

## Theory of Behavioral Finance and Its Application to Property Market: A Change in Paradigm

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### Abstract

It is considered that behavioral finance is basically the extension of behavioral economics. It is specially related to the arena of thinking of investor and his mind towards the stock market. The main objective of this study is to define the emotions based theories which are used to explain the stock market problems and terms. It is also critically analyzed the issues related property for behavioral research and the theory of behavioral finance. After the analysis of this paper we came to know that investors cannot always motivated by emotions, and it is not necessary that the property market will only be sufficient at the weak form efficient. There is a need of deep analysis for the theory of behavioral finance. The two major concepts of behavioral finance are discussed by this paper. First, investor psychology and limit to arbitrage. Next, the theories related to psychology used in behavioral finance both are reviewed. The identification of issues related to property market is made possible by the analysis of behavioral finance theories and development. This analysis is useful to understand these theories by using behavioral model. Investor always want to invest in those projects which having greater profit and the minimum chances of loss or risk. So this psychology of investor is also discussed in behavioral finance. It is also considered the feelings and thinking errors which encourage the investors and process of making decisions. Next the paper will discuss about the human behavior theories which can motivate or demotivate the human's mind to make any decision. These theories will be discussed later in detail. These are Prospect theory, judgment under uncertainty (overconfidence, fear of regret, Representativeness heuristic, Availability heuristic, Anchoring and judgment). If we discuss about stock price irregularities related to reaction higher than expectations of investor, under reaction, force strategies, steering Behavior, effect of the size of firm and book value or market value ratio effects. The behavioral model is excellent to explain all these anomalies. Possessions or real estate research is concentrated on the human behavior because they believe that all the decisions are made in the property or real estate markets are always from the perception of human behavior.

Similarly investor is also a human so the investment decisions will always made by the person who is interested in doing some investment. He will always focus the market conditions and then he will decide whether he should invest or not. These human behaviors and psychologies having a great effect on the stock prices. As human behavior might have biases about the property valuation field and also about the market information. This will have to discuss in this research paper that how behavioral finance can help the investor to make wise decisions. The behavioral finance paradigm, claims that investment adoptions are not always made on the basis of full rationality but it is necessary to understand the investment market sensations. The behavioral research issues those will be discussed and analyzed in this paper will lead to the path for developing a joined strategy for the investment in property.

### Problem statement

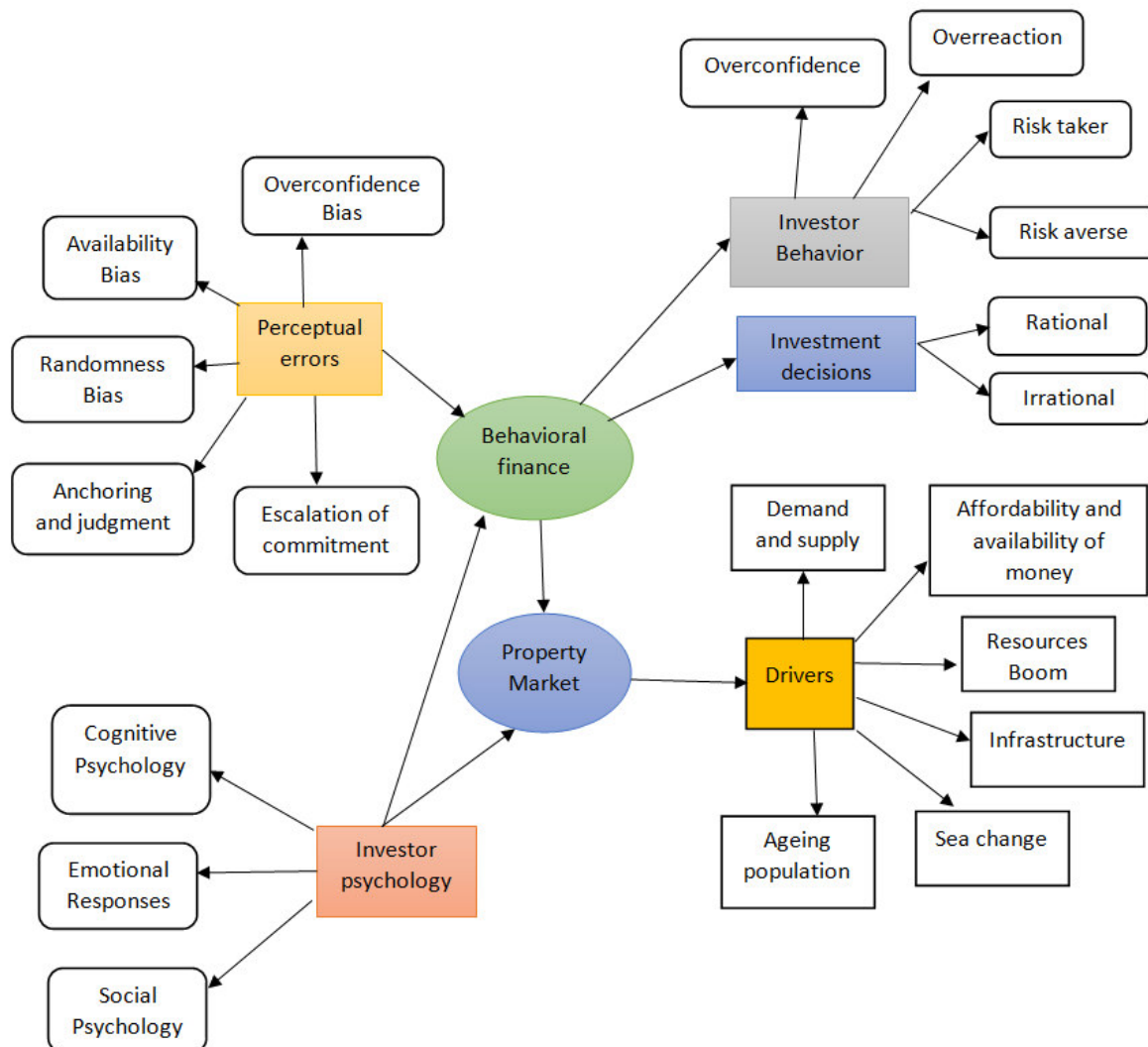
The research is about behavioral finance because behavioral finance has made its importance in almost every field of life. Behavioral finance is applied in all types of investment projects but this paper is particularly focuses the area of property market. Because finance relates to the money basically and by staying in this limit research tried to apply the investors' individual behaviors to the property market so it can become a new and interesting concept for readers. This research area try to make this concept useful and worthy for students and as well as the investors. It discussed all those aspects of investors' behaviors those have not been discussed in a single platform at a time. They although found in different locations because they are scattered in different places but not found in a single study.

Variables of Study		
Dependent Variables	Moderating Variables	Independent Variables
Investment Decisions	Behavioral Finance	Drivers of property market
Perceptual Error	Market Efficiency	Investor's Behavior
Property Market		Investor's Personality
		Investor's Psychology

## Introduction

This paper is basically define the behavioral finance theory and further its presentation to the property market. If research deeply study these two concepts, behavioral finance and property market then it will be cleared that investment decisions completely depends upon current expectations and required business conditions. Research cannot ignore the emotions and attitudes of an investor towards investment. Property market normally involve in sales and purchase of bonds, securities and real estate as well. This paper will talk about the sale and purchase of real estate such as houses. In this case author described that how the investor's decisions are made and how they change according to the change in the value of that particular property. When we talk about real estate investments there are basically three factors must be focused, which are decision theory, analysis and support (French, S., 1986). Decision theory is about the study of judgment models that leads to the rational and deliberate choice. The rational and irrational behaviors of investor is discussed further in the paper. Later this paper will explain how decisions are made and how they are affected by the rational behavior of investor. These all terms are shown in the networking diagram. Actually behaviors are related to the emotions and psychology of investor as economists and philosophers are seeming to concentrate on these terminologies which is completely explain in behavioral finance. These all investment behaviors, perceptual errors, biases and drivers of property market are explained in this paper. Behavioral finance is very useful and applicable in all these concepts. Behaviors of investors can be changed because they depends on the choice of the group of properties which have sold recently and that's value is equal to the value of required variables such as location, corporeal characteristics and other surroundings (Millington, 1988). In the property market during the purchase and sale of property, there are basic variables which can come the cause of variations in the behavior and decisions of investors. Other than this, psychology of investor and their emotions can influence them to invest and as well as can demotivate them. Investor always think about his own benefit but behavioral finance teaches us that we should focus the benefit and welfare of society also, this is called social psychology (Daniel Kahneman). Social psychology emphasized on the rights and benefits of the society. It suggests that if an investor invest in the way that is acceptable by the society or a common person then he can gain more profit than normal. Because the investment will be encouraged by the society and investor will motivate towards that particular project in the favor of his surrounding people. Psychology of an investor basically deals with three strand of psychology first is cognitive behavioral psychology, second is emotional responses and the third is social psychology. These three strands effect investor behaviors during his investment process. The cognitive behavioral psychology describe the mental state thinking and learning of investor. How investor calculate his value of investment in his mind. Emotional responses refer to as how wisely an investor apply his emotions while making decisions. Social psychology, in which investor consider the society's welfare and seeking for the encouragement form society. If his investment is not violating the wellbeing of society then he will be encouraged by the people of that area and he will be able to go ahead for investment, otherwise, he will be discouraged by the senior regulatory officials and then his particular behavior will be to fail conventionally instead of exposing himself in front of others (cited by warner DeBondt et all, 2013). In past edges people believe that "market knows best" it means if there would be any crises come to the market it would resolve itself by the market because market always know that what should do in this situation. This was wrong concept which become the cause of financial crises. Behavioral finance has broken this concept and teach the people a new phenomenon of a successful and prosper life. It proves that human intuition is breakable and can be destroy any time. It needs to have a strong and undeniable concept that not leads to the crises but success. For this purpose academics and practitioners arranged a round table discussion in which they have full right to explore their ideas about the elimination of crises from any economy. They all proved that behavioral finance is a main tool to teach about the wisdom of investment. How should an investor behave and when he can change his decision. The most important thing is how can prevent financial crises and get rid from bubbles in the market. The main research purpose is to teach the readers and financiers to invest in any project or portfolio by undermine the concept of behavioral finance. According to the author Glaser et all (2004, p.527) that behavioral finance models are basically used to describe the behaviors of investors and market anomalies when there is not sufficient knowledge available by rational models. Modern theories considered that people select alternatives from the portfolio in rational manner (von Neuman and Morgenstern, 1944). But the fact is that everyone who select alternatives not necessary related to the finance, so he cannot assume from the finance field. So a person who is not a finance professional. How can he make decisions towards his investment? Because the behavior of a finance professional and a lay man must be different. The professional will always think rationally but the lay man most probably cannot think logically. He just follow the herding behavior and look towards his only benefit. That's why they both always behave differently according to their knowledge. Behavioral finance describe their behaviors and attitudes those are discussed further.

## Network Diagram



## Literature Review

Behavioral finance is the extension of behavioral economics which deals with emotions and psychology of investors. Through this study we can understand the rational and irrational behavior of investor as well as cognitive and social psychology to explain the behavior of investor towards investment. Normally the irrational behavior of investor influence the decision making process of property investor. Because this behavior does not consider the logics and available information to make decisions. The theory of behavioral finance discuss that how decisions are made by investors and how their emotions and cognitive psychology helps them to make wise decisions.

Rational behavior of investor refer to as the consideration of all available information regarding their investment in a particular project before making any decision. Other than this the quantitative model, modern portfolio theory (MPT) and capital asset pricing model (CAPM) supports rational based theories. It is not necessary that these theories are perfectly true always. Because there is not enough amount of data available to support these theories. Because it is not easy to understand the individual tendency behavior and cross section average returns (Miles and McCue, 1984).

Behavioral finance teach the finance professionals how they should change their behaviors how they can communicate with their clients effectively. Kahneman and Riep's (1998) gave following some recommendations for an effective finance professional.

- Maintain the track of your examples to prove your self-efficacy.
- Communicate in the way of realistic probabilities of success to your clients.
- Try to avoid the natural urge to be optimistic.
- Make it confirm yourself that how much reasons you have to prove your knowledge more that the

market.

- The frame that has been chosen must be relevant to your client.
- Assess the mindset of your client that how much he is risk averse.

Investment choices are not always made on the basis of full rationality, there is a description of two principles of traditional paradigm:

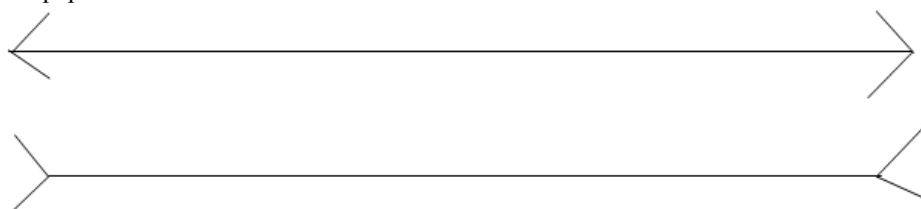
- 1) Agents are not successful in updating of their beliefs correctly
- 2) Normative process make systematic deviation in making investment choices

To understand the investor decision making behavior we will discuss the phenomena of two minds at work describe by (kahemen) the way people make decisions. This phenomena will help readers to better understand the purpose of behavioral finance as well as investor's mental state.

### **Two minds at work**

Everyone of human beings behave as we have an "intuitive" mind and term 'knowing' both are used to explain our mental state of thinking, learning and judgments etc. We also have "reflective" mind which is normally slow and analytical and needs to have conscious effort. Financial advisors seems to be engage in this mind specially when they are sitting with clients to calculate a retirement plan or framework based on their risk profile. Mostly decision made by people are the productions of intuitive minds and they are accepted perfectly (kalien and kahenman, 2009).

Example of this framework is discussed here. Suppose you have two small pieces of paper, draw two lines on this paper but make their ends different like this



These two lines have same length but looks different we will examine our intuitive and reflective mind. If you are victim of optimal illusion. This will effects on the senses when even you know the truth but you don't accept this. In the above diagram two lines having same length but dew to their fins direction they looks different. Our intuitive mind sees them different but our reflective mind which is slow and analytical knows that these are of same length.

### **Drivers of Property Market**

There are basically six key drivers of property market are discussed below:

#### **1. Supply and Demand**

Change and variation in the population is the key driver of demand. When there is more population then houses in particular area, the price of houses are increased and if there is decline in population and house are available then the prices of houses are decreased. The things that become the cause of change in population growth rapidly and provide the opportunity to investors, are change in immigration quotas, change in infrastructure which makes an area more or less attractive and reachable to live in and changes in employment etc.

#### **2. Affordability and availability of money**

Affordability is basically the power of an investor to accomplish the requirements against particular property. It includes prices of houses, interest rates and wages. It is the cost to the owner to retain or enjoy a particular property. If there is high interest rates, wages and prices in a particular area. Residents (investors) try to move another area in search of living a better lifestyle.

#### **3. The Resources Boom**

The boom in natural resources also become a key driver of property market. For example, China and India has the demand of skilled and semi-skilled workers greater than before, due to the increase in mining, harvesting and extracting. As compare to other industries, mining industries offer high salaries to its employees. And people working in these industries having a good chance o live in a better lifestyle and they have buying power to purchase expensive houses to live in or may be the investment property or two.

#### **4. Infrastructure**

Infrastructure is also a major key driver for pricing because when the attractiveness of a particular area increases the property prices also tend to increase as well. For example, the opening of M2 and M7 freeways made the north west of Sydney more accessible and attractive that become the cause of increase in the property prices and rental return.

#### **5. Sea change**

Now the population tend to shift to the waterside. This thing has nudged the prices up in all capital cities and many seaside regions. So due to this trend waterside investors gaining more returns.

## 6. Ageing Population

The workers in the age of retirement looking for retirement from their workforce. These retirees always try to invest in those projects from which they can earn enough profit so that they can easily spend their remaining life. They prefer to shift to waterside areas. For this purpose they purchased houses or may invest in some houses property and generate a favorable amount of profit which become the cause of increase in property prices.

### **Invest or save more tomorrow**

Investor prefer to invest or save more tomorrow. It includes investor paralysis. The main reason for this problem is fear of decline in the value of portfolio or loss aversion. As it is discussed before that investor psychology and cognitive ability is important in decision making. Empirical research also support this phenomenon that during the process of portfolio selection investor not only consider the statistical measures but also considers psychological factors such as sentiment, overconfidence, and overreaction. As traditional finance indicates the concept of variance and mean etc, and describe that investor make decisions on the basis of these measures. But behavioral finance tells that they are rational in decision making but not in perspective of quantitative measures. As an alternative behavioral finance tells the measures in psychological factors in rationality such as fear, hope, optimism and pessimism (Harry Markwitz, 1952).

Financial crises also has an important effect on property market and behavioral finance help to understand these crises as well as provide the ways how to prevent from these situations. The concept of “market knows best and generally can correct itself” become a major reason of crises. If there is a bubble created in the property market this can totally destroy it. Because investor always rational. He may trust in this rumor and invest in some property according to the rumor. Finally everyone who invested have to face financial crises. So behavioral finance advise the senior regulatory officials that they should not flourish the particular bubble in the market because they understand the behaviors of investors and give the direction to the market. They should provide investors the complete awareness about market trends so they cannot detract from a direction and can protect themselves from high losses (cited by warner ET all, 2013).

### **Main behavioral factors that affect financial decisions:**

#### **Overreaction and overconfidence**

Behavioral factors do exist and they make significant affect in decisions and also considered by market. Especially the above two factors play an important role in decision making in order to focus the study of psychological factors (DeBondt, 1998) is to make the long story short the selection of irregularities to two factors: overconfidence and overreaction. DeBondt identified four classes of anomalies in case of individual investor that have to do with: (1) investor’s perceptions of stochastic process of asset prices, (2) investor’s perception of value, (3) management of risk and return, (4) trading practices. The conference was held in USA consisting 45 individual investors. From every one of them was personality managing finance \$310000 equity portfolio. By discussing and judging their behaviors towards investment and return expectations, DeBondt’s findings showed that:

- Mostly investors were optimistic about future performance of their own shares rather than other company. (Over confidence)
- They overly narrow confidence intervals about the fluctuations in prices. They set their high guess too low and low guess too high. Which show the factor of over confidence.
- They mostly relied on past performances and forecast the prices of stock market on their past performances.

#### **Investor’s personality and perceptual errors affect the financial decisions**

Investor personality includes his financial behavior toward the market. Besides of rational or irrational investor financial behavior divided into two main categories: massive and minor financial behavior. Both deals with the questions do individual investor behave rationally? And the perceptual errors and emotions affect them? Minor behavior studies the individual decision making behavior and describe the psychology and their effects on the decision making for the property market. While the massive behavior deals with huge number of investor behaves towards decision making in property market. Firstly, discussed the perceptual errors of an investor:

#### **Overconfidence Bias**

The investor involve in this bias is more confident about his future. He thinks that his future is bright and he definitely will earn high profits. He doesn’t consider any valid information before doing an investment because he is fully confident that he is taking valid decisions (Gervis and odean, 2001).

#### **Availability Bias**

Availability bias refer to as the investor’s tendency toward deciding and judging on the basis of available data. Human mind can recover the inspirational and recent events quickly. So investor take decisions on the basis of recently available data it is not a wise decision because the recently available data might not be enough to make necessary decisions (Kim and Nofsing, 2004).

#### **Randomness Bias**

Randomness bias deals with person’s superstitions and illusions. A man’s perception affected more or less by

his luck and superstitions. The investor who believes in superstitions is more effected as compare to the investor who believes that he can make his fate himself and can flourish his future. That person can become a good and successful investor (gholipour, 2007).

#### **Anchoring and judgment Bias**

A person involve in this bias compare himself with another person. He judges the performance and productivity of other person than anchor than anchor his own productivity. On this base he under or overestimate himself.

#### **Escalation of commitment**

Escalation of commitment refers to as a wrong decision has made even knowing the consequences the process still being continued. And then the person who make wrong decision even he is responsible for his failure he just pretend that he made the right decision and try to hide the reasons of failure. This is because of the cognitive sunk cost that man feel a heap of investment has been done on the basis of wrong decision and then he try to justify himself by showing positive aspects of that decision (Schoorman and Holahan, 1996).

#### **Directions for behavioral finance in property market**

In this part of literature review the main directions in the perspective of behavioral finance in the property market are discussed. The real estate research focused that the judgments and decisions regarding property markets are made on the basis of human behavior. This research basically study that how human react toward biases and how man's mind go through these biases or when he reached his conclusion. After the go through above all studies we have reached to the point that the behavioral theories are most successful in explanation of stock price anomalies related to the concept of under and overreaction etc (Barberis, Shleifer, and Vishny, 1996; Lakonishok, Shleifer and Vishny, 1997; Daniel, Hirshleifer, and Subramanyam, 1998; Daniel and Titman, 2000 and Barberis and Shleifer, 2003). These are called market anomalies because these are violating the trading rules. Kishore, 2003 has provided the brief description about the anomalies. No one can provided the explanation except Kishore. Paper described that the value of stock is underpriced while the growth overpriced. This is because the irrational behavior of the investor. This investor can have the ability to explain the various pricing anomalies of property market because he does not consider the available information and logics to make decisions. Now in recent years it has been seen that market capitalization process and both prices and valuations are more volatile as compared to the movements in cap rates and changes in rents (cited by Kishore) this phenomena propose the existence of investor irrational behavior and risk aversion behavior changes in the property market. Similarly, this behavioral based framework can be used to study the variation within the property market capitalization process on the basis of investor beliefs and preference arguments.

#### **Data Collection and Methodology**

Finance has always derived methodologies from the other castigation. The methods which are developed by mathematics, physics and economics are now the standards in finance. But now the methods developed in psychology are imported gradually. There are some reasons for this. For example, experiments are complex, difficult and also to conduct survey with professionals and investors. Because highly funds are required for the participation of these people that can be exceed from the under standard finance budgets. The main and basic input for the behavioral finance has been experimental psychology. But the methods in sociology are surveys, interviews, participant observations. Focus group is not influence as the same value of other methods. So this paper used secondary data method in my research paper to collect the data. Data regarding this topic is collected from secondary source. This topic is a new and quite different from other research topics. Behavioral finance is an advancement in finance of this era. So for the purpose of data collection, many web sites are visited and mainly Google and emerald.com. These websites are assigned by my teachers. For this paper more than sixty five research papers collected, many of those bibliography is mentioned in the end of this paper. I also got help from my teachers whose are conducting this research by us. All the data regarding this topic is based on the secondary data. As this is a new one topic about research so updated secondary data is available on these websites. That's why it is preferred to choose this new one topic so that I can further update this topic by increment of my knowledge and combination of some other behavioral factors.

#### **Conclusion**

Behavioral finance is very important advance concept in these days. No doubt past researches had explain the investment behavior of the people but a particular name is given these attitudes and behaviors is behavioral finance. To somehow this is a new concept of its application in property market. In fact behaviors are main antecedents to change the investor decisions in any investment. So behaviors should always be undermine whenever we are going to observe the investment phenomena. The purpose of this paper is also to express and pull up the importance of behavioral finance in almost every field of life wherever we going through the financial decisions. An example of the purchase of a house is given here. How many variables should be undermine during the purchase of a house? Property related variables are House size, Number of reception rooms, Number of bedrooms, two or more car garage, plot size, house type and age of house, presence of bathrooms, one site parking and layout accommodation. The purpose of giving this example to clarify that these variables include in behaviors and can change the decision of investor if anyone is missing form all of them. This

can conclude that behavioral finance having the greater importance in all financial decisions.

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