sup>The rate of advice implementation without payment does not statistically differ between O1 and O2, and V1 and V2. However, V1 differs from both O1 and O2 ( $p = 0.048$  and  $p = 0.006$ , respectively), and V2 differs from both O1 and O2 ( $p = 0.081$  and  $p = 0.025$  respectively), one-tailed Fisher's exact test.

<sup>25</sup>The difference is significant: one-tailed Fisher's exact test,  $p = 0.032$ .

<sup>26</sup>Both  $p$ -values are equal to 0 according to a two-sided Wilcoxon sign ranked test (WSR).

<sup>27</sup>WSR,  $p = 0.0129$ .

Holding the condition constant and comparing average beliefs across treatments yields the following results. Given payment, beliefs in O1 are the same as beliefs in O2; beliefs in V1 are the same as beliefs in V2. In contrast, beliefs in both V–treatments are higher than beliefs in both O–treatments.<sup>28</sup> Given no payment, beliefs in the O–treatments are the same; beliefs in the V–treatments are also the same. Beliefs in V1 are lower than beliefs in both O–treatments and beliefs in V2 are lower than beliefs in O1.<sup>29</sup>

**Result 6 :** *Advisors believe that clients who pay for advice voluntarily will be more likely to follow advice than those who pay out of obligation. Advisors believe that when not paying for advice is chosen by clients, those will be less willing to follow advice than clients who did not pay for advice because chance determined so.*

On the individual level, 63% of advisors in O1 and 47% of advisors in O2 believe that the payment will *decrease* the number of clients who will follow advice. The corresponding shares in the V–treatments are negligible: 6% in V1, and 9% in V2.

In any case, in the V–treatments and in O2 clients behave very similarly to how advisors expect them to behave: in the V–treatments the payment increases advice implementation and in O2 the payment does not have an effect. The beliefs of advisors are wrong with respect to behavior in O1.

### Clients

In all treatments, clients believe that the positive payments will increase the rates of truthful advice.<sup>30</sup> This is true for all clients: those who paid voluntarily/had to pay for advice and those who did not pay/did not have to pay for it. Beliefs of clients are correct with respect to the effect of the payment. However, clients are too optimistic about the exact share of truthful advice, with and without payment.

**Result 7 :** *Clients believe that advisors are more likely to offer truthful advice when being paid for it.*

Do all clients who believe in the improvement of advice quality indeed offer a voluntary payment? An answer is given on Table 4.

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<sup>28</sup>The comparisons are based on two-sided Wilcoxon ranksum tests (WRS):  $p = 0.0001$  for V1 vs. O1;  $p = 0.0012$  for V1 vs. O2;  $p = 0.0001$  for V2 vs. O1;  $p = 0.0018$  for V2 vs. O2.

<sup>29</sup>WRS,  $p = 0.0007$  for V1 vs. O1;  $p = 0.0724$  for V1 vs. O2;  $p = 0.0083$  for V2 vs. O1.

<sup>30</sup>WSR,  $p$ -values: V1 – 0.0008, V2 – 0.000, O1 – 0.000, O2 – 0.0149.



Treatment	Paid	Belief1	Belief2	N	Follow	Don't follow
V1	0	58	37	20	3	17
	1	71	30	11	11	0
V2	0	65	29	28	7	21
	2	85	28	4	4	0

Table 4: Average beliefs of clients in treatments V1 and V2 with clients being grouped according to the voluntary payment they offered

Note: Belief1: the average belief of clients about the share of advisors who give truthful advice with payment; Belief2: the average belief of clients about the share of advisors who give truthful advice without payment.

In V1, the beliefs of clients who offer a voluntary payment do not differ from the beliefs of clients who do not do so. Both groups believe that advice quality will increase with the payment ( $p < 0.05$ , Wilcoxon signed-rank test), but not everyone who holds this belief indeed offers a voluntary payment.

In V2, the group of those who offer a voluntary payment is very small (4 subjects). Nevertheless, for the sake of completeness, beliefs across groups are compared. Clients who offer a voluntary payment in this treatment have a higher belief about the effect of the payment on advice quality than those who do not offer a payment but the difference is only weakly significant ( $p = 0.09$ , Wilcoxon ranksum test). Both groups believe in the significant improvement of advice quality given the payment.

Although almost all clients (27/31 in V1 and 29/32 in V2) believe that the voluntary payment will improve advice quality, this belief seldom leads to the offer of such a payment. In other words, not every subject who believes that she will receive better advice if she pays for it, indeed decides to offer a payment.

Given payment, clients in V2 are most confident about the loyalty of their advisors, followed by clients in V1, O2, and O1, with none of these differences being statistically significant except for V2 vs. O1.<sup>31</sup> Given no payment, clients in V2 are the most skeptical ones now, followed by clients in V1, O1, and O2, with the difference being significant between O2 and the V-treatments and O1 and V2.<sup>32</sup>

**Result 8 :** *Clients believe that not paying for advice will lead to less truthful advice in the V-treatments than in the O-treatments.*

<sup>31</sup>WRS,  $p = 0.0434$ .

<sup>32</sup>WRS, O2 vs. V1:  $p = 0.0331$ , O2 vs. V2:  $p = 0.0040$ , O1 vs. V2:  $p = 0.0421$ .

9% of clients in O1, 22% in O2, 13% in V1, and 6% in V2 state a lower belief given payment than given no payment.

## 4 Discussion

According to the main result of the paper, advice quality increases with all types of payment.<sup>33</sup> All payments besides the small voluntary are similarly effective. Thus, taking the small obligatory payment as a starting point and raising the amount paid and/or adding intentions to it, either does not change the frequency of truthful advice or reduces it (as in V1). Obviously, advisors are sensitive to the fact that payoffs become more equal in the presence of payment, without caring exactly how equal. When intentions are present, the payment has to be generous, otherwise many advisors seem to feel that someone is trying to oblige them to sacrifice profits in exchange for ‘peanuts’.

One surprising result is that advisors give more truthful advice with payment in the O-treatments, although they are less likely to believe that this truthful advice will be implemented. Recall that 63% of advisors in O1 and 47% in O2 stated a lower belief given payment than given no payment. In the V-treatments the corresponding numbers are negligible. If advice is fully independent from beliefs, this observation will not be of any concern. However, if advice is based on beliefs about advice implementation, the results in the O-treatments may mean that advisors who gave truthful advice given payment actually meant to deceive.<sup>34</sup> The advisors who drive the main result in this study are those who change their recommendation conditional on payment. It was therefore important to make sure that these advisors really intended to give truthful advice. Otherwise, it would not be justified to claim that the obligatory payments lead to more truthful advice, while they actually trigger strategic behavior. The incentivized data collected in this experiment did not allow to determine whether behavior and beliefs are related or independent. Fortunately, the post-experimental questionnaire solved this problem. There, advisors stated whether they recommended different options conditional on payment and why. In very rare cases<sup>35</sup> advisors stated that they reacted to their beliefs in a strategic way. All advisors whose advice did not differ across conditions because it was either both times truthful or both times misleading, did not really care about the behavior of clients. Those who always told the truth simply obeyed their principles, and those who always lied wanted to maximize their own profit. Most advisors who gave truthful advice

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<sup>33</sup>The equilibrium outcome occurs only three times in the entire experiment.

<sup>34</sup>Consider an advisor, who gives truthful advice with payment and misleading advice without payment. Assume further that the advisor believes that the client will follow advice with probability 20% if she paid and with probability 80% if she did not pay. If behavior is motivated by beliefs, this advisor may give truthful advice *because* she does not expect that it will be followed. By the same token, she may give misleading advice *because* she believes that this misleading advice will be followed.

<sup>35</sup>See Table 6 in Section B of the Appendix for the exact numbers.

with payment and misleading advice without payment reacted to the payment only and not to their belief. A small number of advisors indeed advised strategically. Table 6 in Appendix B gives detailed information about behavior combined with beliefs and stated motivations of those advisors, who drive the results. Adjusting for those advisors who acted strategically, by mistake, or at random, does not change the results obtained so far. I.e., truthful advice is more frequent with payment than without payment in all treatments. (Interestingly, subjects in O stated equality and subjects in V – reciprocity as the reason why they provided truthful advice.)

Nevertheless, why are beliefs of advisors in the O-treatments different than in the V-treatments? One possible explanation could be that people may be affected by fairness in outcomes but may not believe that others will be affected by this as well in the absence of intentions (i.e. reciprocity). This is in line with Maximiano et al. (2007) who show that the driving force behind gift exchange is reciprocity and not outcome fairness. In the present context, advisors may feel that it is fair to give truthful advice when being paid for it (no matter by the client or by chance). At the same time they may not believe that clients for whom it was not possible (by design) to show good intentions (because chance was responsible for the payment) will believe in the good intentions of advisors and implement advice. As it shows, advisors reason correct in the case of the O2-treatment, where clients do not follow advice more often given payment.

It seems that the driving force behind advice implementation is not related to the amount paid but to the intention to make or withhold payment. Remember that all clients who offered a payment, also followed advice, and most of those, who did not offer a payment, did not follow advice. This is different from the O-treatments, where much less clients follow advice with payment and much more clients follow advice without payment. In O2, these numbers are even equal. Intentions obviously influence the behavior of clients.

Intentions also matter for client's beliefs. In the V-treatments, where not paying is a deliberate decision, the consequences are expected to be more severe than in the O-treatments, where the client cannot be blamed for having refused a payment.

Can lessons from this study contribute to the policy debate about fees versus commissions and/or improve the situation of clients?

The German policy maker does not intend to abolish commissions and mixed models<sup>36</sup> in the near future. Hence, fees-based consulting, commissions-based consulting and mixed models will be available for clients to choose from. If fees-based advising is not affordable for clients, those would have to choose between the remaining two options. Based on the results in this study, clients will have a better chance to receive good advice from an advisor who earns both commissions and fees.

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<sup>36</sup>Mixed models means that advisors charge both, fees and commissions.

Voluntary payments have been shown to work (in the sense that customers are willing to pay enough, such that firms do not suffer losses) in different contexts (see Kim et al., 2009; Regner and Barria, 2009; Gneezy et al., 2010; Riener and Traxler, forthcoming). Exploring how exactly a voluntary payment can be implemented in the context of the financial market is a topic of future research. Given results from this study, it can be kept in mind, that when commissions can create a conflict of interest for (financial) advisors (i) both, voluntary and obligatory upfront payments (i.e. fees) increase the quality of financial advice compared to no payment; (ii) while low obligatory payments are sufficient for this positive effect, voluntary payments would have to be generous. In this case adding intentions to the small obligatory payment may turn out to be counterproductive.

## 5 Conclusions

This study was inspired by an ongoing debate pointing at failures on the market for financial consulting. Commissions paid by the suppliers of financial products may lead advisors to recommend not the products that are best for their clients but those that yield the highest commissions to themselves. The current study tests whether complementing commissions with an (obligatory or voluntary) payment by clients as alternative remuneration modes mitigates the conflict of interest of advisors and thereby induces more truthful advice.

The laboratory environment gives an excellent opportunity to isolate and compare the different remuneration modes. With a simple task at hand, the intention of advisors to deceive can be clearly separated from their lack of competence. This is not possible in the field. A further advantage is that the experimental setting provides access to the beliefs of advisors about the behavior of clients. This sheds additional light on motivations.

The experiment has intentionally implemented the most unfavorable scenario for the main hypothesis – that an additional payment will counteract the conflict of interest faced by advisors. The experimental situation is a one-shot, anonymous interaction between strangers, without the threat of immediate or future punishment (since reputation formation is excluded), and peer pressure (since the client never learns whether advice was truthful). Advisors who do not suffer from lying aversion and believe that clients are likely to follow advice, do not have any reason to provide a truthful recommendation except when they feel obliged to reciprocate with a kind gesture (i.e., given a voluntary payment) or reduce inequality (i.e., given any payment).

The results indicate that the quality of advice increases with all types of payment. Clients who paid or had to pay for advice are more likely to follow it (or at least equally likely as in O2). While the voluntary payments drive the beliefs of advisors about advice implementation in the expected direction (up), the obligatory payments decrease beliefs.

It seems that both fairness in outcomes, as well as intentions drive behavior and beliefs. However, it is sometimes not clear how the interaction between the magnitude of the payment and the intentions (or the lack thereof) related to the payment works (as in the case of the small voluntary payment (see the behavior of advisors) and the large obligatory payment (see the behavior of clients)).

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## 6 Appendix

### Section A. Instructions (not for publication, for referees’ convenience)

The text placed in square brackets is relevant for the V-treatments only. The text in round brackets concerns the O-treatments. Curly brackets distinguish between a payment of one and two euros. Since in the original instructions the notions “advisor” and “decision maker” were used, the translation also uses “decision maker” rather than “client.”

### Instructions for Advisors



Welcome to the experiment! Please switch off your cell phones, stop communicating with other participants, and remove all objects from your desk except for these instructions. If you have any questions, please raise your hand. One of the experimenters will come to your place and answer your questions in private.

In this experiment you will interact with one other participant just once. After that, the experiment will end and you will be paid in cash. The other participant will be assigned to you at random. None of you will get to know the identity of the other. There are two roles: advisor and decision maker. You are randomly assigned the role of advisor.

There are three possible options. Every option consists of a payoff each for you and the decision maker in your pair. Here are the three options:

Option A: You receive 10 euros and the decision maker receives 5 euros.

Option B: You receive 5 euros and the decision maker receives 10 euros.

Option C: You receive 3 euros and the decision maker receives 3 euros.

The task of the decision maker is to choose one of these options. The decision maker knows that there are three options. However, the decision maker does not know the payoffs related to each option. Your recommendation will be the only information that the decision maker will have about the different options. Your task is to make one of the following recommendations to the decision maker :

Recommendation 1: Option A will earn you more money than the other two options.

Recommendation 2: Option B will earn you more money than the other two options.

Recommendation 3: Option C will earn you more money than the other two options.

Rather than showing your recommendation to the decision maker, we will ask her whether she wants to follow it. If yes, the recommended option will be implemented as her decision. If no, the computer will randomly choose one of the options that were not recommended and implement it. The selected option will determine the final payoffs for both of you. Additionally, both of you will receive a show-up fee of 2.5 euros.

[Before you make your recommendation, the decision maker can voluntarily offer you 1 euro {2 euros} for your recommendation. This 1 euro {These 2 euros} will be subtracted from her show-up fee and added to your show-up fee. You are obliged to make a recommendation, even if the decision maker does not offer you anything. At this point, we will not inform you whether the decision maker offered you 1 euro {2 euros}. You will make a decision for the case in which the decision maker offered you 1 euro {2 euros} and for the case in which the decision maker did not offer you 1 euro {2 euros}. If the recommendations differ from each other, the decision maker will receive the recommendation

which corresponds to her actual decision. *Example: You want to make Recommendation 3 if the decision maker offers you 1 euro {2 euros} and Recommendation 2 if the decision maker does not offer you anything. Actually, the decision maker decided to offer you 1 euro {2 euros}. Hence, the decision maker receives Recommendation 3.]*

(It will be randomly determined whether the decision maker has to pay you 1 euro or 0 euros {2 euros or 0 euros} for your recommendation. If the decision maker has to pay 1 euro {2 euros}, 1 euro {2 euros} will be subtracted from her show-up fee and added to your show-up fee.

At first, neither of you will be informed which situation was randomly selected. You will make a recommendation to the decision maker for the case in which she has to pay and for the case in which she does not have to pay. The recommendations can be different, but they need not be. For each situation, the decision maker will state whether she wants to follow the recommendation or not. Only at the end of the experiment will you and the decision maker learn whether the decision maker had to pay. Your own payoff and the payoff of the decision maker will be determined by the decisions that were made for this situation. *Example: the advisor makes Recommendation 3 if the decision maker has to pay and Recommendation 2 if the decision maker does not have to pay. At the same time (i.e., without seeing exactly which option was recommended), the decision maker must state whether she wants to follow the recommendation, if she has to pay for it, and whether she wants to follow the recommendation, if she does not have to pay for it. The decision maker states twice that she wants to follow it. The randomly selected situation is: decision maker has to pay. Consequently, the relevant decisions are “Recommendation 3” and “Follow.” This means that Option C is implemented.)*

At the end of the experiment, the decision maker will learn only her own payoff from the selected option. This means, the decision maker will never learn what payoffs she would have earned from the other two not selected options. Moreover, the decision maker will never learn your payoffs from the three options.

Before we inform you about your final payoff, we will ask you to answer some questions on your computer screen. In doing so, you can earn additional money. How exactly, you will learn from your screen later on.

After you have learned your final payoff, we will ask you to fill in a short questionnaire.

Next, you will be asked to answer some questions on your screen which will help you to better understand these instructions.

Do you have any questions regarding these instructions? If so, please raise your hand. Otherwise, please click on “continue.”

## Instructions for decision makers

Welcome to the experiment! Please switch off your cell phones, stop communicating with other participants, and remove all objects from your desk except for these instructions. If you have any questions, please raise your hand. One of the experimenters will come to your place and answer your questions in private.

In this experiment you will interact with one other participant just once. After that, the experiment will end and you will be paid in cash. The other participant will be assigned to you at random. None of you will get to know the identity of the other. There are two roles: advisor and decision maker. You were randomly assigned the role of the decision maker.

There are three possible options. Every option consists of a payoff each for you and the decision maker in your pair. For example: “Option A: the advisor receives ... euros and the decision maker receives ... euros.” We showed the three options with the corresponding payoffs to the advisor. Her recommendation will be the only information that you will receive about the different options. There are three possible recommendations:

Recommendation 1: Option A will earn you more money than the other two options.

Recommendation 2: Option B will earn you more money than the other two options.

Recommendation 3: Option C will earn you more money than the other two options.

Your task is to select one of the options. You will not see the recommendation of the advisor, but you have to decide whether you want to follow it or not. If yes, the recommended option will be implemented as your decision. If no, the computer will randomly choose one of the options that were not recommended and implement it. The selected option will determine the final payoffs for both of you. Additionally, both of you will receive a show-up fee of 2.5 euros.

At the end of the experiment, you will learn only your own payoff from the selected option. This means, you will never learn what payoffs you would have earned from the other two not selected options. Moreover, you will never learn the advisor’s payoffs from the three options.

[Before the advisor makes her recommendation, you have to decide whether you want to voluntarily offer her 1 euro {2 euros} for her recommendation. The 1 euro {2 euros} will be subtracted from your show-up fee and added to the show-up fee of the advisor. The advisor is obliged to give you a recommendation in any case, even if you do not offer her anything. At this point, we will not inform the advisor whether you offered her 1 euro {2 euros}. She will make a decision for the case in which you offered her 1 euro {2 euros} and for the case in which you did not offer her 1 euro {2 euros}. If the recommendations differ from each other, you will receive the recommendation that corresponds to your actual decision to offer the voluntary payment or not.]

(It will be randomly determined whether you have to pay 1 euro or 0 euros {2 euros or 0 euros} for the recommendation. If you have to pay 1 euro {2 euros}, 1 euro {2 euros} will be subtracted from your show-up fee and added to the show-up fee of the advisor.

At first, neither of you will be informed which situation was randomly selected. The advisor will give you a recommendation for the case in which you have to pay and for the case in which you do not have to pay. The recommendations can be different, but they need not be. For each situation, you have to decide whether you want to follow the recommendation or not. Only at the end of the experiment will you and the advisor learn whether you had to pay. Your own payoff and that of the advisor will be determined by the decisions that were made for this situation. *Example: the advisor makes Recommendation 3 if the decision maker has to pay and Recommendation 2 if the decision maker does not have to pay. At the same time (i.e., without exactly seeing which option was recommended), the decision maker must state whether she wants to follow the recommendation if she has to pay for it and whether she wants to follow the recommendation if she does not have to pay for it. The decision maker states twice that she wants to follow it. The randomly selected situation is: decision maker has to pay. Consequently, the relevant decisions are “Recommendation 3” and “Follow.” This means that Option C is implemented.)*

Before we inform you about your final payoff, we will ask you to answer some questions on your computer screen. In doing so, you can earn additional money. How exactly, you will learn from your screen later on.

After you have learned your final payoff, we will ask you to fill in a short questionnaire.

Next, you will be asked to answer some questions on your screen which will help you to better understand these instructions.

Do you have any questions regarding these instructions? If so, please raise your hand. Otherwise, please click on “continue.”

## **Section B. Tables**

Dep. var.: truthful advice	I	II	III	IV	V
Indep. var.	O1	O2	V1	V2	All
Payment–dummy	1.39*	1.25	10.03***	1.39*	1.51***
	(0.79)	(0.8)	(2.85)	(0.79)	(0.45)
O1–dummy					-1.92***
					(0.65)
O2–dummy					-2.57***
					(0.73)
V1–dummy					-4.10***
					(0.97)
V2–dummy					-2.17***
					(0.68)
Constant	-1.81**	-2.28**	-23.81***	-1.99**	
	(0.81)	(0.92)	(2.69)	(0.84)	
<i>N</i>	64	64	62	64	254
Log likelihood	-37.77	-34.41	-17.97	-36.67	-129.07

Table 5: Regression: Truthful advice depending on payment and treatment  
Note: Logit regressions with individual-specific random effects, standard errors in parentheses,  
\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Advice	O1		O2		V1		V2	
Payment, No payment	Beliefs	Statement	Beliefs	Statement	Beliefs	Statement	Beliefs	Statement
Truthful, Misleading	40,50	fair/equal	95,95	fair	40,20	intuition	85,55	fair
	65,35	fair/equal	80,80	fair	75,25	reciprocity	92,40	fair
	85,70	fair/equal	70,60	fair	95,20	reciprocity	80,10	fair
	35,45	fair/equal	25,45	fair	50,30	reciprocity		
	20,80	fair/equal					35,30	reciprocal
							90,70	reciprocal
	20,80	mistake	39,47	meant to lie			80,20	reciprocal
	45,35	random	30,75	meant to lie			45,20	reciprocal
	40,60	meant to lie	30,85	meant to lie			40,12	reciprocal
Misleading, Truthful	40,60	meant to lie	60,50	meant to lie			45,55	meant to lie
	45,55	mistake	60,40	meant to lie			95,65	meant to lie

Table 6: Behavior (given payment, and given no payment), average beliefs (given payment, and given no payment) and stated motivation in the post-experimental questionnaire by advisors who drive the main result (because they change their advice conditional on payment)

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