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by

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What renders financial advisors less treacherous? – On commissions and reciprocity*–

Vera Popova**

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 (paid by product providers) to the advisor. Do advisors nevertheless provide truthful advice? If not, will a voluntary or obligatory payment by a client induce more truthful advice? According to the results, only the voluntary payment reduces the conflict of interest faced by advisors.

JEL classification: C91, D82, D03, L15, M52
Keywords: financial advisors, moral hazard, 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.[1] In 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 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 may lose money. Inderst and Ottaviani (2010) investigate the role of commissions in a theoretical model 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,

[1] A list of references to German newspaper articles can be found in the Appendix. Further examples from the U.K. and the U.S.A. along with many references are given in Inderst and Ottaviani (2010).

1989). Principal-agent settings are characteristic of the labor market, where a principal employs an agent who has to exert a certain effort in exchange for a salary. The agent experiences disutility from work, and since the principal cannot afford to monitor the agent or is not able to do so, the agent has an incentive to exert less effort than agreed (moral hazard). Shirking reduces the productivity of the agent as well as the profit of the principal.

In the context of the financial market, a client (principal) looks for (hires) an advisor (agent) and hopes to receive truthful advice[2] (high effort). Since the client lacks expertise on financial matters, she is not able to judge the quality of advice given. If the advisor's interest conflicts with that of the client, there is an incentive for the advisor to exploit her by providing misleading advice. Although the advisor does not suffer the cost of effort when providing truthful advice, she forgoes 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.

Traditional remedies for the principal-agent problem are, for instance, incentive contracts which align the interests of employers and employees. 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

[2]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.

the morale of workers and therefore the productivity of labor. 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 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 reducing 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.

The design of the experiment relies on a sender-receiver game[3] 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

[3]The sender-receiver game is only used as a workhorse here. For more details on strategic information transmission, see Crawford and Sobel (1982).

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 experimental design allows to test the hypothesis that an additional payment will lead to more truthful advice. By imposing one-shot anonymous interaction, it excludes factors like reputation concerns which may 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.[4]

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 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 is a moral obligation disguised as money, a signal of good will and trust, and a kind gesture calling for reciprocation in terms of a truthful recommendation.[5]

[4]Sánches-Pagés and Vorsatz (2007) and Sánches-Pagés and Vorsatz (2009) examine the impact of sanctions on truth-telling in a sender-receiver game.

[5]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, given the client paid voluntarily, then advisors may feel

However, the voluntary payment can 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. 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. Do commissions create a moral hazard problem for advisors? If so, will an additional payment by clients (voluntary or obligatory) solve the problem? Will a voluntary payment be equally or more successful 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, only the voluntary payment reduces the conflict of interest of advisors. Advisors expect their truthful advice to be implemented so that there is no strategic aspect in their behavior. Clients having paid for advice voluntarily, follow it in 100% of the cases, and they also expect more truthful advice in the presence of a voluntary payment rather than an obligatory payment or no payment at all.

The novelty of this study is that it investigates the problem of moral hazard on the

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).

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. This work may be seen as a first step toward policy recommendations for improving the organization of the market for professional consulting.

The paper is organized as follows. Section 2 describes the experimental design, procedures, and behavioral predictions. Section 3 talks the reader through the results. Section 4 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).

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. When

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

only two options are available, some advisors provide truthful advice, believing that their client will invert it, i.e. select the other, not recommended option. Sutter (2009) observed this behavior and labeled it "deception through telling the truth." 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.

The client only knew that there were three options available. She neither knew the payoffs related to each option nor whether the interests of subjects were aligned. 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 of 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. The

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

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

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). 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.

In treatments "Voluntary," the client could offer a voluntary payment for advice before the advisor provided her 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. Each subject stated two beliefs: one for the case in which a payment was made (voluntary or obligatory) and one for the case, in which 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).[6] 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 is summarized in Table 3.

In order to prevent advisors from mentally changing the original payoff matrix by adding the payment for advice to each payoff of the advisor and subtracting it from each payoff of the client, the instructions stated explicitly that the payment would be subtracted from the show-up fee of the client and added to the show-up fee of the advisor. Both show-up fees were 2.5 euros.[7]

[6] 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).)

[7] 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

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

Table 3: Course of events
Note: AD = Advisor, CL = Client, P = Payment, NP = No payment

2.2 Procedures

I performed 2 sessions per treatment or 8 sessions altogether, yielding 64 observations per treatment.[8] I recruited 254 undergraduate students from the University of Jena (30 or 32 per session) for this experiment 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

offered a payment and whether she had followed the recommendation) and 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.

[8]In the last session of V1 only 30 subjects showed up. Consequently, in this treatment there are 62 observations.

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.[9] Then they participated in the computerized[10] 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 who of the 32 students they would be matched with later on. All subjects had participated in at least one experiment before.

2.3 Behavioral predictions

Recall that the aim of this study is to test the effect of an additional payment by clients on the willingness of advisors to provide truthful advice. The additional payment will only be successful if it aligns the behavior of advisors with their beliefs and the behavior and beliefs of clients. More specifically, the payment will be found effective in reducing advisors' conflict of interest if

(i) advisors provide more truthful advice with payment than without payment;

(ii) clients follow advice more often with payment than without payment;

(iii) advisors believe that clients will follow advice more often with payment than without payment;

(iv) clients believe that advisors will provide truthful advice more often with payment than without payment.

If for more than one type of payment all these conditions are met, then the frequency of truthful advice with payment will be compared across treatments. This will allow to determine the most effective mechanism(s) for reducing moral hazard on the

[9] For a translation of the instructions from the German, see Appendix.

[10] The experiment was programmed in z-Tree (Fischbacher, 2007).

market for financial consulting.

Why do I expect that any of the payments will induce more truthful advice?

Under standard assumptions, the recommendation of a selfish advisor will be chosen strategically. If the advisor believes that the client, having paid for her recommendation, is likely to follow it, the advisor will provide a recommendation in her own interest. However, under the assumption that individuals hold social preferences for fairness and reciprocity, these predictions will change.[11]

Outcomes-based fairness models (e.g., Fehr and Schmidt, 1999; Bolton and Ockenfels, 2000) predict that any payment (no matter whether obligatory or voluntary) will induce higher frequencies of truthful advice. The reason given is that, in case of payment, a truthful recommendation will decrease inequality of final payoffs from the experiment, while an untruthful recommendation will increase inequality. Hence, if advisors are inequity averse and believe that clients, having paid for their recommendation, are likely to follow it, then they will provide truthful advice in case of payment.

According to intentions-based fairness models (see, e.g., Rabin, 1993; Charness and Dufwenberg, 2006), only the voluntary payment will increase the frequency of truthful advice, and this only in case that the payment is perceived as a kind gesture.

If both outcomes and intentions matter (see, e.g., Falk and Fischbacher, 2006; Falk et al., 2008) and, again, if the payment is perceived as a kind gesture, then the highest frequency of truthful advice will be induced by the voluntary payment, followed by the obligatory payment, and the case where there is no payment at all.

[11] Lying aversion (see Hurkens and Kartik, 2009; Gneezy, 2005) may also play a role but not for the comparison across treatments and conditions.

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, the voluntary payment will lead to even less truthful advice than no payment at all, if advisors believe that clients will follow their advice.

In summary, selfish advisors will not be affected by the payment. Inequity averse advisors will provide more truthful advice with payment (no matter whether obligatory or voluntary) rather than without it. If advisors are positively reciprocal, only the voluntary payment will increase the frequency of truthful advice. If advisors are a mixture of inequity-averse, (positively) reciprocal, and both inequity-averse and reciprocal individuals, both payments will increase the frequency of truthful advice, with the voluntary payment being more effective. The data on beliefs will help to distinguish between a truthful recommendation provided in the belief that it will not be followed and a truly truthful one.

Whether clients will follow advice or not, depends on their beliefs about the nature of advisors and how the payment will affect the recommendations.

3 Results

In reporting the results, I will proceed as follows. I will first discuss the behavior and beliefs of advisors. Then I will turn to the behavior and beliefs of clients.

3.1 Behavior of advisors

In all treatments the share of truthful advice is higher with payment than without payment. However, in O2 the result fails to attain statistical significance. Fig. 1

depicts the frequencies of truthful advice with and without payment across treatments.

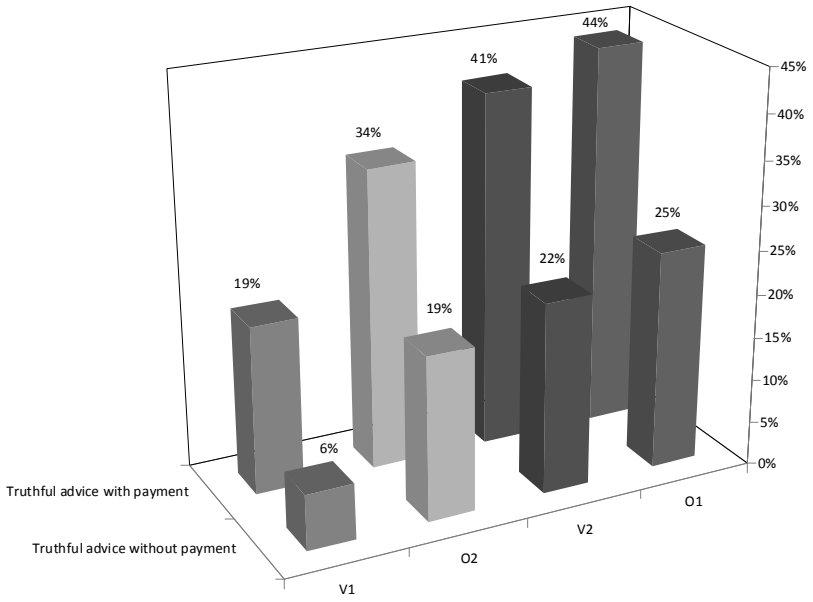

Figure 1: Share of truthful advice conditional on payment

Table 4 provides the result of five Logit regressions[12], investigating the effect of the payment on the probability of truthful advice being provided (the dependent variable takes the value of 1 if the advisor provided a truthful recommendation and 0 otherwise). In all treatments the relationship between truthful advice and payment is positive, but only in O1, V1, and V2 is it also significant (see regressions I to IV). Regression V shows the comparison across treatments. The V1-dummy is the only one that significantly differs from all other treatment dummies, meaning that the probability of truthful advice, both given payment and given no payment, is lowest in V1.[13]

[12]Because of the strategy method, each subject makes two decisions (besides clients in the V-treatments) and states two beliefs. To account for the fact that subjects decide repeatedly, I ran regressions with individual-specific random effects.

[13]Pairwise Wald tests were performed on the estimated coefficients of regression V. The null hypothesis of equality between coefficients could only be rejected when comparing the coefficient of the dummy V1 with the coefficients of the dummies O1 ($p = 0.02$), O2 ($p = 0.09$), and V2 ($p = 0.04$).

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)	
N	64	64	62	64	254
Log likelihood	-37.77	-34.41	-17.97	-36.67	-129.07

Table 4: Truthful advice depending on payment and treatment
Note: Logit regressions with individual-specific random effects, standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Result 1 : *In all treatments but O2, the frequency of truthful advice is higher with payment than without payment.*

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

Why is the frequency of truthful advice lower in V1 than in V2 for both conditions (payment and no payment)? It seems that voluntary payments of any amount provoke positively reciprocal responses. However, a small voluntary payment may not be perceived as sufficiently generous. Trying to oblige someone to sacrifice profits in exchange for 'peanuts' may not have an effect at all. On the other hand, refusing to offer the 'peanuts' also seems to be a bad idea. In contrast, not being prepared to offer 80% of the show-up fee (i.e., the relatively high amount of 2 euros, compared to the overall earnings in the experiment) seems more tolerable to advisors.

It is puzzling that the high obligatory payment does not have a positive effect on

the provision of truthful advice. Comparing O2 to V2 and V1 only, one could easily conclude that intentions behind the payment are needed in order to reduce moral hazard. However, this explanation is not able to accommodate the fact that the low obligatory payment *does* increase truthful advice. Looking at beliefs of advisors may be helpful in understanding this puzzle.

3.2 Beliefs of advisors

Table 5 reports the average beliefs of advisors about the share of clients who will follow advice conditional on payment.

Beliefs of advisors	O1	O2	V1	V2
Follow with payment	49%	53%	74%	74%
Follow without payment	64%	57%	46%	49%

Table 5: Average beliefs of advisors about advice implementation conditional on payment

Table 6 lists six regressions which show how beliefs of advisors regarding the behavior of clients depend on the payment and intentions behind it. The first four are done for each treatment separately. In V1 and V2, the payment raises beliefs about advice implementation. Surprisingly, in O1 the same relationship has a negative sign, and in O2 the payment does not change beliefs at all.

Regressions V and VI compare the belief in advice implementation conditional on no payment (V) and payment (VI) across treatments. It turns out that for both conditions, beliefs in V1 do not differ from beliefs in V2, and beliefs in O1 do not differ from beliefs in O2. Given payment, beliefs in the O–treatments are significantly lower than in the V–treatments.[14] Given no payment, beliefs in O1 are higher

[14]Wald test p–values for all pairwise comparisons between the coefficients of the V–dummies and the O–dummies are highly significant (< 0.001).

than in V1 ($p = 0.002$) and V2 ($p = 0.008$), and beliefs in O2 are higher than in V1 ($p = 0.05$) and the same as in V2. These results give a first hint that intentions behind the payment matter. In contrast to the obligatory payment, the voluntary payment drives beliefs more toward the extremes: downward in absence of payment and upward in presence of payment. Advisors in V1 (V2) guessed that 35% (40%) of clients would pay for advice.

Dep. var.: Belief of AD	I	II	III	IV	V	VI
Indep. var.	O1	O2	V1	V2	NP	P
Payment–dummy	-14.88***	-4.09	28.00***	24.56***		
	(5.08)	(5.46)	(4.29)	(3.98)		
O1–dummy					64.28***	49.41***
					(3.95)	(3.94)
O2–dummy					57.41***	53.31***
					(3.95)	(3.94)
V1–dummy					46.29***	74.29***
					(4.02)	(4.00)
V2–dummy					49.09***	73.66***
					(3.95)	(3.94)
Constant	64.28***	57.41***	46.29***	49.09***		
	(3.59)	(4.55)	(3.68)	(3.93)		
N	64	64	62	64	127	127

Table 6: Beliefs of advisors that clients will follow advice dependent on payment
Note: Random effects regressions (I–IV) and OLS regressions (V, VI), standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$, AD = Advisor, NP = No payment, P = Payment

While the voluntary payment increases the advisors' beliefs about advice implementation and hence, according to advisors, the trust of clients in the quality of advice, the obligatory payment seems to create confusion. According to advisors, the high obligatory payment does not render advice more trustworthy than no payment at all. This belief suits the behavior of advisors who provide the same amount of truthful advice in both conditions. According to the behavior and beliefs of advisors, one can already conclude that the combination of commissions for advisors and a high obligatory payment by clients does not change behavior and beliefs of advisors, compared to the case where only commissions are paid.

Further, according to advisors, clients are more likely to follow advice without payment than with a low obligatory payment. This finding resolves the puzzle mentioned in the previous section. Recall that it was difficult to explain why the large obligatory payment is not able to increase truthful advice, while the small obligatory payment is. The explanation is straightforward. Most advisors who provide truthful recommendations, given the low obligatory payment, do not truly believe that the latter will be followed. Hence, in this treatment we are dealing with strategic agents who tell the truth but mean to deceive. Advisors believe that clients are more likely to follow advice without payment, and in this situation, they readily provide misleading recommendations. This means that the low obligatory payment is an improper mechanism to reduce moral hazard of professional advisors.

Result 3 : *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.*

Result 4 : *With payment, more clients are expected to follow advice in the V-treatments than in the O-treatments. Without payment, the results are reversed. Intentions related to the payment are believed to influence behavior.*

Conclusion 1 : *The obligatory payments are not appropriate for reducing the conflict of interest of advisors.*

3.3 Behavior of clients

Although on average more truthful advice is expected with payment than without payment in all treatments (see Table 8), only 45% of clients in V1 and only 13% in V2 offer a payment.[15] One explanation for the observed behavior may be the relatively

[15]The difference is significant: one-tailed Fisher's exact test, $p = 0.032$.

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.

Table 7 provides descriptives on the share of clients who follow advice conditional on payment. In all treatments but O2, significantly more clients follow advice with payment than without payment.[16]

Treatment	O1	O2	V1	V2
Clients follow with payment	21 (66%)	14 (44%)	11 (100%)	4 (100%)
Clients follow without payment	13 (41%)	17 (53%)	3 (15%)	7 (25%)

Table 7: Conditional behavior of clients

Notice that 100% of the clients who *voluntarily* paid for advice also follow it. This percentage is significantly lower in the O-treatments.[17] At the same time, significantly more clients follow advice without payment in the O–treatments than in the V–treatments.[18]

It seems that the driving force behind trust in advice is not related to the amount paid but to the intention to make or withhold payment and to the belief about how the advisor will react to that intention. Clients seem to believe that the voluntary payment will ensure them good advice, while the refusal to offer it will render advisors unwilling to provide truthful advice. The data on beliefs in the next section will help evaluate these conjectures. In any case, in the V-treatments and in O2 clients

[16]Fisher's exact test, one-tailed: $p = 0$ for V1 and $p = 0.009$ for V2; McNemar's test, one-tailed: $p = 0.0325$ for O1 and $p = 0.6$ for O2. The McNemar's test is used to compare dependent samples. Because of the strategy method, in the O–treatments the same individual makes two decisions – with and without payment. Hence, when comparing the sample "payment" with the sample "no payment," we are dealing with two dependent samples.

[17]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 ($p = 0.052$).

[18]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.

behave very similar 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.

Result 5 : *In all treatments but O2, more clients follow advice with payment than without it.*

Result 6 : *Given payment (no payment), the share of implemented advice is higher in the V-treatments (O-treatments) than in the O-treatments (V-treatments).*

3.4 Beliefs of clients

Table 8 presents the average beliefs for each condition by treatment. Table 9 shows the results of six regressions explaining how beliefs depend on the payment (regressions I to IV) and how beliefs differ across treatments holding the condition constant (V, VI). The positive and significant Payment–dummy in regressions I to IV indicate that in all treatments clients expect more truthful advice with payment than without it.

Beliefs of clients	O1	O2	V1	V2
Truthful advice with payment	59%	61%	63%	68%
Truthful advice without payment	39%	47%	34%	29%

Table 8: Average beliefs of clients about the share of truthful advice conditional on payment

Given payment (see Table 8), 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 significant. However, this order of treatments hints at the fact that both intentions and the amount paid matter, with intentions being more important. 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 (see Tables 8 and 9).[19] In accordance with the conjectures about behavior in the last section, not agreeing to pay voluntarily is expected to have negative consequences. If intentions are present (as in the V-treatments), the consequences of no payment are expected to be more severe, compared to the case where no intentions are present, and hence the client cannot be blamed for having refused a payment. The higher the deliberately refused payment, the greater the skepticism. It is interesting that beliefs of clients in the O-treatments coincide with behavior more closely than in the V-treatments.

Dep. var.: Beliefs of CL	I	II	III	IV	V	VI
Indep. var.	O1	O2	V1	V2	NP	P
Payment–dummy	20.06***	14.22**	28.39***	38.63***		
	(3.61)	(6.08)	(6.6)	(5.55)		
O1–dummy					38.66***	58.72***
					(4.18)	(4.37)
O2–dummy					46.84***	61.06***
					(4.18)	(4.37)
V1–dummy					34.29***	62.68***
					(4.25)	(4.44)
V2–dummy					29.06***	67.69***
					(4.18)	(4.37)
Constant	38.66***	46.84***	34.29***	29.06***		
	(3.71)	(4.3)	(4.67)	(4.46)		
N	64	64	62	64	127	127

Table 9: Beliefs of clients about the frequency of truthful advice
Note: Random effects regressions (I–IV) and OLS regressions (V, VI), CL = client, P = Payment, NP = No payment, standard errors in parentheses,
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Result 7 : *Clients expect more truthful advice with payment than without it.*

Result 8 : *Without payment, clients expect significantly less truthful advice in the V-treatments than in the O-treatments. Refusing to make a voluntary offer is expected to have negative consequences. Intentions seem to matter.*

[19]The Wald tests performed on the estimated coefficients of regression V (see Table 9) yield: $p = 0.0371$ for V1 versus O2, and $p = 0.0032$ for V2 versus O2.

Table 10 summarizes the results. Only in the V-treatments do advisors provide more truthful advice with payment than without payment and truly believe that clients will follow this advice. With a small obligatory payment, advisors provide truthful advice but mean to deceive, while the large obligatory payment does not change their behavior and beliefs, compared to no payment at all. Clients expect more truthful advice with payment in all treatments and follow advice more often with payment than without it in all treatments but O2.

Only in the V–treatments are the behavior and beliefs of clients and advisors aligned. The payment in V2 induces higher frequencies of truthful advice than in V1, everything else being the same. Hence:

Conclusion 2 : *The large voluntary payment by clients is the most successful mechanism for reducing the conflict of interest of advisors.*

	Advisors		Clients	
Treatment	Truthful advice	Beliefs of AD	Follow	Beliefs of CL
O1	P>NP	P<NP	P>NP	P>NP
O2	P=NP	P=NP	P=NP	P>NP
V1	P>NP	P>NP	P>NP	P>NP
V2	P>NP	P>NP	P>NP	P>NP

Table 10: Summary of results
Note: AD = Advisor, CL = Client, P = Payment, NP = No payment

4 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 reduces the conflict of interest of advisors and thereby induce 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. Furthermore, since the experimental setting provides access to the beliefs of advisors about the behavior of clients, one can easily check whether advice that appears truthful really is.

The experiment has intentionally implemented the most unfavorable scenario for the main hypothesis – that an additional payment will decrease 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 a voluntary or obligatory payment).

The results indicate that only the voluntary payments succeed in reducing the conflict of interest of advisors. The large obligatory payment does not have any effect on the share of truthful advice; the small obligatory payment increases the share of truthful advice in comparison to no payment at all, but only because advisors actually believe that clients are not likely to follow advice, i.e., truthful advice is meant to deceive. The voluntary payments, on the contrary, do not only increase the share

of truthful advice and advice implementation but also the beliefs in truthful advice and advice implementation. Further, the large voluntary payment is more effective than the small one. Obviously, fair outcomes alone (equalization of payoffs) are not sufficient to reduce moral hazard – intentions are also needed. Once intentions are there, outcomes start to matter again. Consequently, both intentions and outcomes matter for reducing moral hazard, with intentions being more important.

Surely, insights based on one experiment only have to be taken with caution. Nevertheless, one can already identify an important tendency. The serious moral hazard problem on the market for financial advice can be reduced by introducing a voluntary payment by clients.

Future research may aim at modeling the situation more realistically by allowing competition among advisors and reputation formation. Both can be expected to create additional incentives for advisors (besides reciprocity and inequity aversion) to provide truthful recommendations. Further, a payoff asymmetry could be introduced to account for the fact that a loss to an advisor is less serious than a loss to a client. Endowing clients with partial information on payoffs would accommodate the possibility that clients may be well-informed or that even completely uninformed clients may take advantage of easily accessible information sources like the Internet. It may also be worthwhile to compare a voluntary payment made before the consulting activity with a voluntary payment made after the consulting activity, i.e. a bonus in the spirit of Fehr et al. (2007), or with a punishment by the client as in Fehr et al. (1997).

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5 Appendix

5.1 A (non-exhaustive) list of references to German newspaper articles

"Gute Beratung gibt es nicht umsonst," *Welt am Sonntag*, June 2003;

"Guter Rat ist billig", *Die Zeit*, August 2006;

"Was gute professionelle Hilfe ausmacht," *Financial Times Deutschland*, November 2007;

"Honorarberatung auf dem Vormarsch," *Frankfurter Allgemeine Zeitung*, July 2009;

"Die Vorzüge der Honorarberatung", *F.A.Z.*, July 2009.

5.2 Instructions

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 communi-

cating 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."