



“Loss Aversion & Mental Accounting – A Behavioral Finance Perspective”

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ABSTRACT

A new field in finance evolved in the 1980s; one which did not build on fundamental basis but from the world of psychology, known Behavioral Finance. The theories in Behavioral Finance also presented a new point of view when explaining market movements. The market is determined by people who cannot always be considered rational in their investment choices, especially not during times of financial agony. Behavioral finance is, in fundamental nature, trying to elucidate and increase understanding of the reasoning patterns of market members, including the emotional course of actions involved and the degree to which they influence the decision-making process. This report takes the perspective to investigate the psychological impact on investors in the financial world.

KEYWORDS

anomalies, irrationality, fallacy

Behavioral Finance

Behavioral Finance considers different psychological behavior of individuals and how these traits affect how they act as investors, analysts, and portfolio managers. Noted by Olsen, behavioral finance recognizes that the standard finance model of rational actions and profit maximization can be true within specific limitations, but advocates of behavioral finance state that this model is incomplete since it does not think about individual behavior. In particular, behavioral finance seeks to understand and forecast systematic financial market implications of psychological judgment processes. Behavioral finance is focused on the implication of psychological and economic principles for the enhancement of financial decision making, while it is accepted that at present there is no integrated theory of behavioral finance, the emphasis has been on identifying portfolio anomalies that can be explained by a variety of psychological traits in individuals or groups or analytical instances where it is possible to get above-normal rates of return by exploiting the biases of investors, analysts or portfolio managers.

Biases In Behavioral Finance Anchoring

Anchoring can be explained by the leaning to attach or “anchor” our thoughts to a reference point - even though it may have no logical relevance to the decision at hand.

What this definition implies can be illustrated by an experiment conducted in the paper “Judgment under uncertainty” by Kahneman and Tversky (1974). In this test, respondents were asked the question - how many percentages of the UN members’ are accounted by African countries? The respondents were supposed to give their answers first after spinning a wheel with the possible outcome of 1 through 100. Kahneman and Tversky (1974) found random anchoring behavior to some extent that the number which the wheel landed on had an effect on the respondents estimate. For instance, when the wheel landed on 10, the average guess given by the respondents was 25%, whereas when the wheel landed on 60, the average estimate was 45%. This behavior illustrates how mental anchoring can have an effect on how people assess certain decisions, even though, as this test indicates, the number had totally no correlation at all to the question.

Confirmation bias

When searching for information to confirm one’s beliefs people tend to follow their original thoughts on a subject and let

that form the research. This behavior is known as confirmation bias or positive bias.

Jones & Sugden further stated that “if positive confirmation bias is a fundamental property of the processes of inference and learning used by human beings, then we might anticipate it to impact on the decisions that economic agents make in relation to the attainment of information. As a outcome, there might be systematic biases in economic learning; for e.g. an agent who frequently faces the same set of options might retain the false belief that a particular option was most favorable, even after revelation to evidence which, rationally interpreted, would point to the opposite”

Existing evidence from selection tasks suggests that individuals seek certain kinds of information which, in the structure of a theory of rationality, is worthless. The implications of such behavior for an economic theory of learning depend significantly on whether irrelevant information is simply ignored in subsequent decision-making or is treated as if it were appropriate. The use to which inappropriate information is put also has implications for individuals’ ability to learn by experience that such information is not worth collecting.

Hindsight bias

The recollection of self-belief is systematically restored after feedback about previous event has been received, known as hindsight bias.

Fischhoff’s original explanation for Hindsight bias was that new information is immediately incorporated with what is already known about the event. This tends to occur in situations where a person believes that some past event was predictable and completely evident, whereas, the event could not have been rationally predicted. Many events seem evident in observation. It can be interpreted as our natural need to find order by creating explanations that allow us to believe that events are predictable.

It is important to note that hindsight bias does not refer to all retrospective increases in the probabilities assigned to proceedings. The hindsight bias is a projection of innovative knowledge into the past accompanied by a denial that the outcome information has influenced judgment.

Overconfidence

There is a thin line between being confident and overcon-

fidant. Shefrin illustrates this statement by an example of average people's overconfidence when it comes to driving. A research group was asked about their driving ability. Between 65-80 percent of the people who answer the question rated themselves above average. Obviously, we all want to be above average, but only half among us can be! The financial world also holds its share of overconfident behavior. In a study conducted by examiner James Montier (2006), he found that 74% of the 300 professional fund managers who completed his survey believed that they had delivered above-average job performance. Of the remaining 26% surveyed, the majority considered themselves as average. Astoundingly, almost 100% of the survey group believed that their job performance was average or better. Once again we encounter the same problem as with the drivers. Clearly, only 50% of the sample can be above average. This illustration is giving good indications of the level of overconfidence and irrationality that exists among professional investors. A common attribute among investors is a general overconfidence of their own ability when it comes to selection of stocks, and to decide when to enter or exit a position. Psychologists have determined that overconfidence causes people to overestimate their Specific security selection is a highly difficult task. Interestingly this type of activity is accurately the task at which people exhibit the greatest overconfidence.

Cognitive Reflection Task

Cognitive Reflection Task is simply the interaction between the spontaneous and the logical thinking process. The spontaneous process "System 1" does not require or consume much attention. It is the answer that first comes in the mind when presented with a dilemma. "System 2" requires a cognizant effort to use and is slow but rational. Shane explains the CRT process. "Recognizing that the face of the individual entering the classroom belongs to your math teacher – it occurs instantly and effortlessly and is unaffected by intelligence, alertness, inspiration or the difficulty of the math problem being attempted at the time. on the contrary, finding the square root out of 19163 to two decimal places without a calculator involves System 2". Even though the range of phenomena related to higher cognitive a viability, few have attempted to understand its influence on judgment and finding. Studies on the previous mentioned theories in this thesis such as Anchoring rarely make any reference to the possible effects of cognitive abilities or characteristics. Research within these fields are more focused on the average effect, thus individual differences are considered as another source of "unexplained" variance.

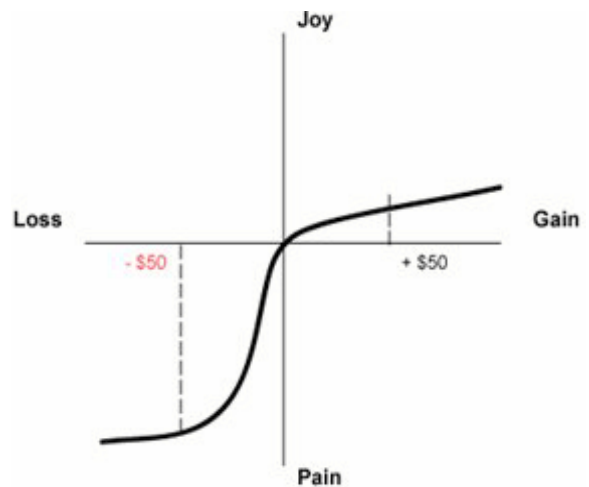
Prospect Theory

Prospect theory is based on two key parts, loss aversion and mental accounting. Loss aversion refers to that those who are more sensitive to losses compared to gains. Empirical studies have proved that a loss has about twice the negative impact compared to a gain. A person who would have gained \$100 and then lost \$50 so that his net gain would be \$50 would feel less "happy" compared with a person who would just have gained \$50. Daniel Kahneman and Amos Tversky were the pioneers within prospect theory and they studied how people reacted to a viewpoint of a loss. Here is one of their examples:

Suppose you can choose between the following choices.

- A. a sure loss of \$7500
- B. take 75% chance of losing \$10000 or take 25% chance of losing nothing

The outcomes are both \$7500 [$0.75 \times 10000 = 7500$] but most people would choose the sure \$7500 because they hate to lose. This is called loss aversion. The magnitude of loss aversion can be shown in the graph.



Loss aversion has consequences, people hold on to losers much longer and sells winners much earlier. Leroy Gross explains the difficulties investors face. Many clients will not sell anything at a loss. They do not want to give up the optimism of making money on specific investment, or perhaps they want to get even before they get out. "The 'getevenitis' disease has probably wrought more destruction on investments portfolios than anything else. Thaler defines mental accounting as following: "mental accounting is the set of cognitive operations used by individuals and households to categorize, evaluate, and keep track of financial activities". This result in a propensity for people to separate their money into separate accounts based on a variety of subjective reasons. Individuals tend to assign different functions to each asset group, which has an offer irrational and negative effect on their consumption decisions and other behaviors

Mental accounting refers to the codes people use when evaluating an investment decision.

The theories of mental accounting can be used for stockbrokers. Instead of telling a customer to sell an asset they will say "transfer your assets". By using these magical words the stockbroker makes the client move money from one mental account to an extra, rather than closing an already existing mental account. The client never has to sense that he is selling at a loss, instead he is just moving money from one mental account to another. Further Thaler emphasize that the primary reason for studying mental accounting is to enhance our understanding of the psychology of choice. In general, thoughtful mental accounting processes helps us understand choices because mental accounting rules are not neutral. Thaler continues by disagreeing "An accounting system is a way of aggregating and summarizing large amounts of data to facilitate good decision making. In an model world the accounting system would accomplish this task in such a way that the decision maker would make the same choice when presented with only the accounting data as he had access to all the relevant data. This is what Thaler means by 'Neutral'. Achieving this goal is generally unfeasible, because something must be sacrificed in order to reduce the information the decision maker has to look at. Thus neither managerial nor mental accounting will achieve neutrality".

Loss aversion and mental accounting often coexist. Samuelson illustrated this with an e.g. in Benartzi & Thaler, (1995). He asked a friend if he would be willing to accept a bet. The friend had a 50% chance of winning \$200 and a 50% chance of losing 100\$. He turned down the offer since he felt that a loss of \$100 would hurt more than an eventual gain of 200. He was undoubtedly loss averse. But the friend said that he would be willing to accept 100 bets of equal nature. The friend had a mental account where he could not stand to just take one bet. But 100 bets would be acknowledged as long as he did not have to watch any individual bet. In the

long run even his friend knew that the odds were in his favor. By this example Samuelson draws the parallel that when decision-makers are loss averse they are more willing to accept risk if they evaluate their performance infrequently.

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