How Behavioral Finance Can Assist Financial Professionals

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Abstract
In this article, we discuss some of the main findings of research in behavioral finance, and their implications on the decision-making of individuals. We concentrate on four seemingly irrational behaviors that individuals are prone to exhibit. First, individuals tend to separate their money into several mental accounts, and, inappropriately, assign different values to a dollar depending on which account it comes from. Second, individuals exhibit loss aversion: they are too fixated by short-term losses and steer their gaze from the long run. Third, individuals are prone to a cognitive bias known as representativeness, which means that recent available evidence is accorded excessive weight. Finally, and particularly damaging to saving behavior, individuals tend to be subject to limited self-control and procrastination. Additionally, we make a number of concrete suggestions as to how financial professionals can make practical use of some of these insights.

Introduction
In October of 2002, Daniel Kahneman of Princeton University and Vernon Smith of George Mason University were the recipients of the Nobel Prize in economics. By granting the awards, the Nobel committee was honoring Kahneman for establishing theory explaining how human decisions
can at times deviate from traditional economic theory, and Smith for laying the foundation for the field of experimental economics. Both men were cited by the committee as innovators for bringing together the fields of psychology and experimental economics. During the past three decades, studies by these two researchers and many others have provided insight into the decision-making of individuals, and offered explanations for the anomalies sometimes observed in stock and other asset markets. In academia, this relatively new field of studies is referred to as "behavioral economics" or, when financial decisions and financial markets are involved, "behavioral finance."

The general premise of behavioral finance is that investors do not always act in a fully rational, utility-maximizing manner. In other words, investors' decisions are not always consistent with what traditional finance theory suggests. In this article, we discuss the implications of some of the main findings of research in behavioral finance on the decision-making of individuals, and how financial counsellors, planners, advisors and educators (hereafter, for brevity, financial professionals) can use them in order to increase the value added that they provide to their clients. We concentrate on four of the most prevalent seemingly irrational behaviors that individuals are prone to exhibit. First, individuals tend to separate their money into several "mental accounts," depending on the sources, magnitudes and purposes of such money. Second, individuals exhibit "loss aversion," which causes their decisions to depend on the context in which the problem is framed, rather than on the net effect of their decisions on their wealth. Third, individuals are prone to a cognitive bias known as representativeness, whereby information that is easily available or has become known recently is given too much weight. Fourth, people are subject to the psychological tendencies of limited self-control and procrastination.

While financial professionals may come across one or more of the above behaviors on a daily basis, we hope that they can benefit from a better understanding of these behaviors and their effects on clients' decisions. Financial professionals, in dealing with their clients, often attempt to drum home certain maxims or themes. Interestingly, the reason why individuals are sometimes slow students in taking these themes to heart is because of some of the aforementioned psychological proclivities. After a discussion of each psychological behavior we will connect it to a few tried-and-true kernels of advice that financial professionals often give. It is our view that a better understanding of the relevant psychological factors can only help as counsellors counsel, advisers advise, educates educate and planners plan on behalf of their clients. This may make it possible to move towards the ultimate goal which is to nudge the client in the direction of what a well-informed, rational, emotionally-neutral individual would opt for.
Mental Accounting

Mental accounting, an idea developed Richard Thaler (1985), refers to the tendency of individuals to separate their money into several “mental accounts,” depending on the sources, magnitudes and purposes of such money. Money in different accounts is then treated differently. That is, the value that individuals assign to one dollar in one mental account, and the willingness to put it at risk, can differ from that of one dollar in other mental accounts. The consequence of this practice is that individuals at times tend to be too conservative and at other times too reckless.

There is a good deal of anecdotal evidence on mental accounting behaviors. For example, people are more careful with the money that they earn than with the money that they “find” (such as tax refunds and, especially, lottery or casino winnings). Such behaviors are corroborated by controlled experimental studies. In one such study (Thaler & Johnson, 1990), participants were asked if they would accept a gamble. There were two versions of the gamble. In the one-stage version, participants were asked if they would accept, for example, a sure gain of $15 or take a gamble with a 50-50 chance of winning $20 or $10. In the two-stage version, participants were told the outcome of the first stage, say a gain of $15, and were asked if they would accept a gamble with a 50-50 chance of winning $5 or losing $5. Note that the two versions are equivalent, except for how things are presented or “framed.” Since the expected outcomes of both versions are the same, one would expect participants’ reactions to be the same as well. Thaler and Johnson, however, found that participants who received the one-stage version were much less inclined to take the gamble than those who were presented with the two-stage version. The reason is that the two-stage participants considered the $15 gain in the first stage as “found” money and were willing to play with it. Thaler and Johnson termed this behavior the “house money” effect.

Recently, the authors of the present article were involved in an experiment where a stock auction was conducted (Ackert, Charupat, Church & Deaves, 2003). The stock in question paid a dividend according to a known probability distribution. Prior to the start of trading, participants were given money endowments which they could take home if they decided not to try to acquire the stock (i.e., by submitting low bids). One group of participants received a small endowment (sufficient to compensate them for their time), while the other received a larger endowment (which was more than sufficient to compensate them for their time). We found that the bids from the second group were repeatedly higher than the bids from the first group. This suggests that the magnitude of found money influences one’s propensity to spend and to take risk.
One’s propensity to spend or take risk also depends on the timing of one’s income, whether earned or found. Shefrin and Thaler (1988) argued that people subconsciously divide their wealth into three mental accounts: current income, current assets and future income. Their survey results showed that the willingness to spend is greatest for money in the current income account and lowest for money in the future income account. Shefrin and Thaler’s argument is consistent with anecdotal observations that a lot of people are careful with big ticket purchases (such as houses or cars) while they are much less careful with small expenses. This behavior can be explained by the fact that the former are generally planned and saved for (and hence the money for such purchases is set aside in a more sacred mental account, the current-assets account), while small purchases are made using the current-income account (and hence are usually repeated or impulsive). Nevertheless, a lot of people fail to recognize that poor choices on small purchases can accumulate and really hinder their savings program.

Financial professionals provide advice designed to mitigate the harmful effects of mental accounting. First, it is wise to encourage clients to take a holistic view of their assets and liabilities. A bad spending habit caused by mental accounting is excessive credit card spending. Average household credit card debt in 2003 was reportedly about $13,000.\(^2\) This amount is dangerously high considering that the interest rate on credit card debt can be as high as 20%. Mental accounting can cause people to spend recklessly to obtain immediate gratification by using their credit cards. This is because some people generally do not feel that they are really spending anything when they use their cards. In other words, they value a dollar in the credit card mental account less than a dollar in the cash mental account. To reduce wasteful credit card spending, one could teach clients to come up with the “cash-equivalent” cost. That is, the clients should ask themselves whether they would still make the purchase if they had to pay for it in cash.\(^3\) Additionally, for those who carry a credit-card balance, it is injudicious to maintain a significant amount of money in a low-interest savings account while servicing high-interest credit card debt.

Second, another good advice is to allow as much of your pay as you can afford to be automatically invested. Automatic payroll deduction is beneficial in that it is viewed as going to the more untouchable future-income account, thus encouraging self-control. Note that we will return to the issue of self-control later in this article. Another way of not allowing current income to be viewed as current income, is, wherever possible, to postpone its receipt so that periodically a lump sum is received (say in the form of a bonus). While this flies against the financial aphorism that money today is better than money tomorrow, it can be argued that one reason that the savings rate is much higher in Japan than in the United States is because in Japan a much higher percentage of income is received in the form of year-end bonuses.
Loss Aversion

Closely related to the concept of mental accounting is the idea of "loss aversion." In a seminal paper, Daniel Kahneman and Amos Tversky (1979) argued that the impact of a loss on people's happiness was much stronger than the impact of a gain of the same magnitude. That is, people hate to lose: they are loss-averse. Consider, for example, a question posed in their study. Suppose you face a choice between (1) a sure gain of $3,000; and (2) an 80% chance of getting $4,000 and a 20% chance of getting nothing. The latter has an expected value of $3,200. Faced with this problem, most people choose the first choice. This is not surprising: most people are risk-averse, and the $200 premium for bearing uncertainty is insufficient compensation.

On the other hand, suppose instead that the problem involves the following choices: (1) a sure loss of $3000; and (2) an 80% chance of losing $4,000 and a 20% chance of no loss. The latter gamble has an expected value of -$3200. In this case, Kahneman and Tversky found that most people opt for the second choice – despite the fact that the gamble has a lower (more negative) payoff and there is additional uncertainty. That is, most people would rather take a chance if they could avoid loss altogether, even though the expected value of the loss is higher under the second choice. Risk seeking, not risk aversion, is implied.

Loss aversion can cause individuals to make unsound financial decisions. For example, a study by Terrance Odean (1998) looked at the trading patterns of approximately 160,000 customers of a U.S. discount broker. Odean reported that investors realized gains 1.68 times more frequently than they realized losses. That is, the stocks that had been performing well were 68% more likely to be sold than the stocks that had been doing poorly. His findings are consistent with the above idea that people prefer a sure gain and will accept risk (by holding on to bad stocks) to avoid losses. In addition, Odean reported that although investors did sell some losers, they tended to sell small losers, but kept large losers. He then followed the performance of these losers and found that the stocks that investors sold generally went on to outperform the stocks that they kept. That is, investors tended to sell the wrong stocks. Odean's findings are consistent with the concept of "sunk cost fallacy" (Thaler, 1980). That is, a lot of individuals base their future investment/spending on how much they have already invested/spent. Investors in Odean's sample did not want to sell their stocks for less than what they had paid for them. Similarly, anecdotal observations suggest that owners of floundering businesses find it difficult to abandon them because they have already invested a lot of time and money in their businesses.

Loss aversion can also cause investors to be too conservative in their investment strategy. The prospect of short-term losses clouds investors' judgement. Shlomo Benartzi and Richard Thaler (1999) conducted an experi-
ment in which participants were asked if they would enter into a gamble with, say, a 50% chance of winning $200 and a 50% chance of losing $100. They were then asked if they would enter into a series of 100 repetitions of such a gamble. Next, Benartzi and Thaler showed them a distribution of possible outcomes under repeated gambles, which indicated that the possibility of ending up with a loss after 100 such repetitions was very small. They found that the majority (around 75%) of participants who earlier refused to take this series of gambles would change their mind. Benartzi and Thaler’s results are consistent with the idea that short-term loss aversion can cause people to overestimate the risk of a long-term gamble. They termed this behavior “myopic loss aversion.” In an investment context, this behavior can cause investors to underweight equity in their portfolios, and thus miss out on the higher expected long-run return that stocks almost invariably bring.

What sort of professional advice follows from the psychological behavior of loss aversion? First, common advice to clients is to forget the past and base decisions on future costs and benefits. In other words, clients should not throw good money after bad. For example, if a car is a patent lemon in that it has required spiralling repairs, one should not decide on future repairs based on how much has already been spent.

Second, clients need to be repeatedly encouraged to take a holistic long-term view of their investments. Holistic means looking at the entire portfolio (mental accounting again), and to not get fixated on losses arising from individual investments to the point of being nervous about taking on reasonable risk. While equity investment can incur losses in the short run, historically it has almost always outperformed fixed-income investment in the medium- and long-run. Ironically this is one instance where some inattention is not a bad thing. If the client becomes too fixated on short-term market fluctuations, he will perceive stocks to be much riskier than they really are.

**Representativeness**

Financial decision-makers face a plethora of information. It is generally difficult to glean relevant information from various sources and come up with the right decision. One solution is to reduce decision-making processes down to a set of rules based on experience. These general rules, or “heuristics” as they are sometimes called, reflect the manner in which individuals incorporate available information into their decisions. Unfortunately such rules can lead to a number of biases. The most common one, representativeness, refers to the fact that people tend to form judgements based on stereotypes. What they see occurring around them, especially in the recent past, is assigned an inordinately high probability of occurring in the future. More technically, decision-makers typically overweight sample data and underweight “base rate” information. This explains why a lot of investors
pick stocks or mutual funds merely based on recent performance. Stocks that have been doing very well will attract buyers, thus pushing their prices up. Their higher prices, together with the reversion of their performance towards a long-term mean, can cause their percentage returns in subsequent periods to be disappointing. Indeed, DeBondt and Thaler (1985) found that those stocks which had performed very well in the preceding five-year period tended to underperform those that had done very poorly by over 30% in the subsequent five-year period.

The internet bubble is a recent painful memory for many. Representativeness seems to have played a role in various ways. First, during the price run-up the press was awash with stories of the internet revolution and the investment opportunities associated with it. It seemed like every week a new hot IPO was coming out and prices were immediately on the rise. It even got to the point where merely changing the company name to a dotcom name led to significant upward price moves. For example, Computer Literacy Inc. changed its name to fatbrain.com and its share price immediately rose by 33%. Cooper, Dimitrov and Raghavendra (2001) demonstrate that this was no isolated case. In fact they document a dotcom effect where during this period a mere name change to a dotcom name led to excess average returns of 74% for the 10 days surrounding the announcement of the name change. To investors dotcom represented investment riches. Additionally, investors were mesmerized past returns.

What advice strategies are suggested by the representativeness tendency? First, financial professionals tell clients that they should not get caught up in fads and allow them to dictate investment strategy. We have already talked about the internet fiasco, and surely another such fad will reappear in the not too distant future. Unfortunately we do not know except with the perspective of hindsight that a fad is indeed a fad. Still, one can advise that trading on “new” information may often mean transacting after overreaction has already set in.

Second, clients are habitually told that past returns are no guarantee of future performance. But do clients ever quite listen? Past high returns represent future high returns. If they smell a few roses people think more must be on the way. The reality of course is often the very opposite. So what are financial professionals to do? The best policy is to warn clients of potential pitfalls. One suggestion is to strongly suggest that trading or fund switching only be considered at periodic intervals (at which time one is less likely to be fooled by representativeness and captivated by emotion), and, even then, it is our view that portfolio adjustments should only be in response to changes in the client’s life stage and should not be in response to any perceived informational advantage.
Limited Self-control and Procrastination

Limited self-control and procrastination are two psychological tendencies that virtually all of us are subject to in varying degrees at various times. After the holiday season becomes a memory, many of us realize it would be nice to shed a few pounds. But what is the rush we tell ourselves? We will start next week: we procrastinate. Assuming we do finally get around to beginning our diet, self-control is not at all easy. Nobody likes to give up what is pleasant to him.

In the financial realm, limited self-control and procrastination are particularly problematic for the saving decision. People sometimes do not save at all, and if they do save, often they do not save enough. Of course the reason is that people prefer current over future consumption. But sometimes there is irrationality attached to their decision. O'Donoghue and Rabin (1999) provide experimental evidence that, if given a choice between work now and a little more work in say two weeks, people often procrastinate preferring to do the work later, even though they have to do more. On the other hand, if given the exact same choice of work now vs. deferring a little more work till later, but with the first work option beginning say a couple of months from now and the second option two weeks subsequent to that point in time, most people now choose to do less work but sooner. Ironically, being tough on yourself is easier if procrastination is involved. It can be shown that this type of preference reversal is inconsistent with standard financial models that compare choices of current vs. future consumption.

People realize that they need self-imposed discipline and rules. They also recognize that controlling their environment can be helpful. Continuing our weight loss analogy, a diet is a set of rules. For example, one diet might specify that one is not supposed to eat more than a certain number of calories per day; or one is not allowed any dessert. Environmental control is important. If you are on a no-dessert diet, it is probably not wise to accompany your friends to a dessert shop.

The SMT\(^\circ\) ("save more tomorrow") program espoused by Thaler and Benartzi (2003) uses some of the insights of behavioral finance to develop mechanisms to induce potential 401(k) participants to increase their deferral rate. The idea is to convince reluctant plan members to lock themselves into future increases in deferral rates with the proviso that these only kick in some time down the road. After all people love to procrastinate so the point is to use positively this psychological tendency. Another benefit of this program is that contribution rates rise over time according to a set schedule. In addition, once people enrolled in the program, a behavioral bias known as inertia starts to abet the cause. Inertia refers to the observation that people are reluctant to change whatever they have or are committed to. As a result, getting clients to commit to a savings program is a good way to use human behavior to their advantage.
There is probably no more hackneyed advice coming from financial professionals than to save early and to save as much as possible. Let us say an advisor is meeting resistance when she tries to impress upon her client the need for self-discipline and commitment in saving. Why not try a variant of the SMT® approach? One strategy might be to suggest that the client sign off on a “contract” whereby he promises to increase the amount saved as a percentage of income according to some reasonable schedule.

Second, financial professionals often advise that one should stay the course. In this context we mean maintaining savings goals if at all possible. Most people have faulty self-control. Knowing beforehand that their clients might subsequently have difficulty sticking to their goals, financial professionals should set up a follow-up process with them to periodically evaluate their effort. Such a follow-up process is not different from one used by, for example, Weight Watchers® on dieters. By requiring dieters to show up periodically for pep talks and weigh-ins, this commitment mechanism makes it harder for some to ease up on their determination. Note also that financial professionals can recommend tools such as automatic savings programs to help clients maintain their discipline.

**Perspective**

As insights garnered from behavioral finance multiply, we believe that it has become virtually imperative for financial professionals to incorporate the knowledge from this field into the advice that they give to their clients. In addition to knowing a client’s personal and financial information (e.g., goals, financial conditions, risk tolerance, and investment horizon), it is also necessary to develop a sense of the client’s psychology (e.g., whether she is prone to using mental accounting, and whether she allows her decision-making processes to be impacted by emotion). As it were, the financial professional can create a kind of behavioral profile of a client. Admittedly, this is not an easy task, primarily because behavioral parameters are more difficult to quantify than financial parameters. Nevertheless, one way to obtain behavioral information is by asking a series of questions that are designed to detect the existence and the magnitude of behavioral biases. Examples of such questions are some of the gamble questions that we alluded to earlier. In some ways a financial professional is akin to a personal trainer. Aside from providing guidance to their clients, personal trainers of course also provide gentle discipline. It is easier to skip a workout or to be lax during one when your “conscience” is not around. Financial professionals, especially those aware of behavioral finance and their client’s mindset, can act in a similar fashion. Investors, left on their own, may be prone to making emotional decisions and straying from the plan. At the outset, one can stress the importance of sticking to the plan and of not jumping ship when, inevitably,
adverse circumstances intervene. It is at such times that it is important to remind the client of previous discussions while urging calm.

To recap, let us review the maxims that were associated with our four behaviors:

1. Take a holistic view of assets and liabilities.
2. Allow as much pay as is affordable to be automatically invested.
3. Forget the past and base decisions on future costs and benefits.
4. Take a holistic long-term view of investments.
5. Do not get caught up in investment fads.
6. Past returns are no guarantee of future performance.
7. Save early and as much as possible.
8. Stay the course.

Some readers may be saying to themselves that these maxims are quite familiar, and of course they are right. Still it is our belief that, in understanding better the behaviors that lead to the need for these maxims to be constantly restated, financial professionals may be able to alter their educational techniques for the better. Additionally, based on developing a psychological profile, it may be possible to surmise what clients (or what categories of clients) are more susceptible to certain behaviors and are thus most likely to require gentle persuasion.

To conclude, we are suggesting that a financial professional should try to develop a multi-faceted skill set. Aside from a broad knowledge of personal finance, and, in many cases, an in-depth knowledge of her area of expertise, it is increasingly important that she also cultivate a feel for the psychological factors that impact her clients’ decision-making. We have discussed some of these less than rational behaviors, namely the tendency for individuals to separate their money into several mental accounts; an excessive fixation on short-term losses; being overly influenced by what has happened recently; and limited self-control and procrastination. By developing a feel for these and other behaviors, the hope is that financial professionals can develop mechanisms, whether they be educational sessions or commitment devices such as automatic savings plans, that are designed to ensure that outcomes are the best for their clients.
References


Thaler, R., and E.J. Johnston, (1990). Gambling with the house money and trying to break even: The effects of prior outcomes (Endnotes)

1 For excellent comprehensive review articles of the broad field of behavioral finance, see Hirshleifer (2001) and Barberis and Thaler (2002). Of late the role of emotion in financial markets has attracted a lot of attention. For an in-depth discussion of this, see Ackert, Church and Deaves (2003). The same holds true for overconfidence. Again, for a discussion see Charupat, Deaves and Lüders (2003).


3 O’Donoghue and Rabin (2000) argue that people who pursue immediate gratification have self-control problems. These people tend to over-indulge in activities with immediate rewards and delayed costs (such as impulse credit-card purchases), and under-indulge in activities with immediate costs and delayed rewards. In this context, our cash-equivalent suggestion simply turns the delayed cost (of credit-card payments) into an immediate cost.

4 Additionally, some of the questions suggested by Kahneman and Riepe (1998) might be useful in forming such a behavioral profile.

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