BEHAVIORAL FINANCE: AN INSIGHT INTO THE PSYCHOLOGICAL AND SOCIOLOGICAL BIASES AFFECTING FINANCIAL DECISION OF INVESTORS

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ABSTRACT

Conventional theories of finance are built on the assumption that people behave rationally and predictably while taking investment and divestment decisions so as to maximize their wealth. In practice, it is observed that people often exhibit quasi-rational or in some cases irrational financial behavior while taking investment and divestment decisions. Such behavior, triggered by emotional and cognitive biases of people, are inconsistent with and contradictory to the conventional theories of finance. Such illogical and quasi-rational/irrational financial behavior of investors has been termed as Behavioral Finance. Behavioral Finance is a potential factor behind market inefficiencies. This paper aims at discussing three relevant aspects of behavioral finance. Firstly the paper discusses the factors causing such irrational behavior and also to build a conceptual model identifying the causal factors for investment behavior of people and the mode in which investment behavior is affected by such factors. The second objective of this paper is to suggest measures to counter such factors and enable the investors to take more rational decisions thereby reducing the chance of market inefficiencies. Thirdly the paper aims at identifying the possible area for further research on behavioral finance.

KEYWORDS : Behavioral Finance, Cognitive & Emotional Bias, Market Inefficiency, Quasi-rational Behavior.

INTRODUCTION

Traditional and conventional theories on finance assumes that people are mostly “economic men” and behave rationally & predictably in taking investment and divestment decisions in order to maximize their wealth. However, observations reveal anomalies in investor behavior which cannot be explained by the traditional finance theories.

Some observed investor behavior, unexplainable by traditional theories of finance, are as below.

a) Premiums paid by investors for some stocks have been found to be irrationally higher compared to the returns they generate;

b) Winning bids often bid at a value higher than the intrinsic value of the asset;
c) Capital markets exhibit seasonal effects as average monthly returns of small firms have been found to be higher in January than other months of the year;

d) Inability of traditional framework to explain many empirical patterns;

e) Better performance of certain behavioral mutual funds than their non-behavioral counterparts and S&P 500 index funds, (Colby Wright, Prithviraj Banerjee & Vaneesha Boney 2006); and

f) Numerous stock market bubbles in Japan, Taiwan & the U.S.A

These anomalies, resulting from unpredictable, illogical and irrational behavior of investors have been attempted to be explained by psychologists who argue that investors suffer from cognitive and emotional biases which cause such seemingly irrational behavior. This argument, evidenced by empirical observations, is known as Behavioral Finance and has received greater acceptance. In essence, Behavioral Finance refers to the sociological and psychological issues that affect the financial decision-making process of investors.

Behavioral Finance is based on the proposition that investors are not that rational as assumed by traditional theories on finance. Behavioral finance rests on two basic concepts of cognitive psychology and the limits to arbitrage (Jay R. Ritter 2003). Behavioral Finance theorists profess that investors are often driven by emotion and cognitive psychology rather than pure economizing rationale. They employ imperfect rules of thumb, preconceived notions, bias-induced beliefs and behave irrationally. Behavioral Finance theories thus attempt to blend cognitive psychology with the tenets of finance and economics to provide a logical and empirically verifiable explanation for the often observed irrational behavior exhibited by investors.

STUDIES ON BEHAVIORAL FINANCE

Sewell (2010) presented a chronologically arranged narration of the major contributions made by various scholars to the knowledge on Behavioral Finance. Some of the most prominent contributors to the knowledge of behavioral finance are:

- DANIEL KAHNEMAN & AMOS TVERSKY: They described three heuristics i.e. representativeness, availability & anchoring & adjustment, which investors resort to while taking a decision under uncertainty. They also introduced the concept of framing.

- RICHARD THALER: He did some pioneering work in revealing the shortcomings of conventional economic theories in explaining irrational behavior of investors and advocated for psychological theories to explain the same. He has some landmark publications to his credit in association with Kahneman & Tversky.

IRRATIONAL BEHAVIOR EXHIBITED BY INVESTORS

Some of the irrational behaviors exhibited most often by investors are given below.

A. PROSPECT THEORY: Differences between perceived gains and perceived losses: Kahneman & Tversky (1979) noted that investors valued perceived gains and perceived losses differently. They further observed that investors laid more stress on perceived gains rather than on perceived losses while taking investment decisions. They named their observations as Prospects Theory. This theory put forward the proposition that amount of gains have lesser emotional and psychological impact on investors than amount of losses. This phenomenon can be depicted by the following diagram where actual gains / losses are plotted against feeling of joy and feelings of pain. Actual gain causes a feeling of joy and actual loss causes feeling of pain. The causal relationship between gains and feelings of joy vis-à-vis that between loss and feelings of pain is reflected in the graph where the utility (feeling of joy or pain) exhibits an asymmetrical function.

If the utilities of a hypothetical gain of Rs.10/- and a hypothetical loss of Rs.10/- are compared, it follows from Figure 1 that the pain of losing Rs.10/- is more than the joy of gaining Rs.10/-.
B. THE DISPOSITION EFFECT: Investors tend to retain losing securities for too long a period. On the contrary, they tend to sell off profitable securities too soon.

C. MENTAL ACCOUNTING: Investors often ignore the fungibility of money. They irrationally and illogically assign different values to money obtained from different sources and also on the basis of intended use.

Investors often save money in low-interest bearing accounts for a purpose they perceive to be more important while they are still having loan to repay and thus reduce their wealth.

Money received from gift, windfall gains or bonus is considered to be cheaper than earned money. Thus such “unearned” money is spent more than earned money.

D. HERD INSTINCT: Investors often blindly follow the action of a larger group without judging the rationality of such an action. This behavior is inbuilt in human nature. Such an instinct is attributable to the natural inclination in human beings to be desire to be better accepted by a group he/she belongs to. Leon Festinger (1957) opined that when dependence on physical reliability is low, the dependence on social reliability is high. Ben McClure (2002) observed that when the market undulates, investors are subject to a fear that others have more information and as a consequence, they generate a strong tendency to do what others are doing. This experience is usually observed in investors having limited experience in investing. Banerjee (1992) has formulated a model of herd behavior.

E. CONFIRMATION BIAS: Investors willfully look for such information which supports his/her idea about any security. They shun or do not look for any information to the contrary. Thus decisions are often taken on incomplete information leading to erosion of wealth.

F. HINDSIGHT BIAS: The investor believes that some past event was predictable though in fact it was not. Such faulty belief or bias may lead to establishing false causal relationships which may end up in incorrect oversimplifications.

G. GAMBLERS’ FALLACY: The investors believe that if something has happened recently, the probability of an opposite phenomenon increases and the probability of a similar phenomenon increases.

H. ANCHORING: This behavior is associated with the tendency of the investor to attach his/her thoughts to a particular reference point without any logical
explicable cause therefor. Gifting of a minimum amount of physical gold, to the newly married couple is an age-old tradition in India. This compulsion reduces the wealth of the parents as well as thrusts a cost burden onto the giftees which might take the form of locker rent in banks or wealth tax liability.

Anchoring is also observed when investors stay anchored to a “high” of a security ignoring the low, even if the “low” be sufficiently supported by the fundamentals.

I. OVERCONFIDENCE: Investors often overly over-estimate themselves and consider themselves to smarter than other investors. This biased sense and the resultant erroneous stock-picking often reduces the return on their assets. This fact was propagated by Terence Odean (1998).

J. OVER-REACTION BIAS: Investors may react in a more than proportionate way to any information

K. AVAILABILITY BIAS: Investors tend to allot more importance to recent information than on relatively past information. Thus they focus on the short-term perspective and miss out on the long—term picture. Thus they are willing to assume more risks after a gain. On the contrary they are willing to assume les risks after a loss.

L. REPRESENTATIVENESS: Investors may be too quick to detect a pattern which in fact is random. They may also mistake past performance of an asset as the indicator of its performance in future. This bias also induces investors to underweight long-term averages (Jay R. Ritter 2003).

M. FAMILIARITY: Investors are often found to be familiar with securities they are familiar with i.e. their employer companies. Local and domestic companies. This stems from the inherent fear of uncertainties about the unknown.

N. AVERSION TO AMBIGUITY: Investors tend to steer clear of situations about which they have little information. They exhibit a preference for known risks to unknown risks.

O. INNUMERACY: Investors may have a phobia about numbers. They usually want to avoid numerical processing of data. This robs them off the quantitative analytical tools which are so essential for successful investing.

P. NARROW FRAMING: Instead of focusing attention over change of their total wealth over their investment horizon, investors take a parochial approach and end up focusing on a cross sectional as well as a temporal sense.

Q. CONSERVATISM: When situations change, some investors under-react due to the natural tendency of being slow to adapt to changes. Thus the bias of conservatism is contrary to the over-reaction bias.
R. HEURISTICS: Investors often resort to rules of thumb which makes their decision making process easier. Benartzi & Thaler (2001) detected that many investors follow the 1/N rule which encompasses the simple rule of thumb that when there are N alternatives for investment, 1/N amount of money should be invested in each of the alternatives.

S. REGRET THEORY: Regret theory of choice under uncertainty was put forward by Graham Loomes & Robert Sugden (1982). When applied to investor behavior, this theory postulates that in case of losses due to erroneous decisions, investors regret more if the loss was due to an unconventional decision rather than a conventional decision.

T. Cognitive Dissonance: This very influential theory of social psychology was put forward by Leon Festinger (1957). Cognition of persons refers to their ideas, notions, beliefs etc. It is human nature to seek consistency among the cognitions. In case any two cognitions contradict, the person feels discomfort and chooses one among the contradicting cognitions by changing the other one. Burkhard Drees and Bernhard Eckwert (2005) cited examples of mispricing of assets due to cognitive dissonance as investors were found to be discarding unfavorable information.

LEADING INDICATORS OF BEHAVIORAL FINANCE


A. THE PUT-CALL RATIO: Most option market positions are held for periods from 1 month to three months. This indicates that some option buyers look for a quick return on their money or are just speculating. The buyers of puts expect a bearish market while the buyers of calls expect a bullish market. Thus high put-call ratio indicates a sense of pessimism and a low ratio signals a sense of optimism. Polcyn observes that at the extremes of the put-call ratio, the actual go in the opposite direction of the majority expectations. He explains that a high degree of pessimism usually coincides with a declining market when sufficient investible surplus is available, which attracts bargain hunters into the market.

B. STOCKS ABOVE THEIR 50-DAY MOVING AVERAGES: Polcyn studied a number of stocks in New York trading above their 50-day averages (A50). The A50 is a reality check which reveals whether the movements in stock prices are broadly based or supported by only a few stocks. The broadly-based moves indicates a higher chance that the move will continue while a narrowly based move has a risk of potential reversal. This indicates that if the investors are influenced by only a few stocks, the movement becomes unpredictable.

THE PROCESS OF MAKING INVESTMENT AND DIVESTMENT DECISIONS BY INVESTORS

Every investor is combination of an economic man and a human being with normal human psychology. Whenever an investor takes an investment / divestment decision, it is
eventually based on processing of certain data available to him / her. The distinction between traditional finance and behavioral finance hinges on the difference of the factors which affect such processing of available data. Traditional finance assumes and professes that such processing should be done by established and time-tested economic principles. However, when the psychological traits in the investor gains prominence and affects and dominates the economic principles, the behavior of the investor diverges from the ideal economic behavior and often ends up in forming sub-optimal asset allocation. This dominance of psychological factors over economic principles can be attributable to many factors. The investor might not have access to the data which he can process, compelling him / her to take a biased and uninformed decision. Even if the data may be available to him / her, the investor may lack the knowledge and / or technology to process the data and extract the information so as to enable him / her to take a rational decision. In such cases also the psychological traits drive the investors which are different from investor to investor. Such differences culminate into market inefficiencies.

The external investment environment i.e. the players, the market and the regulations are the source of all publicly available data. If all the data is uniformly available to all the investors, market would become efficient. However this is usually not the situation. Every investor receives the data subject to the limitations of awareness of the investor, the technology (e.g. internet facilities) and accessibility (e.g. TV channels, dailies and magazines disseminating related data). So gathered data by investors fall short of all available data as some available data gets blocked. Thus the first filter in Figure 2 inhibits the rational decision making process by the investors by depriving of relevant data. The gathered data are processed by the investors so that he / she can extract information from them which will be the driver of his / her investment / divestment decision. This processing by the investor is affected by various factors like past experience, level of related knowledge, technology (e.g. fundamental analysis & technical analysis), culture, peer pressure, advice from others, value attachment to certain assets, heuristics and normal human psychology etc. If the aggregate of all these factors is treated as a filter, it is seen that gathered data, after passing through this filter, becomes perceived information which will be different from investor to investor as each investor has his / her unique filter. The final four forces which drive/affect investment/divestment decision of investors are this perceived information, return expected by the investor, his / her investment horizon and his / her risk appetite.

This process of decision making by individual investors has been depicted in Figure 2. The schematic diagram in the figure shows how available data after passing through two filters, unique for each investor, gets transformed into perceived information. This perceived information, along with the three other factors i.e. risk appetite of the investor, his/her investment horizon and his / her expected returns, decide the investment/divestment decision of the investor.

In order to insulate the investment decisions from the irrationalities of behavioral finance, the investors may take a two-pronged approach.
Firstly they should try to increase their awareness about the availability of publicly available data, try to gain maximum accessibility to such data and try to equip themselves with available technology.

Secondly, they should develop awareness about the distorting psychological tendencies and try to exercise maximum self control and take a rational, unbiased, fact-based decision avoiding such distorting psychological traits.

The banks, stock exchanges, mutual fund companies, insurance companies and depositories etc. have a vital role to play in elevating the level of awareness of the publicly available data among the investors and enhancing the accessibility of the investors to the same.
CONCLUSION

Behavioral finance is still in a nascent stage. It is not a separate discipline but is fast becoming an integral part of mainstream finance. Behavioral finance upholds the fact that psychology affects the market prices and fundamental values. Behavioral finance is the missing link between traditional finance theories and anomalous investor behavior. The knowledge about this fact can help the investors to train themselves and avoid committing the mistakes while taking investment / divestment decisions and act as a deterrent to erosion of their net wealth. Investors, if aware of the common follies they commit due to impact of psychology on rational investment decision, can insulate partially themselves from making sub-optimal asset allocations. Avanidhar Subrahmanyan (2007) suggests a probe into whether behavioral finance can explain and predict corporate events like Mergers & Acquisitions, splits, security offerings etc based on the observable profiles of the CEOs & CFOs.

Scholars like Richard Thaler, Joseph Chen, Harrison Hong and Meir Statman profess the concept of reconciliation of the differences between traditional finance and behavioral finance. Meir Statman suggested that investors are rational in standard finance and are normal in behavioral finance. Rational people care more about the utilitarian characteristics than value-expressive ones. They do not get affected by cognitive illusions and retain perfect self control. On the contrary, normal people do not have these traits. The investors need to understand both the benefits, utilitarian, as well as value-expressive.

However, there is huge scope of further research in the field of Behavioral Finance. Empirical research should be done on the extent of effects, both generic as well as investor-specific, of the constituents of the first filter on different categories of investors as shown in Figure 2. Such studies may also seek measures to minimize the effect of this filter. Further research may also be undertaken to understand more clearly the composition of the second filter. Though the composition of this filter is investor specific, research could be directed towards identifying the generic components of the filter for each class of investors.

REFERENCES


