

Conflict of Interest Disclosure as a Reminder of Professional Norms: Clients First!

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Abstract

Conflicts of interest create an incentive for advisors to give biased advice, and disclosure is a popular remedy. Across a series of studies, with monetary stakes creating conflicts of interest, I show that disclosure of the conflict of interest can increase as well as decrease bias in advice. The effect of disclosure depends on whether the perceived norms of the context in which the advice is provided are “clients first” or “self-interests first.” Disclosure increases the salience of these norms, which in turn, affects the level of bias in advice. As people draw on multiple sources of information to perceive norms, norms will vary by context and for expert versus non-expert advisors. For non-experts (research participants asked to play the role of advisors), disclosure tends to *increase* bias in settings in which self-interested advice is deemed to be the norm (e.g., giving financial advice) and *decrease* bias in settings in which placing advisees first is deemed to be the norm (e.g., giving medical advice). However, for experts (professional financial and medical advisors), whose norms often emphasize placing advisees’ interests first, disclosure (typically) decreases bias in advice. When considering the benefits and pitfalls of disclosure, professional norms toward clients or self-interests appear to play an important role.

Keywords:

Conflicts of interest, disclosure, advice, ethics, context, professional norms, norm salience

Advisors, such as physicians, lawyers and financial advisors, face a conflict of interest (COI) when their professional responsibilities clash with their personal interests. Professional responsibilities include giving the best independent advice possible and placing clients' needs above one's own. Personal interests refer to benefits, such as additional financial compensation, that advisors can receive if clients follow their recommendation. For example, financial advisors, real estate agents, physicians and other advisors often receive a (greater) commission if the advisee selects a particular product, service or treatment. Advisors in such situations face the dilemma between recommending the option from which they personally benefit most and the option that is best for their clients. (I use the word "client" to encompass all types of advisees, e.g., patients, consumers etc.)

In the face of this dilemma between self-interests and the client's interests, advisors may consider the norms that apply in that environment. Advisors can perceive the norms of their environment as either prioritizing self-interests or placing clients first. I refer to these norms as "professional norms" (as opposed to "professional responsibilities" which are to place clients first).

I refer to professional norms that prioritize advisees as "client first" norms and those that prioritize profits or self-interests as "self-interest first" norms. Professional norms may align with professional responsibilities to place clients first if the professional norms dictate "clients first," or differ from professional responsibilities if the norms dictate "self-interest first."

Attempts to align professional norms with professional responsibilities (perhaps via formal rules or codes of conduct) are often made to alleviate some of the negative effects that arise from COIs. For example, in medicine, physicians are required to place patients first and "to

help, or at least, to do no harm” (Edelstein, 2000). Similarly, registered investment advisors have a fiduciary duty to hold their clients’ interests above their own in all matters (Investment Advisors Act, 1940). Despite these attempts, advisors from many professions, including medicine and the financial industry, often give biased advice in the presence of a COI.

Disclosure—informing clients of their advisors’ COIs—is a common method for managing COIs. Indeed, virtually all policies designed to mitigate the negative effects of COIs include, or consist solely of, disclosure (Fung, Graham, & Weil, 2007; Haines & Olver, 2008). Disclosure is an attractive remedy because it is relatively easy to implement and appeals to principles of transparency, empowerment, and free markets. By reducing the information gap between the advisor and advisee (Dye, 2001; Healy & Palepu, 2001), disclosure arguably allows advisees to make better-informed decisions (Crawford & Sobel, 1982).

Despite the appeal of a COI disclosure, it can pose difficulties for advisees. First, advisees generally do not use disclosures effectively. Unsure of how to react, advisees often ignore the disclosure (Hampson et al., 2006; Pearson, Kleinman, Rusinak, & Levinson, 2006; Rose et al., 2019), trust the advisor more (Okike et al., 2011; Sah, Fagerlin, & Ubel, 2016; Sah, Malaviya, & Thompson, 2018), or trust the advisor less, even when the advice is of demonstrably high quality (Sah & Feiler, 2019). Advisees may also feel increased pressure to comply with the advice despite trusting it less (Sah, Loewenstein, & Cain, 2013, 2019). Moreover, whether due to cost, time, a reluctance to insult their primary advisor (Foreman, 2001; Schwartz, Luce, & Ariely, 2011), or some other factor, advisees do not regularly seek second opinions. The wide range of advisees’ responses to COI disclosure combined with their often disappointing effects suggests that a need to change the advisor’s behavior rather than the

behavior of clients who face the effects of conflicted advice. To do so, one must begin with a better understanding of the impact of COI disclosure on advisors.

The Effect of Conflict of Interest Disclosure on Advisors

As with advisees, past research shows mixed effects of COI disclosure on advisors. In medicine, many COIs arise from physician-industry relationships. For example, physicians who have relationships with industry may prescribe more branded drugs made by companies who give them gifts or fund their research (Hadland, Creda, Li, Krieger, & Marshall, 2018; Larkin et al., 2017; Sah, 2012; Wazana, 2000).

Promisingly, several studies in the medical field show beneficial effects of COI disclosures on physicians' prescribing behavior. For example, in Massachusetts, public disclosure laws (of payments regarding gifts, meals and consulting payments from industry to physicians) decreased physicians' prescriptions of branded drugs relative to similar physicians in nondisclosure states (Chao & Larkin, 2017; Guo, Sriram, & Manchanda, 2017). Furthermore, this reduction in branded drugs occurred even when there was no change in how much physicians received from industry, suggesting the physicians reduced their bias in prescribing branded drugs due to self-monitoring rather than changes in how firms deliver payments (Guo et al., 2017, pp. 1, 4).

Similarly, public disclosure laws in Maine led to fewer branded prescriptions for physicians relative to similar physicians in other nondisclosure states. However the effect of such disclosure laws in West Virginia were mixed, showing a reduction in branded prescriptions when compared to Delaware physicians but no significant effect when compared to Kentucky physicians (Pham-Kanter, Alexander, & Nair, 2012). Although Pham-Kanter et al. showed

smaller effects of COI disclosure on physician bias, most evidence from the medical field shows a trend of decreasing physician bias in response to COI disclosure.

Evidence from the field in the financial services context is limited but also shows encouraging effects of COI disclosure on advisor behavior. For example, auditors reduced provision of non-audit services when disclosure of these services was mandated (Omer, Bedard, & Falsetta, 2006). This complements evidence from laboratory experiments that demonstrates the effectiveness of disclosures when advisors reject the conflict (e.g., when advisors decline gifts from third parties) so that they can disclose the absence of any conflicts (Sah & Loewenstein, 2014).

In other laboratory experiments, when COIs are unavoidable (i.e., they cannot be rejected), two influential papers have shown that disclosure can backfire. That is, rather than giving better advice, advisors give even *more* biased advice with disclosure than without (Cain, Loewenstein, & Moore, 2005, 2011). Cain et al. (2011) asked members of a university community to play the role of advisors who gave advisees a recommendation on the sales price of a house. Advisees were rewarded for their accuracy in estimating the sales price of the house. However, some advisors were rewarded more if the advisees overestimated the sales price. When conflicted advisors' incentives were disclosed, they gave more biased advice (recommended higher sales prices) than when their incentives were not disclosed.

As a result of this finding, policy-makers and academics in medicine, finance, law, and management have questioned the effectiveness of COI disclosures (Burke, Hung, Clift, Garber, & Yoong, 2015; Editors, 2012; Prentice, 2011). While the finding offers an important contribution to the literature regarding the effects of COI disclosures on advisors, the extent to which it generalizes remains an open question. Will advisors in other contexts, such as medicine,

exhibit the same perverse reaction to disclosing COIs? Will this finding generalize to the field, that is to expert advisors (actual professionals giving advice)? Indeed, the evidence from the medical field with physicians suggests that disclosure may have the opposite effect—decreasing, rather than increasing, bias.

Furthermore, other laboratory experiments have documented important boundary effects on Cain et al.'s (2005, 2011) finding, revealing that COI disclosure can decrease advisor bias in certain conditions. Koch and Schmidt (2010) conducted an experiment in the financial services context and found that experience (which they proposed makes the advice-giving context more realistic) led to decreased bias with disclosure.¹ As most practicing advisors in the field have experience, this aligns with the evidence of decreased bias with COI disclosure in the medical field.

Church and Kuang (2009) state that Cain et al.'s finding “may not apply to all settings because certain contextual factors inherent in specific settings could have a different impact on advisors” (pg. 507). They conducted a laboratory experiment in the financial services context in which advisees had the choice to invest or not. They also included the availability of sanctions to advisors who give poor quality advice (but were costly to advisees to initiate). With these

¹ Koch and Schmidt (2010) report a marginal effect of increased bias with COI disclosure (vs. nondisclosure) with no experience (two-tailed $p = .06$). Experienced participants (who were given precise comprehensive feedback about the asset after each of nine periods of advice-giving) gave marginally less biased advice with disclosure (vs. nondisclosure), $p = .06$. The interaction between disclosure and experience was significant, $p = .002$, demonstrating that with experience, advisors gave less biased advice with disclosure relative to nondisclosure. They state “this means that the perverse effects of disclosure postulated by Cain, Loewenstein & Moore cannot be observed for experienced subjects.” (p. 7). Koch and Schmidt (2010) also report that “the negative effect of disclosure postulated by Cain, Loewenstein & Moore are not present in environments where reputation formation is possible.” (p. 8).

changes in contextual factors, advisors gave significantly less biased advice with disclosure relative to nondisclosure. Furthermore, even without sanctions, disclosure did not increase bias in advice. Church and Kuang (2009) state that this “result is not consistent with Cain, Loewenstein, and Moore (2005) but is consistent with our expectation that advisors have an incentive to appear unbiased,” (pg. 521). In other words, the contextual changes led advisors to think differently about the advice they were giving with disclosure than without. For example, sanctions may have made advisors think harder about the appropriate action to take when giving advice (sanctions amount to a legal signal clarifying the professional norm of giving good quality advice).

In another laboratory study, using a sender-receiver game (i.e., not set in an advice-giving context, see Gneezy, 2005), larger COIs led to greater bias (lying) but no significant differences between disclosure and nondisclosure conditions (Ismayilov & Potters, 2013).

In summary, the evidence from the field, primarily in the medical context, suggests that COI disclosure may decrease bias in advice relative to nondisclosure (Chao & Larkin, 2017; Guo et al., 2017; Pham-Kanter et al., 2012). In contrast, the evidence from laboratory experiments is mixed, ranging from increased bias in advice with disclosure (Cain et al., 2005, 2011), to no effect of disclosure (Ismayilov & Potters, 2013), to decreased bias in advice with disclosure (with experience, sanctions, and other changes in context) (Church & Kuang, 2009; Koch & Schmidt, 2010).

Mechanisms that could change bias in advice with disclosure

Cain et al. (2011) provided two possible explanations for increased bias with disclosure. One is that advisors may strategically exaggerate (increase their bias) to compensate for anticipated discounting by advisees with COI disclosure. The other is moral licensing, which

suggests that after a COI has been disclosed, advisors may feel licensed to provide biased advice (Merritt, Effron, & Monin, 2010; Monin & Miller, 2001).

Cain et al. (2011) examined these mechanisms via hypothetical within-subject scenarios in which participants viewed a photo of a jar of jelly beans, imagined they had a COI and were giving advice, on the quantity of jelly beans in the jar, with and without COI disclosure. The scenario examining strategic exaggeration found no effect for this mechanism: advice did not differ with or without disclosure and many participants (47%) gave the same advice, 23% gave lower advice with disclosure and 30% gave higher advice. The scenario examining moral licensing as a potential mechanism found some support: participants rated it more ethical to give biased advice (suggest a number in the hopes that the estimator overestimates) when imagining a COI with disclosure vs. without disclosure.

Koch and Schmidt (2010) also presented participants with a post-experiment questionnaire which contained a hypothetical scenario that asked all participants (advisors and advisees) to imagine they had given biased advice.² Participants responded that they would find it more morally correct and would feel less guilty about giving biased advice with disclosure than without. While lending support to the moral licensing mechanism, this finding is again limited by the hypothetical nature of the scenario.

People often mis-predict or mis-forecast their feelings and behavior when imagining scenarios as opposed to actually being in them (Kawakami, Dunn, Karmali, & Dovidio, 2009; Patrick & MacInnis, 2006; Sommers & Bohns, 2018; Van Boven, Dunning, & Loewenstein, 2000; Woodzicka & LaFrance, 2001), and hypothetical questions can lead people to overstate behavioral reactions. For example, a national survey found that 74% of people believed that

² Confirmed via personal communication with Christopher Koch, February 2019.

industry money influences physicians and 51% reported they would be less likely to choose physicians who received industry money (Evans, 2014). However, patients' discovery that their own physician did, in fact, receive money from industry had no effect on their trust in their physician and 75% said it made no or little impact on their medical decisions after the disclosure (Rose et al., 2019). Likewise, in Koch and Schmidt's (2010) post-experimental questionnaire, participants reported that they would find it more morally correct and would feel less guilty about giving biased advice with COI disclosure than without. Yet, when playing the role of advisors in the experiment, many advisors gave *less* biased advice with disclosure than without at the end of the experiment. That is, their behavior was in the opposite direction to their hypothetical responses.

In contrast to hypothetical scenarios, to capture strategic exaggeration, Ismayilov and Potters (2013) asked advisors who were subject to monetary COIs about anticipated advisee discounting ("How likely is it that your receiver will follow your advice?"). To capture moral licensing, they calculated mathematically the cost of lying (the psychological cost of sending a deceptive vs. honest message). This cost should decrease with disclosure if advisors feel morally licensed. They found no evidence of strategic exaggeration or moral licensing with disclosure (perhaps unsurprising as they also found no differences in bias with disclosure vs. nondisclosure). Thus, more evidence is needed to better understand the mechanisms that could lead to increased or decreased bias with COI disclosure.

In this paper, I examine potential underlying mechanisms that could change advisors' behavior in response to a COI disclosure. Recent work has shown that other disclosures, such as calorie labeling, have mixed effects on consumer food choices. Some studies report a decrease in caloric intake (Krieger et al., 2013), others show no effect (Wisdom, Downs, & Loewenstein,

2010), or even an increase in caloric intake (Seenivasan & Thomas, 2016). Goswami and Urminsky (2015) suggest that calorie labeling works as a *reminder* that prompts people to consider nutrition (rather than the calorie information displayed). Thus, for consumers who *perceive* high-calorie items as healthy, calorie labeling working as a reminder can actually backfire, leading consumers to select high-calorie food that they consider healthy. Similarly, I propose that COI disclosure will work as a reminder that focuses advisors' attention on the COI dilemma (whether to place the client or their self-interest first). The resulting increased salience of the professional norm (clients first or self-interest first), in turn, affects the level of bias in the advice, either increasing or decreasing bias depending on the norm.

The Importance of Context and Advisor Expertise

Context, in the sense of peripheral but influential elements of the surrounding environment, is often lacking in organizational behavior research. Its influence is “often unrecognized and underappreciated” (Johns, 2006, p. 389). In the current investigation, I draw on norm focus theory (Cialdini, Bator, & Guadagno, 1999; Cialdini, Kallgren, & Reno, 1991) and the logic of appropriateness perspective (March, 1994) to explain why COI disclosure might affect advisors differently depending on the perceived professional norms of the advising context.

Norms and the Logic of Appropriateness

Norms are “understood rules for accepted and expected behavior” (Cialdini et al., 1999, p. 196). Our behavior is reliably predicted by both injunctive norms (perceptions of behaviors that are socially sanctioned and commonly approved of; what we think we *should* do), and also by descriptive norms (perceptions of how others typically behave; what we think others *actually* do) (Cialdini et al., 1999). These norms are closely related to the “logic of appropriateness”

perspective, which March (1994) proposed to describe the role of context in organizational decision-making.

Following norms is a relatively complicated cognitive process. Reasoning is not primarily linked to the anticipation of future consequences but instead to tacit mutual “understandings of what is true, reasonable, natural, right and good.” (March & Olsen, 2004, p. 4). That is, most of the time, people take reasoned action after answering three elementary questions (implicitly or explicitly) pertaining to (1) Recognition: What kind of situation is this?, (2) Identity: What kind of person/professional am I?, and (3) Rules: What does a person/professional like me do in a situation such as this? (March, 1994; March & Olsen, 1989, 2004). People answer these questions not by undertaking a cost-benefit analysis, but rather through internalized prescriptions, which have both an injunctive component—what they think they ought to do in such a situation—and a descriptive component—what they think others actually do (Bicchieri, 2005, 2016; Cialdini et al., 1991).

As *perceptions* or *beliefs*, norms must be examined from “both the individual’s psychological system and the sociocultural system in which the individual is embedded” (Cialdini & Trost, 1998, p. 153). Note that all norms are perceptions (beliefs) not actual rates of behaviors. People tend to draw on multiple sources of information to perceive norms, including other people, mass media, and institutional/legal signals such as sanctions or other penalties and rewards (Tankard & Paluck, 2016). Recognition, identities, and rules are based on experience, expert knowledge, intuition, or role expectations (March & Olsen, 2004). Naturally these perceptions differ between expert and non-expert advisors as well as by context.

Expert Advisors

Practicing professionals (experts) have spent considerable time and effort training in their profession, have frequent work interactions with other experts, and receive different institutional and legal signals. As a consequence, they are likely to have different perceptions of the moral rules and norms of their profession than research participants (non-experts) who are asked to play the role of an advisor in an experiment. Research reveals that attitudes and behaviors learned or acquired during early training persist into practice (Austad, Avorn, & Kesselheim, 2011; McCormick, Tomlinson, Brill-Edwards, & Detsky, 2001). Experts, such as practicing physicians and financial advisors, have professional responsibilities and a defined role in society, such as caring for their patients or improving their clients' financial well-being. These professional responsibilities to place clients first are likely to strongly inform professional norms. Thus, when experts consider a COI by asking "What does a professional like me do in a situation like this?" in many professions, the answer is likely to be "Clients First."

Non-Experts and Context

Meanwhile, when non-experts are asked to play the role of an advisor, their expectations of advisors' behavior are likely to be strongly influenced by schemas and descriptive stereotypes of the particular type of advisor (S. T. Fiske, 2000). For non-experts, two professions that are likely to conjure up different schemas for advisors' behavior are medicine (often viewed as a caring profession) and finance (often viewed as a self-interested profit-driven profession). Thus, for non-experts, the perceived norms of these two professions may be at different ends of the spectrum for placing clients first vs. giving self-interested advice.

Financial advisors are often portrayed in the media as having a "self-interest first" norm (Miller, 1999; Miller & Ratner, 1996; Smith, 2012). Recent business scandals may also reinforce

the view that there is a “business exemption on moral motivation” (Batson & Moran, 1999, p. 912). For example, the downfall of Arthur Andersen can be traced, in part, to the COIs of its auditors, who were motivated to pursue lucrative consulting contracts from the same firms they audited (Moore, Tetlock, Tanlu, & Bazerman, 2006).

In contrast, people (non-experts) trust physicians more than other professionals, such as financial advisors and bankers (Gallup Poll, 2015), even though physicians possess, and succumb to, similar COIs as other advisors (Lexchin, Bero, Djulbegovic, & Clark, 2003; Sah, 2012, 2015; Shafrin, 2010). Indeed, high-profile scandals regarding COIs are present in medicine (Kassirer, 2001; Rodwin, 1995; Sekeres, 2016), but people may be either less aware of them or less willing to accept that physicians are affected by COIs. This may be because people *believe* that physicians have a higher moral professional code to place their advisees first, or they are more familiar with physicians’ professional responsibilities. Even if patients acknowledge that COIs may influence physicians, many believe their own physician will not be influenced (Gibbons et al., 1998). Non-experts are therefore likely to believe that physicians will place “clients first” and that most financial advisors will place their own “self-interest first.”

To validate these implicit theories of professional norms for financial and medical advisors, I surveyed 327 people (non-experts from MTurk) from a range of occupations (see the supplement for further details). I asked them to “Imagine two situations in which one could give advice, Financial and Medical. You are the advisor and are subject to a conflict of interest in that you are financially better off if the advisee chooses Option B but the advisee is usually better off choosing Option A.” Participants reported how much they agreed or disagreed with statements regarding the extent that they would be willing to give self-interested biased advice and thought it appropriate to give self-interested advice. As expected, people were more willing to give self-

interested advice, and deemed such advice more appropriate to give, if they were a financial advisor with a COI than if they were a medical advisor with the same COI (all $ps < .001$).

Disclosure Increases Norm Salience

Given that people have different perceptions of the professional norms in a particular context, the question that follows is whether COI *disclosure* will have different effects on the advice? I propose that COI disclosure will work as a reminder prompting advisors to consider the ethical dilemma—whether to give self-interested advice or place the client first—and ask themselves (implicitly or explicitly), “What does a person/professional like me do in a situation such as this?” (March, 1994). The logic of appropriateness focuses attention on the perceived professional norm (clients or self-interest first). Prior literature highlights that norms are more likely to direct behavior when they are made salient (Cialdini et al., 1991; Cialdini, Reno, & Kallgren, 1990). COI disclosure increases such salience, and as a consequence, bias in advice can increase or decrease depending on the perceived norm.

Hypotheses

For non-expert advisors (research participants asked to play the role of an advisor), disclosure will *increase* bias in settings in which self-interested advice is deemed to be the norm (e.g., giving financial advice) and *decrease* bias in settings in which placing clients first is deemed to be the norm (e.g., giving medical advice).

Hypothesis 1: For non-expert advisors, context will moderate the effect of COI disclosure, increasing bias in contexts in which the perceived norm is to place self-interest before clients and decreasing bias in contexts in which the perceived norm is to place clients first.

However, for experts (actual practicing financial and medical advisors), who perceive the professional norm is to place clients first, disclosure can have the beneficial effect of decreasing bias in advice as it encourages experts to focus on this norm.

Hypothesis 2: For expert advisors with professional norms that emphasize placing clients first, COI disclosure will decrease bias in advice.

Prior work has used hypothetical scenarios to investigate potential mechanisms of moral licensing and/or strategic exaggeration with COI disclosure (Cain et al., 2011; Koch & Schmidt, 2010). Because both these mechanisms have been proposed to explain increased bias, neither mechanism would explain a decrease in bias with COI disclosure. My theory suggests a third possible mechanism that has not been previously considered—norm salience—which may offer an improved understanding of the effect of COI disclosure on advisors in different environments. I propose that COI disclosure reminds advisors to consider the conflict between their self-interests and their client’s interests, which increases the salience of the perceived norm. Although the perceived norm may differ for experts vs. non-experts and by context, and thus disclosure could lead to either increased or decreased bias, in all cases, this “norm salience” (Cialdini & Trost, 1998) is expected to mediate the relationship between disclosure and bias in advice. In this paper, I examine all three potential mediators—moral licensing, strategic exaggeration, and norm salience—and predict that COI disclosure will prompt advisors to consider the perceived professional norm (making it more salient) and behave accordingly.

Hypothesis 3: Norm salience will mediate the relationship between disclosure and the level of bias in advice.

Overview of Studies

I test these hypotheses in a series of studies with real monetary incentives that examine how COI disclosures affect advisors. First, I show in Study 1 that disclosure can have different effects on advisors when the perceived professional norm to place clients or self-interest first is different. Because financial and medical contexts are likely to elicit different perceived norms for non-experts, disclosure could have opposing effects: increasing bias in financial advice and decreasing bias in medical advice (*Hypothesis 1*). This study also examines the role of norm salience, as well as other potential mechanisms such as moral licensing and strategic exaggeration, that could explain the relationship between disclosure and the likelihood of giving biased advice (*Hypothesis 3*). The next two studies examine the advice-giving behavior of experts: trained practicing medical (Study 2a) and financial (Study 2b) advisors, who are likely to be exposed to “client first” norms more frequently than non-experts. Therefore, COI disclosure is likely to decrease bias in advice for both professions (*Hypothesis 2*).

Finally, Studies 3 and 4 further test the proffered mechanism. Study 3 provides supporting evidence for the role of norms by documenting that the perceived professional norms for experts and non-experts diverge in the financial domain but converge in the medical domain. Furthermore, if COI disclosure increases the salience of professional norms, reminding advisors of their COI may have the same effect as COI disclosure by focusing the advisor’s attention to the COI and the professional norm. This predicted effect is shown in both the medical (Study 4a) and financial (Study 4b) contexts. Lastly, informing non-experts in the financial domain of their professional responsibility (to place clients first) changes their advice-giving behavior leading to less bias with COI disclosure (also Study 4b).

Study 1: Context Moderates the Relationship between Disclosure and Bias in Advice for Non-Expert Advisors

In this experiment, I randomized non-expert participants to give advice to another set of participants in either a financial or medical context. Based on the results of the pilot study described in the Introduction, I expected non-experts to hold different perceived norms for these contexts regarding placing clients first. In this experiment, advisors were asked to give advice on which of two options the client should take. In both contexts, advisors were subject to the same financial COI by monetary incentives that paid advisors more if the client chose the inferior option. The structure of the advice-giving and the economic payoffs were identical in each context. I predicted context would moderate the effect of COI disclosure on bias in advice (*Hypothesis 1*).

I also investigated advisors' reasons for giving, or not giving, biased advice. Questions included measures for the psychological mechanisms that have been proposed previously for increasing bias in advice with COI disclosure: strategic exaggeration (measured by examining advisors' belief that clients would discount their advice) and moral licensing (measured by examining advisors' guilt in giving biased advice), as well as for professional norm salience (measured by advisors' perceptions of whether the client's interests should be placed first).

Norm salience is difficult to measure (see Study 3 for more on this). I propose that COI disclosure increases focus on the perceived professional norm (clients vs. self-interest first). Thus, participants in the disclosure conditions may report clearer/stronger attitudes regarding placing clients, or self-interest, first. In this study with disclosure (vs. nondisclosure), the "clients first" norm should be more salient to those in the medical context and the "self-interest first" norm should be more salient to those in the financial context. I predicted that this norm salience

would mediate the relationship between disclosure and the level of bias in advice (*Hypothesis 3*) in both the financial and medical contexts.

Method

Participants. Two hundred and twenty-five participants (155 men, 66 women, 4 genders unreported; $M_{\text{age}} = 29.5$, $SD = 4.4$) from a U.S. graduate school, played the role of advisors in a study in which they could earn up to \$18.³ Although this paper focuses on the behavior of advisors, to minimize deception, the advice was later presented to a further 225 participants, the advisees. The responses of advisees determined advisors' payments. The study procedure and results for advisees as well as payoffs are available in the supplement for all relevant studies.

Procedure. Advisors were randomly assigned to one of four conditions in a 2 (context: financial vs. medical) x 2 (disclosure vs. nondisclosure) between-subjects design. Participants read detailed instructions and took a quiz to check their understanding before giving advice. Due to the length of the study, an attention check was included near the end of it. In all conditions, advisors were subject to real monetary COIs.

In the medical context, advisors were told to place themselves in the role of a medical doctor and were informed that they would give advice to other participants who would be their patients. Medical advisors had to advise three different patients on which treatment option, A or B, the patients should take. For each of the three patients, the advisor had a COI and would receive more money if the patient chose Treatment B (up to \$18), but Treatment A was better for the patient. Therefore, for each patient, the medical advisor faced the dilemma to give self-interested advice (recommend Treatment B) or to prioritize the interests of the advisee

³ For each study, I retained participants whether they skipped questions or not; therefore, degrees of freedom vary slightly across measures.

(recommend Treatment A). Advisors had more information than advisees; advisors could see the full payoffs for each option for both themselves and their advisees, whereas advisees could not.

For each patient, advisors viewed the payments for each treatment option and then selected either Treatment A or Treatment B and one of three recommendation strengths: “I’m [100%/very/fairly] sure that this treatment is the best option for you.” The advice was converted to a 1-6 scale representing honest advice that places the client first (score = 1, Treatment A, 100% sure) to self-interested biased advice (score = 6, Treatment B, 100% sure), which was averaged across the three advisees (see the supplement for more details on the payments and instructions). Some advisors were required to disclose their COI, (“Disclosure: I, your doctor, typically get paid more if you take Treatment B”) and some were not.

In the financial context, participants played the role of a financial advisor and advised three clients on which of two funds (A or B) the clients should choose. The scenario followed the exact same format as the medical scenario, differing in language at appropriate places; for example, “patient,” “doctor,” and “treatment” were substituted with “client,” “financial advisor,” and “fund,” respectively. The payoffs for each option were identical to those in the medical context. Advisors viewed the payments for each fund option and then selected either Fund A or Fund B and one of three recommendation strengths: “I’m [100%/very/fairly] sure that this fund is the best option for you” which was again converted to a 1 (honest unbiased advice) to 6 (biased self-interested advice) scale averaged across the three advice decisions. Again, some advisors were required to disclose (“Disclosure: I, your advisor, typically get paid more if you take Fund B”) and some were not required to disclose their COI.

Norm salience. Professional norms are developed from perceptions of both injunctive norms (what we believe we should do) and descriptive norms (what we believe others actually

do). In this study, I measure only the salience of the injunctive norm by asking advisors to respond to the statement “The patient’s/client’s interest should come first” on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). (Other studies in this paper employ statements to capture both injunctive and descriptive norms). In the medical context, COI disclosure should lead to stronger agreement with the statement as the “clients first” norm becomes more salient; in the financial context, COI disclosure should decrease agreement with this statement as the “self-interest first” norm becomes more salient.

Perceptions of advisee discounting. To examine strategic exaggeration, advisors were asked how much they agreed or disagreed on a 7-point scale that the advisee would discount their advice (three questions: “I thought the patient/client would discount my advice”; “The patient/client will follow my advice” (reverse coded); “The patient/client trusts me” (reverse coded); Cronbach’s $\alpha = .78$).

Guilt. Four questions, also on a 7-point scale, adapted from Piazza and Giner-Soralla’s scale (2011), measured advisor’s guilt (“I would feel guilty about giving advice that would not be in the patient’s/client’s best interest”; “I would feel I had let the patient/client down if I did not give the best advice I could”; “I would feel I had disappointed the patient/client if I did not give the best advice I could”; and “I would feel I had not lived up to the standard the patient/client expected of me if I did not give the best advice I could”; Cronbach’s $\alpha = .88$).

Type of decision. Advisors rated on the same 7-point scale how much they viewed the decision as a personal, business, ethical, or legal decision (questions from Tenbrunsel & Messick, 1999). The answers to these questions are reported in the supplement.

Results

Please see Table 1 for the means and standard deviation of the dependent variables.⁴

Advice. As predicted by *Hypothesis 1*, the interaction of disclosure and context was significant, $F(1, 221) = 12.70, p < .001, \eta_p^2 = .05$. The main effects for context, $F(1, 221) = 1.79, p = .18$, and disclosure, $F(1, 221) = 1.57, p = .21$, were not significant. Disclosure had opposing effects on the bias in advice due to context (see Figure 1): disclosure *decreased* bias in advice in the medical domain relative to nondisclosure, $F(1, 221) = 9.60, p = .002, \eta_p^2 = .04$, whereas disclosure *increased* bias in the financial domain compared to nondisclosure, $F(1, 221) = 3.37, p = .07, \eta_p^2 = .02$.⁵

Norm salience. A main effect for context revealed that advisors agreed with the “clients first” norm more in the medical ($M = 6.12, SD = 1.20$) than the financial ($M = 5.61, SD = 1.30$) context, $F(1, 218) = 9.65, p = .002, \eta_p^2 = .04$. The main effect for disclosure was not significant, $F(1, 218) = 0.03, p = .87$, but there was an interaction of disclosure and context, $F(1, 218) = 12.29, p = .001, \eta_p^2 = .05$. As predicted, COI disclosure led to increased norm salience in each context: i.e., stronger agreement, or disagreement, with the “clients first” norm. Disclosure led to higher agreement with the clients first norm in the medical domain relative to nondisclosure, $F(1, 218) = 4.67, p = .03, \eta_p^2 = .02$, whereas in the financial domain, disclosure led to lower agreement with the client first norm relative to nondisclosure, $F(1, 218) = 8.39, p = .004, \eta_p^2 = .04$.

⁴ Fifty nine participants failed the attention check (a question asking participants to “choose disagree [on the response scale] to demonstrate I am paying attention” inserted near the end of the study amongst other questions). The results reported here include all participants. Results excluding participants who failed the attention check follow the same pattern unless noted.

⁵ Excluding participants who failed the attention check increases the effect sizes and significance of the results. Financial advisors gave significantly more biased advice with disclosure than without, $F(1, 162) = 4.40, p = .04, \eta^2 = .03$.

Mediation of norm salience. I predicted that norm salience would mediate the relationship between disclosure and level of bias in advice (*Hypothesis 3*) for both the financial and medical contexts. As context moderated the effect of disclosure on the level of bias in advice, to examine whether norm salience was a mediator of this effect, I conducted bootstrapping mediation analyses with 5,000 bootstrap samples for mediated moderation using Hayes PROCESS macro, Model 7 (Hayes, 2013; Preacher, Rucker, & Hayes, 2007). This analysis revealed, as predicted, that norm salience was a significant mediator in both the financial and medical contexts; the 95% confidence interval (CI) for the indirect effect excluded zero for both the financial [0.17, 0.92] and medical [-0.93, -0.08] contexts.

Perceptions of advisee discounting. There was a significant interaction between disclosure and context, $F(1, 219) = 3.98, p = .047, \eta_p^2 = .02$.⁶ The main effect for disclosure, $F(1, 219) = .12, p = .73$, was not significant. The main effect for context was marginal, $F(1, 219) = 3.65, p = .06, \eta_p^2 = .02$, with more discounting forecasted for financial ($M = 2.87, SD = 1.15$) vs. medical contexts ($M = 2.57, SD = 1.19$). However, simple contrasts between disclosure and nondisclosure conditions were not significant in the financial, $F(1, 219) = 1.72, p = .19$, or medical, $F(1, 219) = 2.27, p = .13$, contexts.

Guilt. The main effects for context, $F(1, 218) = 2.49, p = .12$, and disclosure, $F(1, 218) = 3.14, p = .08$, were not significant. The interaction between disclosure and context was also not significant, $F(1, 218) = 1.63, p = .20$.⁷

⁶ All effects for advisee discounting become non-significant when participants who failed the attention check are excluded.

⁷ Excluding participants who failed the attention check revealed only a main effect for disclosure: while moral licensing predicts that advisors will feel less guilty to give biased advice with disclosure, in this study, I find the opposite. Advisors who had to disclose reported *greater* guilt than advisors who did not

Multiple mediation model. For a stronger test of potential mediators, I conducted a multiple mediation test again using Hayes PROCESS mediated moderation model (Model 7) simultaneously for all three potential mediators—norm salience, advisee discounting, and guilt. Norm salience was again a significant mediator explaining the relationship between disclosure and biased advice for both the financial (95% CI [0.14, 0.78]) and medical (95% CI [-0.81, -0.09]) contexts. Perceptions of advisee discounting did not mediate the effect of disclosure on biased advice in either context: financial (95% CI [-0.03, 0.09]); medical (95% CI [-0.12, 0.04]), and neither did guilt: financial (95% CI [-0.10, 0.08]); medical (95% CI [-0.28, 0.01]).

Discussion

COI disclosure had opposing effects in the financial and medical contexts, resulting in a significant interaction between context and disclosure for the level of bias in advice (*Hypothesis 1*). Aligning with evidence from the medical field, COI disclosure decreased bias in the medical context. In the financial context, COI disclosure increased bias (although the effect was not as strong as the opposing effect in the medical context). The salience of the professional norm to place clients first was the only mediator that significantly mediated the relationship between disclosure and bias in advice in both the financial and medical contexts (*Hypothesis 3*). Neither guilt nor anticipated advisee discounting mediated the relationship.

An additional experiment (Experiment S1 in the supplement) with monetary COIs randomized non-expert participants to a real-estate context (a replication of the main study in Cain, et al. 2011) and a medical context similar to the one in this study. A significant interaction

have to disclose, $F(1, 162) = 5.34, p = .02, \eta_p^2 = .03$. Simple contrasts revealed that this result was driven by advisors in the medical context ($p = .03$); there was no difference in guilt for financial advisors who had to disclose or not ($p = .27$).

again revealed opposing effects for COI disclosure: increased bias in the real-estate context and decreased bias in the medical context.

Note that the advisors in this study were subject to monetary COIs in that the incentives to give biased advice were real and advisors received payment depending on the choice the advisees made. Thus, there were monetary consequences for both advisors and advisees in both domains. Although we asked advisors in the medical domain to consider the patient's health vs. their own financial self-interest, there were, of course, no real health consequences for the advisees in the medical domain nor any actual legal, reputational, or other consequences for the advisors in either domain. By having identical economic trade-offs in both contexts and changing only the context (i.e., financial vs. medical), Study 1 successfully demonstrates how perceived norms, to place clients or self-interests first, differ by context for non-expert advisors and how COI disclosure may make them more salient. Similarly, others have found that changing the name of a game (e.g., Wall Street Game vs. Community Game) had powerful effects on whether players cooperate or compete (Lieberman, Samuels, & Ross, 2004) and labeling someone as leader vs. supervisor can substantially change behavior (Samuelson & Allison, 1994).

This experiment sampled from non-experts who lack the everyday interactions, training, and experience of expert advisors. In contrast, expert advisors are likely to have different perceptions of their profession's norms. The next two experiments examine the decisions of expert advisors in the medical (Study 2a) and financial (Study 2b) contexts in similar scenarios, again using real monetary incentives.

Study 2a: Disclosure Improves Advice for Expert Medical Advisors

Physicians often believe they will not be influenced by COIs (Sah, 2012) even though some note that profits are important to the institution in which they work (Gawande, 2009). Given the professional responsibility in medicine to “do no harm,” and field evidence demonstrating a decrease in physician bias with COI disclosure (Chao & Larkin, 2017; Guo et al., 2017), I predict that practicing medical advisors will behave similarly to the non-expert medical advisors in the prior study. Disclosure will remind expert medical advisors to place patients first. As a result, they will provide higher-quality advice as compared to nondisclosure (*Hypothesis 2*). By recruiting actual medical advisors and applying a realistic task, I employ what Harrison and List (2004) call a “framed field experiment” (in which the nature of the subject pool and task are relevant to the field context).

Method

Participants. One hundred and nine medical students with at least one full year of clinical experience in patient care (48 men, 55 women, 6 genders unreported; $M_{\text{age}} = 26.0$, $SD = 2.8$) from two different private U.S. medical schools completed the study. Invitations to participate were sent from one medical student in each school to a total of approximately 217 classmates; after two reminders, 109 advisors had completed the study (response rate = 50%). All who completed the short study received a \$10 gift card and were incentivized to receive an additional bonus of up to \$10.

Procedure. The study was designed to present practicing medical advisors with realistic medical COIs. Medical advisors were randomly assigned to either a disclosure or nondisclosure condition. Advisors read scenarios regarding three different “patients.” The scenarios included the current symptoms of the patient and the patient’s relevant past medical and family history.

Advisors then decided between one of two treatment options to recommend to the patient.

Advisors were subject to a COI, in that one of the options gave the advisor an additional payment but was less beneficial for the patient. In the disclosure condition, advisors were informed that their advice would be accompanied by a disclosure statement revealing the additional payment.

For example, one of the scenarios described Patient P, a 64-year-old man who presented for a routine annual examination. His paternal uncle had been diagnosed with colorectal cancer at age 67. Previously, the patient had two clear colonoscopies. The medical advisor was reminded of the American Cancer Society's guidelines, which recommends a colonoscopy every 10 years for average-risk individuals. Advisors were told that Patient P's last colonoscopy was four years ago, and that "You could recommend a repeat colonoscopy today if you determine that the medical history of Patient P warrants more attention, or wait another six years as the guidelines recommend." Medical advisors were then informed of the risks (for example, bleeding or perforation of the colon) and benefits (for example, early detection of cancer) of conducting colonoscopies. Advisors were also told that because of the fee-for-service compensation model, they would receive more payment if they conducted the colonoscopy today. This was incentivized by offering medical advisors an additional \$5 bonus if the patient decided to get the colonoscopy today.

Medical advisors gave their recommendations and, one of three recommendation strengths: "I'm [100%/very/fairly] sure that this choice is the best option for you." The advice was converted to a 1-6 scale representing honest advice that placed the interests of the patients first (score = 1, Treatment A, 100% sure) to self-interested biased advice (score = 6, Treatment B, 100% sure).

Results

Most medical advisors gave unbiased advice, and consistent with *Hypothesis 2*, disclosure reduced the bias in advice ($M = 2.03$, $SD = .60$) relative to nondisclosure, ($M = 2.37$, $SD = .78$), $F(1, 107) = 6.37$, $p = .01$, $\eta_p^2 = .06$.

The older the advisor was, and the greater the number of years of clinical experience he/she had, the less likely the advisor was to give self-interested advice, $r = -.21$ and $r = -.24$, respectively (both $ps < .05$). This correlational finding could reflect a general increase in ethical behavior or a decrease in the attractiveness of the COI with clinical experience or as advisors age (and perhaps accumulate more wealth).⁸

Discussion

In this framed field experiment, COI disclosure worked in a positive way for practicing medical advisors, reining in bias in advice. This finding aligns with evidence from the medical field that COI disclosure can improve advice from medical advisors. The finding also aligns with decreased bias with COI disclosure seen in the non-expert medical advisors in Study 1, suggesting a convergence of perceptions of the professional norm in this context between experts and non-experts. See Study 3 for further evidence of this convergence of norms.

⁸ Future research could match expert and non-expert advisors on various dimensions such as age and gender. To investigate the effects of disclosure for both expert (this study) and non-expert (Study 1) medical advisors across studies, I combined the samples and conducted an ANCOVA, with age and gender as covariates. As expected, there was a main effect of disclosure: less biased advice with disclosure vs. nondisclosure ($p < .001$). There was also a main effect of expertise: experts gave less biased advice than non-experts ($p < .001$), and an interaction between disclosure and expertise ($p = .008$) with non-experts decreasing bias in advice to a larger extent than experts decreased bias with disclosure.

Study 2b: Disclosure Improves Advice for Expert Financial Advisors

This study also employs a framed field experiment and examines the effect of COI disclosure on expert advisors in the financial context. Expert financial advisors may have different perceptions of the norms of their profession than non-experts. If a financial institution emphasizes profit and self-interest over clients (Sah, 2018; Smith, 2012), then, COI disclosure will increase bias in advice. If, however, expert financial advisors believe in their fiduciary duties and/or the “clients first” mandate, then COI disclosure will decrease bias in advice (*Hypothesis 2*).

Method

Participants. Approximately 200 practicing financial advisors were identified from the alumni database of a U.S. university and invited to participate in a research study in which they could earn an Amazon gift card. Financial advisors were also asked to pass the study on to other colleagues working as financial advisors at their institution. After two reminders, 75 practicing financial advisors (52 men, 18 women, 5 genders unreported; $M_{\text{age}} = 45.4$, $SD = 14.0$) completed the study. Of this sample, 31% reported being registered as both a broker and registered investment advisor, 25% as only brokers, and 21% as only registered investment advisors. Remaining participants reported some form of active financial advising, such as investment advisor representatives. The financial advisors came from a number of different financial institutions including Goldman Sachs, Edward Jones, Merrill Lynch, and Morgan Stanley. A small number were self-employed, and some did not wish to disclose their employer.

Procedure. Financial advisors were randomly assigned to either a disclosure or nondisclosure condition and advised three different clients on which of two Funds (A or B) the clients should take, along with one of three different recommendation strengths: “I’m

[100%/very/fairly] sure that this choice is the best option for you.” As in the prior studies, the advice was converted to a 1-6 scale that ranged from honest advice in line with the client’s interests (score = 1, Fund A, 100% sure) to self-interested biased advice (score = 6, Fund B, 100% sure). The payoffs were similar to those in Study 1, but instructions were simplified and additional information on the risk profile of each of the three clients was given.

Results

As with expert medical advisors, most expert financial advisors gave unbiased advice. Consistent with *Hypothesis 2*, disclosure led to less bias in advice ($M = 1.95$, $SD = .86$) than nondisclosure, ($M = 2.50$, $SD = 1.20$), $F(1, 73) = 5.26$, $p = .025$, $\eta_p^2 = .07$. Neither age nor gender correlated with bias in advice.⁹

Both financial and medical expert samples were collected at the same time. Compared to expert medical advisors, financial advisors were older with a higher proportion of men. Combining both financial (this study) and medical (Study 2a) expert advisor samples together, an ANCOVA, with age and gender as covariates, revealed, as predicted (*Hypothesis 2*), only a main effect of disclosure reducing the level of bias in advice, ($M = 1.99$, $SD = 0.72$ vs. $M = 2.37$, $SD = 0.94$), $F(1, 167) = 9.50$, $p = .002$, $\eta_p^2 = .05$. The main effect of context, $F(1, 167) = .001$, $p = .98$, and the interaction of context and disclosure, $F(1, 167) = .81$, $p = .37$, were non-significant.

⁹ Combining expert (this study) and non-expert (Study 1) financial advisors together, an ANCOVA, with age and gender as covariates, revealed a main effect of expertise: experts gave less biased advice than non-experts ($p < .001$), and, as predicted, an interaction between disclosure and expertise ($p = .02$) with experts decreasing bias in advice and non-experts increasing bias in advice with disclosure. The main effect of disclosure was not significant ($p = .99$).

Discussion

COI disclosure led to higher-quality advice for practicing financial advisors suggesting that they perceived the norms of their profession as “client first.” We know that people draw on multiple sources of information to perceive norms, including other people and institutional/legal signals (Tankard & Paluck, 2016). This sample of financial advisors were all alumni from the same university and included both brokers and registered investment advisors at different financial institutions. Different institutions can signal different professional norms. Likewise, brokers and registered investment advisors are subject to different fiduciary requirements: registered investment advisors are required to place clients first whereas brokers can advise clients of many suitable options (although recent rule proposals are recommending to place a fiduciary duty on brokers also¹⁰). Due to the sample size, this study cannot parse out differences in norms between institutions and different types of financial advisors (note many advisors indicated that they served as both brokers and investment advisors). However, it is informative in demonstrating that COI disclosure can decrease bias in experienced professional advisors in the financial context who cannot avoid conflicts. Interestingly, similar to physicians (Gibbons et al., 1998; Sah, 2012), many of the practicing financial advisors across institutions and type, who were unaware of the hypotheses and different disclosure conditions, wrote comments at the end of the study revealing that they were offended by the notion that a COI would bias their advice and that they might not place their clients’ interests first.

Studies 3 and 4 explore the mechanisms that lead to COI disclosure decreasing or increasing bias in advice. In Study 3, I examine the professional norms of experts and non-experts in both the financial and medical domains. If COI disclosure focuses advisors’ attention

¹⁰ See <https://www.njconsumeraffairs.gov/Proposals/Pages/bos-04152019-proposal.aspx>.

on the professional norm, COI reminders may do the same. Studies 4a and 4b examine this proposition.

Study 3: Professional Norms

I propose that COI disclosure impacts bias in advice because it increases the salience of the perceived professional norm (to either place clients, or self-interest, first). Norm salience is notoriously difficult to measure (Cialdini & Trost, 1998; Krupka & Weber, 2013). Especially when concurrently examining behavior, measures of norm salience may simply capture advisors' intention or justifications for biased advice. As a consequence, prior studies mainly rely on behavior alone to demonstrate the norm (Camerer & Fehr, 2004; Fehr & Fischbacher, 2004).

In this study, across three different samples, recruited at similar times, I document the professional norms perceived by both experts and non-experts in the financial and medical context separately from behavior. I asked participants to consider giving advice in the presence of a COI, and specifically what they think advisors should do (the injunctive norm) and what they think most other advisors actually do (descriptive norm). Both injunctive and descriptive norms influence behavior (Cialdini et al., 1990) and contribute to the professional norm to place clients or self-interest first.

Based on Studies 1 and 2 (and on the pilot study), I expected that experts in both the financial and the medical professions would state that the professional norms are to place clients first. I also expected that non-experts would rate the "clients first" norm higher in the medical (vs. financial) context. My main prediction is that the professional norms will converge for experts and non-experts in the medical domain, but diverge in the financial domain.

Hypothesis 4: Professional norms will be similar for experts and non-expert advisors in the medical context but differ between experts and non-experts in the financial context.

One key difference between the medical and financial domain may be the gravity of consequences for the advisee of receiving bad advice: money versus health in the medical domain but just money versus money in the financial domain. The former is what some term a taboo trade-off containing sacred values (A. P. Fiske & Tetlock, 1997; Tetlock, 2003).

Norms incorporate rules forbidding taboo trade-offs (Triandis, 1994). This study also documents the norms in the medical domain when the COI imposes only a financial, not a health, cost on the patient. This matches the severity of the consequence to the client in the financial domain. Although medical advisors have a professional responsibility only to prioritize their patient's health (just as financial advisors have a responsibility to only prioritize their client's financial interests), it is possible that medical advisors will extend their beliefs about domain-specific professional norms to non-health-related consequences for their patients. If so, medical advisors will state that the professional norm is to place their patients first, although the effect may be attenuated when the outcome for the patient is financial rather than health-related.

Method

Participants.

Expert financial advisors. Invitations to participate in a short research study were sent to approximately 200 financial advisors identified from a university alumni database.¹¹ After two reminders, 61 financial advisors (40 men, 15 women, 6 genders unreported; $M_{\text{age}} = 50.1$, $SD = 13.6$) completed the study. The composition of the sample was similar to that in Study 2a

¹¹ This was the same database as used in Study 2a. However, none of the advisors recalled the prior study in their responses.

(approximately 35% were registered as both a broker and registered investment advisor, 36% as brokers only, and 7% as registered investment advisors only). As in Study 2a, financial institutions included Edward Jones, Merrill Lynch, and Morgan Stanley. All advisors that completed the study received a \$10 Amazon gift card.

Expert medical advisors. Ninety-seven medical students with at least one full year of clinical experience in patient care (42 men, 52 women, 3 genders unreported; $M_{\text{age}} = 27.1$, $SD = 2.6$) from a private U.S. medical school (different from the medical schools in Study 2a) completed the study in exchange for a \$10 Amazon gift card. Invitations to participate were sent to approximately 200 medical students; after two reminders, 97 advisors had completed the study (response rate = 49%).

Non-expert participants. One hundred and thirteen graduate students (71 men, 40 women, 2 genders unreported; $M_{\text{age}} = 27.3$, $SD = 4.4$) from a U.S. business school completed the survey for course credit. Although the pilot study revealed differences in how non-experts perceive medical and financial contexts, this study takes a further step to document professional norms as assessed by non-experts drawn from (non-overlapping) samples of the same population as Study 1.

Procedure.

Expert financial advisors. Financial advisors read the following passage:

“Imagine you are a financial advisor giving advice to a client on whether to invest in Fund A or B. You are subject to a conflict of interest in that you are financially better off (receive a greater bonus) if the client chooses Fund B, but the client is usually better off financially choosing Fund A.”

Expert medical advisors. Medical advisors were randomized to view one of two medical scenarios that described the advisor’s COI with a health-related outcome or with a financial-related outcome (equal health outcomes but different costs to the patient) for the patient:

Health outcome: “Imagine you are a physician giving advice to a patient on whether to take Treatment A or B. You are subject to a conflict of interest in that you are financially better off if the patient chooses Treatment B, but the patient is usually better off medically choosing Treatment A.”

Financial outcome: “Imagine you are a physician giving advice to a patient on whether to take Treatment A or B. Both treatments are medically equivalent. You are subject to a conflict of interest in that you are financially better off if the patient chooses Treatment B, but the patient must pay more out-of-pocket costs for Treatment B.”

Non-expert participants. Participants viewed the two scenarios, in a counterbalanced order, given to expert advisors, one in a financial context and one in a medical context (randomized to either the health-related or financial-related outcome).

After reading the relevant scenario, advisors rated their beliefs regarding both the injunctive norm (what advisors think they *should* do) and descriptive norm (what most advisors would *actually* do) in that situation on a scale of 1 [Strongly recommend Fund/Treatment B (self-interested advice)] to 6 [Strong recommend Fund/Treatment A (place client first)].¹²

Results

Norm to place clients first. The means for the injunctive and descriptive norms for placing clients first for all three samples are shown in Figure 2. For experts, both financial ($M =$

¹² Additional questions (e.g., whether advisors should, and whether most advisors would, consider their responsibilities towards their advisees, and view the decision as a personal, business, ethical or legal decision) are reported in the supplement.

5.75, $SD = .94$) and medical ($M = 5.62$, $SD = .82$) advisors rated what they think advisors believe they should do (injunctive norm) near the top of the six-point scale for placing clients first. The descriptive norms were lower for both financial ($M = 3.70$, $SD = 1.59$) and medical ($M = 3.58$, $SD = 1.10$) advisors, but still remaining just above the mid-point of the scale suggesting that expert advisors believed that other advisors would place the client first (Figures 2a and 2b).

For non-experts, as expected, the medical context produced higher ratings for placing clients first relative to the financial context; and this held true for both the injunctive norm ($M = 5.39$, $SD = 1.20$ vs. $M = 5.04$, $SD = 1.45$), paired $t(112) = 2.05$, $p = .04$, and the descriptive norm ($M = 3.43$, $SD = 1.58$ vs. $M = 2.25$, $SD = 1.33$), paired $t(112) = 7.25$, $p < .001$, as shown in Figure 2c. The descriptive norm for the financial context was significantly below the mid-point of the scale, $t(112) = -10.04$, $p < .001$, revealing that non-experts perceived that other financial advisors would behave in a way consistent with having a “self-interest first” norm.

In the medical context, the outcome for the patient (health vs. financial) had little effect on what expert or non-expert advisors believed advisors should do (injunctive norm), (expert: $F(1, 95) = 3.34$, $p = .07$, $\eta_p^2 = .03$; non-expert: $F(1, 111) = 2.03$, $p = .16$). However, for the descriptive norms, both experts and non-experts expected that most other advisors would be less likely to place patients first when the outcome for the patient was financial (expert: $F(1, 95) = 22.78$, $p < .001$, $\eta_p^2 = .19$; non-expert: $F(1, 111) = 9.08$, $p = .003$, $\eta_p^2 = .08$).

Comparison of expert and non-expert samples. Because context was a within-subject factor for non-experts and a between-subject factor for experts, I conducted t-tests to examine differences between experts and non-experts in each context. I predicted (*Hypothesis 4*) that the professional norms would converge for experts and non-experts in the medical domain, but diverge in the financial domain.

Medical context. As predicted, expert advisors did not significantly differ from non-experts for their assessments of whether they should place patients first (the injunctive norm), $t(208) = -1.59, p = .11$ (for both patient outcomes; health: $t(105) = -1.26, p = .21$; financial: $t(101) = -1.11, p = .27$). Similarly, expert advisors and non-experts did not differ in their perceptions of what most other medical advisors do (descriptive norm), $t(208) = -.75, p = .45$ (for both patient outcomes; health: $t(105) = -.87, p = .39$; financial: $t(101) = .21, p = .46$).

Financial context. Also, as predicted, relative to expert financial advisors, non-experts were significantly less likely to believe that financial advisors think they *should* place clients first, $t(172) = -3.44, p = .001$, and that most other financial advisors would place clients first, $t(172) = -6.45, p < .001$.

Discussion

Expert financial and medical advisors rated professional norms for placing clients first near the top of the scale, although the descriptive norm was substantially lower than the injunctive norms. This difference in injunctive and descriptive norms conforms to the general tendency to rate others' behavior as less ethical than our own (Ford & Richardson, 1994).

Non-expert advisors rated client-first norms in the medical context higher than in the financial context, and did so for both injunctive and descriptive norms. The descriptive norm in the financial context was clearly "self-interest" first.

Consistent with *Hypothesis 4*, non-experts aligned closely with experts when assessing norms in the medical context but not in the financial context. These findings provide support for the proposal that norms differ by context and advisor expertise and these perceived norms could account for the different effects of COI disclosure on advisors.

Study 4a: COI Disclosure and COI Reminders Work Similarly, Medical Context

One key difference between disclosure and nondisclosure of COIs is *advisees' knowledge* of the COI. Advisors may fear that advisees' knowledge of the COI will lead them to discount their advice or perceive their advice to be of low quality, which could have negative consequences for the advisor (for example, legal or reputational). This could lead advisors to increase or decrease the bias in their advice. To examine whether reactions to COI disclosure are due to increased attention to the professional norm vs. advisors' considerations of the advisee knowing about the COI, this study compares the effects of COI disclosure (informing advisees of the COI) to the effects of COI reminder (reminding advisors that they have a COI) on bias in advice. If the effects of COI disclosure on advice operate through reminding advisors of their professional norms, we are likely to see similar results with COI disclosure and a COI reminder. But if the effects are contingent on the advisee's knowledge of the COI, then the effects on advice with COI disclosure may not match those with COI reminder.

Hypothesis 5: Compared to nondisclosure, COI disclosures and COI reminders will change bias in advice similarly.

To explore the effect of COI disclosure in a setting where the consequences for the advisee are similar to those in a financial domain, I test this hypothesis in the medical domain when the outcome for the patient is financial rather than health-related. In Study 3, the injunctive norm to place patients first was similar regardless of patient outcome. However, participants thought that other advisors would be less likely to place the patient first when the patient outcome was financial (vs. health-related). This descriptive norm was near the mid-point of the scale but still substantially higher than the descriptive norm (of "self-interest first") in the financial domain. As the professional norm has components of both the injunctive and

descriptive norm, there is ambiguity as to whether COI disclosure in this situation will increase or decrease bias in advice. Regardless of the direction of bias, if COI disclosure works similarly to being reminded of the COI, the direction of bias will be similar with both COI disclosure and a simple COI reminder (*Hypothesis 5*). Furthermore, norm salience should mediate the effect between COI disclosure (and COI reminder) and the level of bias in advice (*Hypothesis 3*).

Method

Participants and design. One hundred and seventy-six students from a private U.S. business school (98 men, 76 women, 2 genders unreported; $M_{\text{age}} = 26.4$, $SD = 4.3$) were randomly assigned to one of three conditions: COI disclosure, COI reminder, or Control.¹³ Students were informed that one in every five participants would have their advice shown to another participant who would play the role of the patient, and both advisor and advisee would be paid as described.

Procedure. Non-expert advisors played the role of physicians who had to decide between two treatment options for their patient. The patient was described as a 45-year-old man with high blood pressure who needed medication (see supplement for more details). The COI presented the dilemma of giving self-interested advice (recommending Treatment B, which rewarded the advisor more; incentivized with a \$5 bonus) or prioritizing the patient (recommending Treatment A, which was best for the patient financially). Participants were informed that both treatments were equal in efficacy, but Treatment B would result in more out-of-pocket costs for the patient.

¹³ Although the new (non-overlapping) sample was drawn from the same population as the non-expert sample in Study 3, at the time of this study, the graduate students were part-way through a required half-semester course on ethics in leadership. Some commented on how the course influenced their decision-making in this study, leading them to place patients first.

In the COI disclosure condition, advisors were informed that their recommendation to the patient would be accompanied by a disclosure statement revealing that the advisor would receive additional payment if the patient undertook treatment B. In the COI reminder condition, advisors were reminded before giving advice that they would receive additional payment if the patient undertook treatment B and that the patient would not know about their payment. In the Control condition, advisors did not receive a reminder and were told that the patient would not know about their payment. Advisors selected Treatment A or B and chose the strength of their recommendation (as in Studies 1 and 2)—“I’m [100%/very/fairly] sure that this treatment is the best option for you”—which was converted to a 1 (advice that places the patient first) to 6 (self-interested advice) scale.

I examined the professional norm with questions that documented the salience of both the injunctive and descriptive norm. For the salience of the injunctive norm, advisors responded to two normative statements on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*): “The patient’s interest should come first” (as in Study 1) and “Physicians have an obligation to provide the best advice to patients” ($\alpha = .81$). For the salience of the descriptive norm, advisors responded on the same scale to the following statement: “Most medical advisors would maximize self-interest in this situation” (reverse coded).

I used the same questions as in Study 1 to measure anticipated advisee discounting ($\alpha = .65$), guilt ($\alpha = .89$), and type of decision (personal, business, ethical, or legal decision; reported in the supplement). Other measures included a scale to examine advisee consequences (two items: “Poor-quality advice could have a detrimental impact on my patient” and “Poor-quality advice could have severe consequences for my patient”; $\alpha = .73$), a statement to assess advisor consequences: “Poor quality advice could have negative repercussions for me (the doctor),” and

a statement to assess perceptions of advisees' expectations: "The patient will expect me to give good quality advice," all on scales of 1 (*strongly disagree*) to 7 (*strongly agree*).

Results

The descriptive statistics are shown in Table 2.

Advice. There was a significant effect of condition, $F(2, 173) = 4.25, p = .02, \eta_p^2 = .05$ (see Figure 3). Non-expert advisors in the medical domain (even when the patient outcome was financial, not health-rated) who had to disclose their conflict gave significantly *less* biased advice than advisors in the control condition, $F(1, 173) = 8.06, p = .005, \eta_p^2 = .05$. Similarly, advisors in the COI reminder condition gave significantly *less* biased advice than those in the control, $F(1, 173) = 4.29, p = .04, \eta_p^2 = .02$. As predicted (*Hypothesis 5*), there was no difference in advice between advisors in the COI disclosure and COI reminder conditions, $F(1, 173) = .66, p = .42$.

Norm salience. There was a significant effect of condition for the salience of both the injunctive norm, $F(2, 172) = 4.92, p = .008, \eta_p^2 = .05$ and descriptive norm, $F(2, 172) = 4.48, p = .01, \eta_p^2 = .05$. Advisors who had to disclose their conflict, (injunctive: $F(1, 172) = 7.70, p = .006, \eta_p^2 = .04$; descriptive: $F(1, 172) = 7.32, p = .008, \eta_p^2 = .04$), or who were reminded of their conflict, (injunctive: $F(1, 172) = 7.39, p = .007, \eta_p^2 = .04$; $F(1, 172) = 6.41, p = .01, \eta_p^2 = .04$), gave significantly *higher* ratings for the professional norm to place clients first than did advisors in the control condition. There were no differences in professional norm salience between advisors in the disclosure and reminder conditions, (injunctive: $F(1, 172) = .007, p = .94$; descriptive: $F(1, 172) = .04, p = .84$).

Mediation of norm salience. With 5000 bootstrap samples, bootstrapping mediation analyses revealed, as predicted by *Hypothesis 3*, that both injunctive and descriptive norm salience were significant mediators explaining the relationship between COI disclosure (95% CI:

injunctive: [-.50, -.04]; descriptive: [-.81, -.11]) and the level of bias in advice, as well as between COI reminder (95% CI: injunctive: [-.48, -.04]; descriptive: [-.83, -.08]) and the level of bias in advice.

Perceptions of advisee discounting. There was a significant effect of condition, $F(2, 173) = 3.74, p = .03, \eta_p^2 = .04$. Contrasts revealed no significant difference between COI disclosure and control conditions, $F(1, 173) = .44, p = .51, \eta_p^2 = .003$, but advisors in the COI reminder condition were less likely to think advisees would discount their advice as compared to those in the control, $F(1, 173) = 6.77, p = .01, \eta_p^2 = .04$, and COI disclosure, $F(1, 173) = 3.94, p = .05, \eta_p^2 = .02$, conditions.

Other questions. There was no difference between the three conditions in the advisors' guilt, $F(2, 172) = 1.37, p = .26$; or in whether the advice would have negative consequences for the patient, $F(2, 172) = .52, p = .59$, or the advisor, $F(2, 172) = .33, p = .72$; or in whether advisors thought the advisee would expect good-quality advice, $F(2, 173) = 0.83, p = .44$.

Discussion

As predicted by *Hypothesis 5*, reminding advisors of their COI had a similar effect on the level of bias in advice as COI disclosure. As compared to the control condition, reminding non-expert medical advisors of their COI (via disclosure or a simple reminder) reined in the bias in their advice. COI disclosure did not lead to less guilt, greater anticipations of advisee discounting, greater expectations for good-quality advice, nor did it make the consequences of poor-quality advice (for the advisee or the advisor) more salient to the advisor. However, both COI disclosure and a COI reminder increased the salience of professional norms to place clients first and norm salience mediated the effect of COI disclosure and COI reminder on the level of bias in advice. This study suggests that the effects of COI disclosure on advisors may not be

dependent on advisees' knowledge of the COI. Instead, the findings lend support to the theory that COI disclosure may work as a reminder of professional norms. The next study examines COI reminders and disclosures in the financial context.

**Study 4b: Financial Context for Non-Experts: Disclosures, Reminders,
and Changing Perceptions of the Professional Norm**

This study also examines COI reminders versus COI disclosures. For non-expert financial advisors, COI disclosure increased bias in advice relative to nondisclosure (Study 1). If COI disclosure serves as a reminder of professional norms, COI reminders may also increase bias in advice similar to COI disclosure (*Hypothesis 5*). I also predict that norm salience will mediate the relationship between COI disclosure (or reminders) and bias in advice (*Hypothesis 3*). However, if the effect of COI disclosure is dependent on advisees' knowledge of the COI, then several other mechanisms could be at play. For example, COI disclosure could increase bias if it reduces advisors' guilt from moral licensing or causes advisors to strategically exaggerate if they believe advisees will discount their advice. In these cases, we would expect to see increased bias in advice with COI disclosure but may not see the same increase in bias with COI reminders.

In addition, this study attempts to focus some of the non-expert financial advisors on the "clients first" norm to determine whether COI disclosure can reduce biased advice. One way to change norm perceptions is to alter the descriptive norm via beliefs about what other advisors do. Since people draw on numerous sources to develop descriptive stereotypes, changing descriptive norms may be difficult. Also, people appear to be more motivated *not* to violate injunctive norms than to make efforts to fit in with what we believe others do (Tankard & Paluck, 2016). Thus, a more successful approach in this setting may be to attempt to focus non-experts on the injunctive

norm. Bicchieri (2016) also recommends first creating relevant injunctive expectations when creating a new norm; descriptive expectations will follow.

In this study, I attempt to focus non-experts on financial advisors' fiduciary duty to place their clients first. Although this information is not equivalent to time-intensive professional training that could indoctrinate professional responsibilities, it should still effectively inform non-experts unfamiliar with this responsibility of financial advisors. Because norms direct behavior when they are made salient (Cialdini et al., 1991, 1990), focusing attention on this norm could change advisors' behavior.

Method

Participants and design. Four hundred and eighty-eight MTurk workers over the age of 21 years (196 men, 290 women, 2 genders unreported; $M_{\text{age}} = 39.7$, $SD = 11.37$) completed the study and were eligible for analysis.¹⁴ They were randomly assigned to one of four conditions: COI disclosure, COI reminder, Client First (information on the advisor's fiduciary duty), or Control. Participants were informed that two participants would be selected at random and their advice presented to other participants playing the role of clients; these participants would be paid additional bonuses as described.

Procedure. Participants were told they would be playing the role of financial advisors advising three different clients on which of two funds (A or B) to invest in, along with the strength of their recommendation: "I'm [100%/very/fairly] sure that this fund is the best option

¹⁴ Nineteen participants who indicated either that they were, or had been, a financial advisor in the past ($n = 16$) or that their responses should not be used for analysis due to a lack of attention ($n = 3$) were removed prior to analysis. The results do not change substantially when these participants are included.

for you,” which was again converted to a 1 (advice placing advisee first) to 6 (self-interested advice) scale. The stimuli were the same as those used in Study 2b.

In the Control condition, advisors did not disclose their COI to the client. In the COI disclosure condition, advisors were required to disclose that they would typically be paid more if the client chose Fund B. In the COI reminder condition, advisors were reminded of their COI (that they would typically be paid more if the client chose Fund B) before giving advice. The Client First condition followed the same instructions as the COI disclosure condition but contained an additional statement in the middle of the instructions to inform non-expert advisors of their fiduciary duty to place clients first: “Financial Advisors have a fiduciary duty to provide honest and ethical recommendations in the best interest of the client. Clients-first!” The statement was purposely placed in the middle of the instructions (rather than on a separate page) to reduce potential demand effects.

After advisors selected the fund to recommend along with the strength of their recommendation, they responded to statements similar to those in the prior study that measured the injunctive norm salience (two items; $\alpha = .84$), descriptive norm salience, perceptions of advisee discounting (three items; $\alpha = .77$), guilt (four items; $\alpha = .95$), advisee consequences (2 items; $\alpha = .82$), advisor consequences, advisee expectations for good quality advice, and type of decision (reported in the supplement).

Results

The descriptive statistics are shown in Table 3.

Advice. An ANOVA revealed a significant effect of condition, $F(3, 484) = 8.36, p < .001, \eta_p^2 = .05$ (see Figure 4). As in Study 1, non-expert advisors in the financial domain who had to disclose their conflict gave *more* biased advice than did advisors in the control condition,

$F(1, 484) = 4.02, p = .05, \eta_p^2 = .008$. Similarly, advisors in the COI reminder condition gave *more* biased advice than did those in the control, $F(1, 484) = 10.75, p = .001, \eta_p^2 = .02$, and, consistent with *Hypothesis 5*, there was no difference in advice between advisors in the COI disclosure and COI reminder conditions, $F(1, 484) = 1.48, p = .22$.

Advisors in the client-first condition gave less biased advice. The advice was not significantly different from the control condition, $F(1, 484) = 1.76, p = .19$, but it was significantly less biased than advice in the COI disclosure, $F(1, 484) = 10.88, p = .001, \eta_p^2 = .02$, and COI reminder, $F(1, 484) = 21.07, p < .001, \eta_p^2 = .04$, conditions.

Norm salience. There was a significant effect of condition for the salience of the injunctive norm, $F(3, 484) = 5.95, p = .001, \eta_p^2 = .04$, and descriptive norm, $F(3, 484) = 4.67, p = .003, \eta_p^2 = .03$. For the injunctive norm, advisors who had to disclose their conflict reported a similar score as advisors in the control condition, $F(1, 484) = .66, p = .42$, and advisors in the COI reminder condition reported marginally lower scores as compared to the control, $F(1, 484) = 3.55, p = .06, \eta_p^2 = .007$. For the descriptive norm, advisors who had to disclose, $F(1, 484) = 4.69, p = .03, \eta_p^2 = .01$, and advisors reminded of their COI, $F(1, 484) = 6.24, p = .01, \eta_p^2 = .01$, reported a significantly lower score than did advisors in the control condition. There was no difference between the COI disclosure and COI reminder conditions, $F(1, 484) = .08, p = .77$.

As predicted, advisors in the client-first condition reported greater scores for injunctive norm salience as compared to the control, $F(1, 484) = 5.12, p = .02, \eta_p^2 = .01$, and COI-reminder, $F(1, 484) = 17.10, p < .001, \eta_p^2 = .03$, conditions, but there was no difference between the client-first and disclosure conditions, $F(1, 484) = 2.00, p = .16$. Advisors in the client-first condition also did not differ from those in the control condition on descriptive norm salience, $F(1, 484) = .32, p = .57$, but rated the descriptive norm as higher compared to advisors in the COI disclosure,

$F(1, 484) = 7.34, p = .007, \eta_p^2 = .02$ and COI-reminder conditions, $F(1, 484) = 9.30, p = .002, \eta_p^2 = .02$.

Mediation of norm salience. With 5,000 bootstrap samples, bootstrapping mediation analyses for multi-categorical independent variables (with control as the baseline condition) revealed that injunctive norm salience was a significant mediator (95% CI [-.34, -.03]) explaining the relationship between the client-first condition and the level of bias in advice. Also, descriptive norm salience was a significant mediator between both the COI disclosure (95% CI [.02, .34]) and the COI reminder condition (95% CI [.04, .37]) and the level of bias in advice.

Other questions. There was a significant effect of condition for anticipated advisee discounting, negative consequences for the client and for the advisor, and advisee expectations for high-quality advice, (all $ps < .05$). Following the same pattern for all four measures, contrasts revealed that the client-first condition had significantly lower means as compared to the control condition (all $ps < .03$). There were no significant differences between the control and COI disclosure conditions (all $ps > .18$), nor between the control and COI reminder conditions (all $ps > .38$) for any of the four measures. (See the supplement for full results for each measure.)

There was also a significant effect of condition for guilt, $F(3, 484) = 3.74, p = .01, \eta_p^2 = .02$. Contrasts revealed no differences between the control and the COI disclosure conditions, $F(1, 484) = .07, p = .79$, or the client-first condition, $F(1, 484) = 1.58, p = .21$. However, advisors in the COI reminder condition felt less guilt than those in the control condition, $F(1, 484) = 4.05, p = .045, \eta_p^2 = .008$.

Discussion

Reminding advisors of their COI worked similarly as COI disclosure (*Hypothesis 5*), both increasing bias for non-experts in the financial context relative to the control condition. In this

study, descriptive (but not injunctive) norm salience was the significant mediator for both COI disclosure and COI reminder and the level of bias in advice.

In contrast to the COI disclosure and COI reminder conditions, advisors in the client-first condition (who were informed that financial advisors have a fiduciary duty to place their clients first in an attempt to focus them on the injunctive norm) gave less biased advice and rated greater salience of the injunctive norm. Injunctive norm salience was also a significant mediator in the client-first condition. As compared to advisors in the control condition, advisors in the client-first condition were less likely to think that advisees would discount their advice, and were more likely to believe that their advisees expected good-quality advice and that poor-quality advice would have negative consequences for the advisee and themselves (the advisor). Expert financial advisors may believe the same: training and experience are likely to indoctrinate professional responsibilities (that align with professional norms to place clients first), and such norms “motivate behavior by promising social rewards or punishments for it” (Cialdini & Trost, 1998, p. 157).

In this study and the prior one, the effect of COI disclosure on bias in advice was similar to a COI reminder. This suggests that the effects of COI disclosure, at least in these studies, may not be dependent on advisees’ having knowledge of the COI. For example, if advisors feel morally licensed after disclosing a COI to an advisee, they should feel less guilt to give biased advice relative to nondisclosure. Although the non-expert financial advisors in this study (and Study 1) gave more biased advice, they did not report less guilt in giving biased advice with COI disclosure. However, advisors in this study who were reminded of the COI also gave more biased advice and these advisors reported less guilt than those in the control condition.

Decreased guilt with COI reminders cannot be due to moral licensing because there is no disclosure to the advisee (for advisors to feel morally licensed).

Although guilt is a different construct to norm salience, advisors could feel guilty if they violate perceived norms. If the perceived professional norm is “clients first” (e.g., medical advisors), and COI disclosure (and COI reminders) make this this norm more salient, advisors may feel that giving biased advice is a norm violation and feel more guilty. Study 1 reveals a directional trend of this (more guilt reported with disclosure than nondisclosure) but no such trend was found in Study 4a (in which the outcome for the patient was financial rather than health-related). Similarly, if the perceived professional norm is “self-interest first,” and COI disclosure (and COI reminders) makes this norm more salient, advisors may not feel guilty (or even feel less guilty) for acting in accordance with this norm. Supporting this prediction, we see advisors with a COI reminder in this study reporting less guilt. Future research could explore what types of norm violations are more or less likely to give rise to guilt.

In sum, this study provided support for the hypothesis that both COI disclosure and COI reminders work similarly (*Hypothesis 5*) leading to increased bias in advice for non-expert financial advisors. Furthermore, the attempt to focus non-expert financial advisors on the professional norm to place clients first decreased bias in advice.

General Discussion

Disclosure is a popular solution for managing conflicts of interest (COIs) across a variety of industries and professions. The present work documents how perceived professional norms may influence advisors’ reactions to COI disclosure. In a series of laboratory and framed field experiments, five with monetary stakes, I demonstrate that disclosure can have differing effects

on advisors who have a COI. These studies provide evidence that COI disclosure increases the salience of the perceived professional norm (“clients first” or “self-interest first”) and, correspondingly, the level of bias in advice. I show that in both the medical and financial context COI disclosure can significantly improve the advice quality of professional advisors who have norms to place clients first.

In Study 1, COI disclosure resulted in increased bias for non-expert advisors (research participants playing the role of an advisor) in a financial-advising role but decreased bias for non-expert advisors in a medical-advising role. Such dramatic reversals are often a symptom of context effects (Johns, 2006; Merton, 1957). Study 1 also found that norm salience—the advisors’ focus on the perceived professional norm to place clients or self-interest first—served as a mediator between COI disclosure and biased advice in both the financial and medical context. Moral licensing and strategic exaggeration did not mediate the effect between disclosure and bias in advice.

Support for the role of professional norms with COI disclosure also came from experts in Studies 2a and 2b, resulting in an improvement of the quality of advice in both the medical and financial context. These findings suggest that professional advisors may comply with ethical principles and the morally correct choice of the profession if norms dictate they do so and if they are reminded about them.

Study 3 documented perceived norms for experts and non-expert advisors. Norms converged for experts and non-experts in the medical context but diverged in the financial context. This divergence of norms in the financial context could explain the different reactions of experts and non-expert advisors to COI disclosure. Studies 4a and 4b found that reminding advisors about their COI worked similarly to COI disclosure, providing further support for the

theory that COI disclosure may work as a reminder of norms to increase or decrease the quality of advice. Finally, informing non-expert advisors that financial advisors have a fiduciary duty to place their clients' interest before their own resulted in less biased advice in the financial context with COI disclosure.

Theoretical Contributions

The current research contributes to the literature and theory on disclosure, decision-making, advice-giving, bias, and professional norms. Advisors in the present studies did not use decision-making models developed for rationally calculating actors who rely on cost-benefit ratios in self-interested exchange (Crawford & Sobel, 1982; Hogarth & Reder, 1987). Although helpful, these models do not incorporate significant and meaningful features of the environment.

Importantly, advisors' reaction to COI disclosure appeared to be influenced by the professional norms—"self-interest first" or "clients first"—of the context in which they were advising. These norms differed for expert and non-expert advisors in some contexts, primarily the financial context. Although non-expert data is often informative in examining process mechanisms, the differences between non-expert and expert behavior in this paper call for caution when generalizing results from non-experts in laboratory studies to professionals in organizations. Past research that revealed decreased bias with COI disclosure for non-experts in the financial context may be due to the presence of sanctions (Church & Kuang, 2009) or advisor experience (Koch & Schmidt, 2010), which could change advisors' perceptions of self-interest versus clients first norms. The present findings suggest that COI disclosure (or reminders of the COI) makes the perceived professional norm more salient, and this norm salience mediates the effect of COI disclosure (or COI reminders) on giving biased advice. These findings align with

those in the medical field (Chao & Larkin, 2017; Guo et al., 2017) that COI disclosure can work as intended by increasing advice quality in professional advisors.

This new theoretical perspective identifies a way to make COI disclosure more effective, in that it can increase the quality of advice by attending to professional norms to place “clients first.” This model of disclosure, with norm salience as a mediator, may be a better fit in many instances for explaining advisors’ reactions to disclosure than cost-benefit utility models (Crawford & Sobel, 1982; Healy & Palepu, 2001) or other psychological mechanisms, such as moral licensing and strategic exaggeration (Cain et al., 2011).¹⁵ This perspective also suggests that increasing situational cues to behave ethically (Aquino, Freeman, Reed II, Lim, & Felps, 2009; Tenbrunsel & Messick, 2004) and signing one’s name to activate internal moral identities (Mazar, Amir, & Ariely, 2008) may also increase focus on appropriate behavior.

Managerial and Policy Implications

In addition to contributing to theory, this research has implications for managers and for policy makers who wish to increase the effectiveness of their legislative and regulatory controls. A variety of factors influence ethical behavior in organizations, including the behavior of leaders, other employees, and its infrastructure, both formal (codes, sanctions, surveillance) and informal (ethical culture, climate, norms, communication) (Treviño, Butterfield, & McCabe, 1998). The results in this paper suggest that an ethical organizational culture can serve as a

¹⁵ Although I find little evidence of moral licensing with disclosure in the studies in this paper, other paradigms could exist in which moral licensing is the primary mechanism increasing bias in advice. Moral licensing theory posits that people who initially behave in a moral way will later display immoral behaviors (Merritt, Effron, & Monin, 2010), thus this mechanism may play a greater role when advisors *choose* to disclose rather than being randomly assigned to disclose. Nonetheless, for the opposing view, see Sah & Loewenstein (2014), which reveals that voluntary and mandatory disclosure works similarly and leads advisors to reject COIs.

powerful defense against COIs. Even when legal regulations are weak or unenforceable, or awareness of bias is low, professionals may comply with standards when reminded of relevant ethical norms simply because putting the advisee first is accepted to be the right thing to do.

The main challenge for many managers or policy-makers will be the use of COI disclosure when the perceived norms within an institution emphasize self-interest. In this paper, both expert financial and medical advisors had professional norms that placed clients first. However, employees may perceive some institutions to be “self-interest first” (Sah, 2018; Smith, 2012). In these cases, COI disclosure or reminders of COIs may actually increase the bias in advice. One possible step in deciding whether to implement COI disclosure may be to assess the current professional norms. If self-interest first norms are prevalent, then the findings in this paper suggest that steps to change the perceived norms may be useful or even necessary as a precursor to implementing disclosure.

Given that perceptions of norms guide behavior (Tankard & Paluck, 2016), to change norms, we must change perceptions. Perceptions can be influenced by many sources such as reference groups, salient others, and institutional or legal signals (Tankard & Paluck, 2016). Identifying the cues people use to learn about norms is important for understanding the persistence of norms and behavioral patterns. To create a new norm, Bicchieri (2016) recommends first creating relevant injunctive expectations, which will shift descriptive expectations. To eliminate a norm, descriptive expectations must first change, and injunctive expectations will follow. To successfully change professional norms, changes to both descriptive and injunctive norms will be important.

For experts, institutional signals may be an important reference group. Due to the billions of dollars that poor retirement advice has cost Americans in the last decade, former President

Barack Obama signed an executive order in 2016 mandating that retirement investment advisors put their “clients first” above profit (Arnold & Geewax, 2016). In 2017, however, President Donald Trump signed another executive order that could delay this rule (Protest & Hirschfeld Davis, 2017). We have yet to see how these different signals affect perceived norms, and perhaps the corresponding behavior, of investment advisors.

COI disclosure is just one approach that could make professional norms salient. As we saw in Studies 4a and 4b, COI reminders also can work. Multiple strategies to increase the salience of the professional norm could be used, including punishing people for violating the norm (Church & Kuang, 2009; Tankard & Paluck, 2016), making commitments to behave in certain ways prominent, such as posters displaying commitments in the work office (Meeker et al., 2014), or asking advisors to justify the advice they give (Meeker et al., 2016).

Importantly, eliminating or reducing COIs are likely to have a much larger effect on improving advice quality than policies such as disclosure or mandatory second opinions (Sah, 2018). Policy makers must be cautious to avoid any indirect harm that disclosure could cause if it displaces more effective measures against conflicts of interest.

Limitations and Future Directions

The generalizability of these results to practicing physicians and financial advisors depend on the extent to which these professionals adhere to similar professional norms. Each organization and context is unique and not representative of all physicians and financial advisors. In professions beyond finance and medicine, of particular importance is whether professional norms are perceived to be “self-interest first” or “clients first.”

Furthermore, the COIs and disclosures presented in these studies were salient to advisors. In reality, COIs can be more complex, providing room for rationalizations and unintended bias

(Dana, Weber, & Kuang, 2007; Sah & Loewenstein, 2010). For example, the best advice may not be apparent or may appear to align with the best option for the advisor, often referred to as a confluence, rather than a conflict, of interest (see Cappola & FitzGerald, 2015; Lo & Ott, 2013; Sah & Feiler, 2019). Ambiguity in what may be best for an advisee may influence advisors' recommendations.

Also, in these studies, there were no personal interactions between advisors and advisees. Disclosures in the real world may also contain limited interaction. For example, disclosures could be displayed on public websites (Chao & Larkin, 2017; Hwong, Sah, & Lehmann, 2017) or given to advisees in written documents (see Rose et al., 2019 for physician-written COI disclosures to patients prior to consultations). In other situations, however, advisors may directly disclose in person to their advisees. The physical presence of the advisor has been shown to increase advisees' pressure to comply with advice they do not trust (Sah et al., 2013, 2019). The presence of the advisee may also affect advisors: Although the studies in this paper demonstrated that COI disclosure changed advisors' behavior primarily by making professional norms more salient, the process of directly disclosing to the advisee may increase considerations of the advisee's knowledge of the COI and/or make the norm even more salient. In other words, advisors may experience multiple psychological processes in response to a COI disclosure. For example, advisors could increase bias if they believe the advisee will discount the advice or they feel morally licensed by disclosing, or they could decrease bias if they feel the advisee will scrutinize the advice more. The presence of the advisee may also increase empathy and considerations of how poor quality advice would affect the advisee leading to better advice. Furthermore, the ability for advisees to assess advice quality may have an effect. For example,

when it is difficult for advisees to discern advice quality, advisors may give more biased advice. This could happen more, for example, when advice is on a continuous rather than binary scale.

Finally, whether a norm influences behavior depends on the degree to which the person's attention is focused on that norm (Cialdini et al., 1991). Due to this and other potential effects of disclosing COIs, from a practical standpoint, pilots for COI disclosure (as with all new policy proposals) should be tested in the field in each context to determine whether they have only beneficial consequences.

Conclusion

Prior research has shown mixed effects of COI disclosure on advisors and advisees. The studies in this paper show a beneficial effect of COI disclosure when the disclosure cues advisors to place clients first. For a comprehensive theory of COI disclosure, professional norms may play an important role. These findings add to a growing body of literature demonstrating that policies designed to improve advisee decision-making, such as disclosure or mandatory second opinions, may have greater effects on consumer welfare by improving the quality of advice from advisors. Nevertheless, we must take care that once disclosure is implemented, it will not inoculate against more systemic change. After all, it is much easier to ask advisors to disclose than to engage in a thoughtful critique and reform to increase the salience of professional norms to place clients first.

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TABLE 1: Descriptive statistics of dependent variables in Study 1

	Conditions			
	Financial context		Medical Context	
	Nondisclosure	Disclosure	Nondisclosure	Disclosure
Advice	2.88 (1.67)	3.37 (1.56)	3.36 (1.69)	2.32 (1.31)
Norm salience	5.91 (1.05)	5.29 (1.47)	5.84 (1.40)	6.41 (0.90)
Advisee discounting	2.74 (1.16)	3.01 (1.13)	2.76 (1.24)	2.39 (1.11)
Guilt	5.42 (1.20)	5.50 (1.08)	5.47 (1.33)	5.97 (1.21)

Note. Means and standard deviations (in parentheses) are shown.

TABLE 2: Descriptive statistics for dependent variables in Study 4a: Medical context

	Conditions		
	Control	Disclosure	COI-Reminder
Advice	3.33 (1.72)	2.45 (1.57)	2.69 (1.70)
Injunctive norm salience	5.93 (1.37)	6.44 (0.68)	6.43 (0.78)
Descriptive norm salience	4.17 (2.07)	5.15 (1.77)	5.08 (1.93)
Advisee discounting	2.48 (0.92)	2.37 (0.75)	2.08 (0.81)
Advisee expectations	6.33 (0.80)	6.52 (0.60)	6.42 (0.86)
Guilt	5.90 (1.10)	6.19 (0.90)	5.93 (1.12)
Consequences for advisee	5.43 (1.39)	5.68 (1.19)	5.55 (1.31)
Consequences for advisor	5.70 (1.07)	5.88 (1.22)	5.79 (1.33)

Note. Means and standard deviations (in parentheses) are shown.

TABLE 3: Descriptive statistics for dependent variables in Study 4b: Financial context

	Conditions			
	Control	Disclosure	COI-Reminder	Client First
Advice	2.94 (1.63)	3.36 (1.58)	3.62 (1.69)	2.67 (1.61)
Injunctive norm salience	5.91 (1.24)	6.03 (1.08)	5.63 (1.34)	6.24 (0.98)
Descriptive norm salience	5.11 (1.69)	4.63 (1.70)	4.56 (1.74)	5.24 (1.78)
Advisee discounting	2.83 (1.13)	2.66 (0.87)	2.72 (1.09)	2.48 (0.89)
Advisee expectations	5.83 (1.11)	5.90 (1.07)	5.99 (1.15)	6.26 (0.89)
Guilt	5.70 (1.35)	5.75 (1.35)	5.35 (1.52)	5.92 (1.24)
Consequences for advisee	5.74 (1.25)	5.85 (1.18)	5.64 (1.32)	6.10 (0.94)
Consequences for advisor	5.54 (1.51)	5.71 (1.29)	5.37 (1.45)	5.94 (1.16)

Note. Means and standard deviations (in parentheses) are shown.

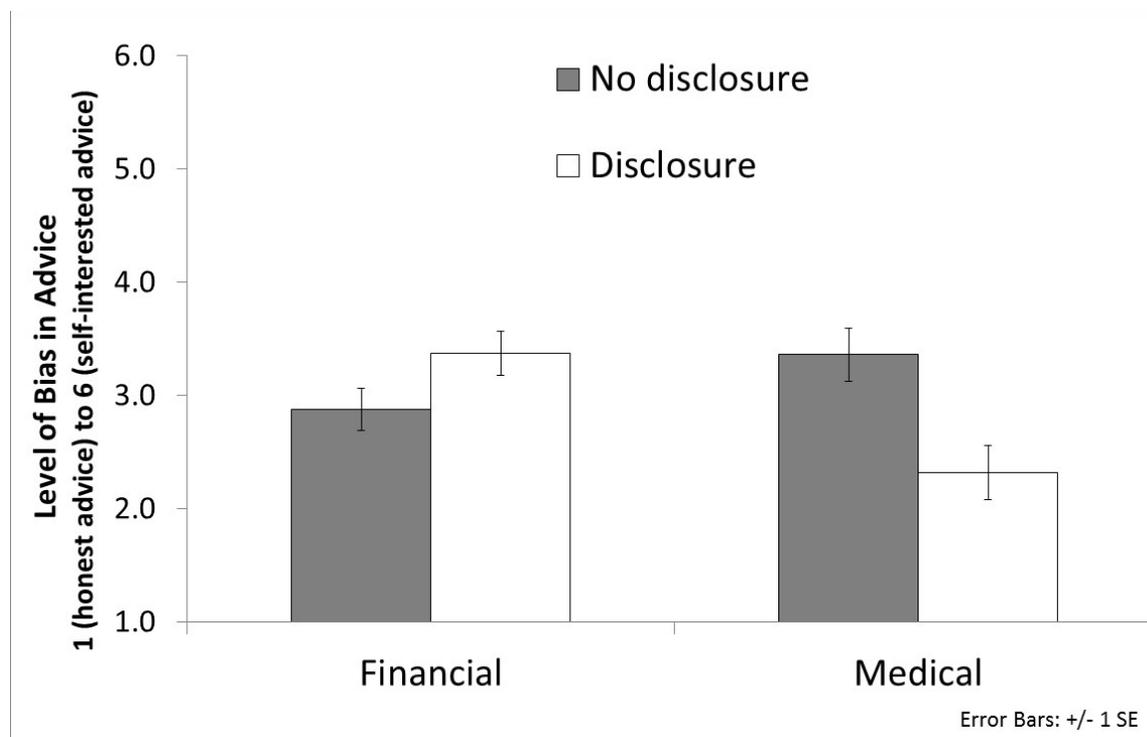
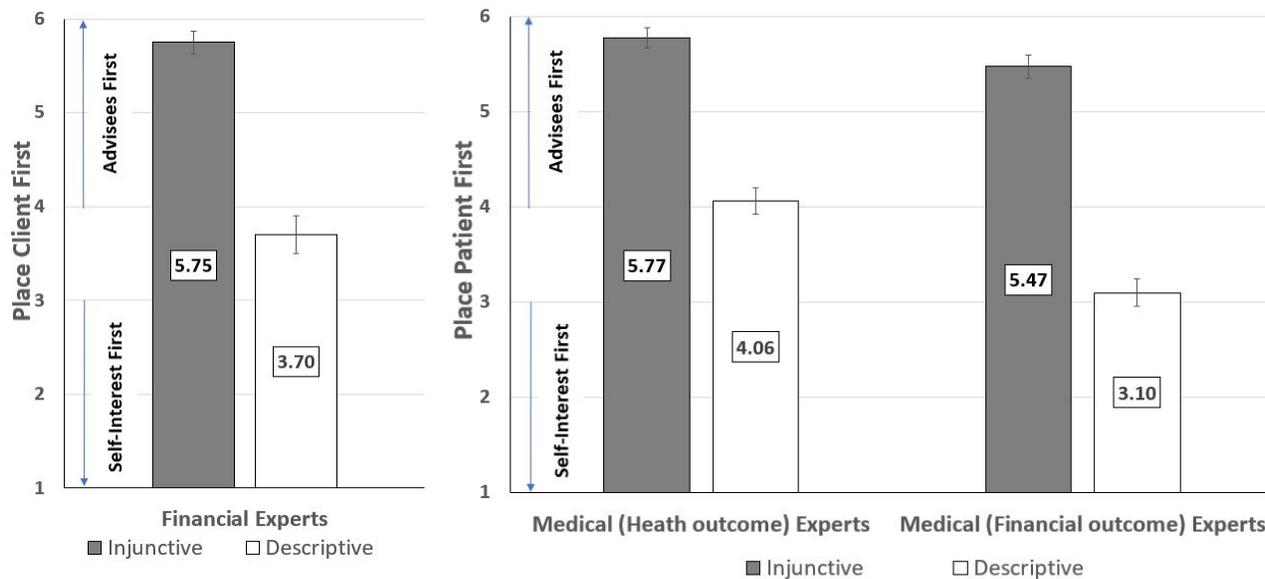
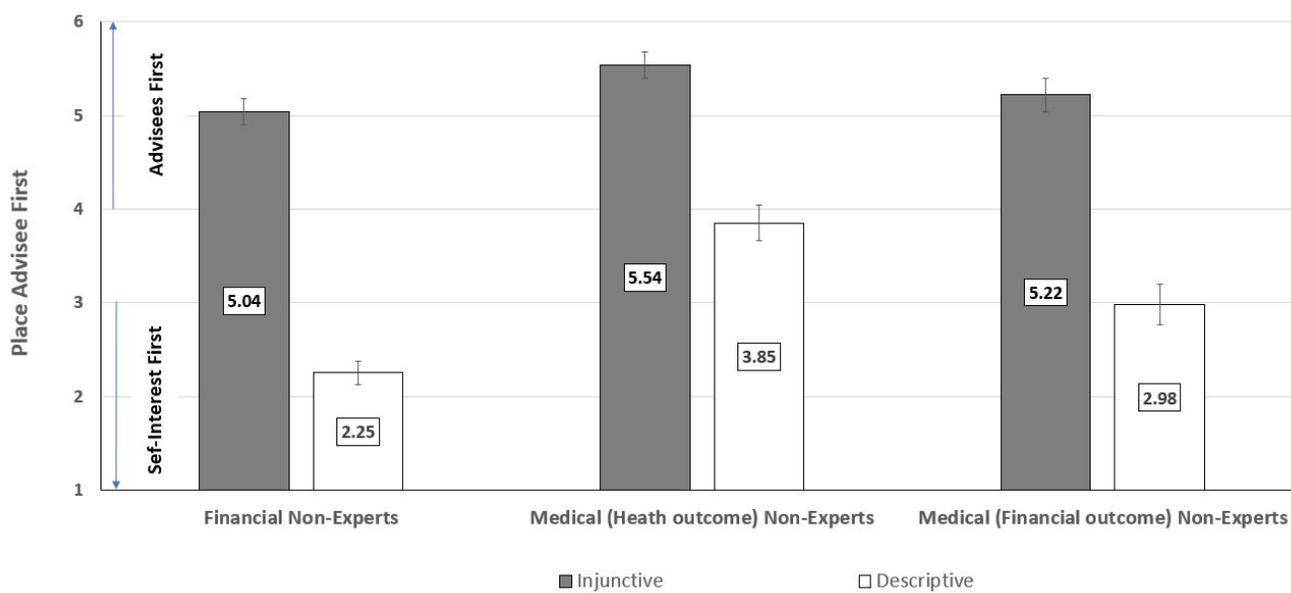


FIGURE 1. Biased advice by context and disclosure conditions, Study 1



(A) Expert Financial Advisors

(B) Expert Medical Advisors



(C) Expert Medical Advisors

FIGURE 2. Injunctive and Descriptive Norms to Place Advisees First in Financial and Medical Contexts by Experts and Non-Experts, Study 3

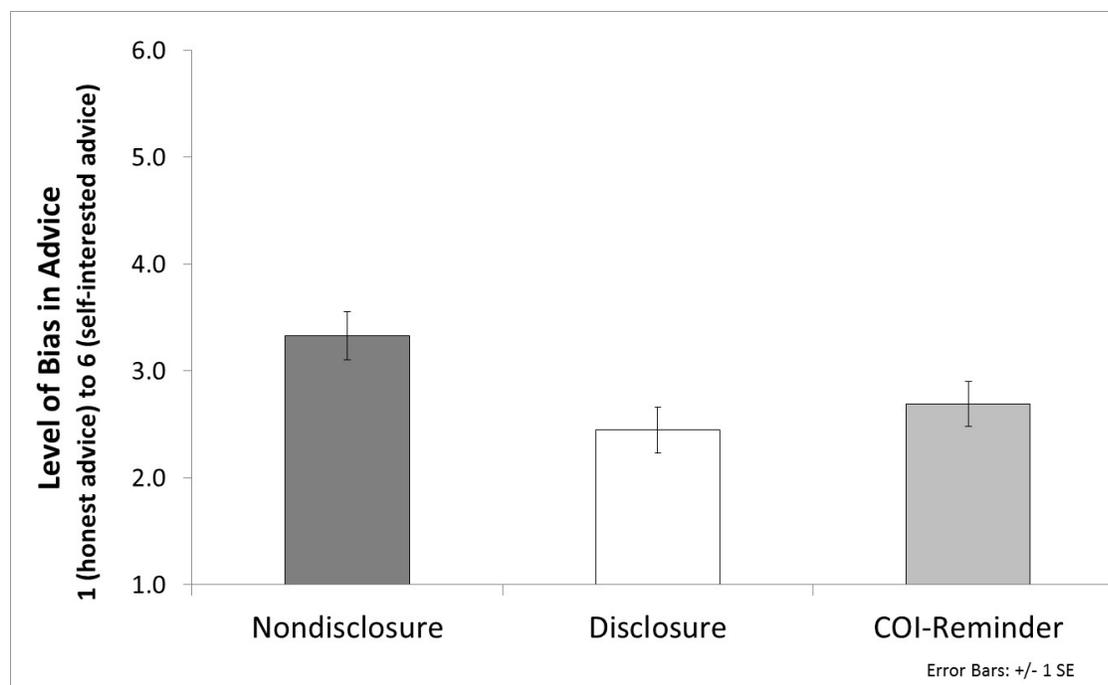


FIGURE 3. Biased advice by condition, Study 4a

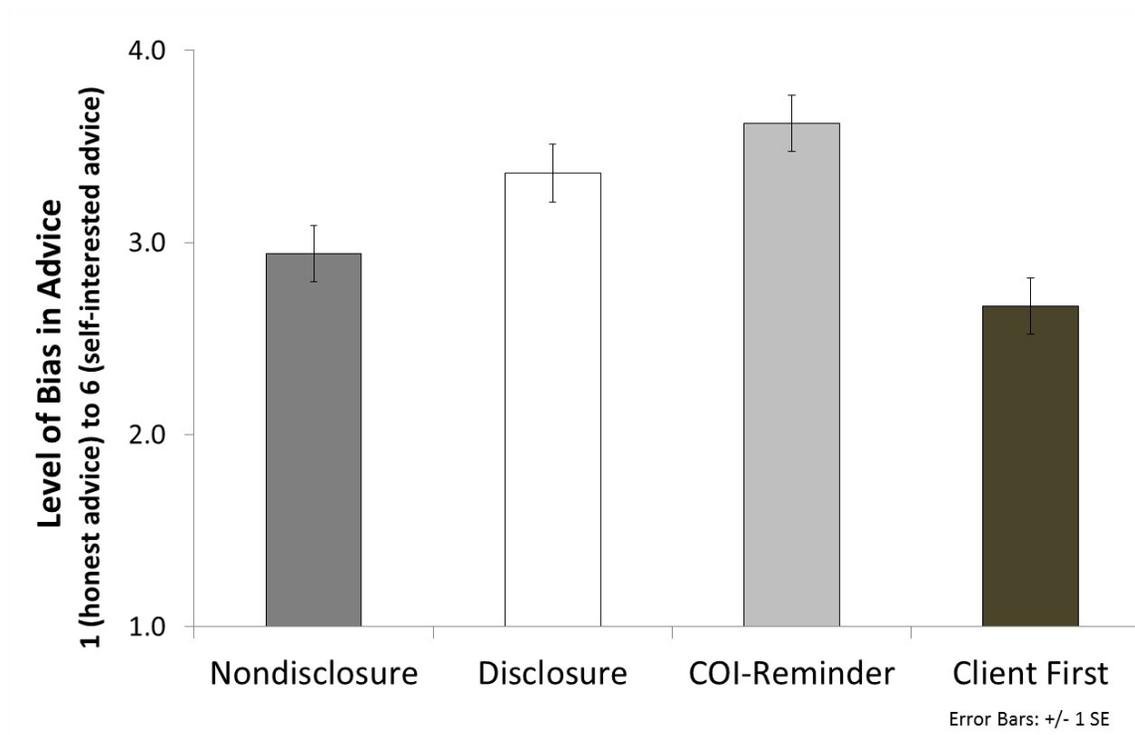


FIGURE 4. Biased advice by condition, Study 4b