

To study the interplay of Cognitive Blocks in Behavioral Finance: A Theoretical, Management cum Psychological Perspective.

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Abstract : The interplay and linkage between the domains of Management And Psychology have always been a zone of inquisitiveness for management & behavior scientists. Whether one speaks of work management or self management, cognitive capacities of the person does have a huge role to play in the same, which is just not confined to the Intelligence Quotient of the person but something way broader than that. Similarly, when it comes to analysing ones' financial behavior much like the other dimensions of behaviour, the contribution of the field of Psychology cannot be undermined. Hence, this research paper, via extensive literature review tends to explore the the interplay of the various cognitive blocks which tends to affect ones' financial behavior.

IndexTerms - Cognitive Blocks, Perception, Heuristics, Attribution Errors, Cognitive Dissonance, Biases.

I. INTRODUCTION

Since the mid-1950s, the field of finance has been dominated by the traditional finance model developed by the economist of the University of Chicago. The Central assumption of the traditional finance model is that people are rational. Standard Finance theories are based on the premises that investor behaves rationally and stock and bond markets are efficient. As the financial economist were assuming that people (investors) behaved rationally when making financial decisions, psychologists have found that economic decision are made in an irrational manner, so they challenge this assumption of standard finance. Cognitive error and extreme emotional bias can cause investors to make bad investment decisions, thereby meaning that they act in irrational manner.

It would be nice if investors and markets moved solely on the basis of fundamentals and economic and financial analysis of businesses. But at times, investors appear to lack self-control, act irrational, and make decisions based more on personal biases than facts.

The study of such psychological influences on investors and, by extension, markets, is called behavioral finance.

One could say behavioral finance came about as a way to explain in a rational way the irrational behavior of markets and investors or, as one acclaimed economist put it, finance from a broader social science perspective including psychology and sociology.

Traditional financial theory holds that markets and investors are rational; investors have perfect self-control, and aren't confused by cognitive errors or information processing errors.

Now, according to the Corporate Finance Institute, behavioral finance holds that investors are considered "normal," not "rational;" they have limits to their self-control, are influenced by their own biases, and make cognitive errors that can lead to wrong decisions.

The study of behavioral finance, a sub-field of behavioral economics, arose in the 1980s, when cracks began to appear in what was then considered the Efficient Market Hypothesis.

The idea that psychology drives stock market movements flies in the face of established theories that advocate the notion that financial markets are efficient. Proponents of the efficient market hypothesis, for instance, claim that any new information relevant to a company's value is quickly priced by the market. As a result, future price moves are random because all available (public and some non-public) information is already discounted in current values.

It was started by study of Slovic (1969,1972) studied stock brokers and investors. Slovic (1972) states the money Game: “You are—face it—a bunch of emotions, prejudices, and twitches, and this is all very well as long as you know it. Successful speculators do not necessarily have a complete portrait of themselves, warts and all, in their own mind, but they do have the ability to stop abruptly when their intuition and what is happening out there are suddenly out of kilter. If you don't know who you are, this is an expensive place to find out.”

However, for anyone who has been through the Internet bubble and the subsequent crash, the efficient market theory is pretty hard to swallow. Behaviorists explain that, rather than being anomalies, irrational behavior is commonplace. In fact, researchers have regularly reproduced examples of irrational behavior outside of finance using very simple experiments.

The Importance of Losses Versus Significance of Gains

Here is one experiment: Offer someone a choice of a sure \$50 or, on the flip of a coin, the possibility of winning \$100 or winning nothing. Chances are the person will pocket the sure thing. Conversely, offer a choice of 1) a sure loss of \$50 or 2) on a flip of a coin, either a loss of \$100 or nothing. The person, rather than accept a \$50 loss, will probably pick the second option and flip the coin.

The chance of the coin landing on one side or the other is equivalent in any scenario, yet people will go for the coin toss to save themselves from a \$50 loss even though the coin flip could mean an even greater loss of \$100. That's because people tend to view the possibility of recouping a loss as more important than the possibility of greater gain.

The priority of avoiding losses also holds true for investors. Just think of Nortel Networks shareholders who watched their stock's value plummet from over \$100 a share in early 2000 to less than \$2 a few years later. No matter how low the price drops, investors—believing that the price will eventually come back—often hold stocks rather than suffer the pain of taking a loss.

An insight into the interplay between the “Herd” and the “Self” : The interplay of the instincts.

The herd instinct explains why people tend to imitate others. When a market is moving up or down, investors are subject to a fear that others know more or have more information. As a consequence, investors feel a strong impulse to do what others are doing.

Behavior finance has also found that investors tend to place too much worth on judgments derived from small samples of data or from single sources. For instance, investors are known to attribute skill rather than luck to an analyst that picks a winning stock.

On the other hand, beliefs are not easily shaken. One notion that gripped investors through the late 1990s, for example, was that any sudden drop in the market is a buying opportunity. Indeed, this buy-the-dip view still pervades. Investors are often overconfident in their judgments and tend to pounce on a single "telling"

detail rather than the more obvious average. In doing so, they fail to see the larger picture by focusing too much on smaller details.

The practicality of the field of Behavioral Finance

One can ask themselves if these studies will help investors beat the market. After all, rational shortcomings should provide plenty of profitable opportunities for wise investors. In practice, however, few if any value investors are deploying behavioral principles to sort out which cheap stocks actually offer returns that are consistently above the norm.

The impact of behavioral finance research still remains greater in academia than in practical money management. While theories point to numerous rational shortcomings, the field offers little in the way of solutions that make money from market manias.

Robert Shiller, the author of "Irrational Exuberance" (2000), showed that in the late 1990s, the market was in the thick of a bubble. But he couldn't say when the bubble would pop. Similarly, today's behaviorists can't tell us when the market has hit a top, just as they could not tell when it would bottom after the 2007-2008 financial crisis. They can, however, describe what an important turning point might look like.

The Bottom Line

The behavioralists have yet to come up with a coherent model that actually predicts the future rather than merely explains, with the benefit of hindsight, what the market did in the past. The big lesson is that theory doesn't tell people how to beat the market. Instead, it tells us that psychology causes market prices and fundamental values to diverge for a long time.

Behavioral finance offers no investment miracles to capitalize on this divergence, but perhaps it can help investors train themselves on how to be watchful of their behavior and, in turn, avoid mistakes that will decrease their personal wealth.

An underlying assumption of behavioural finance is that, the information structure and characteristics of market participants systematically influence the individual's investment decisions as well as market outcomes. Investor, as a human being, processes information using shortcuts and emotional filters. This process influences financial decision makers such that they act seemingly in irrational manner, and make suboptimal decision, violate traditional finance claim of rationality. The impact of this suboptimal financial decision has ramification for the efficiency of capital markets, personal wealth, and the performance of corporations. Irrational decision could be either due to processing of wrong information or interpretation with inconsistent decisions.

Review of Literature :

- i. Gilovich (1999) have referred to behavioural finance as behavioural economics and further defined behavioural economics as combining twin discipline of psychology and economics to explain why and how people make seemingly irrational or illogical decisions when they save, invest, spend and borrow money.
- ii. Shefrin (1999) "Behavioural finance is rapidly growing area that deals with the influence of psychology on the behaviour of financial practitioner."
- iii. According to Shefrin "*Behavioural Finance is the application of psychology to financial behaviour-the behaviour of practitioner.*"(Shefrin,2000)³⁴

- iv. According to Shefrin “*Behavioural Finance is the study of how psychology affects financial decision making and financial markets*” (Shefrin, 2001)
- v. According to Fromlet “Behavioural finance closely combines individual behaviour and market phenomena and uses knowledge taken from both the psychological field and financial theory” (Fromlet, 2001)³⁵
- vi. M Sewell (2007) “Behavioural finance is the study of the influence of psychology on the behaviour of financial practitioner and subsequent effects on market.” He has stated Behavioural Finance, challenging the theory of Market efficiency by providing insight into why and how market can be inefficient due to irrationality in human behaviour.
- vii. W.Forbes (2009) defined behavioural finance as a science regarding how psychology influences financial market. This view emphasizes that the individuals are affected by psychological factors like cognitive biases in their decision making, rather than being rational and wealth maximizing. Behavioural finance is new approach to financial markets that argues that some financial phenomena can be understood by using models where some agents are not fully rational.
- viii. Richard Thaler (1999) states “Behavioural finance is no longer as controversial a subject as it once was. As financial economists become accustomed to thinking about the role of human behaviour in driving stock prices, people will look back at the articles published in the past 15 years and wonder what the fuss was about. I predict that in the not-too-distant future, the term “behavioural finance” will be correctly viewed as a redundant phrase. What other kind of finance is there? In their enlightenment, economists will routinely incorporate as much “behaviour” into their models as they observe in the real world. After all, to do otherwise would be irrational.”

Assumptions of Behavioural Finance:

- a) Loss aversion: The characteristics of seeking to limit the size of the potential loss rather than seeking to minimise the variability of the potential returns.
- b) Bounded rationality: The manner in which human being behave, limits their rationality.
- c) Denial of risk: They may know statistical odds but refuse to believe these odds.

Inferences :

As the evidence of the influence of psychology and emotions on decisions became more convincing, behavioural finance has received greater acceptance.

“Behavioural finance relaxes the traditional assumptions of financial economics by incorporating these observable, systematic and very human departures from rationality into standard models of financial markets. The tendency for human beings to be overconfident causes the first bias in investors, and the human desire to avoid regret prompt the second” (Barber and Odean, 1999)

Individual investor and their behaviour had received lot of consideration and focus of interest of many scientists not only being confided only to economist, but, due to the inclusion of the findings and the

methodology of psychology into financial studies. Despite many debates, this has slowly led to the establishment of behavioural economics and behavioural finance as widely recognised sub-disciplines.

Thus behavioural finance can be perceived in the following ways:

- Behavioural finance is the integration of classical economics and finance with psychology and the decision making sciences.
- Behavioural finance is an attempt to explain what causes some of the anomalies that have been observed and reported in the finance literature.
- Behavioural finance is the study of how investors systematically make errors in judgment or 'mental mistakes'.

According to behavioural finance, investor's behaviour in market depends on psychological principles of decision making, which explains why people buy and sell investments. It focuses on how investors interpret information and act on information to implement their financial investment decisions. In short psychological process and biases influences investors decision making and influence the market outcomes.

1.1 Theoretical framework of Behavioural Biases:

Psychologists have documented systematic patterns of bias on how people form views and take decisions. These biases influence how decision makers form investment opinions, and then how investors take investment decisions.

Information processing may be correct but individual tend to make less rational decisions using that information. Nevertheless, most of the financial decisions are driven by people's emotions and associated universal human unconscious needs, fears and psychological traits. Thus bias arises and it can be divided into (i) Prospect theory and framing (ii) heuristics and (iii) other biases. These biases sit deep within our psyche and as fundamental parts of human nature; they affect all types of investors, both professionals as well as private.

The heuristic decision process by which the investors find things out for themselves usually by trial and error, leads to the development of rules of thumb (Brabazon, 2000). These decision are those with which humans attempt to make mental shortcuts. These practices however can result in poor decision results that also apply to individual investment decision process.

When individuals are faced with complex judgments involving statistical probability, frequency or incomplete information, many individuals usually utilise limited number of heuristics that reduce the decision to simpler task (Kahneman, Slovic, and Tversky, 1982). Psychological biases or heuristics that can affect decision making are explained in following section.

Heuristics and Biases in Behavioural Finances :

According to Shefrin (2000), Representative heuristic is a judgment based on stereotypes. It is also referred as drawing conclusions from little data. Representativeness refers to the tendency to form judgment based on stereotypes. For example, you may form an opinion about a student to perform academically in college on the basis of how he has performed academically in school. While representativeness may be a good rule of thumb, it can also lead people astray.

Representative bias occurs when it is required to assess the probability of an object. A belonging to B. The heuristic rule says that if object A is highly representative of class B, the probability of A originating from B is judged as high, and vice versa (Tversky and Kahneman, 1974). They showed that representative is insensitive to prior probability of outcomes, when description is provided. Furthermore, it is insensitive to sample size, when people estimate the probability related to the sample randomly drawn from a large population, based on the similarity with the population parameter.

Heuristics are just rule of thumb for dealing with the information deluge that we are all faced with. Representativeness refers to our tendency to evaluate how likely something is with reference to how closely it resembles something rather than using probabilities. (James Montier.2002)

Actions which is explaining representativeness bias:

- a) Investors often try to detect patterns in data which is random number.
- b) Investors extrapolate past returns which actually follow randomness.
- c) Investors may be drawn to MFs with good track record because such funds are believed to be representative of well –performing funds. They forget that even unskilled manager can earn higher return by chance.
- d) Investors are overly optimistic about past winners.
- e) Good companies -good stock syndrome.

This heuristic leads people to judge the stock market changes as bull or bear market without valuing that the likelihood that particular sequences happen rarely. In the same way it could lead the investors to be more optimistic about the past winners and more pessimistic about the past losers which may assume that a recent trend in price movements will definitely continue into the future. It may also result in individual investors developing too much attention to popular stocks that have recently been performing well.

Statman explains that being duped into making investment decisions based upon imperfect theory of small numbers is something that standard finance investor would never do. Statman argued conversely that the investors consider past performances as evidence of future returns is a realistic possibility, contrary to the standard finance model of an investor. (Statman,1999)

Representativeness and sample size neglect, bias is where individual are too quick to conclude that they understand developments on the basis of too little information and limited data, where conclusions from small data sets were used even when that is the only evidence available.

One aspect of representativeness is often referred to as the law of small numbers. It is believed that random sample will resemble each other and the population more closely than statistical sampling theory would predict. This representativeness heuristic has application in finance. For e.g. investor are subject to law of small number when dealing with earning data. Another example of representativeness is the way in which investors often mistake good companies for good stocks(Statman,1989, and 1995).

Representativeness can cause investors to overreact to new information, i.e. investors give new information too much weight in forming their expectation about future.

Overconfidence Error :

Confidence can be described as the “belief in oneself and one’s abilities with full conviction” while “overconfidence can be taken one step further in which overconfidence talks this self – reliant behaviour to an extreme” (Ricciardi and Simon, 2000). As a human being people have tendency to overestimate their skills and predictions for success.

Extensive evidence shows that people are overconfident in their judgments. Psychologist has found that people tend to be overconfident and hence overestimate the accuracy of their forecasts.

Overconfidence stems partly from illusion of knowledge. The human mind is perhaps designed to extract as much information as possible from what is available.

They may not be aware that the available information is not adequate to develop an accurate forecast in uncertain situations. Investment with overconfidence, can lead to inappropriate or risky investments. Overconfidence causes investors to overestimate their knowledge, underestimate risks, and exaggerate their ability to control events.

Not only people are habitually optimistic but they are overconfident as well. People are surprised more often than they think. The classic study in overconfidence is Lichtenstein, Fischhoff and Phillips(1982.) Individuals who exhibit overconfidence are said to be not well calibrated. Overconfidence and optimism are potent combination. They lead investors to overestimate their knowledge, understate the risk and exaggerate their ability to control the situation.

The two main facet of overconfidence are mis-calibration and better than average effect. Mis-calibration can manifest itself in estimates of qualities that could potentially be discovered and in estimates of not yet known quantities.

SAB & Confirmation Bias:

Self-Attribution Bias theory is attributed to Heider (1958), who observed how people tend to attribute successful outcome from decisions to their own actions and bad outcome to external factors.

SAB emerge from two important human traits: Self-protecting and Self enhancement. Self-protecting, which is the desire to have positive self-image and self enhancement, which is the desire for others to see us positively.

It can be difficult to encounter something or someone without having pre-conceived opinion. This first impression can be hard to shake because people also tend to selectively filter any pay more attention to information that supports their opinions, while ignoring or rationalizing the rest. This type of selective thinking is often referred to as the confirmation bias.

The people are systematically overconfident in the reliability of their own judgment. Overconfidence in turn is reflected in self-attribution, attributing to their own innate ability and unusual skill any success that they enjoy. Self-attribution leads to a natural tendency to attribute any disappointment to bad luck rather than a lack of skill.

Availability Bias:

According to availability bias, people tend to base their decisions more on recent information rather than any detailed study of past events and thereby become biased to that latest news.

In investment world, people often made decisions based on the information readily available and do not take pain to go for any detailed analysis. When people are asked to assess the frequency of a class or the probability of an event, they do so by the ease with which instances or occurrences can be brought to mind.⁷⁰

This heuristic is used to evaluate the frequency or likelihood of an event on the basis of how quickly instances or association come to mind. Availability is a cognitive heuristic in which a decision maker relies upon knowledge that is readily available rather than examine other alternatives or procedures.

Cognitive Dissonance:

A form of self-deception stems from the fact that people seek consistency. The mental discord, that arises when the memory of an event conflicts with a positive self-perception or conflict between perception and reality.

Cognitive Dissonance is the mental conflicts that people experience when they are presented with evidence that their belief or assumptions are wrong, people have an incredible degree of self-denial. They will effectively jump through mental hoops in order to reduce or avoid inconsistencies.

Cognitive dissonance is the mental suffering that people experience when they are presented with the evidence that their belief have been wrong (Shiller, 1998)

Conservatism:

Kahneman et al. describes conservatism bias as how people underweight base rates such as extrapolating trend from patterns in a small data set.⁷³ This is a tendency to cling tenaciously to a view or a forecast. Once the position has been stated most people find it very hard to move away from the view. When movement does occur it is only very slow, which creates under-reaction to events.

Regret aversion:

Loomes et al. developed the term regret aversion, which is used to describe the emotion of regret experienced after making a choice that either turns out to be bad choice or at least an inferior one. Regret aversion is primarily concerned with how a priori anticipation of possible regret can influence decision making. (Loomes and Sugden, 1982) and (Bell, 1982)

Regret is the emotion individual feels if they can easily imagine having acted in a way that would have led to a more favourable outcome. Classical e.g. of it is fall in price of investment. Regret is the emotion experienced for not having made the right decision. It is the feeling of responsibility for loss (Shefrin, 2000). In a financial context the minimization of possible future regret plays an important role in portfolio allocation. It is also related with preference for dividend in financing consumer expenditures, because selling a stock that may rise in the future carries a huge potential for regret.

Anchoring and Adjustment:

It is well known that when people are asked to form a quantitative assessment their views can be influenced by suggestions. When faced with uncertainty people will grasp at straws in order to find basis for the view. Kahneman and Tversky (1974)⁷⁹ argued that when forming estimates, people often start with some initial, possibly arbitrary value, and then adjust away from it. Anchoring can be explained as the tendency to attach or 'anchor' our thought to a reference point even though it may have no logical relevance to the decision at

hand (Phung,2008). Although it may seem an unlikely phenomenon, anchoring is fairly prevalent in situation where people are dealing with concepts that are new or novel.

Conclusion: Behavioural Finance is a new approach to financial market that has emerged, at least in part, in response to difficulties faced by the traditional paradigm. In broad terms it argues that some financial phenomena can be better understood by models in which some agents are not fully rational.

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