

## THE MENTAL AND BEHAVIORAL MISTAKES INVESTORS MAKE

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### **—Abstract—**

Behavioral finance results from an interdisciplinary convergence of cognitive psychology and financial economics. Behavioral finance is a field of finance that proposes psychology-based theories to explain stock market anomalies. Behavioral finance encompasses research that drops the traditional assumptions of expected utility maximization with rational investors in efficient markets. There are many concepts in behavioral finance like overconfidence, anchoring, mental accounting, herd behavior, Gambler's fallacy, overreaction and availability bias. We first briefly discuss behavioral finance in general, and then we explain the key concepts that lead and guide to behavioral finance.

**Key Words:** *Investors, Behavioral Finance, Psychology*

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### **1. INTRODUCTION**

Behavioral finance is the paradigm where financial markets are studied using models that are less narrow than those based on Von Neumann-Morgenstern (1947) expected utility theory and arbitrage assumptions. Specifically, behavioral

finance has two building blocks: cognitive psychology and the limits to arbitrage (Ritter, 2003: 430). Behavioral finance is a finance discipline interacting with the psychology and sociology which has emerged in order to obtain a better explanation about how psychological factors affect investors' behaviors and decisions. Traditional finance ignores to examine the behavior and psychology dimension in financial decisions of individuals (Yalçın, 2009: 16).

## **2. PROSPECT THEORY**

Behavioral finance is a new approach to financial markets that has emerged, at least in part, in response to the difficulties faced by the traditional paradigm. In broad terms, it argues that some financial phenomena can be better understood using models in which some agents are not fully rational (Barberis and Thaler, 2003, 1053). Traditionally, it is believed the net effect of the gains and losses involved with each choice are combined to present an overall evaluation of whether a choice is desirable. Academics tend to use "utility" to describe enjoyment and contend that we prefer instances that maximize our utility (Phung, 2010: 17). However, research has found that we don't actually process information in such a rational way. In 1979, Kahneman and Tversky presented an idea called prospect theory, which contends that people value gains and losses differently, and, as such, will base decisions on perceived gains rather than perceived losses. Thus, if a person were given two equal choices, one expressed in terms of possible gains and the other in possible losses, people would choose the former - even when they achieve the same economic end result.

The most interesting feature of prospect theory for most psychologists is that it predicts when (and why) people will make decisions that differ from perfectly rational or normative decisions, and has therefore figured prominently in explanations of why people make a variety of transparently bad decisions in daily life (Gneezy and Epley, 2007: 711). Finance is the field of economics where prospect theory has been most actively applied. The research in this area applies prospect theory in three main contexts (Barberis, 2013, 180):

- The cross section of average returns, where the goal is to understand why some financial assets have higher average returns than others
- The aggregate stock financial assets have higher average returns than others
- The trading of financial assets over time.

### 3. TRADITIONAL VERSUS BEHAVIORAL FINANCE

The proposition that has dominated finance for over 30 years is efficient market hypothesis (EMH). There are three basic theoretical arguments that form the basis of the EMH. The first and most significant is that investors are rational and by implication securities are valued rationally. Second is based on the idea that everyone takes careful account of all available information before making investment decisions. The third principle is that the decision maker always pursues self-interest (Nik Muhammad, 2009: 2).

Contrary to the efficient market hypothesis, behavioral finance is based on the investor behavior in the market. And while doing this it makes use of the psychology discipline to a great extent. In short, theories of Behavioral Finance are structured upon the experimentally supported knowledge from social psychology. According to Behavioral Finance, markets are not effective and the biggest proof of this fact reveals itself to us, in the form of overreaction or lack of reaction (Kıyılar ve Acar, 2009: 460). Behavioralists typically argue that their approach can account for market inefficiencies and other results that are inconsistent with traditional finance, while traditionalists reject this new paradigm on the grounds that it is too complex and not capable of refutation (Bloomfield, 2009: 1).

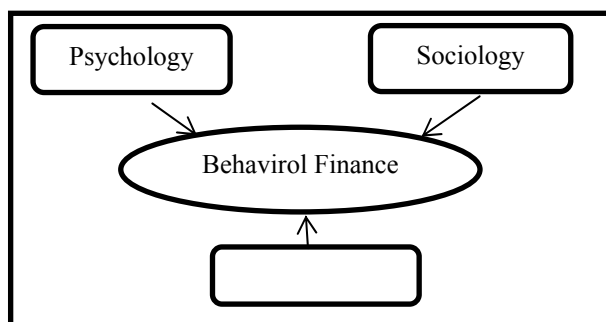
The key difference between “traditional finance” and “behavioral finance” are as follow ([www.niftydirect.com](http://www.niftydirect.com), 15.03.2013):

- Traditional finance assumes that people process data appropriately and correctly. In contrast, behavioral finance recognizes that people employ imperfect rules of thumb (heuristics) to process data which induces biases in their beliefs and predisposes them to commit errors.
- Traditional finance presupposes that people view all decision through the transparent and objective lens of risk and return. Put differently, the form (or frame) used to describe a problem is inconsequential. In contrast, behavioral finance postulates that perceptions of risk and return are significantly influenced by how decision problem are framed. In other words, behavioral finance assumes frame dependence.

- Traditional finance assumes that people are guided by reason and logic and independent judgment. Behavioral finance, on the other hand, recognizes that emotions and herd instincts play an important role in influencing decisions.
- Traditional finance argues that markets are efficient, implying that the price of each security is an unbiased estimate of its intrinsic value. In contrast, behavioral finance contends of its intrinsic value. In contrast, behavioral finance contends that heuristic- driven biases and errors, frame dependence, and effects of emotions and social influence often lead to discrepancy between market price and fundamental value.

Behavioral finance is based on the notion of bounded rationality, in which a person utilizes a modified version of rational choice that takes into account the limitations of knowledge, cognitive issues and emotional factors (Ricciardi, 2004: 10). The interdisciplinary approach of behavioral finance is shown Figure 1.

**Figure 1: The Underlying Sciences of Behavioral Finance**



Source : Ricciardi and Simon: 2000: 2

Traditional finance stays at the heart of behavioral finance. In practice, behavioral finance based on psychology and sociology.

#### **4. BEHAVIOR PATTERNS OF INVESTORS**

Behavioral finance deals with the behavior patterns of investors and tries to understand how these patterns guide investment decisions. In this section, we explain the key concepts that lead and guide to behavioral finance. These are summarized below.

**Overconfidence:** A serious error in judgment you can make as an investor is to be overconfident. People are all overconfident about their abilities in many areas. If you are overconfident about your investment skill, you are likely to trade too much. In both the areas of psychology and behavioral finance the subject matter of overconfidence continues to have a substantial presence. As investors, we have an inherent ability of forgetting or failing to learn from our past errors known as financial cognitive dissonance. Then we make a bad investment or give a bad financial decision (Ricciardi and Simon, 2000: 4).

Barber and Odeon (2001) found that, men are more overconfident than women in finance area. Overconfidence may also result in a scenario where an individual observes a pattern in actually random data and proceeds to make decisions or investments based on this false observation. It is therefore advisable to acknowledge each set of challenges associated with each investment and try to constantly refine investment techniques (Bali, 2012: 308).

**Anchoring:** Anchoring refers to the decision making process where quantitative assessments are required and where these assessments may be influenced by suggestions. People have in their mind some reference points (anchors), for example of previous stock prices. When they get new information they adjust this reference insufficiently (under reaction) to the new information acquired. Anchoring describes how investors tend to focus on recent behavior and give less weight to longer time trends (Johnsson, 2002: 20). The anchor can be an external like random number and public information or an internal data like self-generated anchor (Williams, 2010: 3).

**Mental Accounting:** When you add a new stock to your portfolio, it is human nature for you to associate the stock with its purchase price. As the price of the stock changes through time, you will have unrealized gains or losses when you compare the current price to the purchase price. Through time, you will mentally account for these gains and losses, and how you feel about the investment depends on whether you are ahead or behind. This behaviour is known as *mental accounting* (highered.mcgraw-hill.com, 15.03.2013).

The main idea underlying mental accounting is that decision-makers tend to separate the different types of gambles they face into separate accounts, and they apply prospect theoretic decision rules to each account by ignoring possible interaction between the accounts. Therefore, mental accounts can be separated not

only with respect to time but also according to their contents (Rekik and Boujelbene, 2013: 110). Mental accounting provides a foundation for the way that decision makers set reference points for the accounts that determine gains and losses (Grinblatt and Han, 2004:1).

**Herd Behavior:** Herd behavior is the tendency individuals have to copy the actions of a large group irrespective of whether or not they would make the decision individually. One reason is that people are sociable and generally tend to seek acceptance from the group rather than being a standout. Another reason is that investors tend to think that it is unlikely that a large group could be wrong (Subash, 2004: 18).

**Gambler's fallacy:** Gamblers' Fallacy arises when investors inappropriately predict that trend will reverse and are drawn into contrarian thinking. Gamblers' Fallacy is said to occur when an investor operates under the perception that errors in random events are self-correcting (Subash, 2012: 21). Gambler's Fallacy mainly revolves around the illogical concept of any investor that believes that someone event (example X) that is in reality inherently independent of any other event (example Y) may be affected by the other event i.e. even though in reality; logically and rationally X does not affect the outcome or occurrence of Y. Gambler's fallacy states that people illogical amuse that they do. This illogical approach often comes into play because a similarity between random processes is wrongly interpreted by an investor as a predictive relationship between them (Amin et.all, 2009: 67).

**Overreaction and availability bias:** There is a common belief that good news tends to raise securities on the stock market (Bali,2012: 308). Overreaction deals with extreme stock price reactions to previous information and also overreaction may stem from representativeness, which arises after salient information and strengthen after a series of similar information (Kaestner, 2006: 2). Availability bias is used to evaluate the frequency or likelihood of an event on the basis of how quickly instances or associations come to mind. When examples or associations are easily brought to mind, this fact leads to an overestimation of the frequency or likelihood of this event (Kishore, 2004: 5).

## 5. CONCLUSION

There are important psychological and behavioral variables involved in investing that provide opportunities for investors to profit. A field of finance that explain such market follies, which is now popularly known as Behavioral Finance. Behavioral finance is based on the notion of bounded rationality, in which a person utilizes a modified version of rational choice that takes into account the limitations of knowledge, cognitive issues and emotional factors. Traditional finance stays at the heart of behavioral finance. In practice, behavioral finance based on psychology and sociology. Behavior patterns of investors are overconfidence, anchoring, mental accounting, herd behavior, Gambler's fallacy, overreaction and availability bias. In this study, we explain prospect theory, traditional versus behavioral finance and the key concepts that lead and guide to behavioral finance like overconfidence, anchoring, mental accounting, herd behavior, Gambler's fallacy, overreaction and availability bias.

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