

A CONCEPTUAL VIEW OF BEHAVIORAL FINANCE

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ABSTRACT

It is accepted that the historical process of behavioral economics, on which the basics of behavioral finance are based, began with the study of "The Theory of Sentiments" by Adam Smith in the mid-18th century. (Asraf, Camerer and Loewenstein, 2005:132). In the 20th century, the neoclassical economy entered the era by developing models with theoretical approaches and it was revealed that man made economic decisions by exhibiting rational behaviors. While these developments have been experienced in economic science, psychological based approaches have been developed and new approaches have been put forward in behavioral sciences. The aim of this study is to examine the concept of behavioral finance, its historical development, its interaction with other disciplines and the theories of behavioral finance. The articles, books and theses written in the field were used for this purpose. The differences with traditional finance theories have been tried to be put forward.

Keywords: Behavioral Finance, Behavioral Finance Theories, Traditional Finance

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Introduction

With the evaluation of financial activities within the scientific field, many theorems and models have been developed with different points of view in the historical process. Financial theories, which were handled with different approaches in different periods, showed differences in time and pioneered their application areas. The fundamental difference of the discipline of finance over time is the way it deals with the human element. While it is observed that the human element is considered as rational entity in the traditional finance approach, it is accepted that the human element can engage in non-rational behaviors in the studies adopting modern finance approach. (Sansar, 2016:136).

As a result of the fact that market conditions contain risks due to the uncertainties inherent in itself, it causes the human element considered to be rational in financial activities to have behaviors to his/her advantage. (Öçal and Çolak, 1999:205). This approach, which people have acquired for their own benefit, has been proved in the literature by turning it into a theory with the Expected Utility Theory (Neumann and Morgenstern, 1944). According to this theory, rational people make decisions in order to maximize their benefit against the uncertainties created by the market. (Sönmez, 2010:6).

1. CONCEPTUAL FRAMEWORK

1.1. Behavioral finance

Although the basic financial theorems that guide the process of making and implementing economic decisions are successful in explaining the fundamentals of economic behavior, they cannot provide satisfactory explanations about the anomalies that arise in market conditions. The reason for not giving detailed information about the reasons for the occurrence of anomalies encountered in market conditions is the irrational behavior of people in market conditions. Behavioral finance is a discipline developed to explain the reasons for irrational behaviors of people in making economic decisions and to reveal the psychological factors on which they are based.

The study which plays the most important role in the emergence and development of behavioral finance discipline is the study by Kahneman and Tversky (1979). Kahneman and Tversky (1979) developed various paradoxes in basic finance theories that expect people to act rationally in economic decisions. Kahneman and Tversky define their paradoxes as precision effect, framing effect, joint ratio effect and sign effect according to their impact states. In order to explain the concept of behavioral finance, it is necessary to explain these effects which prove that people can behave in a limited rational manner.

1.1.1. Common Ratio Effect

When the rational people cannot make any choice between the benefits they expect in displaying their economic behavior, the possibility of two alternatives is considered equivalent. Kahneman and Tversky (1979) firstly showed two equivalent alternatives to their subjects in their study. The subjects

accepted that the possibilities of alternatives were equivalent. Later, when they extended the probability of alternatives to the subjects by expanding them with the same coefficient, they answered systematically that the alternatives were not equivalent and the probability of one being higher than the other. This situation led to the perception that the expansion of the probabilities with the same coefficient does not create a real change in the probabilities but creates a change on people. This result supports that people can behave in a limited rational way.

For $X_1 < X_2$ and $0 < k < 1$; $[(X_1; a_1) \text{ is equivalent to } (X_2; a_2)] = [(X_1; ka_1) \text{ is equivalent to } (X_2; ka_2)]$ (expected)

For $X_1 < X_2$ and $0 < k < 1$; $[(X_1; a_1) \text{ is equivalent to } (X_2; a_2)] = [(X_1; ka_1) < (X_2; ka_2)]$ (realized)

Precision effect: People always choose the exact alternative from the possibilities they face. Kahneman and Tversky (1979) presented two alternatives that were equivalent to each other in their study. They then expanded the alternatives with a common coefficient provided that the probability of one of the alternatives to be precise. While rational people should determine that the equivalence will not deteriorate under normal conditions, they have stated that there is a greater chance that the precise alternative appears to be more likely than the other alternative.

For $X_1 < X_2$, $1 < k$ and $ka_1 = 1$; $[(X_1; a_1) \text{ is equivalent to } (X_2; a_2)] = [(X_1; ka_1) \text{ is equivalent to } (X_2; ka_2)]$ (expected)

For $X_1 < X_2$, $1 < k$ and $ka_1 = 1$; $[(X_1; a_1) \text{ is equivalent to } (X_2; a_2)] = [(X_1; ka_1) > (X_2; ka_2)]$ (realized)

1.1.2. Sign Effect

While the rational human being is expected to prefer the most likely one among the probabilities, Kahneman and Tversky (1979) found that the probabilities will differ according to the winning and losing conditions of the people. According to the results of the study, it was found that while the subjects exhibited avoidance behaviors in the probability that they would produce positive results, they preferred to take risks in the possibilities that would lead to negative results.

For $X_1 < X_2$; $[(X_1; a_1) \text{ is equivalent to } (X_2; a_2)] = [(-X_1; a_1) \text{ is equivalent to } (-X_2; a_2)]$ (expected)

For $X_1 < X_2$; $[(X_1; a_1) \text{ is equivalent to } (X_2; a_2)] = [(-X_1; a_1) > (-X_2; a_2)]$ (realized)

1.1.3. Framing Effect

The rational man chooses the one that is most likely to always be among the possibilities offered to him. But Kahneman and Tversky (1979) first presented two possibilities to the subjects and then changed the way they presented the possibilities and asked the subjects to choose from the same possibilities again. Although the possibilities were not changed according to two ways of presentation, it was observed that the subjects made different choices. This supports the fact that people cannot always behave rationally and possibly make different choices according to their encounter.

When the effects described above are analyzed, the area of interest of behavioral finance can be expressed as observing and explaining the behaviors that contradict the assumptions of the concept of

rational human which is narrowly explained in traditional finance theories (Frankfurter and McGoun, 2000: 211). In this respect, financial behavior shows that economic approaches consider the applicability of real life and the fact that people who are accepted as rational human beings are actually the subjects of rationality.

1.2. Comparison of traditional finance theories and behavioral finance

Another fundamental distinction between traditional finance theories and behavioral finance is that the methodologies applied differ. While the models obtained through theoretical studies in traditional financial flows are supported with empirical studies, the models aim to form models based on the findings obtained from empirical studies conducted in behavioral finance (Sefil & Çilingiroğlu, 2011: 253). This difference supports that the results obtained by empirical studies play a guiding role in developing practical models and the role of people in making economic investments.

Tomer (2007: 474) interpreted the concept of behavioral finance as “When behavioral economy is the basic economy, behavioral finance is finance.” Tomer points out that the concept of behavioral finance should be evaluated in the context of behavioral economics.

Behavioral economics is an economic approach that distinguishes itself from basic financial flows with some basic features. Distinguishing features of behavioral economy from basic economic currents are presented under the titles of strictness, stiffness, intolerance, mechanism, separation and individualism (Tomer, 2007:465). Behavioral economy, which deals with different scientific approaches and economic attitudes, has a critical approach to the concept of economic human being and argues that the psychological characteristics of people are effective in economic decisions.

Shefrin (2000: 2) states that behavioral finance studies are psychologically based studies. Shefrin also states that the main issues addressed by such studies are to emphasize the importance of systematic deviations in long-term rationality and efficiency and to develop solutions.

Shefrin (2000: 2) states that there are two main sources of these deviations that occur regularly in the market. These are the effects of investors' beliefs and values on their psychology and arbitrage in real markets.

As a result, the emergence and development of the behavioral finance discipline underlies the development of behavioral sciences with the psychological aspects of people and the acceptance of these effects into their behavior. It is acknowledged that human beings cannot always act rationally with the development of the expectation theorem, which was developed by Kahneman and Tversky (1979), and which was awarded by the Nobel Prize in 2002, instead of an understanding that accepts man as rational with the expected benefit theory, which is one of the traditional finance theories based on economic studies. This acceptance also suggests that people are limited rational in their investment decisions and may be affected by psychological factors.

Stigler (1950) states that in order to prove the validity of traditional finance theories, it should be judged in terms of its compatibility with reality, generalizability and traceability. Camerer et al. (2011) state that behavioral finance is more compatible with the realities in terms of current features against traditional finance theories, generalizability is higher and achieves more successful results in terms of traceability. The table presents a comparison of the acceptability of behavioral finance and traditional finance theorems under realism, generalizability and traceability.

Table 1: Comparison of Traditional Finance Theories and Behavioral Finance in terms of Realism, Generalizability and Traceability

	<i>Traditional Finance Theories</i>	<i>Behavioral Finance</i>
<i>Realism</i>	Since the assumptions of "rational human" and "economic human" do not reflect the necessity of human characteristics, the level of realism is accepted under certain assumptions.	The assumptions of "limited rational man" and "avoidance of loss" prove that man possesses psychological and sociological characteristics. The studies show that the level of realism of behavioral finance is superior.
<i>Generalizability</i>	Inability to clarify market anomalies indicates that the theorems cannot be presented and generalized only in a rational human perspective.	In the limited rational human investment decisions supported by the common ratio effect, certainty effect, sign effect and framing effect, influencing human behavior from sociological and psychological factors and generalizability is supported.
<i>Traceability</i>	Ignoring the psychological aspect of human beings and subsequent irrational behavior of people in investment decisions shows that the traceability of traditional finance theorems can be maintained under certain assumptions.	The limited rational acceptance of people and their occasional irrational behavior in practice reinforces the fulcrum of financial behavior and strengthens its traceability with the findings in the field of application.

1.3. Historical Development of Behavioral Finance

To begin with the historical process of behavioral economics on which the basics of behavioral finance are based, it is accepted that the behavioral economics approach began with the study of "The Theory of Sentiments" by Adam Smith in the mid-18th century. (Asraf, Camerer and Loewenstein, 2005:132). With the development of theoretical approaches in the 20th century, neoclassical economics was introduced and it was demonstrated that man made economic decisions by exhibiting rational behaviors. While these developments are experienced in economic science, psychological based approaches have been developed and new approaches have been put forward in behavioral sciences.

Watson (1926) emphasized the need to take into account the effects of psychology on behaviors and emphasized the need to take part in scientific studies. Addressing the concept of psychology in behavioral sciences affected economic studies and contributed to the development of psychological models in economic studies.

Studies on behavioral economics have examined the effect of behavioral economics on people's economic attitudes and it was emphasized that people's rational attitudes can be limited. Eser and Toigonbaeva (2011) divide the old behavioral and new behavioral economics into two groups in their studies on behavioral economics. Based on this distinction, it is accepted that examining the historical development of behavioral finance under these two main headings is a more accurate attitude in explaining the developmental stages of behavioral finance.

1.3.1. Old Behavioral Economics

The old behavioral economics, which includes the first studies that laid the foundations of behavioral economics, has dealt with traditional economic approaches from the behavioral perspective until the new behavioral economics approach and tried to complete the missing aspects by bringing criticism to the basic economic theories. These studies are pioneered by two basic researches. These are studies by Herbert Simon at Carnegie Mellon University and George Katona at the University of Michigan. The common goal of the studies is to develop a behavioral perspective on economic science.

Herbert Simon, a member of the Carnegie school, has earned the reputation of the other members of the school. In his work, he questioned the validity of the assumptions accepted by neoclassical economics and developed hypotheses against theories that could not be discussed. These studies, which form the basis of behavioral economics, are handled by Simon in three different ways (Augier, 2003).

The first is the determination of the degree of rationality of rational and self-interested people. The second is the development of behavioral economics approaches that are far from formulation and practical instead of mathematical modeling approach which forms the basis of neoclassical studies. The

third is to adopt the positivist philosophy approach and carry out its works within this scope (Tomer, 2007:469).

The results obtained by synthesizing the three main approaches described above can be seen in the study titled "A Behavioral Model of Rational Choice" by Simon. Simon (1955: 112) argues that the concept of universal rationality, accepted by neoclassical economic theories, is unacceptable and that systems cannot remain as absolute rational systems by limiting their rationality. This has a corrective effect on the assumptions traditionally accepted, leading to the adoption of the concept of limited rational human rather than rational human.

1.3.1.1. Michigan University - George Katona

Katona and colleagues at the University of Michigan have argued that psychological factors that are not considered against economic theories based on mathematical foundations should be taken into account in economic decisions and choices. In the study conducted by Warneryd (1982) on Katona and her researches, it is stated that it tries to determine the psychological and sociological dimensions of economic approaches by applying questionnaire, survey and interview techniques which are qualitative data collection techniques. In order to determine the attitudes, longings, expectations, habits, optimism, pessimism and stereotypes of the people that Katona predicts that they cannot be determined by mathematical models in Katona's studies. In addition, by examining the effects of psychological and sociological findings on human behaviors, the behaviors of people in saving, investing and spending decisions were examined (Katona and Harris, 1978:14).

Katona states that the most important difference between basic economic theories and behavioral economic theories is the different application approaches in scientific methods. While the expectations of the future are expected to be predicted in traditional economic theories, it is tried to interpret the behaviors and findings based on observation and experiment in behavioral economy. Another distinction is that while basic economic theories do not like the effect of surprise results triggering different results than expectations, surprise results obtained by observations in behavioral economy are considered as valuable findings (Katona and Harris, 1978:14).

In conclusion, the behavioral economic approaches put forward by Katona indicate that psychological factors should be taken into consideration in the development of behavioral economics and that successful findings can be obtained by observing the effects of psychology on people's economic behavior.

1.3.2. Current Behavioral Economics

The development of the old behavioral economics approach led to the behavioral treatment of economic theorems and played a guiding role for further studies. It is seen that the development of behavioral science and the increase in psychology-based studies have an impact on new behavioral economics studies. But Camerer (1999) differentiates the new behavioral economics studies into two

groups. The first of these studies is purely psychological factors, while the second one criticizes traditional economic theories, but does not rely entirely on psychological foundations. Kahneman, Tversky and Thaler studies are based solely on psychological foundations. In addition, Akerlof and Rabin conducted studies which rejected traditional economic theories and were not based on psychological foundations.

Kahneman and Tversky complete their studies on behavioral economics in three basic stages. In the first stage, they conducted studies on how people are affected by cognitive deviations in making economic decisions and how they make investment decisions in unpredictable environments and how they are affected by psychological factors in making these decisions. (Kahneman and Tversky, 1973; Tversky and Kahneman, 1974). In the second stage, they developed the expectation theory, which was shown as an alternative theorem to the expected utility theorem. This theorem has enabled theorizing the studies conducted within the behavioral economics discipline based on the hypotheses developed in the first stage against the basic economic theories. It is seen that the assumptions and constraints put forward by the theory of expectations bring solutions to the missing aspects of the expected utility theory. (Kahneman and Tversky, 1979). In the third stage, in the studies carried out as the continuation of the first and second stages, it is seen that the framing effect is made by presenting the situations presented to people in different ways and suggesting that they will tend to perceptions in different ways. With these studies, behavioral economics discipline, which has become a theory with the theory of expectation, reinforces the foundations of theory and suggests that people may have different expectations in the same situations and directly affect investment decisions in this case (Tversky and Kahneman, 1981; Tversky and Kahneman, 1986).

Thaler participates in the behavioral economics discipline by developing the concept of mental accounting. With mental accounting, Thaler came to the conclusion that people follow different approaches in the way they evaluate any object in their minds, and in this assessment people make evaluations that are influenced by personality traits and ways of presenting situations to people (Thaler, 1985). This supports the theory of expectations and supports that people can make decisions in relation to their expectations and that expectations can be transformed into behaviors by showing differences according to situations and individuals.

Akerlof observed that with the increase in wages paid by employers to workers, the workers offered more of their labor as a result of the works carried out within the scope of wage-labor relationship between employer and employee. (Akerlof, 1982; Akerlof, 1984). However, it was found that wage increases had a psychological effect on workers. This theoretical approach, which is called the gift exchange theory, shows that in behavioral economics, workers who use their labor as investment instruments are affected by psychological factors while making labor investments.

Representation schemes acknowledge that people are influenced by certain stereotypes when making investment decisions, and that stereotypes are at a very effective level in making investment decisions (Rabin, 1998). In addition, it is accepted that people cannot take an objective approach in investment decisions and that they will act in a subjective manner in decisions they will take and will act in accordance with the sample that they have accepted.

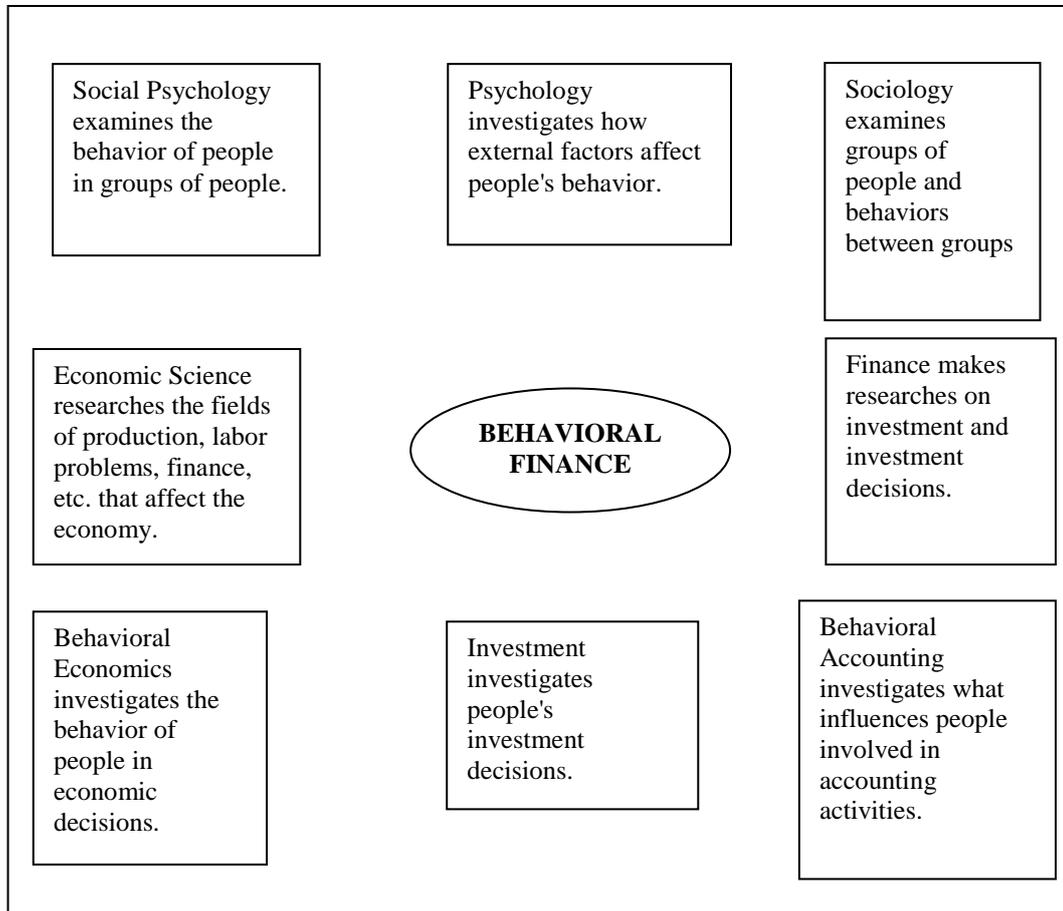
As a result, they emphasize that new behavioral economists take into account the psychology dimension of the impact of behavioral sciences on economics and that the effects of cognitive psychology studies on people's investment decisions should be accepted and taken into consideration.

1.4. Other Disciplines Affecting Behavioral Finance

When the disciplines that affect the starting point of behavioral finance are examined, especially sub-disciplines of behavioral sciences stand out. The disciplines of psychology, social psychology, sociology and anthropology, which constitute the sub-disciplines of behavioral finance, play an active role in the development of behavioral finance and significant changes in the perspectives of economic theories.

Ricciardi (2005: 8) puts forward the disciplines in which behavioral finance is of interest, suggesting that behavioral finance is nurtured from more than one discipline. This situation supports that behavioral discipline can play a role in multidisciplinary studies with its formation structure. In other words, behavioral finance may play an important role in the joint work of more than one discipline.

Ricciardi and Simon (2000: 27) laid the foundations of behavioral finance primarily in the disciplines of form of psychology, sociology and finance. Then, in the study which examined the relations between sub-disciplines of these disciplines, it was revealed that there is a relationship between psychology, sociology, social psychology, economics, finance, investment, behavioral economy and behavioral finance discipline (Ricciardi, 2005:10). In addition, Ricciardi reveals the interests of other disciplines with which he is associated with behavioral finance. The figure shows the disciplines in which behavioral finance is related and the issues they are related to.

Figure 1: Disciplines in which behavioral finance is related

Ricciardi, V. (2005). A research starting point for the new scholar: A unique perspective of behavioral finance. Available at SSRN 685685.

1.5. Behavioral Finance Theories

This section includes theories about behavioral finance.

1.5.1 Expectation Theory - Kahneman and Tversky

The theory of expectation was developed by Daniel Kahneman and his colleague Amos Tversky, who were awarded the 2002 Nobel Prize in Economics. The starting point of the theory is to determine people's decision-making in situations with high risk and uncertainty. The expectation theory, which emerged as an alternative theory to the expected benefit theory, was published in 1979 with the study "Prospect Theory: An Analysis of Decisions under Risk".

When the formation stages of the theory are examined, Kahneman and Tversky (1979) presented the problems to the subjects in terms of how people prefer to present the possibilities. Then, they compared the answers of the subjects with the probability of having options and their findings were

examined. In the continuation of the study, it was determined that people do not behave rationally in contrast to the expected benefit theorem and the findings of the study are presented in theory.

1.5.2. Barberis, Shleifer and Vishny Model

The main purpose of the model, developed by Barberis, Shleifer and Vishney (1998), is to try to determine the investors' reaction to the developing financial markets. Barberies et al. (1998: 332), trying to identify differences in investors' behavior, found that their response to the good and bad news received by the investor about the market under the market conditions was inadequate or, on the contrary, excessive than expected. It is seen that these findings are in parallel with the findings obtained by Griffin and Tversky (1992).

In their study, Griffin and Tversky (1992), found that the investors showed irrational behavior and preferred the investment choices that appear to be stronger by the way of presentation among the options offered to them when making investment decisions rather than investment preferences that were likely to be statistically significant.

Griffin and Tversky (1992) have kept the power of the information that will affect investment decisions constant and presented it to investors in different presentation intensities and found that the responses of investors to the intensity of the presentations changed in the same direction. This is in parallel with the fact that according to Barberies et al. (1998), if the statistical ratio created by the information provided to the investors is kept constant, the perception differences in the market will emerge as overreaction and under reaction by investors.

Barberis, Shleifer, and Vishney (1998) found that investors will exhibit two types of behavior in a study examining the relationship between current price movements in the market and investors' behaviors. These are bias of representativity and conservatism. The conservative behavior observed in the investors is expressed as the investment behavior pattern exhibited by the investors who cannot come out of the effect of the knowledge gained from their past experiences and make investment decisions in this direction. On the other hand, the bias of representativeness is explained by taking into account the artificial and striking value created by the investors rather than taking into consideration the statistical weight of the information obtained from the market by the investors.

Barberies et al. (1998: 310) determined the insufficient reaction and overreaction behavior of investors in market conditions as a result of two situations. Insufficient reaction behavior indicates that investors are slow to act in the absence of the expected investment reaction in the face of a company operating in the market declaring that it is making a profit. Overreaction behavior means that after a series of positive and negative news about a company, investors react differently than expected n an extreme reaction, regardless of the firm's profit-loss relationship.

Barberies et al. (1998: 311) showed statistical evidence of overreaction and insufficient response observed by investors in their study. The inequality of insufficient response from these inequalities represented by mathematical expressions is presented as shown below.

$$E(r_{t+1}|z_t = G) > E(r_{t+1}|z_t = B)$$

Among the terms used inequality "t" is the time period, "z" is the news received about the investment, "z_t" is the news received about the investment in time t, "r" is probability of realisation, "r_{t+1}" means the probability of realisation in the next period, "G" means success and "B" means failure.

The inference from the above inequality is as follows: It shows that an investment that is reported to be successful in the current period will be more likely to succeed in future periods than an investment that is reported to be unsuccessful in the current period will be more likely to fail in the future. In other words, if an investment instrument is currently yielding successful results, it is likely to be successful in the future. Likewise, if an investment instrument is currently failing, it is likely to fail in the future.

In view of the inequality presented above, investors need to choose investments that are currently successful. However, when the behaviors of the investors are observed, it is seen that the investors do not act in line with this expectation and the investment response that they should show is not sufficient (Barberies et al., 1998:311).

Barberies et al. (1998: 313) present the inequality of overreaction as shown below.

$$E(r_{t+1}|z_t = G, z_{t-1} = G, \dots, z_{t-j} = G) < E(r_{t+1}|z_t = B, z_{t-1} = B, \dots, z_{t-j} = B)$$

Among the terms used inequality "t" is the time period, "j" is the last time of the time zone, "z" is the news received about the investment, "z_t" is the news received about the investment in time t, "z_{t-j}" is the news received about the investment in time j, "r" is probability of realisation, "r_{t+1}" means the probability of realisation in the next period, "G" means success and "B" means failure.

The inference from the above inequality is as follows: It is more likely that an investment instrument, which is reported to have consistently failed in the past, will also fail in the future, compared to the probability that an investment instrument, which is reported to have consistently been successful in the past, will be successful in the future. In other words, if a firm fails in the past, it will also fail in the future. Likewise, a company that has been successful in the past will be successful in the future. When the likelihood of these two inferences is compared, the failing firm is always more likely to fail in the future (Barberies et al., 1998:313).

Looking at the inequality presented above, good and bad situations in the past provide information about future periods. However, in the face of this inequality, it is seen that investors react to the success and failure of investments and succession of investments instead of seeing the statistical

difference presented by inequality. It is observed that investors have turned towards investments that have yielded successful results in the past and avoided investments that have failed in the past.

1.5.3. Daniel, Hirshleifer and Subrahmanyam Model

People are affected by many factors when making investment decisions. These factors result from both personal characteristics and environmental factors. Bolhuis and Goodman (2005: 62) state that investors are influenced and acted on certain factors such as benefiting from past experiences, avoiding loss and overconfidence when making investment decisions. Daniel et al. (1998) state that two basic emotions emerge by focusing on the psychological factors that investors are affected in making their investment decisions. These are excessive trust and self-attribution.

Daniel et al. (1998: 1844) pointed out that investors consider themselves superior in exhibiting investment behavior in order to increase the value of their assets, and they show that investors act with the illusion of over-confidence in making investment decisions. The other error that directs investors to make a wrong investment decision is the self-attribution fallacy. Investors are influenced by the success of their previous investments and make their own success while making investment decisions. Investors applying the investment behavior in this context reinforce these feelings if the investment decisions are successful. In case of failure of investment decisions, they deceive themselves by putting the situation to chance.

Daniel et al. (1998: 1865) base the two psychological conditions under which investors are influenced by the misinterpretation of real information shared with the market about investment instruments. The results of these two basic psychological emotions, which ignore the real information, mislead investors and lead them to make wrong investment decisions.

De Long et al. (1991) suggest that there are positive effects of overconfidence of investors. The study suggests that investors who make rational decisions on the basis of statistics will not be profitable in the long term, and that investors with excessive confidence can make high-profit investments with the information obtained from the market and interpreted correctly. Although this interpretation creates a paradoxical situation in the face of the psychological illusion of excessive trust, it ignores the assumption that investors with excessive trust cannot exhibit successful behavior in interpreting real and accurate information from the market.

Gervais and Odean (1992) point out to the positive results of an aggressive attitude in the behavior of the investor with excessive confidence in himself, suggesting that acting with excessive confidence will provide investors with advantages and competitors may be unresponsive to this situation. Daniel et al. (1998: 1866), on the other hand, assert that excessive self-confidence behavior is seen more in investors with low investment liquidity, and that low investment liquidity will lose the

advantage of this situation and that the competing investment instruments can react quickly and without reacting to this situation.

Odean (1998: 1887) argues that markets will be affected by the excessive confidence investment behavior of investors and may create market fluctuations. It strengthens the conclusion that in an investment environment where market fluctuations are high, investors will act with reference to incomplete and incorrect information, which will mislead investors, and especially those who act with excessive confidence will be affected more.

Coval and Shumway (2005: 5) state that investors who have achieved successful results in their investments have self-attribution behavior in their investment decisions based on their past success related with their future investments and have more confidence in self-attribution behavior in each successful investment. This situation triggers investors to be more risk-oriented and to act on their own interpretations rather than statistical values of actual information. Investors who are affected by this psychological situation and exhibit irrational behaviors also support the model proposed by Daniel et al. (1998).

As a result, in the behavioral finance model developed by Daniel et al. (1998), it is determined that investors will act by being influenced by excessive confidence and misconception of self-attributability and that they will exhibit irrational behaviors.

1.5.4 Hong and Stein's Model, News Hunting and Momentum Behavior

The limited rational human approach, accepted from the basic assumptions of behavioral finance discipline, is clearly seen in the behavioral finance model put forward by Hong and Stein (1999). The overreaction and inadequate response of the investors, which are tried to be explained in other models are also tried to be explained in this model and their reasons are questioned. However, the model of Hong and Stein (1999), unlike other models, tries to determine how investors exhibit their investment behavior and to explain the types of investor behavior in line with their findings rather than questioning rational behaviors that emerge on a psychological basis.

Hong and Stein (1999: 2143) divide the type of investor behavior into two. The first of these is news hunters who determine investment behaviors in line with the developments in the market and the information obtained. The second investor behavior type is momentum investors who take into account the investment trends of the investment instruments in the previous periods and act according to the change situation of the investment instrument in a certain period.

When these two types of behaviors are associated with investor reactions, it is seen that news hunters show inadequate reactions due to the low rate of dissemination of information obtained from the market and taking a certain time to accept the accuracy. Momentum investors, on the other hand, are observed to be overreacting by making predictions together with examining the situation of the

investment instrument in the past periods instead of following the information coming from the market (Hong and Stein, 1999:2143).

The basic approach followed in this model examines the effects of investor behavior on each other and on the market, following different paths instead of investigating the effect of psychological attitudes of two basic investor behavior types on behaviors (Hong and Stein, 1999:2144). Looking at the effects of investor behavior on each other, it is seen that both investment behavior types have their own weaknesses and these weaknesses affect each other. The weak point of news hunters is that they are not able to react to the information coming from the market in a timely manner and are open to losing investment opportunities and profits from investment opportunities.

The main weakness of Momentum investors is the fact that they only evaluate the investment instrument by looking at the past conditions and ignoring the information obtained from the market. This increases the risk level of investment decisions of momentum investors. Looking at the effect of weak points on each other, the lack of reaction of news hunters prevents the market value of the investment instrument from reaching its required level and causes momentum investors to gain below the expected earnings level if they succeed in their predictions. Investments made by Momentum investors based on historical data appear to inflate the market situation of the investment instrument, causing news hunters to mislead and make wrong investments. When the common points of both investor types are considered, it is seen that the investors have limited rational behavior rather than rational behavior.

Zhang (2006: 135) compares the two types of investment behavior based on the uncertainty of the market and the gains of the investment instruments to investors under these uncertainties. According to this comparison, the increase in the risk level in uncertain environments increases the amount of gain to be obtained from investment instruments whose uncertainty level is higher than other investment instruments. The investor behavior that will benefit the most from this situation is the momentum investor type. The investor exhibiting momentum investor behavior increases the level of earnings by receiving the reward of early reaction.

As a result, it is seen that the model developed by Hong and Stein (1999) has a characteristic behavioral finance model. Instead of seeing people as rational investors as in traditional finance theories, it is seen that the investors prefer a certain investor behavior attitude based on their beliefs and general acceptances while acting accordingly in this model.

Results

Behavioral economics is one of the major branches of recent literature in the literature. In fact, popular academic articles have recently been published in this field. Behavioral Economics is based on psychology and economics to discover why people sometimes make irrational decisions and why their behavior does not match the predictions of economic models. For example, it reveals that we don't make

decisions about how much we will pay for a cup of coffee, which car to buy, or how much savings we have to make for a healthy life by purely economic factors. Behavioral economics deals with explaining why an individual makes decision B instead of choice A. It argues that people are not always “rational” in making economic decisions, that they make decisions under many social, cultural and psychological influences, and that economic policies should be designed and implemented with these factors in mind. These economic policies may be on the basis of companies or individuals, as well as state and even intergovernmental policies.

Behavioral Economics emerged by criticizing the assumptions of the basic economic view that prevailed until the 1980s, in particular the assumption of “homo economicus”. When constructing Behavioral Economic theories, it is necessary not only to analyze with mathematical data but also to add psychological and sociological elements to the related theory. People may not always decide to maximize profit or benefit because people are not always able to make rational decisions. For example, due to the presence of asymmetric information, risks and uncertainties, the desire to gain status and reputation, to become popular, and to be loved or counted, people may be distanced from rationality.

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