A CRITICAL ANALYSIS OF BEHAVIORAL FINANCE

Dr. Swetha Thiruchanuru*
Prachi Satapathy**

INTRODUCTION:

Most of the financial theories like Capital Asset Pricing Model (CAPM), The Efficient Market Hypothesis describe that investors are rational thus their behavior is predictable. A large body of empirical research done in this area says that the real investors behave differently from the investors in these models. Unlike the investors in these models real investors tend to sell the good investment while holding on to the losing investments. This is termed as the `disposition effect`.(**Brad M. Barbera, 1999**). Real investors are indeed influenced by many factors.

So these anomalies which are not explained by those models have been tried to be understood using the field of behavioral finance..

The conventional financial theory says most of the investors are rational in decision making however the investors' psychology and emotions plays great role in their decision making and cause the investors to behave in an irrational way. Thus, behavioral finance combines the cognitive psychology theory with the conventional financial theory in order to understand the irrational behavior of investors in a better manner. Behavioral finance is defined as," a rapidly growing area that deals with the influence of psychology on the behavior of financial practitioners" by **(Hersh Shefrin, 2011).**

* Assistant Professor, Department of Management & Commerce, Sri Sathya sai Institute of Higher learning, Ananthapuram, India
** Student

From the academia point of view one of the crucial reasons for the appearance of Behavioral Finance is due to various hitches faced by the traditional or conventional finance theories.

In a developing country like India there is a robust growth and an economic prosperity all over. This implies there is a huge investible fund available in the economy. Most of the people desire to invest their hard earned money in the most secure avenue available. To define investment, investment means purchase of financial products with an expectation of positive future return. So it has a greater impact on individual's future well-being (Kothari). There are many avenues available for people to invest their money in secured and unsecured assets. Which investment avenues individual will choose depends upon factors like risk and return. The investors' personal financial goal also impacts their decision making. But their financial goal differs as their life stage changes. The change in decision doesn't happen only because of the age factor. It also happens because of the income level category, occupation etc.

So there are both technical and psychological factors which affect the overall investment behavior. One more fact is every investor has a different mindset while selecting an investment avenue to invest. Hence, the study of behavioral finance and understanding individual investment behavior has great relevance in today's economic condition.

According to **Martin Sewell**(Sewell, 2007)*"Behavioral finance is the study of the influence of psychology on the behavior of financial practitioners and the subsequent effect on markets."*

This science deals with the theories and experiments focusing on what happens when an investor make financial decisions based on premonitions or sentiments.

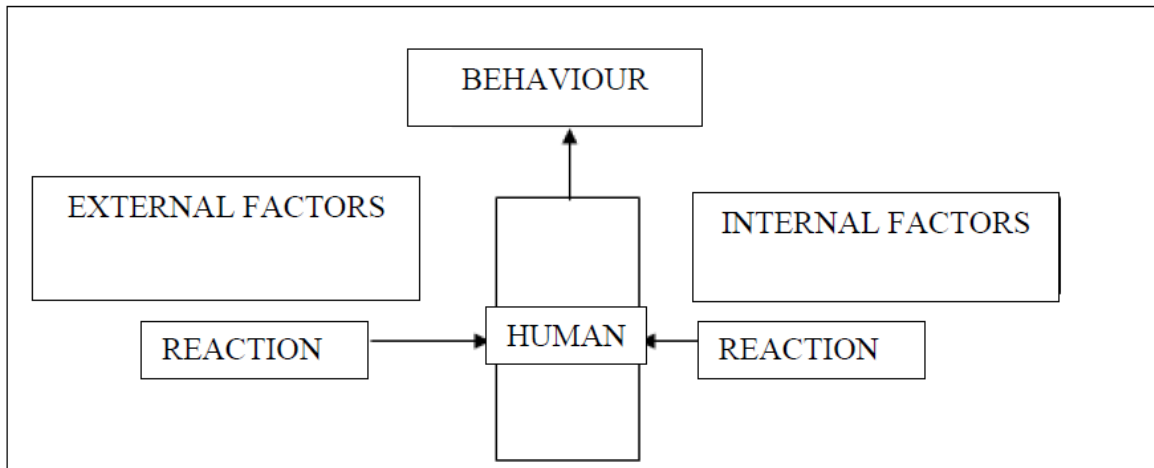
"Behavioral finance relaxes the traditional assumptions of financial economics by incorporating these observable, systematic, and very human departures from rationality into standard models of financial markets. The tendency for human beings to be overconfident causes

the first bias in investors, and the human desire to avoid regret prompts the second". (**Brad M. Barbera, 1999**)

BEHAVIOR- VARIOUS PARADIGMS

Before going into the depth of the topic the research the researcher would like to describe the term 'behavior' in order to understand the investor's behavior in financial context.

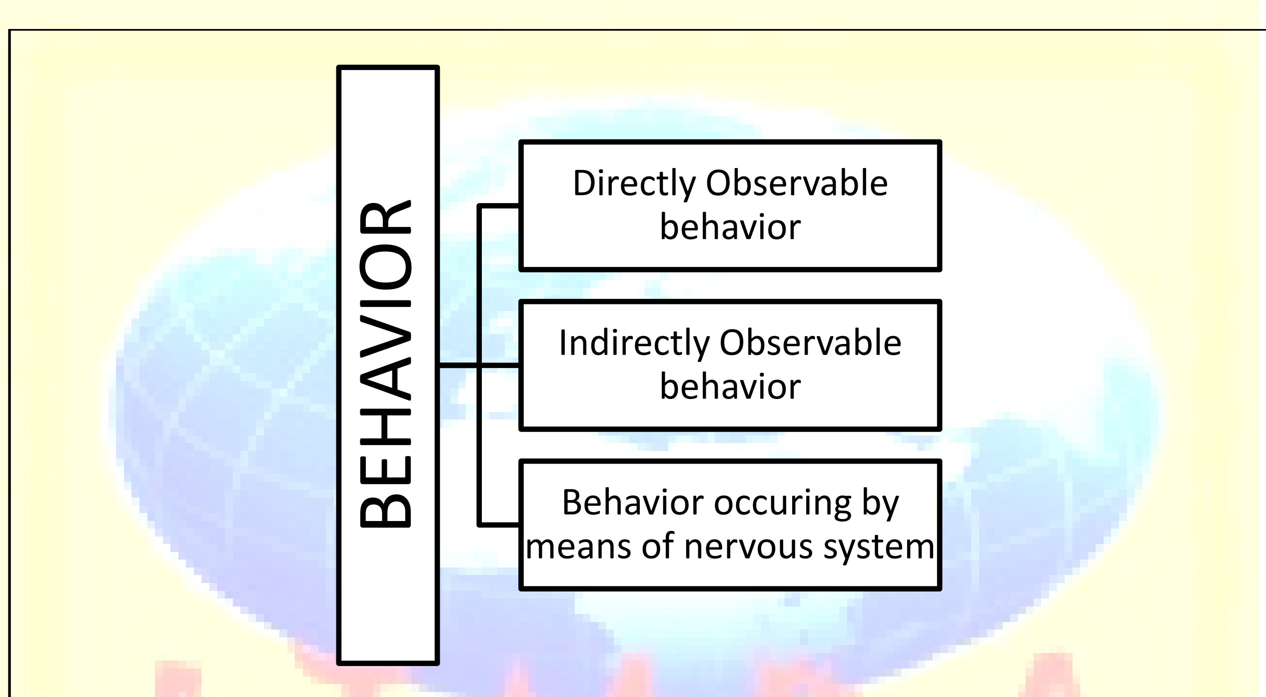
Skinner says that it is very difficult to analyze human behavior because its nature is extremely complex. He says human behavior is mostly based on the cause and result relation. Human beings actions are highly influenced by both internal and external drives and display certain reactions. These interactions are called behavior in psychology.



Source: (Murat Kiyilar, 2009)**Development of Behavior**

The dictionary meaning of 'behavior is "the mode of action or the way human beings react". But in the psychological literature it is said that 'behavior is both the actions reflected in the outside world and the internal human psyche. The term 'behavior' can also said as everything an individual could do or try to do. In short as behavior is all kinds of actions carried out or existing in an organism, such as walking, speaking, eating etc. the actions which are not visible also are considered to be behavior like feeling, thinking, dreaming etc.

1. **Directly observable behavior:** these are the kind of behaviors which could be directly observable such as actions, gestures, speech etc.
2. **Indirectly observable behavior:** These kinds of behaviors cannot be observed by seeing or directly but can be felt or experienced, such as understanding, remembering etc.
3. **Behavior occurring by means of the nervous system:** These behaviors occur by means of the nervous system



Classification of Behavior

Human behavior basically depends on two determinants. Those are:

a) **Individual influence:** it is the assessment, might be positive or negative which an individual makes before displaying that particular behavior.

b) **Societal influence:** It is the social pressure faced by the individual whom they perceive as pressure in order to conduct or not to conduct in a particular manner.

As result of these two the individual decides whether to display or not to display certain behavior.

INVESTMENT BEHAVIOR:

Investment behavior can be defined as the way people invest. The way in the sense, how people decide which avenue to go for the investment, which cognitive process takes place in the minds of the investors while investing etc.

In this study by the term investors behavior the author means, how investors behave at different life stage of there. Life stages such as their age group to which they belong to or their marital status or their annual income etc.

As discussed earlier, the term Behavior is very vast. So in this study the term behavior means firstly the ability of their investment decision. By ability the author means that, are the investors are confident about their own investment decision, are they able to manage their own investment etc.

Another factor which has been taken into account of behavior is the investors' optimism. By optimism the author means that how optimistic are they about their own investment. For an example are they going to increase their investment, are they thinking that they will surely get a good return on their investment. This term investors' optimism is basically taken account from the stock market perspective.

The third factor which has been considered as the determinant of the investors' behavior is investors' effort. By the term investors' effort the author means the effort the investor makes to get a good return. Efforts the investor makes were in the sense active trading, observation of index and so forth. And the last determinant taken is the investors' risk appetite. By the term risk appetite the author means, whether the investor is ready to invest in stock market, if they are ready to invest in a company which is not known to him etc.

As it is explained in the very first sentence that the investors' behavior means the way they behave while doing an investment. The behavior may mean what analysis they do before they invest or are they affected by the market psychology.

The analysis which the author is talking about has been defines below to communicate the reader that what the author means by these terms:

Technical analysis: By the technical analysis the author means that whether the investors follow the price movement or they use different charts, trends etc. to analyze an investment to see whether t is profitable or not.

Fundamental analysis: the fundamental analysis means the use of income statements, balance sheets, companies report, price earnings ratio etc. to analyze a particular company's stock. In this study the author also means the same.

The last factor which may influence the investor's decision is market psychology as the author considers.

Market psychology: The author by the term Market psychology means the rumor which drives the market, the recommendations from brokers or other investors, etc.

The literature review on behavioral finance explains the different studies done by different researchers in the area of behavioral finance and individual investment behavior. Further, the author discusses the contribution of the researchers to this area of research, which have been a great help to the author to complete the study successfully. It aims at giving the reader a plethora of different studies done in the area so that the reader can actually comprehend the study and its purpose. This also aims at communicating the reader about the criticism of this area and the author's contribution to the literature.

Stimulating Behavioral finance:

The term Finance can be defined as the study of two things. One is how the resources which are scare are allocated by individuals. Another thing is how the surplus resources are managed. The key points of the traditional financial theory are:

1. Investors are absolutely rational. The rationalism of investors implies that all the information (the new and old) is interpreted correctly by them.

2. The financial market is efficient: the EMH (Efficient Market Hypothesis) states that all the information regarding the stock is perfectly and completely reflected in the stock prices.

When this hypothesis holds good the prices of the securities are always right and there is no extra ordinary investment strategy which helps in earning excess risk adjusted returns over a time period.

Over the past few decades there has been a lot of research on the testing of various classical asset pricing models. **Subrahmanyam (2007)** classifies the central archetypes of finance as:

- portfolio allocation based on the investor's degree of risk aversion,
- risk-return based asset pricing models (Capital Asset Pricing Model),
- The Modigliani-miller theorem which presumes that, since people value wealth, they automatically behave rationally while taking financial decisions.

Though these financial models have brought about a revolution in the area of finance many things were left unanswered by them.

Such anomalies are:

i. Why do the individuals invest?
ii. What are factors which are key drivers in the decision making?
iii. Why does their return vary across the investments for reasons other than the risk factor?

The conventional financial theory especially the random walk theory assumes that the investors with their own reasons optimize the expected value. It assumes that the investors' behavior doesn't include any psychological factors.**(Khoa Cuong Phan, 2014)**. The models covered by the traditional financial theories expect the investor to make rational decision. All these researches which were made in eighties or nineties argue that the markets very accurately and incorrectly incorporate all the available information whether it is internal or external into stock prices (**Harsh purohit, 2014**).

A study done by Rahul Subash says that the field of finance which has evolved and has been evolving over the past years is purely based on the assumption that the investors really make rational decisions and their behavior is totally unbiased in predicting the future. The

investor is assumed to be a very rational person who takes all her investment decisions economically feasible and carefully weighted **(Subash, 2012)**.

According to Barber and Odean the traditional finance has been built up on the conception individuals are rational who always attempt to maximize their wealth and the same time minimizes the risk **(Brad M. Braber, 2011)**. Human beings as rational agents assess the risk and return factor of all available investment options to arrive at their optimum investment portfolio. An investor is believed to be updating his beliefs in a very timely and appropriate manner when he receives new information. She also makes choices which are normatively acceptable.

But it is evident from the empirical research that the random walk hypotheses strongly contradict the reality **(Mark Grinblatt, 1998)**. So this assumption of the traditional finance theorists has been under criticism by many researchers. And it has been an interesting area of investigation. It is very true human beings are social animals that have their own unique set of values and they take decisions according to their emotions. It cannot be expected out of humans to always make decisions purely on the basis objective factors. It's a fact that the models on the traditional financial theory's assumption laid a foundation for further thinking and brought about powerful insights into how the financial markets work. However there is a real contradiction between how real investors behave from the investors in these models.

While this was happening over the world researchers of psychology found that individuals often behave in strange ways in investment decision making. They found that individual often made decisions in a seemingly irrational way. They showed that perceptive errors and thrilling emotions can cause the individual in making a poor investment decisions. The academicians started finding the anomalies in the behavior which were left unexplained by the traditional theories.

There is where Behavioral finance comes as a unique perspective to analyze the arguments of traditional finance and the anomalies of the traditional finance **(Murat Kiyilar, 2009)**.

Behavioral finance argues that the mood sets, mind sets of individuals are the main determinant in shaping their investment decisions and has been evolved in the past 30 years. A number of interdisciplinary studies have been done in this area.

FOREBEAR OF BEHAVIORAL FINANCE:

This section of the literature review chapter aims at presenting some key legendary works of Daniel Kahneman and Amos Tversky. They are actually known as the fathers of this field.

In the era of 1960s **Mr. Kahneman and Amos Tversky** were focusing on different area of research but came together and created what was to be the benchmark in the field of behavioral finance in the era of 1970s. Initially they were focused on adapting psychological experimentations in different financial decision making theories in the real world scenarios. Tversky was working on the normative theory. And Kanheman was emphasizing on the variance between objective inducement and subjective sensation merged seamlessly in serving the purpose **(Heukelom, 2006)**

- The first paper authored together by both Kanheman and Tverky was in the year of 1971. The paper's title was "Belief in the Law of Small Numbers". , In this paper they reported that *"People have erroneous intuitions about the laws of chance. In particular, they regard a sample randomly drawn from a population as highly representative"***(Daniel kanheman, 1971)**

- In the year of 1972 they published a paper titled "Subjective probability: A judgment of Representativeness". In this paper they explained about the Representativeness bias. This study was followed by one more paper in 1973 titled "On the psychology of prediction". In this paper they say that Representativeness plays an important role in prediction made by the individual investors. **(Daniel Kahneman, 1972)(Daniel Kahneman, On the psychology of prediction, 1973)**

- In the year of 1974 one more wonderful works was published titled “Judgment under Uncertainty: Heuristics and Biases”. In this they described three major heuristic as:

1. Representativeness: The representative bias is
2. Availability
3. Anchoring

- The most imperative study was published titled “Prospect Theory: An analysis of decision under risk” which was a criticism of the utility theory. For this work Kanheman was awarded Nobel Prize in Economics in the year of 2002 which strengthened the ground of behavioral finance.
- In another paper of Tversky and Kahneman, they introduced the effect popular as Framing. It was found by them, when the same problem was framed in various ways, the psychological principles that regulated the perceptual map of decision problems assessment of probabilities and outcomes which are produced by those established shifts of preference **(Tversky & Kahneman, 1981)**

EVOLVEMENT OF BEHAVIORAL FINANCE:

Behavioral Finance is a new area of finance which aims at supplementing and advancing the conventional theories of finance by proclaiming the behavioral aspects into it. When Nobel Prize in economics was awarded to psychologist Mr. Daniel Kanheman and an economist Vernon smith, the field of behavioral finance was really justified. Hahnemann’s study was on human judgment and the decision making process under various uncertainty. And Smith studied the alternative market mechanisms. This actually convinced the financial economists of the main stream that the individual investors do behave irrationally at times. Thaler as cited in **(Sewell, 2007)** propose the Prospect theory[1] of Kanheman to be used as the alternative solution to the traditional finance theory. The research in the area seem like relatively new (**Gnani Dharmaja .V, 2012**). But the talk on the topic of behavioral finance started long back in the year of 1944.The plethora of literature available says that the whole topic of behavioral finance was actually brought into light by Daneil Kanheman. And the rest of the thing was invented

by Amos Tversky. Both of them brought a change in the way people expect stock to behave.

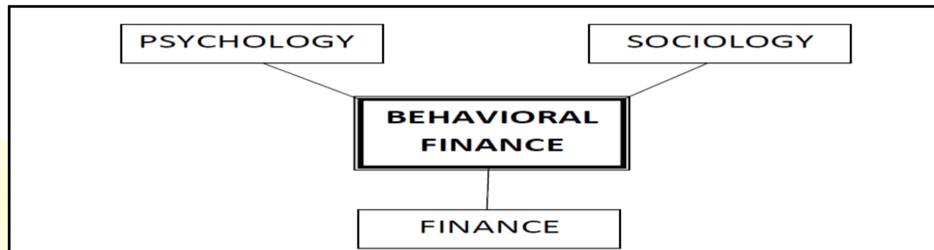
They showed people don't behave rationally. The irrationalities which lie behind investors' behavior that:

- Investors are judged based on stereotypes.
- The likelihood of events is assessed based on one's ability to retrieve from memory.

The neoclassical theory of finance in the 1970s has brought about a revolution in the finance profession represented only one model. Freed from the autocracy of one model behavioral finance has come as progress in the field of financial research. The models of behavioral finance often bank one of the concepts of individual investors who are prone to decision making error and judgments. The field of behavioral finance diminishes the assumption of traditional finance by integrating the observable behavior and systematic departure of human being from rationality of traditional finance into the behavioral model of finance **(Brad M. Barbera, 1999).**

There are comparatively low costs measures exist to help the investors in making better choice. These factors could be the investor's education, regulations and may be some standardization of mutual fund advertisement. It also helps in making the market efficient. The traditional finance theory is based on the rule of thumb approach but behavioral finance is a theory which describes the anomalies using cognitive psychological approach. This theory really questions the theories like efficient markets. Behavioral finance explains the relationship of psychology on the behavior of individuals. It also shows the main factors which are the causes of market inefficiency.**(Ehsan ul Hassan, 2013)**. The concept of behavioral finance uses behavior as the main factor in financial practice. It is based on psychology and sociology. Behavioral finance emphasizes on how the investors infer knowledge in order to make financial decisions and how they perform with their investment decisions. Behavioral finance has evolved as the result of increasing interest of psychologist in economics **(Murat Kiyilar, 2009).** In the early twentieth century the neoclassical economics theory had greatly displaced 'psychology' as a great influence in economic discourse. But in the

1930s-50's a lot of events laid down the groundwork for the awakening of behavioral economics. A lot of experiments took place which brought insights which would later instigate the key elements of contemporary behavioral finance.



Source: adapt from (Schindler, 2007) **Evolution of Behavioral Finance**

Other than the rationality that the individual has, the psychological biases play an important role in financial decision making. It says that though in investors are rational the overconfidence regarding to the choice to be made and over sensitiveness to the losses made really prevails. (**Alistair Byrne**). The key biases the study explains are:

- overconfidence
- loss aversion
- the problem of inertia
- constructing portfolios
- managing diversification
- using or misusing information
- group behavior
- managing the biases

Schindler a researcher **(Schindler, 2007)** lists three main keystones for research in the area of Behavioral finance. Those are

a. **Limits to arbitrage-**so as he describes arbitrage opportunities exist, which allows the individual investors' rationality to be significant and have an impact on stock prices. To explain this irrationality behavioral finance draws on the investigational evidence of the cognitive psychology and the psychological biases, the way of decision making.

b. **Psychology-**research says that the individual investors exhibit certain biases in their decision making which is the result of their beliefs and choices.

c. **Sociology-** it emphasizes a point that a huge number of financial decisions re outcomes of social collaboration. This contradicts the assumption that investors take decisions without any external influence.

One studies **(Mohammad Hossein Ranjbar)** which aims to investigate the relationship between the different aspects of behavioral finance and the volatility of stock general index. The result of the study was found out to be a significant relationship between the behavioral variables and the stock volatility. The findings of the study confirm the arguments of the behavioral finance.

One more study opines that some anomalies in the individual decision making can easily be understood using some behavioral models which is not very rational. According to the study, this field has two main blocks. One is 'limits to arbitrage'. Limits to arbitrage argue the difficulty of traders in undoing the dislocation which has been made by the irrational traders. Another thing which the author of the study explains is 'psychology', which explains the deviations from the fully rational behavior.(**Nicholas barberis, 2003**). A researcher says that the investors who actually populate the real world and the investors who inhabit the academic models are distant sisters. Practically investors trade frequently and have pertinacious stock selection ability. They also incur unnecessary costs and losses. They sell their winners investment and hold on to their losers which incurs unnecessary transaction cost and losses. They also tend to hold their poor diversified portfolios. These portfolios result in high level of unsystematic risk (diversifiable risk). Many investors also highly influenced by media information, market psychology, past experiences and so on(**Brad M. Braber, 2011**).One study done in Japan opines that by focusing on the individual buying and selling of the financial instruments and examining such behaviors from the behavioral finance point of view the anomalies in the behaviors can easily be observed. (**Kaneko, 2004**). A study describes in the pursuit of understanding the individual investment behavior argues that the risk appetite increases when the capacity to assume the additional risk decreases. This study is an interdisciplinary effort to understand the correlation between psychological theory and

financial theory **(Mitroi, 2014)**. Another research one in the city of Karachi in the country of Pakistan examines the impact of financial literacy, accounting information, openness to experience and information asymmetry n the financial decision making of the individuals. The study reveals that the financial literacy and available accounting information actually decreases the information asymmetry and lets investor invest in riskier avenues. It also reveals that as the age and experience increases investors prefer the less risky instruments **(Lodhi, 2014).** A study says reveals that among the various factors which influence the investors' decision making, "accounting information" plays a remarkable role and "neutral information" is the least influencing factor. It was found in the study that there are some other behavioral factors like investor's financial tolerance, emotional risk tolerance and financial literacy also influence the investor's behavior**(Gnani Dharmaja .V, 2012)**. One more study **(Kothari)** similar this study which is done in Indore city in the state of Madhya Pradesh on the preferred investor's behavior towards various investment avenues available in the city. The study also focused on the difference of opinion of age on investor behavior while selecting any investment avenue. The study revealed that, if the younger generation starts to invest at an early stage on regular basis, then they will be able to save more money and will be able to secure their future. It also revealed the perception of different age group on various investment avenues. The study done by **(Subhashree Nayak, 2013)**reveals that in the rural area of sundergarh district of Odisha state the different variables like the gender, age, primary occupation, educational qualification, possession of land, house type, number of family members and the marital status of the individuals has a significant impact on the individual's saving habit. The terms saving behavior includes change in savings, income of the individuals, income groups, mode of savings, future expectations of saving, income towards saving, type of savings, amount of savings, problem relating to saving, types of accounts available in banks, parental or own savings, wish to save each month and anytime got cheated from any financial institutions. Another study reveals that the Indian financial markets have been very hectic to receive large amount of funds from both the domestic as well as overseas markets. The reason behind this is the easy flow of information and the independency of the investors in decision making. This reason indeed has enabled the shifting from banking to security markets **(Altaf, 2014)**. A study

named "Understanding Individual Investor's Behavior: A review of Empirical Evidences" is done on the several variables which govern the individual decision making. The study argues that understanding of the same would help to understand the stock market anomalies and would also help the different stakeholders to understand the mood of the client and respond accordingly **(Dr. Mandeep Kour, 2012**).

According to Expected utility theory the individual decision making is actually tradeoff between their differed consumption and immediate consumption. However individuals don't always behave according to the classical theory of economics. So it is found by the recent studies that the investors don't actually behave in a rational manner. There are rather several factors which influence their investment decisions. It is found from the literature on economics, psychology, finance where in the individual investors were surveyed to discover what actually affect their investment decisions and to what extent in affects. And I have been found out from the study that their decisions are mostly driven by psychological factors and less by their personal rationalism (**Dr.S.Jayaraj, 2013**). It is a tendency of the individuals that every investment or purchase they do is a result of their differed consumption. The investors also save money whether knowingly or unknowingly as a hedge against the future uncertainty. This is where the actual process of wealth maximization starts. That is why may be savings and investment behavior has proved to be an interesting area of research to the researcher. Kanti Das and Sanjay as cited in a study say that the economic cycles like boom, recession, depression & recovery also affect the individual's investment behavior **(Gaurav Chhabra, 2014)**.

Thaler a researcher argues that the consumer act in ways which are totally inconsistent with the expected utility theory of economics. The he also tells that the Prospects theory may be used as basis for an alternative descriptive theory. **(Thaler, 1980)**

A research study was done studying the investment behavior of middleclass household's. It was found by the study that the investment trend of household varies between different financial instruments. As it is revealed by study the household investors mostly prefer the

bank deposits, then it is followed by insurance and other small saving schemes which are mostly the fixed income bearing options.**(Kanti Das, 2012)**

The propensity to save and spend is dependent upon nature, future goals and needs, present financial status and risk appetite of the individual investor. It can be proved that individuals with higher income might not be very interested in saving or if interested the quantum of saving might be very minimal. On the other side some people will be there who would like to save the maximum amount of their income. Two researchers Chaturvedi Meenakshi and Khare Shruti did a research on individual household's investment preference and saving pattern. The study revealed that most of the Indian households prefer bank deposits at the first choice and followed by small saving schemes. According to them 'preference' and 'pattern' are the two key aspect of investment. Other than the risk and return there are some other factors like the economic cycle, natural calamities, investor's annual income, government policy etc**.(Meenakshi Charturvedi, 2012)**. It is actually savings which creates a path for individual's investment. So attaching words like miser or spendthrift to these individual is a real injustice. Because the reasons for this behavior might be the individual's personal requirements or beliefs, or it might be lack of understanding of the financial instruments and financial markets, lack of knowledge about the investment avenues available. It's a fact that those who invest always see to that their savings are safe and gainful. Technically investment is commitment of funds to one or more financial instrument with an intention to grow for a certain time period. When an individual postpones his/her current consumption investment happens. Investment happens in an anticipation of growth which will add to the individual's total wealth. These investment decisions are a trade-off between current and future consumption. So it can be concluded that lesser the consumption of an individual higher the proportion of investment. A study revealed existence of a significant relationship between the demographic aspects of the individuals and the source of awareness acquired by the investors **(N. Geetha, 2012).**

Two researchers Dr. Rakesh and Shrinivas V.S.M studied the individual investment behavior in mutual funds. The respondents include Executives and Non-Executives. They found that

most of the respondents preferred investing in bank sponsored mutual fund because they think that bank sponsored securities are more secured. Investments are often done through intermediaries like mutual funds, insurance companies, banks etc.**(Dr. K Rakesh, 2013)**.

A study done by Shaik Pasha Majeeb Abdul, Murty Dr. T. N., R.Vamsee Krishna, Gopi Kiran V.Hemantha examines that the degree of importance presumed by the retail investors of equity are based on the selective investment profile factors and the socio economic factors. They found that the investors assign more importance to safety in equity investments, capital appreciation, quick gain and liquidity compared to other factors **(Abdul Majeeb Pasha Shaik, 2012)**.

A study has revealed that the human epistemology have an impact on the human decisions..**(Kumaran, 2013)**

Financial decision making and the investor behavior are as results of participation of investors in investment programs by investment companies. SEBI has started these kinds of awareness programs for investors which benefit them in informed investing and value investing. A study done in Vietnamese stock market revealed that individual investment behavior is affected by his/her attitude towards the investment, the subjective norms and perceived behavioral control. The study also provided evidence that the psychological factor in the investment decision making do exist. Gender has dominance on all the factors considered in the study **(Khoa Cuong Phan, 2014).**

The information structure and the market participants' characteristics affect individual decision making as well as the market outcomes. Investors' market behavior derives from the psychological principles. The neoclassical theory of finance in the 1970s has brought about a revolution in the finance profession represented only one model. Freed from the autocracy of one model behavioral finance has come as progress in the field of financial research. In a study done by **(Ambrose Jagongo PhD, 2014)** it states that, there is a strong correlation between the factors of the behavioral finance and the behavior of an average equity investor.

CONCLUSION:

It is well said by Benjamin Graham "***Individuals who cannot master their emotions are ill-suited to profit from the investment process***". From the above review of literature it can be concluded that there are several factors influencing the individual investor's behavior in any avenue. Some of the factors influence very slightly and some influence majorly. The most common factor in all the studies found to be the human cognitive error. Study of the investment behavior truly prepares the professionals of finance with a set of new lenses, which permits them to comprehend the psychological process that involves human cognition and human emotions. It includes individual as well as institutional investors, corporate, financial analysts, portfolio managers and advisors, policy makers etc.(Yazdipour, 2010)The studies on behavioral has enabled finance professionals to answer some unsettled questions which continue to appear in the minds of both the investors and corporate.

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References:

1. Abdul Majeeb Pasha Shaik, D. T. (2012). Investment Objective of Retail Equity investors in India. *International Journal of Social Science & Interdisciplinary Research2012*, 54-88.
2. Alistair Byrne, S. P. (n.d.). *Understanding how the mind can help or hinder investment success.* vanguard.
3. Altaf, M. (2014). A Changing Financial Behavior Of Households. *International Journal of Management and Social Science*, 2321-1784.
4. Ambrose Jagongo PhD, V. S. (2014). A survey oft the Factors Influencing Invetsment decision: The case of Indivudual Investorsat the NSE. *International Journal of Humanities and Social Science*, 92-102.
5. Ambrose Jagongo, V. S. (2014). A Survey of the Factors Influencing Investment Decisions: The Case of Individual. *International Journal of Humanities and Social Science*, 92-102.
6. Brad M. Barbera, T. O. (1999). The Courage of Misguided Convictions. *Financial Analysts Journal*, pp. 41-55.

7. Brad M. Braber, T. O. (2011). *The Behavior of Individual Investment.*
8. BrahmabhattP.S Raghu Kumari, D. S. (2012). A STUDY OF INVESTOR BEHAVIOR ON INVESTMENT AVENUES IN MUMBAI FENIL. *Asian Journal of Marketing & Management Research*, 49-71.
9. Daniel Kahneman, A. T. (1972). Subjective Probability: A judgment of Representativeness. Cognitive Psychology. Academic Press Inc.
10. Daniel Kahneman, A. T. (1973, July). On the psychology of prediction. *psychological Review*, pp. 237 – 251.
11. Daniel Kahneman, M. W. (1998). Aspects f Investor Psychology: Beliefs, preferences, biases investment advisors should know about. *The journal of Portfolio Management*, 52-65.
12. Daniel kanheman, A. T. (1971). Belief in the law of small numbers. *Psychological Bulletin*, pp. 105-110.
13. Daniel Khaneman, A. T. (1979). Prospect Theory: An Analysis of Decision under Risk. Econometrica. *Econometrica, The journal of Econometric Society* , 263-291.
14. Dr. K Rakesh, M. V. (2013). Undersatnding individual Investors Investment behavior in Mutual funds (A Study on Investors of north Coastal Andhra Pradesh). *International Journal of Management*, 185-198.
15. Dr. Mandeep Kour, T. V. (2012). Understanding individual Investors' behavior: A Review of Empirical Research. *Pacific Business Review International*, 10-18.
16. Dr.S.Jayaraj. (2013). The Factor Model for Determining the Individual Investment behavior in India. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 21-32.
17. Ehsan ul Hassan, F. S. (2013). Measuring Validity of Determinants of Individual Investor Decision. *Middle-East Journal of Scientific Research*, 1990-9233.
18. Fama, E. F. (1965). Random Walks in Stock Market Prices. *Financial Analysts Journal*, 55-59.
19. Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, 383-417.
20. Gaurav Chhabra, A. M. (2014). Understanding the Investment Behavior – A Review of Literature. *International Journal in Multidisciplinary and Academic Research (SSIJMAR)*, 1-8.

21. Gnani Dharmaja .V, G. .. (2012). A Study on the Individual Investor Behavior. *IRACST-International Journal of Research in Management & Technology (IJRMT)*, 2249-9563.
22. Harsh purohit, V. D. (2014). *Investors' psychology: A Empirical Analysis.* Varanasi: SMS, Varanasi.
23. Hersh Shefrin, M. S. (2011). *Behavioral Fianance in theFinancial Crisis:Market Efficiency,Minsky, and kenes.* Santa Clara University.
24. Heukelom, F. (2006, september). Kahneman and Tversky and the Origin of Behavioral Economics. Berlin: Universiteit van Amsterdam, and Tinbergen Institute.
25. Investopedia. (n.d.). Retrieved from investopedia.com.
26. jensen, M. (1978). Some Anomalous evidence Regarding Market Efficiency. *Journal of Financial economics*, 95-101.
27. JORGENSON, D. W. (1967). *The Theory of Investment Behavior.* NBER.
28. Kaneko, H. (2004). *Individual investmen behavior.* Security Analysts Association of Japan.
29. Kanti Das. (2012). Middle class households's investment Behavior: an Empirical analysis. *radix Internstional Journal of Banking, Finance ana Accounting, Volume 1, Issue9*, 1-36.
30. Khoa Cuong Phan, J. Z. (2014). Factors Influencing Individual Investor Behavior: An Empirical Study of the Vietnamese Stock Market. *American Journal of Business and Management*, 77-94.
31. Kothari, H. (n.d.). Altius Shodh Journal of Management & Commerce. *Altius Shodh Journal of Management & Commerce*, ISSN 2348 - 8891.
32. Kumaran, S. (2013). Impact of Personal Epistemology, Heuristics and Personal attributes on Investment Decisions. *International Journal of Financial Research*, 62-69.
33. Lodhi, S. (2014). Factors affecting Individual investment Behavior : An Empirical Study Of City Karachi. *IOSR Journal Of Bsiness And Management*, 68-76.
34. Mark Grinblatt, M. K. (1998). The investment behavior and performance of various investor types: a study of Finland's unique data set. *Journal of Financial Economics*, 43-67.

35. Meenakshi Charturvedi, s. K. (2012). study of Saving Pattern and Investment Preference of Individual household in India. *International Journal of Research in Commerce and Management* , 115-120.
36. Mitroi, D. A. (2014). *Individual Investment Decision Making process.* ACADEMICA BRÂNCUŞI".
37. Mohammad Hossein Ranjbar, B. A. (n.d.). *AN INVESTIGATION OF THE RELATIONSHIP BETWEEN ASPECTS OF BEHAVIORAL FINANCE AND ATTITUDES OF INVESTORS TOWARD VOLATILITY OF GENERAL INDEX IN TEHRAN STOCK EXCHANGE.* TSE.
38. Murat Kiyilar, O. A. (2009). *Behavioral Finance And The Study of The Irrational Financial Choices of Credit Card Users.* Istanbul: Annales Universitatis Apulensis Series Oeconomica.
39. N. Geetha, M. R. (2012). A Study on Relevanceof Demographic Factora in Investment Decision. *International Journal of Financial Management*, 39-46.
40. Nicholas barberis, R. T. (2003). Handbook of the Economics of Finance. In M. H. Edited by G.M. Constantinides, *Handbook of the Economics of Finance* (pp. 1052-1114). University of Chicago.
41. Sanford J. Grossman, j. E. (1980). On the impossibility of Informationally Efficient Market. *The American Review* , 393-408.
42. Sewell, M. (2007). *Behavioral Finance.* Retrieved from www.behavioralfianance.net: http://www.behaviouralfinance.net/behavioural-finance.pdf.
43. Shiller, R. J. (2003). From Efficient Markets Theory to Behavioral Finance. *Journal of Economic Perspectives*, 83-104.
44. Subash, R. (2012). *Role of Behavioral Finance in Portfolio Investment Decisions: Evidence from India.* Charles University in Prague.
45. Subhashree Nayak, D. N. (2013). *Determinants and Pattern of Saving Behaviour in Rural Households of Western Odisha.* Rourkela: Department of Humanities and Social Sciences,National Institute of Technology.
46. Subrahmanyam, A. (2007). Behavioural Finance: A Review and Synthesis. *European Financial Management,*, 12–29.

47. Thaler, R. (1980). Toward a Positive theory of Consumer Choice. *Journal of Economic Behavior & Organisation*, 39-60.
48. Tversky, A., & Kahneman, D. (1981, january 30). The Framing of Decisions and the Psychology of Choice. American Association for the Advancement of Science.
49. Yazdipour, R. (2010). Behavioral Finance: Application and Pedagogy in Business Education and Training. In J. R. H. Kent Baker, *BEHAVIORAL FINANCE: Investors, Corporations and Markets* (pp. 39-55). New Jersey: Wiley.