Original article

How analytical is your financial advisor?

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Abstract

We survey over 100 financial planners to assess their reasoning mode, intertemporal choices, risk aversion and preferences, and framing focus. Using the Cognitive Reflection Test, we find that financial planners are more analytical than the general population. Further tests show that the analytical planners are more financially patient and perform better in intertemporal choice problems. These attributes seem important to successful financial planning. Intuitive thinkers were more risk averse and behave more according to the axioms of prospect theory. One-third of our planners were fooled by the framing of a question. © 2007 Academy of Financial Services. All rights reserved.

1. Introduction

People are being asked to manage more of their own wealth. The shift toward investment autonomy can be seen in the worldwide trend toward self-directed retirement accounts (like defined contribution plans) and away from employer or government directed benefit programs. However, there is some question as to whether individuals are capable of making effective investment decisions. Baker and Nofsinger (2002) summarize the many cognitive errors, psychological biases, and emotions that frequently influence investor decisions. Bailey, Nofsinger and O'Neill (2003) illustrate that many people may not be suited to making effective retirement investment decisions. They may believe that professional investors are less susceptible to such problems. Indeed, Byrne (2007) finds that a large portion

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of employee survey respondents in the United Kingdom do seek independent financial advice.

The question of whether professional investors actually are less susceptible to such problems is still open, the evidence is mixed. For example, in the examination of brokerage accounts in Israel (Shapira & Venezia, 2001) and China (Chen, Kim, Nofsinger & Rui, 2007), individuals tend to exhibit a stronger disposition effect than do professional investors. On the other hand, studies on professional United States futures traders (Coval & Shumway, 2005) and on U.S. mutual funds (e.g., Frazzini, 2006) find that institutional investors exhibit similar degrees of the disposition effect as individual investors. There is little research in comparing professional and individual investors in risk and intertemporal preferences.

Frederick (2005) discusses the intertemporal choice mistakes and risk preference patterns of people (mostly students). Kahneman (2003) shows that the problems people have making decisions are related to the context in which the question is framed. In short, people suffer from time preference problems, behave according to the axioms of prospect theory risk preferences, and are fooled by the framing of a question. These mistakes seem to manifest themselves within retirement saving behavior (Jacobs-Lawson & Hershey, 2005). As an alternative to making these investment decisions alone, many people seek advice from financial advisors (Allen 2001). However, little is known about the cognitive ability and biases of financial investment advisors. Advisors have education, training, and experience that could mitigate their biases and help clients with the investment process (Volpe, Chen & Sheen, 2006). On the other hand, financial professionals may have incentives to form suboptimal portfolios and select expensive investment products (Jones, Lesseig & Smythe, 2005). Most research on intertemporal choice mistakes, risk preferences, and framing has been conducted using nonprofessionals.

This study investigates the psychological profile of one type of financial advisor, the personal financial planner. We first measure the reasoning mode tendency of the financial planners and classify them as intuitive decision makers or analytical decision makers. We then use this categorization to ask the following questions: Does a planner's reasoning mode impact other aspects of the psychological profile like (1) time preference choices, (2) general risk-aversion, (3) gain/loss frame dependent risk aversion, or (4) recognition of framing effects? Because choice framing is important in all of these psychological profile preferences, we (5) conduct cross-preference analysis of the framing effects with the other preferences. Lastly, we (6) conduct an exploratory analysis of whether these preferences relate to the planner's ability to attract and retain clients. Our investigation focuses on the responses of over 100 financial advisors who average more than 16 years of personal financial planning experience. Such a sample of experienced professionals (as apposed to students) is unusual.

The rest of the study is organized as follows. The next section reviews the literature on the modes of reasoning and decision-making. Section 3 describes the survey and the financial planner participants. The fourth section reports the primary results on intertemporal choices, risk preferences, and framing. Section 5 explores how the psychological profile of the planners might impact their ability to retain and recruit clients. We discuss some limitations of this study and present our conclusions in the last two sections.

2. Preferences in decision-making

2.1. Describing intuitive and analytical decision-making

Daniel Kahneman outlined two different modes of cognitive function (intuitive and analytical[1]) in his lecture delivered in Stockholm when he received the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel (see Kahneman, 2003). He describes analytical thinking as what we do "when we compute the product of 17 and 258." An intuitive decision is made when you are reluctant to eat a piece of chocolate that has been formed in the shape of a cockroach. Analytical thought is deliberate and effortful, while intuitive thought is spontaneous and effortless.

Because mental processing capacity is limited, effortful processes tend to be serial. Effortless processes can occur in parallel. Thus, analytical thinking requires more concentration. Alternatively, several intuitive tasks can be accomplished simultaneously. Consider that the driver of a car can concurrently carry on a conversation if the driving task requires only intuitive thinking. If the driving task requires more analytical processing (like parallel parking), then conversation becomes interrupted. Because of its effortless aspects, most judgments and choices are made intuitively. Some tasks can change from analytical processing to intuitive processing through repetition. It takes much analytical reasoning to learn to play chess. However, when the proverbial chess master walks past a game and declares "white mates in three moves" with hardly a glance, intuitive processing has occurred.

Common activities of financial advisors require specialized financial information, financial theory, and application skills. For example, a financial planner should understand the specifics of tax planning, estate law, retirement plan details, insurance products, and investment products. The use of these products should occur within the context of financial theory; like diversification, asset allocation, market efficiency, risk, and expected return. Much of the learning and application of these theories requires analytical thinking. However, financial planning is also very much a "people business." The planner can only be effective in steering a client toward a particular outcome when the two have formed a trusting relationship.

This study investigates the cognitive reasoning modes (intuitive and analytical) of financial advisors and relates them to the underlying psychological aspects of common planning activities. These aspects include intertemporal choice, risk preferences, and framing effects.

2.2. Intuitive and analytical decision-making

Frederick (2005) studies the relationship between cognitive reasoning mode and decision making. He introduces a three-item Cognitive Reflection Test (CRT) to measure cognitive ability. In terms of Kahneman's (2003) two modes of reasoning (intuitive and analytical), the three questions are designed to distinguish between people who yield to the immediate impulse by making quick decisions with little conscious deliberation (intuitive decision-makers) and those who tend be slower and reflective (analytical decision-makers). Frederick reports that the correlation between the score on the CRT and the total score on the college admission SAT test, the math section, and the verbal section is 0.44, 0.46, and 0.24,

respectively. He concludes that the CRT is not simply a measure of IQ but a measure of reasoning mode.

2.3. Intertemporal choice

Financial planning includes intertemporal choices. For example, should a client consume wealth now, or invest for the future? These intertemporal decisions have been shown to be related to cognitive reflection (Federick, 2005). In general population samples, there is a relationship between recognition of an underlying discount rate and analytical ability (Parker & Fischhoff, 2005; Shoda, Mischel & Peake, 1990). For example, Frederick (2005) reviews the literature on intertemporal choice problems in many different contexts. He concludes that "these studies support the view that cognitive ability and time preference are somehow connected. . . " In Frederick's sample, the majority of high CRT score people select the patient option while the majority of the low CRT score people select the impatient one.

2.4. Risk preferences

One of the important roles of financial planning is to understand investment risk and recommend appropriate levels of market risk to clients. Planners often struggle to convince clients not to take too much risk during exuberant times, like the late 1990s, and not to take too little risk after bear market periods. Thus, both general risk aversion and risk attitudes in the domain of gains and losses are important.

We also examine the risk preferences in the domain of gains and losses. Kahneman and Tversky's (1979) prospect theory predicts that people will be more willing to take risks to avoid losses than to achieve gains. For a financial advisor to mitigate this tendency in clients, he would have to either understand the asymmetry or have the opposite tendency. Frederick (2005) reports that students with low CRT scores behave in a manner more consistent with the axioms of prospect theory than students with high CRT scores. Thus, analytical thinking planners appear more likely to be able to offset these risk preferences in clients whereas intuitive thinking planners are more likely to magnify their clients' risk attitudes.

2.5. Framing of decisions

The manner in which a decision is framed has an impact on which choice a person makes (Kahneman, 2003). For example, Tversky and Kahneman (1981) describe a gambler at a horse track. He has already lost $140 and has $10 in cash left. He is now considering a $10 bet on a 15:1 long shot. One way to frame this decision would be to consider keeping the $10 (certain event) or betting it on the 15:1 long shot with a small chance of winning $150. Note that this frame of reference is in the gain domain. Prospect theory predicts that the tendency will be to not take risk in this domain. An alternative frame is that the gambler can choose to keep the $10 and lock in a certain loss on the day of $140. If the long shot is taken, then there is a small chance he will break even for the day. This frame is characterized in the loss domain. Prospect theory predicts that people are prone to taking risks in the loss domain to

Table 1   Sample statistics of 108 financial planners

	N	Mean	Min	Max	SD
Panel A					
Age	106	48.5	23	70	10.1
Experience	106	16.4	1	35	8.5
Retention (1–5)	103	4.2	2	5	0.75
New Clients (1–5)	105	3.2	1	5	0.95
Panel B					
CRT score		0	1	2	3
Distribution		21	22	27	38

Note: In Panel A, Age refers to the age of the planner. Experience is the number of years in the planning industry. Retention and New Clients are self-reported ability at retaining clients for five years and obtain new clients (low 1 to 5 high). Of the 108 useable surveys, several did not answer a couple of questions like age, experience, and the ability to obtain and retain clients. Panel B reports the distribution of CRT scores. See the text for the three CRT questions.

try and break even. Thus, the manner in which a decision is framed influences whether the decision-maker will tend toward being risk-averse or risk-seeking.

How individuals frame investment choices will impact their decisions. Consider the decision of an employee on whether to contribute to a pension plan. If viewed as primarily a reduction in today's paycheck, the employee is less likely to contribute. If viewed as an increase in future consumption, then the employee is more likely to contribute. Because understanding the influence of framing a decision is so important, we test to see whether the framing of a question fools the financial planners.

3. Participants and survey

3.1. Participants

The Financial Planners Association (FPA) is a national, professional organization for people in the personal financial planning industry. There are over 100 local chapters of the FPA that meet frequently throughout the year to provide continuing education, industry news and trends, and networking opportunities. Professional financial planners were surveyed at two local financial planning association conferences in the Fall of 2006. Of the 92 participants at a local chapter on the west coast, 73 returned useable surveys and 35 useable surveys were obtained from 52 participants at a FPA conference in the Midwest. Table 1 describes the 108 financial planners in the sample. Note that two people did not answer the age and experience questions.

The average age of the financial planners shown in Panel A is 48 years and six months, though they range from 23 to 70 years. The average number of years in the profession is 16 years and 5 months and ranges from 1 year to 35 years. Clearly, this is a sample of experienced financial planners.

3.2. Survey questions

The survey instrument was designed to be short to increase the chance that more participants would complete the survey. The questions that target intertemporal choices, risk preferences, and framing are as follows.

3.2.1. Intertemporal choice

Consider the question, "Which investment payoff would you pick? $3,400 this quarter or $3,800 next quarter?" The selection of the more patient option is recognition that the choice includes an 11.76% rate of return for one quarter, which is a 56% compound annual rate. Another monetary test of patience is a question asking the maximum amount of money the participant is willing to pay to receive a book purchased over the Internet tomorrow instead of in one week.

Risk preferences

A general level of risk aversion is measured with the following question: "You are offered the following bet on the toss of a fair coin: if you lose, you must pay $100. What is the minimum amount that you would need to win in order to make this gamble acceptable?" Few people would accept a 50/50 gamble with an expected value of zero, so we expect participants to answer this question with a value greater than $100. To test for risk tendencies in the gain domain, financial planners were asked, "Which investment payoff would you pick? Receive (A) $100 for certain or (B) a 50% chance to receive $300 and a 50% to receive nothing." Note that the expected value of the gamble ($150) is greater than the $100 certain payoff. To test for risk preferences in the loss domain, financial planners were asked, "Which investment payoff would you pick? Lose (A) $100 for certain or (B) a 50% chance to pay $300 and a 50% to pay nothing." Here, the certain alternative has a higher expected value than the gamble.

Framing questions

We ask the question posed by Tversky and Kahneman (1981)): Imagine that the United States is preparing for the outbreak of an unusual disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume the exact scientific estimates of the consequences of the programs are as follows:

- If program A is adopted 200 people will be saved.
- If program B is adopted there is a one-third probability that 600 people will be saved, and a two-thirds probability that no one will be saved.

Which program do you choose?

Notice that program A is framed in a positive way (lives saved) with a risk-averse outcome. Program B is also framed in a positive manner but entails risk. These two outcomes are then asked again later in the survey. The second time the two alternatives are asked, the frame is changed to a negative focus (lives lost):

The same disease from question #1 is back, only this time the two programs now have the following payoffs:

- If program C is adopted 400 people will die.
- If program D is adopted there is a one-third probability that nobody will die, and a two-thirds probability that 600 people will die.

Which program do you support?

Although the framing of the two alternatives are different, the outcome of program C is precisely the same as program A. The outcomes of programs D and B are also the same. Therefore, an advisor who selects program A should also select program C. Similarly, the selection of program B should entail selection of program D. Any other combination implies that the advisor is fooled by the framing of the question.

In addition to the intertemporal choice, risk preference and framing questions, the survey asked the planners to rate their ability at keeping clients more than five years (Retention) and at obtaining new clients (New Clients) compared to others in the industry. Ratings were between one and five (1= far below average and 5 = far above average). The self-reported ability to retain clients was quite high, with a sample average of 4.2 and standard deviation of 0.75. The ability to obtain new clients was lower, averaging 3.2 with a standard deviation of 0.95. These self-reported ratings seem high. This could be because of a selection bias. The planners who generally attend the FPA meetings get professional education. Their meeting attendance could be interpreted as a signal of their commitment to their profession. Another explanation is that these financial advisors are exhibiting overconfidence. Although this may be the case, Odean and Gervais (2001) claim that overconfidence is learned from having positive outcomes.

3.3. CRT questions

In Frederick's (2005) three-item CRT, each question is designed so that there is one incorrect answer that immediately seems appropriate. Intuitive thinkers are likely to impulsively pick this wrong answer. Consider this question:

- If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?

The intuitive answer is 100 minutes and the correct answer is 5 minutes the other two questions are:

- In a lake, there is a patch of lily pads. Everyday, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half the lake?
- A bat and ball together cost $1.10. The bat costs $1.00 more than the ball, how much does the ball cost?

In the lily pads question, the intuitive answer is 24 days whereas the correct answer is 47 days. The intuitive and correct answers for the bat/ball question are 10¢ and 5¢, respectively.

Frederick then differentiates people by their score on the three questions. Scores range from zero to three. A score of three correct answers is associated with more analytical thinkers while zero correct answers are considered intuitive thinkers. To illustrate the

possible variation in CRT scores between groups, Frederick reports the mean score for various student groups. For example, the mean scores for students tested at the Massachusetts Institute of Technology, Princeton, and Carnegie Mellon were 2.18, 1.63, and 1.51, respectively. A student choir group at Harvard averaged 1.43. It may not be surprising that the more engineering focused population at MIT might be measured as more analytical whereas choir students are more intuitive, even at Harvard. Students at Bowling Green University and the University of Toledo averaged 0.87 and 0.57. These values will provide a comparison for the financial planners.

Panel B of Table 1 shows the distribution of CRT scores for the 108 financial planners. The mean score is 1.76. This is generally high compared to the Frederick (2005) samples. Although we know of no distribution of CRT scores in the general population, Frederick does conduct an online survey instrument given to students and online retail customers. The mean for this survey was 1.10. Overall, planners appear to be more analytical on average. Our initial analysis of the impact of cognitive reflection on various psychological characteristics (like risk-aversion, frame dependence, etc.) is started by sorting the planners into two groups, intuitive (CRT score of 0 or 1) and analytical (CRT score of 3). This sorting provides similar numbers of planners in each group (43 and 38) whereas allowing for separation between the CRT scores. We use the terms intuitive (analytical) thinkers and low (high) CRT score interchangeably. Later, in regression analysis, we utilize the CRT score itself instead of the group designation.

4. Empirical results

4.1. Reasoning mode and preferences

The payoff time preference problem is particularly important to financial planners. Financial planning inherently includes intertemporal choice. Moreover, financial planners should be more experienced with these types of decisions, and therefore more comfortable. Fig. 1 shows that a majority (53.5%) of the low CRT sample picked the $3,400 payoff this quarter. Alternatively, a majority (68.4%) of the high CRT sample picked the patient payoff ($3,800 next quarter), recognizing the high implied discount rate. To statistically test for a difference in choice between the high and low CRT groups, we compute a χ^2 test statistic. The p-value of 0.047 from this test indicates that the difference in intertemporal choice decisions is significant.

The other monetary test of patience is the maximum amount of money a person is willing to pay to receive a book purchased over the Internet tomorrow instead of in one week. Panel A of Table 2 shows the mean amount reported by low and high CRT groups. Intuitive thinking planners report a willingness to pay a mean of $10 to receive the book sooner whereas the analytical thinkers report a mean of less than $3. The difference is statistically significant (t-statistic of -2.32). The results of these two time preference choices are surprising in that a group of finance professionals exhibit such large deviations. It appears that financial planners who are more analytically minded might be better suited to performing the time preference functions than intuitive minded planners.
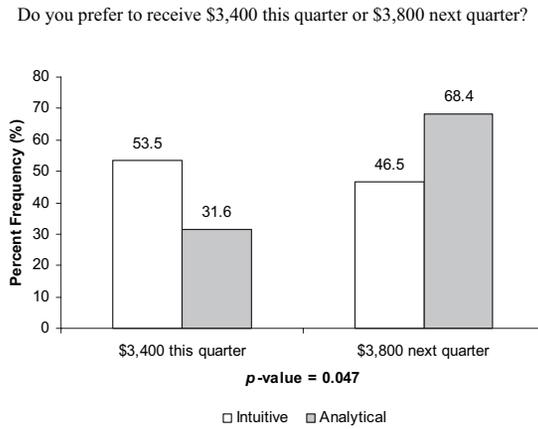
Do you prefer to receive $3,400 this quarter or $3,800 next quarter?

Fig. 1. Do you prefer to receive $3,400 this quarter or $3,800 next quarter? Intertemporal choice by reasoning mode group.

We next report the risk preference results. First, we examine the general risk aversion. Panel B of Table 2 reports that intuitive thinkers (the low CRT group) have a higher level of general risk aversion. When asked how much they would have to win to accept a gamble where the loss would be $100, the mean win was stated as $846. This compares to a mean of $219 for analytical thinkers. These results suggest that intuitive thinking planners are generally more risk averse than analytical thinking planners. The *t*-statistic of −1.61 has a *p*-value of 0.112. The standard deviation in the intuitive sample is quite high ($2,300) because of several people who answered with a value of $10,000.

We also examine the risk preferences in the gain and loss domains. Panel A of Fig. 2 shows the responses for taking the certain and gamble choices in receiving money. The majority of intuitive planners (63.4%) chose to take the certain gain. The majority of

Table 2   Patience, risk-aversion, and framing by reasoning mode groups

	Low CRT-intuitive Mean (SD)	High CRT-analytical Mean (SD)	Difference (*t*-statistic)
Panel A patience			
Maximum amount willing to pay to receive book sooner.	$10.03 ($13.67)	$2.63 ($2.41)	$−7.40 (−2.32)*
Panel B risk aversion			
Amount needed to win to offset 50% chance of losing $100.	$846.03 ($2300.07)	$218.66 ($175.99)	$−627.4 (−1.61)
Panel C framing			
Selected same outcome (not fooled)	56.41%	68.57%	
Changed outcome selection (fooled)	43.59%	31.43%	

Note: Panel A reports the amount the planner is willing to pay to receive a book ordered online tomorrow instead of in one week. Panel B reports the amount of money needed to win to accept a gamble in which the loss is $100. Panel C reports the percentages of the group that were consistent in answering two questions that had the same outcomes but were framed differently.

*Significant at the 5% level.

A

Certain gains versus higher expected value risky gamble

p-value = 0.058

□ Intuitive   ▪ Analytical

B

Certain loss versus lower expected value risky gamble

p-value = 0.099
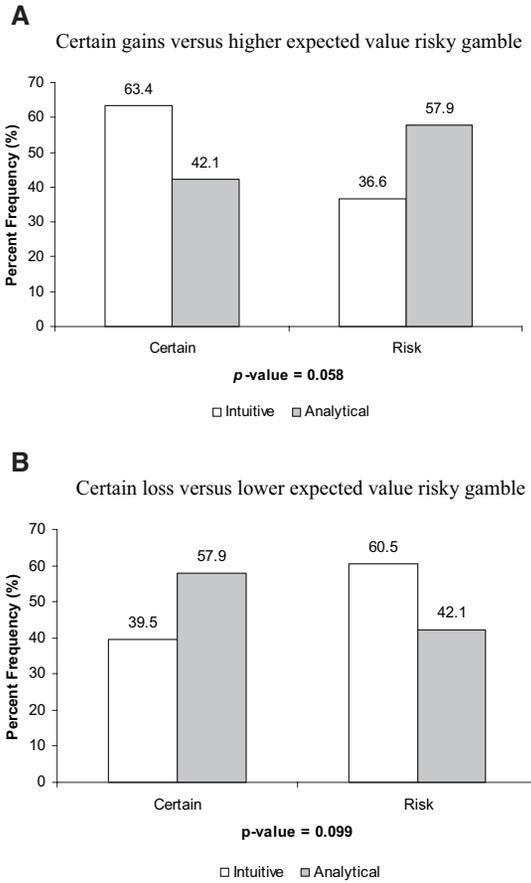
□ Intuitive   ▪ Analytical

Fig. 2. (A) Certain gains versus higher expected value risky gamble. (B) Certain loss versus lower expected value risky gamble. Risk-taking in the gain and loss domain by reasoning mode groups.

analytical planners (57.9%) selected the risky gamble with the higher expected value. The χ^2 test for different behaviors between intuitive and analytical planners has a *p*-value of 0.058.

For the loss domain, Panel B shows that a majority of intuitive planners (60.5%) picked the risky gamble while the analytical planners (57.9%) picked the certain loss. The χ^2 *p*-value for a difference between intuitive and analytical planners is 0.099. These results show that intuitive planners' risk preferences are generally consistent with prospect theory (i.e., taking risk in the loss domain, but not in the gain domain).

Overall, the majority of our sample was not fooled by the framing and was consistent in their selections. Panel C of Table 2 shows that 56% of the intuitive thinkers picked the same outcome in the two frames. This portion increases to 69% for the analytical thinkers. While the difference seems large, the χ^2 statistic is 1.16, which has a *p*-value of 0.28. The surprising result is that about one-third of these professional decision-makers were fooled by the framing of the question.
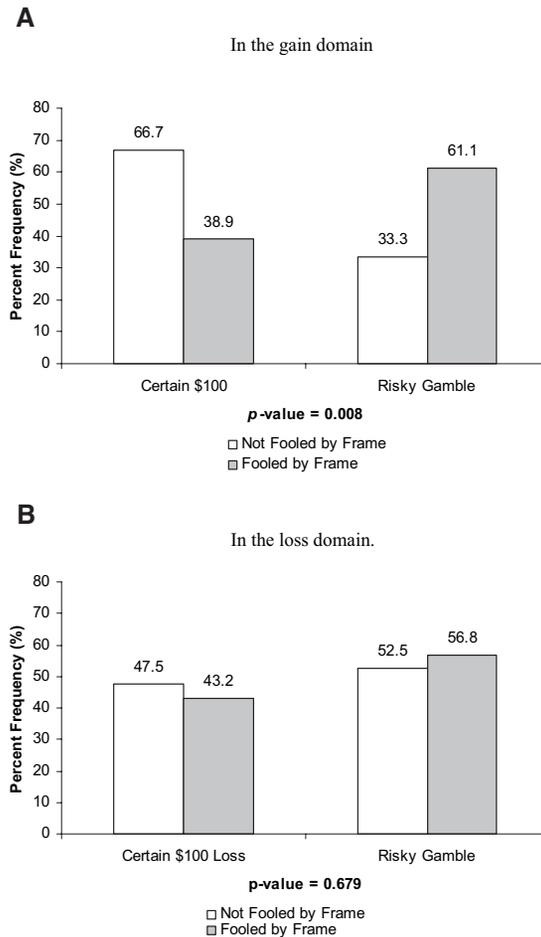
A

In the gain domain

p-value = 0.008

☐ Not Fooled by Frame
☐ Fooled by Frame

B

In the loss domain.

p-value = 0.679

☐ Not Fooled by Frame
☐ Fooled by Frame

Fig. 3. (A) In the gain domain. (B) In the loss domain. Cross-analysis of risk preference by groups fooled and not fooled by question framing.

4.2. Cross preference analysis

We also examine the relationship between being fooled (or not) by the framing and the risk preference examined in the previous section. Recall that in the gain domain, planners chose either the certain $100 or the gamble of potentially receiving either $0 or $300. Panel A of Fig. 3 shows that in the positive domain, 66.7% of planners who were not fooled by the framing selected the certain outcome of receiving $100. Only 38.9% of the planners who were fooled by the framing selected the certain outcome. The difference in decision selection between these two groups is significant (*p*-value of 0.008) from a χ^2 test. In the loss domain, the majority of the planners (56.8%) who were fooled by framing continued to pick the risky gamble. The planners who were not fooled narrowly favored (52.5%) the gamble in the loss domain. The behavior in the loss domain is not statistically different between those who were fooled and not fooled by framing. However, those who were not fooled switched from the certain outcome in the gain domain to the gamble in the loss domain. This is consistent with
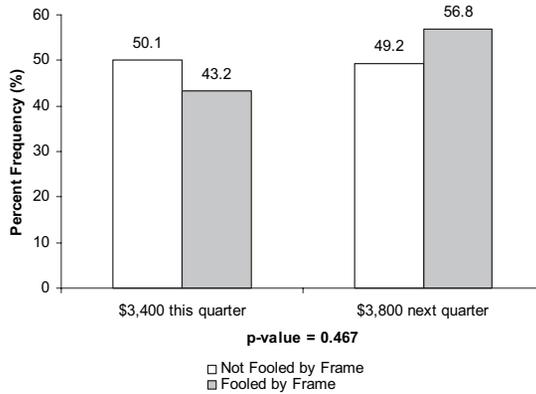
Fig. 4. Intertemporal choice by planners fooled and not fooled by question framing.

the predictions of prospect theory. The majority of those who were fooled selected the risky gamble in both the gain and loss domains.

Our last cross-preference analysis investigates whether those who are fooled by framing also have problems with intertemporal choice. It could be the case that the people who were fooled by the change in frames were also fooled by the context of the time preference question. Fig. 4 shows the majority (56.8%) of planners who were fooled by the framing did pick the better intertemporal choice. On average, they do not appear to have been fooled by the implied discount rate as they were by the positive/negative framing. Indeed, there is no statistical difference between the intertemporal choice of those who were fooled and those who were not fooled by the framing. Trouble with intertemporal decisions does not appear to be related to positive/negative framing problems.

5. Retaining and obtaining clients

As a final investigation, we examine whether the intertemporal choice, risk preferences, and framing susceptibility of financial planners impact the relationship with their clients. Do these characteristics reveal themselves to clients over time? If so, do clients stay with the financial advisor or leave because of them? Unfortunately, we have no way of directly answering these questions. However, we can study the correlation between the self-reported ability of the planners to retain clients and their psychological profile. We also investigate the relationship between these psychological variables and self-reported ability to obtain new clients.

Table 3 shows the response distribution of the self-reported ability to retain clients. A majority of the planners reported being above average or far above average at retaining clients. The distribution for obtaining new clients appears to be more centered on being average. We then conduct a probit regression analysis with the psychological profile variables of CRT Score (degree of analytical thinking), Framing (not fooled), Risk in the gain domain (certain choice) and loss domain (certain choice), Intertemporal choice (deep dis-

Table 3   Probit regression analysis of retaining and obtaining clients

Panel A. Distribution of answers about the ability to retain and obtain clients

Response	Retention answer frequency	New clients answer frequency
1	0	4
2	2	15
3	15	47
4	47	29
5	39	10

Panel B. Probit regression analysis

	Retention (p-value)	Retention (p-value)	New clients (p-value)	New clients (p-value)
CRT score	−0.167 (0.075)*	−0.110 (0.293)	−0.100 (0.311)	−0.061 (0.586)
Experience	−0.0065 (0.605)	−0.0077 (0.592)	0.030 (0.030)**	0.028 (0.073)*
Not fooled by framing		−0.032 (0.890)		0.172 (0.491)
Risk in gain domain (certain outcome)		0.393 (0.098)*		−0.242 (0.345)
Risk in loss domain (certain outcome)		0.137 (0.551)		−0.035 (0.889)
Intertemporal choice ($3,400 this quarter)		−0.038 (0.868)		0.512 (0.040)**
Risk aversion (amount to win)		−0.0001 (0.636)		0.0001 (0.645)

Note: Panel A shows the self-reported ability of the planners to retain clients five years and recruit new clients. Panel B shows the coefficient estimates and χ^2 p-values for the preference variables in probit regressions where the dependent variables are retention and new clients, respectively.

**, * Significant at the 5 and 10% level, respectively.

count choice), and general Level of risk aversion (amount to win). The personal characteristic of Experience is also included.[2]

Two probit regressions on Retention are also shown in Table 3. The first regression includes only the CRT Score and Experience. The CRT coefficient is −0.167 and has a χ^2 of 3.17 and p-value of 0.075. This suggests that intuitive planners tend to feel they retain clients better. The experience variable coefficient is not significant. We then add the other psychological profile variables to the regression. This causes the CRT score coefficient to become insignificant. Only the variable indicating the taking of the gamble in the gain domain has a significant coefficient of 0.393 (p-value = 0.098). This result suggests that planners who are willing to take risk in the gain domain (contrary to prospect theory) are more likely to retain clients. The table also reports similar probit regression results for explaining the ability in obtaining New Clients. In the first regression with only CRT Score and Experience, the coefficient for Experience is significant and positive, 0.030 (p-value = 0.030). This suggests that planners with more experience have higher success in recruiting new clients. This result is not impacted with the other preference variables are added to the model. The intertemporal choice variable also has a significant and positive coefficient of 0.512 (p-value = 0.040). The planners exhibiting a higher degree of impatience tend to report being more successful in obtaining new clients.[3]

6. Study limitations

There are several limitations in this study that may impact the interpretations of the findings to financial planners in general. For example, there is a selection bias in that only planners who attended the conference were surveyed. Although a high percentage of the attendees completed the survey, it is common for as little as 10% of the local chapter's members to attend any given meeting. Thus, the findings may be qualified as behavior of planners who attend local chapter meetings.

Also note that survey questions may not reflect what the planners would actually decide for themselves or for clients. We recommend an experimental setting as future research to examine this issue. Self reported abilities to keep or obtain clients may be skewed because of overconfidence (Nofsinger, 2005, Chapter 2) or a lack of knowledge of others in the industry for comparison.

Lastly, our analysis suffers from low power because of the sample size. The sample is small compared with studies that use populations easy to sample, like students. We believe the sample is adequate for a hard-to-sample population, like financial professionals, to learn about their preferences. Nevertheless, we have discussed tests with p-values of 10% or lower as being statistically important.

7. Conclusions

The role of financial advisors seems to be increasing over time as people are being asked to manage their own retirement accounts and other wealth. Although much research is being done on the psychological biases of individual investors, very little is known about the advisors they go to for help. However, their role in the process could impact everything from how the capital markets function (Allen, 2001) to how financially successful retirement money is managed (Byrne, 2007).

We survey over 100 financial planners to assess their reasoning mode, intertemporal choices, risk aversion and preferences, and framing focus. Using the Cognitive Reflection Test, we find that financial planners are more analytical than the general population. Nevertheless, many planners are classified as intuitive thinkers. Our tests show that the analytical thinkers are more financially patient. For example, they are not willing to spend as much money as the intuitive planners to obtain a new book early. They also recognized the very high implied discount rate in an intertemporal choice problem. This attribute seems important to providing successful financial advice.

We also study the risk preferences of the planners. Overall, intuitive thinkers were more risk averse than analytical thinkers. Examining the risk preferences in the gain and loss domains, we find that intuitive financial planners behave more according to the axioms of prospect theory. That is, they seek certain outcomes in the gain domain and gambles in the loss domain. Analytical planners behave in the opposite manner. These findings are very pertinent because financial planning activities are bound to experience bull and bear periods in both general markets and individual investment products over time. As such, planners

must be able to influence their clients in such instances. Analytical planners appear to have risk preferences that might offset those of the average client.

We are also surprised that more than one-third of our planners were fooled by the framing of a question. Recognizing the framing did not seem to be related to reasoning mode or patience. An intriguing finding is that the majority of planners who were fooled by framing also picked the risky gamble in both the gain and loss domain. As little research as been done on the interaction between risk preferences and framing, we believe that further study of this affect is warranted.

Lastly, we explore the role that these psychological profile variables may play in the success of the financial planners. Generally, these variables do not appear to be related to keeping and obtaining clients. However, the intuitive planners appear to have more success in obtaining new clients. These results should be qualified by the fact that the success at retaining and obtaining clients is self-reported.

Notes

1. Kahneman uses the term "reasoning" where we use "analytical."
2. The years of experience variable is highly correlated (0.43) with age. To avoid the multicollinearity, we include only the experience variable.
3. Effect size statistics (see Cohen, 1988) for these regressions indicate that the strength of these variable relationships ranges from small to medium.

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