

**FACTORS AFFECTING THE OF TURKISH INVESTORS WHILE
PURCHASE STOCK**



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DECEMBER, 2021

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DECEMBER, 2021

PLAGIARISM

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

29.12.2021

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ABSTRACT

In recent years, behavioral finance has become a frequently discussed and researched concept in academia. Understanding behavioral trends is more effective than certain predictions and expectations in financial decision making, so it is necessary to identify, investigate and understand the function of these trends and evaluate the consequences of these factors. From the past to the present, human beings appear in many types, not only physically, but also in behavior. These behaviors differ for each person. Since the beginning of the 20th century, economics and finance experts have focused more on financial behaviours, recognizing the importance of behavioral characteristics and variability in the financial field. For this reason, they have begun to examine the decision-making phase and behavioral changes of individuals in the investment process. Technical analysis while investing, basic knowledge and theoretical knowledge are used. However, another equally important factor is behavior. In this study, it was investigated whether the financial behaviours differ according to the demographic characteristics and financial profiles of the investors. Accordingly, it has been determined that the behavioral finance tendencies of Turkish individual stock investors differ significantly according to the investor's working time, education level and the share they allocate from their income for investment.

Key Concepts: Investment, Investor, Stocks, Financial behaviours.

ÖZET

Davranışsal finans, son yıllarda akademide sıkça tartışılan ve araştırılan bir kavram haline gelmiştir. Davranışsal eğilimleri anlamak, finansal karar vermede belirli tahmin ve beklentilerden daha etkilidir, bu nedenle bu eğilimlerin belirlenmesi, araştırılması, işlevinin anlaşılması ve bu faktörlerin sonuçlarının değerlendirilmesi gerekmektedir. Geçmişten günümüze insanoğlu sadece fiziksel olarak değil davranış olarak da birçok türde karşımıza çıkmaktadır. Bu davranışlar kişiden kişiye farklılık gösterir. 20. yüzyılın başından itibaren ekonomi ve finans uzmanları, finansal alandaki davranışsal özelliklerin ve değişkenliğin önemini fark ederek daha çok finansal davranışlara odaklanmışlardır. Bu nedenle yatırım sürecinde bireylerin karar verme aşamasını ve davranış değişikliklerini incelemeye başlamışlardır. Yatırım yaparken teknik analiz, temel bilgiler ve teorik bilgiler kullanılır. Bununla birlikte, eşit derecede önemli bir başka faktör de davranıştır. Bu çalışmada, finansal davranışların yatırımcıların demografik özelliklerine ve finansal profillerine göre farklılık gösterip göstermediği araştırılmıştır. sonrasında Türk bireysel hisse senedi yatırımcılarının davranışsal finans eğilimlerinin yatırımcının çalışma süresine, eğitim düzeyine ve yatırım gelirlerinden ayırdıkları paya göre önemli ölçüde farklılaştığı tespit edilmiştir.

ACKNOWLEDGMENTS

Bu yolda bana her zaman destek veren anneme ve eşime ve de bu tezin gerçekleşmesin de yardımcı olan danışmanım Can KAYA'ya, anketime katılan ve sabırla bütün soruları cevaplayan herkese, son olarak hayatımın her evresinde bana destek olan değerli abim Barış DALAN'a sonsuz teşekkürlerimi sunarım.

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INTRODUCTION

Researchers in the field of financial behaviours have provided a new perspective to the finance literature that opposes traditional finance theories and have conducted many studies to prove that individuals often behave irrationally as well as rationally. Tversky and Kahneman's (1974) studies played an important role in the rise of behavioral finance, in particular.

Financial behaviours, which emerged as an alternative perspective as a reaction to the weaknesses of traditional finance theories, can claim that financial markets cannot be explained by the assumption that investors are rational. The concept of rationality in financial behaviours as been stretched by personal choices such as risk aversion or false beliefs (Ritter, 2003).

The traditional finance model defines individuals as rational people who seek to maximize their utility. Contrary to the rational approach, financial behaviours recognizes that investors' choices are based on these intuition-based beliefs about future returns, within the framework of various psychological biases. In short, the concept of behavioral finance emerged with this decision-making process that deviated from rationality. financial behaviours; Is a model that argues that people deliberately or unknowingly make investment decisions by acting accordingly to internal and external factors which are far from being rationed.

In the first part of the study, the concept of investment is given in detail. In the second part, financial behaviours approach is given in detail. The historical development of behavioral finance, its relationship with other disciplines and its foundations are explained.

Investor trends, which are the starting point of financial behaviours, are explained and explanations are made about stocks. First, the definition of stocks was made and information was given about their types. Then, alternative investment instruments are mentioned. In the third and last part, it is aimed to examine individual stock investors within the scope of financial behaviours. In this context, a questionnaire was applied to individual investors who buy stocks frequently. 191 individual investors were available for the application. The questionnaire applied to individual investors consists of 3 main points. In the first part, 6 questions were asked to determine the demographic characteristics of the investors. In the second

part, 11 questions were asked to determine the financial profiles of the participants. In the third part, a total of 9 statements prepared according to the 5-point likert scale, in which psychological tendencies are measured, are also included. After all the data was collected, the data was analyzed using the SPSS 23 statistical analysis program. First of all, frequency analysis of each question was made. Then, hypotheses related to the research was established and these hypotheses were tested. In order to test the hypotheses, analysis methods were used according to the characteristics of the variables. Accordingly, the behavioral finance tendencies of Turkish individual stock investors depended on the working hours of the investors.



FIRST PART

GENERAL FRAMEWORK ON THE INVESTMENT CONCEPT

1.1. Investment Concept

Investment is defined as previously incurred expenditures, the main purpose of this is to make profit, gain and benefit financially (Istanbul Stock Exchange, 2008: 524). Regarding the concept of investment, different definitions are made with different approaches in terms of economy, public language in social life and business. The concept of investment in social life can be expressed as the separation of economic values for a business in order to gain profit. In simple terms, investing means buying anything that counts as a capital asset. All purchasing activities such as depositing money in banks, buying stocks or bonds, buying real estate are considered as investments (Usta, 2005: 3). From an economic point of view, the concept of investment can be expressed as the sum of the expenditures used to increase the means of production.

From an economic point of view, the concept of investment refers to the creative activities created by the equipment stock over a period of time. As used in social life, that is, from the point of view of the language of society, the concept of investment is the activities performed to protect and increase the existing capital. Investing from a business perspective; It refers to various expenditures that are believed to bring income to a business for a long time where expenditures and investments made for all assets, short or long, tangible or intangible, in order to carry out the activities of the workplace and to ensure the flow of the business (Kaya, 2015: 35).

Kojabad (2012:6) investment; Defined as the transfer of equity or wealth to various investment channels in order to increase future consumption power and generate income. Karan (2013) investment; It is defined as connecting a certain amount of money today to a certain job or vehicle in order to gain or benefit in the future. Return refers to the benefit or gain to be derived from investments made for a certain period of time. The investor, aims to make a monetary benefit to be obtained at the end of the process in order to increase their capital which should be higher than the amount of investment made at the beginning. This increase in expected value at the end of the investment can be seen as political, economic, social, etc. may differ

according to their condition (Sezer, 2013: 6). The main desire of the investors, to preserve the value of the investment they have made and to continue to increase this value to a certain extent (Aksoy and Tanrıöven, 2007: 1-10). In this case, investors will transfer their savings to different sectors through various securities in the process of making investment decisions (Usta, Öcal and Demireli, 2010: 25).

Funds, capital or money used by individuals or organizations are often referred to as finance. Finance means gaining the funds needed by the business in order to increase the business value to the highest and then being able to transferring these funds to the assets in the most efficient way (Ateş, 2007:3). When evaluated by the business, finance is the evaluation and use of unique principles and methods within the economy in decision making and problem solving. Finance, with the theory and tools it shows for the management of businesses, has a great importance in the investment and financial decision-making stages of the business (Canbaş and Vural, 2010: 3).

1.2. Investment Decisions

All decisions for the future also have a financial aspect. Decisions are to be taken in this direction are financial decisions by emphasizing that the needed resources are procured from the most appropriate sources and under the most favorable conditions and investment preferences are used accordingly (Tufan, 2006:11). Simply put, investment equity refers to purchasing any financial asset purchased by investors in order to make a profit or increase existing wealth. While the main tools of financial investments are reasoning to the decision-making process, emotional and unconscious factors are more effective than logical transactions. (Aksoy and Tanrıöven, 2007: 1-10).

Individuals can choose to consume their assets today or invest in the future. If they choose to invest, they can invest by purchasing various securities. Investments are divided into two as non-financial investments and financial investments according to the asset on which the investment decision is made. Estate, collections, building, land, metals, physical resources refer to non-financial investments. Investments in items such as bills, bonds and stocks represent financial investments. In addition, the definition of financial investment includes investments such as interest, arbitrage arising from maturity differences, and dividends. Although non-

financial and financial investments point to different points conceptually, it should be noted that these investment types are interlinked. Take the example of someone setting up a factory with the help of a loan, a factory built by an entrepreneur can be used as an example of non-financial investment, while a company's lending to an entrepreneur qualifies as financial. The main determining factors of social material wealth are the production capacity of countries and the information they use in the production of goods and services (Ateş, 2007: 79).

1.3. Purpose of Financial Investment Instruments

Efficient use of resources in the financial market is ensured by transferring the idle funds held by the investors to those who are short of funds and need funds. Financial market instruments are used to facilitate and accelerate this process (Telçeken, 2003:35). Financial market provides a standardized method of transferring funds. Since the conditions and usage rules of financial market instruments are predetermined, time-consuming and costly processes such as redefining the conditions and making an agreement in each transfer transaction are eliminated. Financial market helps to accumulate capital.

We can divide the general investment objectives into three main categories in terms of investors: “capital protection”, “income generation” and “value increase” (Kaya, 2015: 37-38).

1.4. Importance of Financial Investment Instruments

Investments that enable a country's economic growth and development often require large amounts of capital. On the other hand, the funds are too much to be covered by one person or institution. However, with relatively small amounts of money collected from many individuals, large sums can be made in total. These savings can be achieved through financial investment instruments in the financial market. Another important factor is that serious investments require long-term financing. However, long-term financing costs are high and difficult to maintain. This negative factor, gives the opportunity to find long-term resources at lower costs, which can only be eliminated through an efficient financial market.

The existence of financial markets is equally important for those who need funds and those who provide them. With the help of financial markets, investors can

own a certain amount of assets, which in turn require large amounts of capital. For example, if a person can never have enough of his own income or wealth to own the whole of a company, he can buy a company's share, thus owning a company at a certain rate during that time. (Telçeken, 2007: 5-6).

1.5. Individual Investors

Individual investors are generally people who invest on their own behalf to make a profit in the market (Korkmaz-Ceylan, 2007, p.11). Individual investors form the basis of financial markets. Individual investors display many psychological behaviors. Being bias is considered one of the most important factors affecting short-term or long-term investment decisions. Individual investors will make unprofessional decisions while investing (Seyidoğlu, 2003, p. 380). Gender, age, marital status, educational status and other characteristics are some of the factors that play an active role in the decision-making process (Barak and Demireli, 2006, p.30).

The size of a country's savings stocks is important for the economic development of developing countries and any country that will fall into the category of developed countries. Developing countries face the problem of insufficient savings due to low income levels due to limited resources. Therefore, developing countries need to use these limited resources along with the right investment in order to achieve their economic goals. In the process of using limited financial resources for the right investment, data regarding each investment area should be collected and analyzed. The most important task in this process is the investor community (Orçun, 2016). On the other hand, an investor can be defined as a person who buys one or more financial assets to generate more revenue through a portion of his or her wealth.

1.5.1. Individual Investor and Investor Psychology

The concept of an investor refers to a person who participates in the market as a buyer or seller, anticipates future benefits in his financial decisions and invests. Individuals who invest with their personal savings are defined as real person investors. Legal entity investors are found in the private sector, governmental and public sector that use their funds with various investment strategies. The main objective of the investor is to provide return benefits and efficiency. In addition, providing continuous and targeted return and value increase, maintaining or increasing the purchasing power of capital are among the objectives of the investor.

Thus, the investor tries to maximize the growth of their wealth with sustainable income and value increase. Psychological factors are one of the most important factors affecting investment decisions. Investors' skills, experience, interests and inclinations, Sources of motivation, behavioral patterns, personality structures and unique characteristics of investors, perception levels of learning abilities, attitudes and behaviors are the most important psychological factors that affect investors' investment decisions. When the investment process is evaluated in terms of human psychology, it is the result of the mutual influence of many independent factors.

Since the decision-making process is closely related to the psychological structures of individuals, human behaviors may differ in every situation to be decided (Döm, 2003: 14). Personality structures and unique characteristics of investors, perception levels of learning abilities, attitudes and behaviors are the most important psychological factors that affect investors' investment decisions. When the investment process is evaluated in terms of human psychology, it is the result of the mutual influence of many independent factors.

The perspectives of individuals who will make investment decisions, what meaning they attribute to the concepts, their emotions and attitudes, which are the natural expressions of psychological tendencies, and their past experiences are the main psychological factors that guide the decision-making process. Since the decision-making process is closely related to the psychological structures of individuals, human behaviors may differ in every situation to be decided (Döm, 2003: 14).

Perception levels, attitudes and behaviors related to learning abilities are the most important psychological factors that affect investors' investment decisions. When the investment process is evaluated in terms of human psychology, it is the result of the mutual influence of many independent factors. The perspectives of individuals who will make investment decisions, what meaning they attribute to the concepts, their emotions and attitudes, which are the natural expressions of psychological tendencies, and their past experiences are the main psychological factors that guide the decision-making process. Since the decision-making process is closely related to the psychological structures of individuals, human behavior may differ in every situation to be decided (Döm, 2003: 14).

Although investor psychology has an important and decisive place in financial markets in terms of financial investment decisions, it is sometimes ignored because it does not see the value it deserves. Individuals who will invest do not only act according to economic indicators and models when making investment decisions. Psychological indicators such as their inner world, experiences, perceptions that direct their perspectives, and beliefs that direct their behaviors play an important role in their investment decisions (Taner and Akkaya, 2005: 47). The irrational tendencies of individuals in making financial investment decisions, expressed as psychological biases, are the determinants of financial investment decisions (Barak, 2008: 105).

Today, it is not possible to say that financial markets operate in an ideal and effective structure, as investment psychology will seriously affect investment decisions, financial markets and the development of these markets. The basic condition for understanding financial markets is to be able to understand economic and irrational investor reactions. This is only possible if human behavior and psychology are fully studied and understood (Akerlof and Shiller, 2010: 176). The courageous attitude of some people compared to other people is an important indicator that investment decisions are affected by psychological attitudes and behaviors (Marron, 2011: 105).

1.5.2. Rationality in Investment Decisions

Although rationality is used in many fields from philosophy to economics, from theology to logic, it is difficult to express it with a general definition (Kübilay, 2015:17). The reason for this situation is that concepts such as good and bad, matter and existence, right and wrong have different meanings in different fields (Demir, 2013;49-68). Rationality is derived from the Latin word ratio, meaning reasonable, reasonable. When evaluated in terms of economy, rational behavior is expressed as maximizing the individual benefits of individuals. According to this way of expression, the homo economicus model, which is the basic human model, emerges. In the homo economicus model, the person has sufficient information about his present and future in all decisions related to production, consumption and exchange, and acts consistently and rationally in making decisions accordingly. Aiming to maximize his own decisions and not affected by feelings such as regret and fear, homo economicus values only money and spending for this purpose. This model

represents the traditional understanding of finance and has had some success in understanding economic relations. It is not enough to eliminate the difficulties encountered in understanding and interpreting complex events that occur in real life (Kübilay, 2015:17). People will be affected by the economic and social dynamics of the society in which they live, and they will make decisions by considering these factors. On the other hand, homo sociologicus is an alternative variant to homo economicus. Homo sociologicus pays attention to factors that influence individual decision making and focuses on variables that influence decision making, such as religion, popular disposition, ideology, and tradition.

People are faced with uncertain situations during their lifetime. Lack of adequate information while making economic decisions is one of the main factors causing these uncertainties. Lack of information affects individuals' understanding of the decision-making environment and may lead them to make different decisions. Although there is sufficient information, psychological events that concern individuals can change the meaning of information for individuals. Another uncertainty factor is the inability to understand and use the new possibilities of changing information depending on the technological development in the information age (Abaan, 1998: 77).

Amos Tversky and Daniel Kahneman (1974) conducted studies showing that individuals deviate from rationality and make mistakes (McFadden, 1996:1-8). Herbert Simon, on the other hand, defined homo economicus as an imaginary element of the economy. Simon advocated using the concept of limited rationality, which he advocated as a more realistic expression, instead of the homo economicus model (Thaler, 1980). Because although there is no problem in obtaining information, psychological factors will affect decision making and choice. As a result, the concept of rationality has become a weak hypothesis over time and it has been realized that this concept does not form the basis of economic relations.

1.6. Types of Risks Encountered in Investments

Risk can be defined as the probability of unexpected events that may occur in the future and the probability of damage arising from the unexpected event. In the case of financial investment, risk means the probability of deviation of the expected rate of return from the actual rate of return (Ceylan and Korkmaz, 2012: 572). The

concept of risk is called the objective measure of uncertainty, and it is defined objectively because it is calculable. Determining risk levels is a very important issue for all investors, whether it is an investment tool or a portfolio (Demireli and Taner, 2009: 146).

In simple terms, risk can be expressed as the current uncertainty about what will happen in the future. Regarding the concept of risk; There are definitions such as the risk of not making the right decision, the possibility of failure of the plans made, loss or profit. Risk cannot be mentioned in an environment of certainty where the future results of the activities carried out, the decisions to be made and the investments to be made are known. When the concept of risk is evaluated in general; It can be divided into "systematic risk", which does not change according to the type of financial asset, and "unsystematic risk", which changes in parallel with the diversity of financial assets (Kaya, 2015: 50).

There are 3 types of investors against risk (Ceylan and Korkmaz, 2012: 575):

- Risk-averse investors
- Investors who are the opposite to risk
- Investors who love risk

One point that should be mentioned here is that the concepts of risk and uncertainty should not be confused with each other as they have different meanings. While the term of uncertainty that includes risk does not have a positive or negative meaning, the term risk has a negative meaning, but it can be expressed as an uncertainty related to whether an economic loss or an undesirable situation occurs (Öçal and Çolak, 1999: 205).

If we evaluate the concept of risk in terms of individual investors (Barak, 2008: 35-36);

- Many individual investors have the ability to avoid the unknown.
- Individual investors often believe that risk can be reduced by investing in more popular financial instruments.
- Individual investors are often reluctant to reinvest in stocks or other financial instruments that they have previously lost.

- Individual investors tend to confuse past risks with future risks, expecting the same performance from a previously well-performing stock or other financial instrument and then concluding that the risk of the investment instrument will be low.
- While the concept of risk is interpreted as "standard deviation of returns" by the institutional investor, risk is interpreted as "losing money" for the individual investor.

Attitudes of investing individuals to risk; may change over time depending on demographic, social and financial conditions. Although risk is one of the fundamentals of financial investing, it is viewed by many investors as the possibility of losing principal. In fact, the concept of risk, which is a multidimensional concept, is one of the most incomprehensible features of investment (Anbar and Eker, 2009: 129). For this reason, it would be appropriate to touch on different risk concepts.

1.6.1. Systematic Risks

Systemic risks include risks caused by factors that simultaneously affect the prices of all securities in the market. The main sources of risk in this risk category are the changes in economic, political and social life, and these occur mostly in businesses that produce basic industrial products (Ceylan and Korkmaz, 2012: 587). Systematic risks can also be expressed as risks that cannot be controlled and cannot be eliminated by portfolio diversification (Akgüç, 2013: 697). The reason why systemic risk cannot be eliminated by portfolio diversification is that all securities in the portfolio are equally affected by systemic risk (Kaya, 2015: 52).

1.6.1.1. Political Risk

Political risk is the probability of expected cash inflows and outflows to change as a result of policies implemented by governments, and factors such as economic crises, wars, foreign investments, quotas, exchange rate fluctuations can be factors that affect the concept of political risk. "Political risk may arise as a reflection of national and international political developments" (Ceylan and Korkmaz, 2012: 595).

1.6.1.2. Market Risk

Market risk is the negative effect of the negativities in the capital market on the expected return of the investment in which the investment is made (Bekçi, 2001: 42). Market risk is not in high quality financial instruments but rather in low quality financial instruments; It has more impact on stocks than bonds, in inactive markets rather than active ones. The reason why it affects stocks more than bonds is that the real values of debt instruments such as bonds can be estimated more accurately than the values of stocks, so the market price fluctuations of bonds are less than the price fluctuations of stocks. Portfolio diversification is not a way to avoid this risk, as all securities are equally affected by market risk. Instead, it would be more beneficial for the investor to measure the sensitivity of the price of the stock he wants to invest in to changes in the market in terms of protecting it from market risk (Ceylan and Korkmaz, 2012: 595). Market risk is a very comprehensive type of risk. In other words, it includes risk types that cannot be controlled by investors such as interest rate risk and currency risk. In addition, the inflation rate and differences in consumer preferences have a significant impact on the securities market and expectations due to the change in expectations over time.

1.6.1.3. Inflation Risk

Inflation risk, also called purchasing power risk, refers to the uncertainty of expected return on investment against inflation. Continuous and significant increases in the general level of prices reduce the purchasing power of money and therefore the effectiveness of securities investments is adversely affected. This uncertainty created by the inflation rate in the market and which cannot be intervened is the main risk factor for investors (Demireli, 2007: 124-125).

The risk that investors will lose the ability to purchase securities defined as monetary value will seriously affect the returns of the securities. If we compare the inflation risk of bonds and stocks, it can be said that stocks are less affected by inflation than bonds are. Inadequate purchasing power creates a negative effect especially on bonds, increasing the potential of bond investors to face inflation risk. When we look at this situation from the perspective of stock investors.

1.6.1.4. Currency Risk

Exchange rate risk is of great importance, especially for international investors, as the changes in exchange rates are closely related to the interest rates of other countries. Because, in the face of changes in exchange rates, the investor will gain in return for the currency of some countries, while losing in others. Investors can reduce the exchange rate risk by adding financial strategies from different countries to their portfolios. Short and long-term volatility of exchange rates, unexpected movements in exchange rates and the difficulty of predicting the future of exchange rates are among the reasons why investors, banks and enterprises are exposed to exchange rate risk (Bekçi, 2001: 42-43).

1.6.1.5. Interest Rate Risk

Changes in market interest rates may adversely affect the prices and returns on securities (Aydın, 2008: 10). While interest rate risk expresses the impact of market interest rates, it also includes the contraction of interest margins due to the volatility of these rates. Securities such as bonds and treasury bills, which are fixed income investments, are more affected by changes in interest rates than others. In this case, since the returns of fixed income investments constantly differ, they carry more interest rate risk than stocks (Demireli, 2007: 125).

1.6.2. Unsystematic Risks

Unsystematic risk, which we can define as "company or sector specific risk", is a type of risk that can be eliminated by portfolio diversification and controlled by various changes and interventions from its main sources. Factors such as errors within management, strikes by workers, advertising campaigns, changes in consumer preferences can be seen as examples of unsystematic risks. (Ceylan and Korkmaz, 2012: 592-599).

1.6.2.1. Management Risk

Management risks will arise due to the quality of business management. Management risk arises from the good or bad managerial decisions made by businesses. Mistakes made in management can have negative effects on many things such as on stocks (Ceylan and Korkmaz, 2012: 592-599). When bank loans are used

to meet the capital needs of newly established companies, management decisions will also impact the banking sector (Demireli, 2007: 127).

1.6.2.2. Industry Risk

The formation of industry risk arises according to the sector in which the enterprises are located (Demireli, 2007: 126). In order to eliminate the risks associated within a sector, investors should resort to diversification of industries when investing. Industry risk levels differ according to the industry in which the business is operating in. For example, since the demand for basic goods such as flour and coal fluctuates less, the risk level of companies producing such goods is lower than other companies that do not produce those goods. One way of minimizing the risk is to observe the possible changes in the business culture and the industry to calculate at what extent the business can be affected by these changes and developments (Ceylan and Korkmaz, 2012: 598).

1.6.2.3. Financial Risk

Financial risk is the possibility of an enterprise not being able to fulfill its obligations arising from its financial structure. This risk can be reduced by investing in different investments. Although financial risk manifests itself in economies with high export power, where capital resources and not bank loans, are used to meet capital needs; fluctuations in sales, increased competition day by day, where wrong decisions can be taken in management, etc. The effect is parallel to each other (Demireli, 2007: 126).

More specifically, financial risk is the reduction in the company's ability to repay its debt. It may vary according to the level of financing the assets of the enterprise with its own funds or foreign resources (Kaya, 2015: 54).

From the point of view from the investors, the level of financial risk may increase according to the characteristics of the industry in which the security is invested:

- The increase in operating debt,
- There is a strike in the workplace
- Insufficient working capital
- Wrong decisions taken in management

- Continuing the production of an outdated product
- An increase in raw material prices
- fluctuations in business sales
- Increasing competition

It can also help minimize financial risk in investments made by considering the following factors:

- Meeting the capital need in the sector to be invested mainly with capital
- The export potential of the enterprise is increasing,
- Consumers benefit from the goods and services of that business,
- The ability of the investee to adapt to technological developments,
- In addition to factors such as the ability of the enterprise to control the sources of raw materials, financial risk can be minimized to a great extent by diversifying a good portfolio of securities from more than one business in the market (Ceylan and Korkmaz, 2012: 597-598).

1.7. Factors Affecting Investment Decisions of Individual Investors

Under this heading, explanations are made about the individual, psychological and social factors that affect the investment decisions of individual investors.

1.7.1. Individual Factors

1.7.1.1. Investor's Demographic Structure

The age and current health status of a person are the most important factors that affect and determine the investment purpose of an individual. Those who want to keep their cash in hand are mostly elderly and people who can be considered to have less health requirements.

On the other hand, young investors may turn to investments to earn more instead of holding cash. This means that the old investors will choose the securities that will bring profit and at the same time contain low risk, whereas the young investors will look for ways to protect the money invested and at the same time increase this money (Büker, 1976, p. 3).

1.7.1.2. Investor's Knowledge

The knowledge of the investor can have a major impact in making investment decisions in accordance with the aim of the investment and risks alongside this investment. As the investor's level of financial knowledge increases, the need for investment advisors and portfolio managers will decrease. Having high knowledge and experience allows individual investors to take the right investment decisions made by themselves. (Anbar and Eker, 2009, p. 150).

1.7.1.3. Analyzing Financial Instruments

Individual investors may have knowledge about investment instruments and have the ability to establish relationships between these instruments. But people may not have time to analyze their investments and set strategies. For this reason, it is possible for individual investors to acquire consultants or switch to investments that do not need to be followed (Kesbic, 2006, p.10).

1.7.1.4. Investors' risk choices

Risk is a factor influencing the investment procedure and has an impact on the investment almost as much as the expected rate in return. While investing, individuals should consider not only the return but also the dangers (Korkmaz and Ceylan, 2007, p.23-24). Financially understandable risks are one of the factors influencing the decision of investors to spread their assets among various investments in such a way as to create a maximum portfolio in terms of risk and return. Demographic, social and economic conditions cause individual investors to change their attitudes towards risk (Anbar and Eker, 2009, p.148-150). In some cases, there are factors that can influence personal risk taking. In this case, the personal characteristics of the investor are to be effective. Investor's liking or disliking of risky actions, risk perception, orientation to risk is within the framework of someones personal characteristics. Studies have shown that as people age, their willingness and propensity to take risks decreases. Another study is about the relationship between education level and risk taking tendency. In this research, it has

been revealed that investors with a higher education status are more risk-seeking than investors with lower education status (Kesbic, 2006, p.10).

The marital status of the investor and the number of children also affect the risk perception. This is because unmarried investors have more responsibilities than married because they have fewer responsibilities. When considering children's and future expenses, married people tend to hold their current assets better and avoid risks. Another reason is that people who are married and have children are more sensitive to social risks. Social risk relates to the fact that investors who are disappointed with their investment decisions can lose their credibility. For these reasons, most married people avoid high-risk investments (Anbar and Eker, 2009, p.149).

Income level plays an important role in determining the amount of personal funds and the risk ratio they carry. Compared to low-income investors, high-income investors prefer high-risk investments as the return on investment will always be higher and more rewarding. (Usul et al., 2002, pp.148-150).

1.7.2. Investor's Psychographic Structure

Although the psychology of investing individuals is often not taken into account, it is of great importance in financial choices. Investors consider not only economic and financial factors, but also their psychology and experiences when making an investment. For this reason, investor psychology has a very important place in financial decisions (Yörükoğlu, 2007: 24).

In traditional models that investigate what kind of decisions individuals can make, especially in uncertain moments, it is predicted that individuals measure all the risks involved and the possible returns and calculate which outcome will have the most benefit to them. By using psychology, a person can overcome the problem by understanding the issue being faced (Yılmaz, 2009, p.4).

In a free market environment where prices are free moving, the role of individual and social psychology should not be ignored. Individuals and societies that do not have much experience in stock trading in underdeveloped countries immediately reflect their psychological state to their investments. Some people's political affairs can affect people's fear as well as greed (Yılmaz, 2009, p.7).

Psychological factors such as judgments, ideas, behaviors, level of education, perception, and whole experience can affect individual investors in their decision-making processes.

1.7.2.1. Heuristics

People naturally want to categorize objects and thoughts. They tend to make sense of human nature to make the decision-making process easier. According to the classifications made by human beings, when faced with a situation that they have never encountered before, they want to deal with this in the most appropriate way possible. This perception will become a tool that will enable the newly acquired situation to be processed simultaneously (Pompian, 2006, p. 62).

Studies and researches show that the human mind uses heuristics to facilitate the situation in confused and challenging situations. Such shortcuts serve to reveal the situation in a simpler way by combining the newly acquired knowledge of the human brain with the level of knowledge and experience obtained before fully internalizing it. This is an escape or a willingness to go the simple way of working things out. Thanks to the shortcuts we mentioned above, the human mind divides the new information it has obtained into classes and quickly absorbs it into the brain. Heuristics have benefits such as saving people time and dividing information into classes in an easy way. However, it can still have some negative impacts. These negative results are the inability of the brain to analyze the acquired information correctly and make wrong decisions. In addition, people will not have enough knowledge about the subject. Tversky and Kahneman, in their study in 1974, concluded that people come to conclusions to save themselves from the complexity of a specific situation which they would have never encountered before. A condition where a person is not used to can lead to series of errors occurring when making that final key decision (Tversky and Kahneman, 1974: 1124-1131).

Atkinson et al. defined heuristics as strategies or shortcuts that can be applied to solving problems, this does not mean always finding the right solution. In general, the situations where people need to use heuristics can be summarized as follows (Barak, 2008: 99):

- Individuals avoid thinking too much in situations that are unimportant to them or due to chance. Therefore, heuristics need to be used.

- While making a decision about a situation, the lack of sufficient information about that situation leads individuals to use specific heuristics.
- When an individual has too much information, they use heuristics because it is difficult to fully interpret all this information.
- While making decisions, individuals use heuristics to solve problems and encounter any issues.

From the point of view of investors, it is seen that the investor is not aware of the most appropriate solution to solve a problem, cannot reach all the necessary information for the most appropriate solution, makes it difficult for him to make an investment decision, or on the contrary, too much information causes information confusion, even if he knows the optimization techniques, the known technique is the current problem. Investors prefer to use heuristics while making their investments (Gazel, 2014: 37-38).

The heuristic is used when available information and time are limited and is considered a mental tool that allows investors to make quick decisions. Investors sometimes need to quickly evaluate new information that is reflected in the market. In this case, investors may need to use this mental tool, but this use sometimes causes investors to go the wrong way (Ariely, 2010: 25).

Kahnemann and Tversky's studies on this concept show that there are three types of cognitive rules when making predictions about complex and uncertain events. This internal cognitive rule; representation, presence, anchoring. When people make decisions about the probability of events, they evaluate the consistency and presence of frequencies occurring in the brain. When it comes to decisions about probability or the frequency of occurrence of the event, individuals resort to a limited number of cognitive shortcuts in order to make decisions simpler. One of them is the representation shortcut. In this shortcut, elements that represent the essential qualities of the main subject are decided. Then the individual makes a decision appropriate to the degree of representation. The orientation of the brain in the concept of representational perception,

People can distribute a long and detailed issue within the scope of the general whole by selecting a few data that they feel closer to them in order to keep more

information about a subject in their minds in their brains and to be able to remember it easily later. Since a few small pieces of information chosen are in a way that covers the entire subject, when the information is shaped in our brain, the whole subject takes shape. We can characterize this situation as small information representing big events.

The similarity of the event or the closeness of the event to a special quality is possible with probability estimation. When analyzed on a financial basis, it has been seen that the shortcuts we mentioned are used by individual investors. While making investment decisions, the investor associates the information obtained from the market with the heuristic concept and evaluates and analyzes accordingly. By combining all these in a short time, he puts the decision he has created in his mind into practice. In general, these easy strategies save time and help the brain, while many times they can lead people to mistakes.

It is an undeniable fact that the superficial perception of the information obtained and the decisions made based on estimates may cause the individual investor to miss the details that should be paid attention to, and that it may create various risks together with the decisions made on the estimates. Knowing the information obtained, making comments by examining the events in detail, and creating different combinations that can be supported by experiences and numerical information by going beyond predicting the results of the decisions will lead to much more profitable and successful investment decisions, even if it leads to a longer process. On the other hand, these mistakes, also known as intuitive illusions, cause more difficult renunciation compared to visual illusions (Kahnemann & Riepe, 1998, p. 52). For humans, shortcuts mean less tiring and easier-looking choices. However, the situations that result from an individual's full study of the event can be more difficult and produce far more complex results to overcome.

1.7.2.1.1. Representation Shortcut

The human brain has an innate tendency to categorize thoughts to give meaning to experiences. As new information becomes available, the individual's brain classifies the new stimuli and decides where the information should be processed. When the subject is presented with a new stimulus, it decides which class the newly acquired knowledge falls into. According to the law of numbers in statistics, the sample must

be large enough to give information about the population. On the other hand, according to the law of small numbers in psychology, people can reach an idea about the group by ignoring the sample size (Baker & Nofsinger, 2002, p. 83).

According to the researches of Kahnemann and Tversky on this subject, the object mentioned in this research conducted with the concept of "Law of Small Numbers" is a non-fraudulent case. In the first stage of the study on the research, the coin was tossed into the air three times in front of the participants. All three tosses resulted in heads. After this result, the subjects were asked the question of which surface of the coin would come for the fourth time. Most of the subjects gave the same response again. However, according to the concept of probability, the probability of getting heads or tails is the same no matter how many times the coin is tossed. However, the subjects could not decide independently of the situation in line with their previous interpretations. This situation shows that people can prelude an outcome or affect the process when deciding.

1.7.2.1.2. Presence Shortcut

Kahnemann and Tversky have carried out important research on the existence of shortcuts. According to their research, the presence of a shortcut is when individuals need to determine the probability or frequency of occurrence in events, they force their minds to remember the subject and try to analyse the information accordingly.

However, if the brain is not able to process the data, they do not think too much about the probability of the event occurring or the chances of something happening often. Conversely, if the information is easily remembered in their brains, they are more likely to have an idea of the outcome.

These behaviors are covered by the concept of the presence shortcut. The presence shortcut is also cognitive bias and can be stated as a mental shortcut. According to Pompian's work, the presence shortcut arises from people's tendency to avoid complex situations that they have difficulty imagining, and to choose the more suitable outcome (Pompian, 2006, p. 88).

- **Accessibility:** According to studies, it has been revealed that people trust mostly the information that they can Access easily. This belief

will not always give the right result. However, in order to avoid this, individual investors invest in financial assets that they can easily obtain information about, instead of doing extensive and detailed research while choosing the correct investment.

- **Classification:** From the perspective of the representation shortcut, people tend to categorize the new information they obtain based on the information they have obtained in the past. In terms of the presence shortcut, this is explained by focusing on how people categorize new knowledge they have acquired. The human mind, in parallel with the recorded information, prefers the new information to be processed, places it in the mind and creates a suitable solution.
- **Limited Experience Opportunity:** People also want to make an prediction about the future. However, if they do not have enough knowledge and experience about the subject they want to predict, their probability of making wrong decisions increases significantly. Investors benefit from their experience when making financial decisions.
- **Resonance:** When people meet someone who fits their thoughts and knowledge, they feel closer to that person which is human nature. They tend to view this person as more knowledgeable than they are in some sort way. There are two factors that affect this which are familiarity and conspicuousness. The investor can make decisions according to the area of his brain, without considering the possibility of profit or loss of a stock he has thought about. The individual investor, who has a lot of information about a stock in his mind, uses the stock preference in question and does not agree to use different investment strategies without considering the short or long-term risks.

1.7.2.1.3. Anchoring Shortcut

According to the researchers, while people do not care much about some information, they also hold on to some information that they have acquired to be seen as more than necessary. The new information that individuals hold onto are also up-to-date information.

When individuals make predictions about the probabilities of the way things will end, they think from the starting point. That is, they act according to the initial value. The problem formulation method or partial calculation method is used when deciding on the initial value. However, this is not enough since it is effective in solving the problem, the initial value of the decision is of great importance in the evaluation process (Döm, 2003, p. 48). When making predictions, the baseline should be easily remembered and not dissimilar because mixed and varied bases will affect the outcome of the decision to be made. If there is a situation where people need to make predictions when they are faced with information that they do not know about the outcome, they will make predictions based on the assumption they have gathered at the beginning.

In the concept of anchoring, information about the subject is obtained from the experiences gained in the first place. When the information is received, the process of combining the information begins and the decision is made after this thought process. The last step in the process is to create the answer. At this stage, the decision is determined by a certain non-intrinsic measurement value such as centimeters (Karan, 2013, p. 95).

When the anchoring effect is evaluated in terms of secure investors, it is seen that individual investors resort to adapting between the capital value they will invest and the capital value realized after making their investments. Research shows that this adaptation may not lead to an absolutely correct result and may cause errors. To put it more briefly, individual investors are committed to the amount of capital they start investing. When they encounter a situation, they immediately ignore the trends that may arise.

1.7.2.2. Cognitive Biases

Cognitive biases, which can be defined as the significant deviation of people from realism, have an important effect especially in the decision-making process. The reason for this is that individuals will be affected by some prejudices in the decision-making process (Kaya, 2015: 43). Cognitive biases can be viewed as the same set of systematic errors made in the decision-making process. Investors and analysts, who are biased while making their investment decisions, may exhibit an attitude contrary to known and accepted rationality during this period and may be

under the influence of certain emotions. Although it is not possible to completely eliminate these feelings, which may cause various prejudices, it is possible to reduce them (Gazel, 2014: 12).

1.7.2.2.1. Postcomprehension Bias

In this prejudice, the person takes an attitude as if he saw the event beforehand. By learning the answer, people's perception of an event or situation can change. This is considered as an important factor showing the regret of investors. Individuals who think that most things can be predicted with this tendency, which has some negative effects, may be mistaken for overconfidence (Hayta, 2014:337).

The afterthought bias is the bias of individuals who say they know the outcome in advance after an event has occurred. When faced with a problem, if nothing is known about the solution to the problem, not disclosing it may also fall within the scope of afterthought bias. The claim that "I already knew this" after the result was obtained is empirical evidence of this bias. This bias is one of the biggest biases that investors can fall into. (Küçüksille and Usul, 2012: 26).

1.7.2.2.3. Conservative Bias

The tendency to stick to a certain direction of thought is defined as conservatism. Conservatism bias, on the other hand, refers to a mental process in which people persistently adhere to their previous thoughts even if they acquire new information. Investments that have a positive impression of a company's earnings in the previous month, but receive negative information about the same company next month, in summary terms, the investor's analysis of old information over current information are examples of conservative biasness (Bayar, 2011: 142). Conservative investors slowly build up their beliefs. Due to this procedure, late and incomplete reactions are given to new situations. (Küçük, 2014:110).

1.7.2.2.4. Overconfidence

Overconfidence bias is a form of bias that occurs when individuals are overconfident that what they are doing is always right. Research shows that this bias

is in a lot of people, and the findings obtained from financial investors show that analysts generally have a sense of overconfidence (Barak, 2008: 108).

Investors with overconfidence have a tendency to see the situation as pure misfortune when they succeed in financial decisions. As a result of this tendency, the investor starts to see himself as smarter than he already is and can inherit an overconfidence trait (Taner and Akkaya, 2005: 47). Overconfidence makes investors feel better than normal and motivates them to invest when it is not essential to invest. (Schwartz, 2010: 63).

Overconfidence is the tendency of people to change their beliefs in that direction by relying too much on their knowledge and experiences in certain situations. Investors who are under the influence of overconfidence tend to rely too much on their own information and think that the best investment is their own decision without the seeking of thoughts from others (Asoy and Saldanlı, 2017:102).

With the overconfidence of the investors, the frequency of trading increases, but the diversification of their portfolios may decrease. Based on the assumption that female investors are more cautious about the risk phenomenon than male investors, it can be said that female investors will fall into the cognitive fallacy of overconfidence. In other words, we can say that the transaction frequency and volume of female investors is less, but their portfolios can show us more diversity (Kahyaoğlu, 2011: 34).

Overconfidence has many different causes. Some examples of these reasons are listed below (Yıldırım, 2017: 55);

- Being subjective when evaluating past decisions
- Ability to evaluate a limited number of options
- People believe too much in the accuracy of available information.
- People's belief that their knowledge and skills are better than the average person by seeing themselves as superior.
- People have false beliefs that they control random situations when in fact they have no control
- People have unrealistic beliefs that potential events will not happen on their own. It can be clearly seen that being overconfident has an effect

here. An overconfident person thinks the probability of being harmed is very low and tends to take high risks whilst being under this sort of illusion.

1.7.2.2.5. Excessive Optimism Tendency

According to Taylor and Brown, many studies have shown that overly optimistic and subjective evaluations are indicators of average human nature (Demir, Akçakanat, & Songur, 2011:123). In other words, excessive optimism emerges as the individual's belief that everything he or she will experience will be as he or she wishes and causes investors to adopt an optimistic attitude while making investment decisions (Kaya, 2015: 45).

Over-optimism is when people tend to think that their knowledge and skills are better than they actually are. People maintain the same optimistic attitude in their expectations about the future. People with an overly optimistic tendency consider themselves luckier than previous generations because those with this perception believe that the future will treat them better. People who tend to be overly optimistic overestimate the probability of being successful while making an investment decision, while the probability of failure is low (Küçük, 2014: III).

There are many different reasons for over-optimism. Some attitudes that cause excessive optimism are listed below (Tufan, 2006: 60)

- Belief that events can be predicted before they happen; These people believe that they can make accurate predictions about the future, and they are very comfortable in making decisions about the future because they rely too much on their predictions. People who do not care about the uncertainty of the future and make decisions with an overly optimistic attitude are at risk of being harmed.
- Believing that good results are due to our own intelligence, and bad results to luck and by blaming external factors. As a result of this tendency, people show the behavior of attributing the success experienced as a result of their decision to themselves and attributing the responsibility of failure to someone else.
- Having imaginative thoughts can happen as well; As a result of this thought, people think that any person, event or object can result in a

positive or negative outcome. The popular belief that the number 13 is unlucky is an example of this. People with this tendency believe that markets can be affected by similar scenarios.

- The tendency to believe in fortune telling; coffee horoscope, tarot horoscope etc. Positive suggestions made in these horoscopes, which do not have a scientific aspect, may cause people to be overly optimistic and shape their decisions in this direction (Tufan, 2006: 61-62).

In summary, excessive optimism can be interpreted as people with this tendency to keep their expectations for the future at the highest level. People with this perception always think that everything will go well in the future (Korkulutaş, 2018: 42-43).

1.7.2.2.5.1. Loading Bias

People see successful works as the result of their own talents, and unsuccessful works as misfortune or the fault of others, and therefore attribute their failure to another cause. Gervais and Odean (2001) stated that this attribution bias will increase successful investors' tendency to overconfidence when investing. (Küçüksille and Usul, 2012: 29).

When individuals achieve success as a result of their knowledge and actions they associate it with their own abilities, while they acknowledge their failure to external factors such as bad luck. According to Garvais and Odean (2000), attribution bias increases the self-confidence of successful investors (Küçüksille and Usul, 2012:29).

1.7.2.2.5.2. Illusion of Control

The illusion of control is defined as the perception of control over an outcome that is stronger than in reality. This may lead individuals to think that their ability to avoid bad situations is high and therefore they are less vulnerable than others (Aypay, 2008; 27). The illusion of control is more likely to occur when individuals fail to distinguish between talent and luck when it comes to achieving success. However, it is very important to distinguish this point because while it is possible to control the successes achieved with a persons own mind, it is not possible to control

the successes achieved by chance as no one can have an impact on these situations (Tomak, 2011; 75).

1.7.2.2.5.3. Information Illusion

The illusion of knowledge is based on the idea that the more a person knows, the more accurate their predictions will be. However, an individual's increased knowledge of a subject does not always mean that he or she can make better decisions. One of the reasons for this is that some information may mislead individuals. Another reason is that not all people have the experience and ability to interpret information correctly. In addition, most people tend to evaluate new information in a way that supports old information which can hinder the ability of a person to make an important decision (Küçüksille and Usul, 2012: 29-30).

1.7.2.2.6. Prejudice of Familiarity

When individuals have to choose between two risky options, they tend to choose the option with which they are most comfortable with, even if they know little about this situation. For example, consider an investor's point of view, when the investor is stuck between two stocks while making a purchase, one of these stocks is in a diversified portfolio with less risk or can be seen as risk-free. Instead of choosing to invest in this stock, the investor will put their time and money in the stock they are most familiar with (Kaya, 2015:46).

1.7.2.2.7. Persistence in Belief / Confirmatory Bias

Most investors tend to look for information that matches their own ideas, rather than looking for information that contradicts their own. This error not only determines where investors will obtain information, but also affects the interpretation of the information gained. Accordingly, while confirmatory evidence holds an important place for investors, non-confirmatory evidence loses its significance. Confirmatory bias can also arise as a result of individuals' fear of losing their dignity. Therefore, the attitude of the individual is not to accept information that may reduce his dignity. For investors, selling a losing stock is the last thing to do as it means admitting to the failure. Again, due to this bias, investors absorb the information on which they can base their previous decisions.

In summary, persistence in belief bias is defined as a tendency to believe and exaggerate the views that support one's own personal views, and to ignore and reject the views that do not support their own views (Küçüksille and Usul, 2012: 32). Persistence in belief can cause people not to give up their thoughts easily even if their judgments are proven wrong.

1.7.2.2.8. Representability Bias

According to the idea first put forward by Tversky and Kahneman in 1974, investors with representative bias use their final decisions in favor of the most striking and extraordinary elements. Individuals with representative bias see events that have not been clarified with certainty, and if this event supports individuals' own experiences (Barak, 2008: 178).

1.7.2.3. Emotional Tendencies

1.7.2.3.1. Tendency to Avoid Regret

Individuals with a tendency to avoid regret are afraid and hesitant of the consequences of their own decisions. Individual investors with this characteristic avoid taking high risks because they think that whatever decision they make, they will make less gains or incur losses. Therefore, investors try to avoid the feeling of regret that may occur as a result of making a certain decision (Pompian, 2006, p. 227). Investors with this tendency want to hold the investments in their portfolios for a long time in order to avoid losing positions and to see their mistakes. They also tend to sell their profit-making investments ahead of time rather than holding on to them for a long time. The reason for this is to experience the feeling of being proud of the result of their decision. This is because they think that if they keep more of their profitable investments, they will incur losses and they believe that they will lose their sense of pride. When we consider the opposite of this situation, individual investors prefer to keep their investments for the long term, which could possibly impact them negatively. By holding on to their loss-making investments, they think they can reverse the loss and make a profit over time. This feeling affects the investor before the purchase (Karan, 2013, p. 180).

An increase in the value of an asset that an investor plans to invest but has not yet made makes the investor sad and regretful. The individual investor who will

make an investment will make a assess the market and will take the review the decision. As a result of all the evaluations, the individual investor wants to turn to profitable investments rather than to an investment that can cause a loss. (Kahnemann and Tversky, 1974, p. 266). Investors can continue to hold a losing stock which they will not admit that they made a mistake. They do this because they tend to try and neglect regret and think that this will turn into a positive decision in the future.

1.7.2.3.2. Tendency to Avoid Uncertainty

Individual investors may find themselves willing to compensate for high risks when investing. The tendency to avoid uncertainty is explained by the situation investors are in. Individual investors want to keep the investments within their portfolios (Elmas, 2010, p. 85).

According to Pompian's research, the behaviors described below are seen in individuals who tend to avoid uncertainty (Pompian, 2006, p. 129);

- Investors who tend to avoid uncertainty are more likely to choose investment types with a predictable loss and a more reliable chance of making a financial gain. This factor will cause individual investors to be more careful when investing.
- Individual investors, who tend to avoid uncertainty, want to invest using investment tools they feel that they are more suited in.
- Individual investors who tend to avoid uncertainty have more information about the stocks of the companies they work for. On the other hand, they have less information about other company stocks. Therefore, they believe the result of these stocks are more unpredictable and therefore avoid investing in the stocks of companies that they might not know about as well.

From a financial point of view, an individual investor who makes his investments with this kind of emotion may face negative consequences from time to time. The investment type that he or she prefers just because they are familiar with it may pose more risk and provide less return than other investment types (Baker and Nofsinger, 2002, p. 88). Individual investors should try to diversify and differentiate their portfolios in order not to suffer from this pattern. A well-diversified portfolio

also minimizes the risk of loss as it is not based on just one area (Moore and Cain, 2007, p. 59).

Individuals, by their very nature, prefer to avoid uncertainty both in their financial investments and in their daily lives. Sometimes this results in positive results and sometimes it gives negative results.

It has been shown by examples that individuals tend to choose more specific options, even when conditions with the same factors occur. As seen in the examples, while this situation negatively affects portfolio diversity in the financial portfolio, it can also make individual investors perceive the idea of avoiding risk completely. Despite this, it should be noted that individual investors, who tend to avoid uncertainty, should be more cautious in the process of making investment decisions.

1.7.2.3.3. Loss Avoidance Tendency

It is an undeniable fact that investors generally do not want to sell any investment at a loss. They want to make a profit from the investments they make and to make sales over the initial purchase price. Investors tend to recoup some of their losses. Some investors are perceived as risk-loving investors. Individual investors, who tend to avoid loss, do not choose to start a sales transaction immediately for their investments in which they can incur losses. They retain their loss-making investments over a long period of time. This type of behavior is characterized within the concept of compensation, which causes harm from time to time (Elmas, 2010, p. 99).

The measure of individuals' loss aversion tendency is related to how people calculate their losses and gains in their own minds. If individual investors are suffering a loss after the profit they have made, their emotions might show the loss more significantly than the moment they made their gain. Therefore the duration of negative emotions is only present for a short period of time. (Barberis, Shleifer, & Vishny, 1998, p. 310).

Investors with a tendency to avoid loss can continue to keep their investments in their portfolios. This situation may continue until profit is seen. As a result, individual investors will ignore the possibility of making more profits over time and will ignore the fact that if they are losing capital.

1.7.2.3.4. The Gambler's Delusion

Some events have a 100 percent probability of occurring, and some events have a 50 percent probability of occurring. Some events happen by chance, luck is the factor in these outcomes.

Here, in the second case, gambler's decision can be explained. For example, if a dice is rolled five times in a row, an even number may appear each time. Therefore, the person who rolls the dice thinks that he will catch the odd number in the sixth attempt. However, the odds of even and odd dice are the same no matter how many times the dice is rolled. This phenomenon can be seen not only in people who gamble, but also in all events that have a probability in day to day life. Individual investors may also encounter this while thinking of making an investment.

In some cases, the gambler's delusion can also be the opposite of the general trend. This happens when people turn to inconsistent predictions. The gambler's illusion can also be thought of as believing in the arithmetic means more than usual. (Yalçiner, 2012, p. 18).

The tendency for the gambler's delusion is imprecise, yet it still pushes our thinking towards a repeatable perception of events. An event is perceived as more livable even if the probability of its occurrence is the same.

1.7.2.3.5. Self-Control Tendency

According to Thaler and Sefrin, individuals tend to go astray. Therefore, they need to take various measures to control themselves. People divide their investments into two groups in their own minds. The first group includes the parts that should be kept as capital. The second group includes overheads. Due to this reason, investors avoid excessive and unnecessary investments (Karan, 2013, p. 671).

If the investor is between the satisfaction of short-term and long-term returns, it means that they are under the influence of self-control tendency. In order to be able to choose between these two different situations, one of these situations should look more advantageous and attractive when compared. As can be predicted in daily life, people always want to prefer high standards over low standards. People do not aim to force themselves in making choices. To achieve high standards, people always save money and avoid risks. However, according to the behavioral life cycle hypothesis,

well-being is divided into three different groups; current income, current assets, future income. According to this hypothesis,

If you have a tendency to self-control, investors may fall into the following mistakes (Tufan, 2006, p. 128);

- Investors under the influence of self-control tendencies may suddenly make the mistake of spending their savings that they should keep aside for the future. This behavior may cause the individual investor to reduce their savings and move away from the goals they originally planned. The investor, who tries to repay their lost savings, will take more risks than ever before and may have to deal with a situation much worse than the bad situation they were already in.
- Investors who are under the influence of self-control tendencies may experience failure in their plans for retirement. For this reason, they may take the risk of retirement. According to the studies, it is seen that individual investors who have prepared a pension plan have a more secure retirement right than investors who have not created a pension plan. In addition, it was concluded that these investors made fewer investments in stocks compared to individuals with retirement plans.
- Investors under the influence of self-control tendencies may spend their assets inconsistently. For example, some people focus on instant gains and turn to short-term profitable investments. Such behavior may cause harm to the individual. This is because investment portfolios that bring in lots of profitable investments because they can't keep up with inflation may be doing more damage than expected in the long run.
- Investors under the influence of self-control tend to be inadequate in situations that require attention, such as observing the vulnerability of their preferred investment instrument against inflation and following the fluctuations created by the developing financial environment.

1.7.3. Social Impacts

Most people are influenced by their work, relatives, and friends in the decision-making process. How investors are affected by their social environment has been the subject of many recent studies. Accordingly, investors who act only

according to the information they have obtained from their own social circles without having sufficient information about investment may be affected by speculation and make wrong decisions.

In addition, investors are exposed to the media and the internet to a large extent, and they are also affected by the media and internet while determining the financial item they will invest in (Gazel, 2014: 62-63).

There are some socio-psychological factors that affect investors while making their investment decisions. The environment in which investors live is effective in their investment decisions. Even if there is no question of investing, their behavior and decisions may vary according to the social conditions they live in (Usul et al., 2002, p.141).

If a person decides to invest without knowing the actions and decisions of other investors, but abandons the investment when he finds out that others are not making the same decision, he is displaying a herding behavior. In the opposite case; If the knowledge that other investors are investing causes the individual to invest, he will also join the 'herd' (Döm, 2003, p.136). Another reason for behaving close to each other is that people have similar decision-making problems. People have similar information and can face almost the same decision-making options and suffer the same consequences. So they make similar decisions, though not exactly the same. From this perspective, herd behavior causes individuals to imitate or copy each other. (Döm, 2003, p.136).

For example, the loss of attractiveness of stocks with an unexpected increase in interest rates emerges as fundamental data-driven herd psychology. Under the new conditions, investors want to reduce the number of stocks in their portfolio. This is not a swarm behavior because investors have reacted to well-known situations (such as an interest rate hike) instead of observing each other's actions (Bickhchandani-Sharma, 2000, p.32). Investors want to reduce the number of stocks in their portfolio. This is not seen as herd behavior because investors have reacted to well-known situations (such as an increase in interest rate) instead of observing each other's actions (Bickhchandani-Sharma, 2000, p.32).

Investors want to reduce the number of stocks in their portfolios. This is not a swarm behavior because investors have reacted to well-known situations (such as an

interest rate hike) instead of observing each other's actions (Bickhchandani-Sharma, 2000, p.32).

SECOND PART

FINANCIAL BEHAVIOURS CONCEPT, SHARES AND OTHER INVESTMENT INSTRUMENTS

2.1. Behavioral Finance Concept

Classical and neoclassical economics assume that hypothetical people called homo-economists maximize utility, have all the information that will affect the decisions to be taken, and see people as rational people who make the right decisions. In the finance literature, the view that individuals make rational choices by taking advantage of their own choices and opportunities and that they benefit from absolute knowledge while doing this has been dominant for a long time. However, there have always been those who questioned the ideal world of the homo economist (Fromlet, 2001, p.64-65). The traditional approach is satisfactory when validated with simple information. However, it was later revealed that the stock market, cross-sectional average returns and the behavior of investors could not be understood easily (Barberis and Thaler, 2005, p.1).

Faced with the challenges of traditional methods, behavioral finance is a new method that has emerged in the financial market. In this method, some subjects are not rational, and the assumptions under the concept of rationality are stretched in the model created. Having a consistent belief in some financial behaviours models, and individual rationality assumptions in others. In these models, people cannot update their beliefs correctly, make choices that are inconsistent with expected utility and questionable normativity (Barberis & Thaler, 2005, p.1).

Although criticism and research have expanded the use of rationality and complete knowledge, its various versions continue to be used predominantly in empirical finance. Financial behaviours also includes studies to develop established approaches by stretching these unrealistic assumptions, by including psychology in these studies and incorporating investors' behavior into the models used.

The assumptions that are publicly available is accurately reflected in prices and that investors act rationally in evaluating the information form the basis of the efficient market hypothesis.

The efficient market hypothesis does not make assumptions that all investors are rational or that the markets see the future. The efficient markets hypothesis assumes that the market is rational and that the markets make unbiased predictions about the future (Ritter, 2003, p.2).

Contrary to the Markowitz/Sharpe approach, financial behaviours examines the extent to which people move away from these assumptions in their decisions by acquiring and using information (Fromlet, 2001, p.65), and assumes that financial markets are not always efficient (Hirshleifer, 2014, p.4). Finance in the modern sense, needs a psychological basis as well as having rational approaches. Today, the leading theory on fundamental issues such as investor behaviors, cross-sectional returns, corporate investment and money management is derived from psychological factors (Hirshleifer, 2014, p.4). Irrational decisions and unforeseen events are not the same concepts. Unpredictable events can also be rational.

It is seen that the development of the field of financial behaviours occurs depending on its interaction with the field of psychology. It is accepted that research in the field of financial behaviours started with Amos Tversky and Daniel Kahnemann. After the expectation theory emerged, reactions began to occur, especially against the rational expectations assumption, and a rational decision-making style was often not considered sufficient enough to explain the situations we are in. At this point, the concept of financial behaviours emerged and began to question the concept of rational people, which classical finance theories showed as a model. As a result, it has been understood that not every decision taken by individual investors is completely rational, and these decisions are significantly affected by various intuitions and prejudices (Gazel, 2014: 4-5).

Financial behaviours has emerged as a branch of science that argues that human psychology is the cause of market anomalies that traditional finance theories cannot explain (Sefil & Çilingiroğlu, 2011). Finance studies accept that individuals use all available information completely and accurately when making investment decisions until the importance of financial behaviours concept is fully understood.

However, studies especially in recent years prove that there is no absolute rationality in the decision-making processes of individuals. These studies show that investors decide according to their own feelings and emotions rather than logic in the decision-making process (Barak, 2008: 65).

2.2. Definition of Financial Behaviours The definitions of the concept and scope of financial behaviours in the literature generally consist of the following statements:

- financial behaviours aims to understand and explain the reasoning model of investors, taking into account the emotional flows that affect the decision-making process. Essentially, financial behaviours tries to find answers to what, why and how questions in investment and finance. Financial behaviours is a branch that studies the effects of psychological and sociological factors on individuals' during the decision-making processes (Ricciardi & Simon, 2000).
- Financial behaviours is a new approach that has emerged in response to the challenges faced by the traditional approaches for financial markets. Financial behaviours also successfully explains how certain types of investors will behave and also what type of portfolios they prefer to invest in, and how they can trade in specific markets (Barberis and Thaler, 2003).
- Financial behaviours also studies the cognitive elements and emotional states shown by investors in markets (Riccardi, 2005).
- It is also a concept based on the fact that investors are exposed to some behavioral errors that can have an impact in their financial decisions (Byrne and Brooks, 2008).
- Financial behaviours examines psychological practices in finance by focusing on cognitive errors at the individual level (Hirshlifer, 2015).
- Financial behaviours is a branch that examines the effect of psychology on investors' financial decisions (De Bondt et al. 2015).
- Finally, it is a branch that tries to explain the behavior of financial markets by making use of the theories that explain the behavior of an individual (Kıyılar and Akkaya, 2016: 115).

By looking at all of these definitions, it is possible to express the concept of financial behaviours a branch of science, which systematically deals with the decision-making processes and behaviors of investors regarding the investment that they have made or will make.

Financial behaviours is a field that has a wide perspective and can adopt a multidisciplinary approach. It not only evaluates market movements and investor behavior in terms of economic and financial dimensions, but also examines these developments from a psychological, sociological and anthropological perspective. Ricciardi and Simon (2000) laid the foundations of behavioral finance on the disciplines of finance, psychology and sociology. Finance is a discipline concerned with evaluation and key decision making. Finance consists of the functions of finding resources, managing the resources that are available and then successfully investing and allocating the right capital.

Psychology is the science that studies how behavioral and mental processes are affected by people's physical and mental states and external environmental factors. Sociology, It is a branch that systematically addresses people's social behavior and focuses on the effects of social relationships on people's attitudes and behaviors. Ricciardi and Simon (2000) stated that traditional finance theories are still at the center of behavioral finance, but psychology and sociology sciences are also complementary catalysts to this field of behavioral perspective. Later, Ricciardi (2005) expanded the disciplines in which financial behaviours interacts, adding the branches of social psychology, economics, behavioral economics, investment and behavioral accounting to the previous three basic pillars, and the interdisciplinary science of behavioral finance formed by the combination of the theoretical infrastructure of these fields, pointed out that it should be defined as an area.

2.3. Historical Development of Behavioral Finance

In his financial behaviours approach extending to the book "The Moral Thinking System" by Adam Smith, Smith pointed out that people feel intense regret and sadness when they go from a good situation to a bad one, and then are happy when their situation improves again. By explaining the situation in this way, risk aversion due to loss phobia in financial behaviours is explained here (Tufan, 2006: 26-27).

Financial behaviours is based on the intensive use of mathematics and 19. It emerged as a reaction to the assumptions of neo-classical economics that prevailed in the mid-twentieth century. People do not always aim to maximize their profits or earnings when making their economic decisions. Due to different emotional and psychological factors affecting people prevent this. For this reason, analysis in financial behaviours approach should not only be done with mathematical data and statistics, but also social, psychological, factors should be included. (Aydın and Ağan, 2016:3).

The work of Kahneman and Tversky (1979) is accepted as the basis of behavioral finance. Kahneman and Tversky introduced the concept of expectancy theory in their work. The work of these two researchers started a new era in finance and established a link between finance and psychology. The work of Kahneman and Tversky won the Nobel Prize in 2002. With the Nobel Prize in Economics, the discipline of behavioral finance was officially recognized in the academic field (Öncü and Özevin, 2017:584). From the 1980s, it is seen that financial behaviours has become very important again and is a subject of interest by researchers. Today, behavioral finance has an important position in financial science and academic studies.

2.4. Fundamentals of Financial Behaviours

The emergence of financial behaviours basically has two pillars: “limitations of arbitrage” and “psychological factors”. Arbitrage is the simultaneous buying and selling of two assets with the same characteristics (that carry the same risk level) in order to profit from price differences. Two assets with the same characteristics must have the same price. It is wrong for these assets to have price differences, and this error is temporary. Arbitrage is caused by this incorrect pricing. Arbitrageurs are people who see and evaluate this type of temporary mispricing. The purpose of arbitrageurs is to buy the lower price one with the money they get by short selling the higher price one among two assets with the same characteristics and profit from the difference in price. Arbitrageurs believe that this is temporary and that the market will correct the mispricing as explained above. According to traditional finance theories, arbitrage is assumed to be seen as a risk-free and cost-free situation. Since

the risks of both assets are the same, it is assumed that this transaction does not bring additional risk and eliminates costs because it offers short selling opportunities.

An issue that should be mentioned at this point is equilibrium models. Equilibrium models are based on the assumption that the arbitrage mechanism will eliminate temporary imbalances in the market. Theoretically, arbitrage is seen as risk-free as there are very limited opportunities. There are three main factors that limit the arbitrage process. These three processes can be seen below;

The risk that arises when the market loses its effectiveness and the price of the securities traded in the market is lower or higher than the real price is the main risk (Kıyılar and Akkaya, 2016).

After purchasing a security at a price that is lower than its true value, the price of the security will not rise, but will fall further. For example, an arbitrageur who buys a stock that is trading below its average value will take the opposite position by short-selling a substitute stock. This is the investor trying to hedge itself against fundamental risk, in case the price of a stock falls further.

However, taking an adverse position in a substitute stock also does not eliminate the underlying risk because it is not always possible to find a substitute stock that is exactly like the arbitrated stock. In addition, company-specific risks cannot be avoided even if a protective shield is created against the fundamental risks of the sector when an inverse position is taken in the substitute stock (Turguttopbaş, 2008: 58). These possibilities create a risk for the arbitrage investor and limit the arbitrageur's trading volume.

Noisemaker or noise trader are irrational investors who rely on the knowledge and advice of a particular expert rather than their own knowledge or take positions in the market by imitating the investments made by a particular investor group. Noisy risk, also known as "rumor trader risk" or "unconscious investor risk" in the literature, is the unpredictable increase or decrease in the prices of securities traded in the market as a result of the transactions made by irrational investors. Noise risk is important in terms of affecting the transactions of other investors in the market. Noise risk, it can direct investors to close their positions early due to having the fear of losing (Herschberg, 2012).

The emotions and thoughts of noisy investors direct their movements in the market, but it is difficult to predict the actions they will take due to the changes in their feelings and thoughts (De Long, Shleifer, & Waldmann, 1990). The unpredictability of market transactions by noisy investors also makes the level of mispricing of stocks unpredictable. It creates a risk for arbitrageurs and the presence of noisy investors affects arbitrageurs' positions in the market. Due to the unpredictable market transactions of the noise traders, it becomes difficult for arbitrageurs to benefit from price differences, as the probability of stock prices reaching their real value in the short term decreases (Şenkesen, 2009). Noise traders can create a bigger problem for arbitrageurs when they make transactions in financial markets, by acting in such a social way, by repeating each other's mistakes by making rumors or imitating certain investor groups (Bayar, 2012).

For these reasons, noisy traders can be seen as a risk group that restricts arbitrage transactions in financial markets. Due to the unpredictable market operations of these types of people it can become very difficult for arbitrageurs to benefit from price differences, as the probability of stock prices reaching their real value in the short term decreases significantly (Şenkesen, 2009).

Psychological factors are among the factors that distract investors from rational investment decisions and push them to behave irrationally in financial markets. Overconfidence, over-optimism, over- or under-reaction, pride and regret, selective perception, attitudes, beliefs, emotional changes, etc. cognitive and emotional biases are important determinants of investor's movements in the market. When new information comes to market, the way each investor perceives, evaluates and uses this information will differ depending on their cognitive and emotional states as well as their level of expertise. Financial behaviours, due to the existence of psychological factors that affect investor behavior,

2.5. Comparison of Behavioral Finance with Traditional Finance

Traditional finance argues that people can be rational and make decisions in a way that maximizes their benefits, and even if they make a wrong decision, they will correct the situation as soon as possible.

Financial behaviours on the other hand, argues that people are not rational, cannot take the right decision all the time, and that there are various factors that affect this. It bases the assumptions on the expectation theory by stating that people are affected by factors such as economic situations, social environment, and the impact of a humans natural psychology.

In expected utility theory; defines individuals as rational individuals who acquire stable information and make full use of all information that they are able to access.

The science of psychology shows that people's behaviors cannot always be rational. Therefore, it is thought that abnormal events that can not be understood in the market are caused by human behavior (Çelik, 2013: 21-22). Traditional finance has caused financial behaviours to be accepted by ignoring the psychological aspect of individuals (Bilgin, 2018: 27).

Traditional finance theory believes that the available information can be shown on the conditions of the market. Experimental research shows that traditional finance contains many contradictions within its assumptions as well. Behavioral finance is also different from traditional finance in terms of the method applied. In traditional finance, the model is determined first and then it is checked whether the model is valid. In behavioral finance, the behaviors in the market are observed first (Bostancı, 2003: 10).

2.6. The Relationship of Financial Behaviours with Other Sciences

2.6.1. Psychology

The financial behaviours model assumes that investors are normal individuals, not rational. Psychology is closely related to behavioral finance models that explore why investors make irrational or wrong decisions.

One of the areas of interest of psychology is personality. The traits in these personalities can be seen as active, passive, calm, excited etc. These have an impact on how to make decisions immediately or not are the concepts that can be associated with behavioral finance. The fact that individuals have such different personality traits will help to make sense of their decisions behaviorally. Even if the age, gender, educational status and marital status of the individuals are the same in the decisions

taken according to the science of psychology, the reason for the differences may be related to different personality traits. Cognitive psychology is a concept that includes thinking and the thought process. In the analytical models created in the science of finance, the concepts of price and probability are discussed. Psychology comes into play here and investigates the factors that affect individual preferences (Tufan, 2006:40)

2.6.2. Sociology

Humans are a social entity. Sociology is a science that deals with people, but it is a science that deals not only with people but also the conditions that humans can find themselves in.

Sociology allows us to better understand the people we live with in certain situations since, their desires, dreams, fears and concerns can all come into play. The person who makes the investment decision is also a part of the community and carries the judgments of the community. The influence of the social group of which they are members in can impact these investment decisions taken by the investor and this cannot be ignored. This is where financial behaviours comes in. While observing the irrational decisions made by the individual who is a member of the social group, individuals try to make sense of these decisions with the help of the value judgments and rules of the social group to which they belong (Tufan, 2006: 42).

2.6.3. Social Psychology

Social psychology is a branch of science that studies the effects of social events on people. Social psychology argues that people do not always make rational decisions. When people evaluate others, they tend to look at at person's initial characteristics rather than summarizing their characteristics as a whole. Our overall assessment of that person will decrease on average when we learn about a person we previously thought to have very good qualities, or a trait that we found relatively less appealing. When we look at this situation from a financial point of view, the information that the investor has about the company may change the investor's thoughts. For example, positive or negative information that people hear from the environment or the media will make it easier for people to change their minds (Tufan, 2006: 45-46).

Investors evaluate the information that they learn about the market according to themselves and in a way that mostly suits them. Here, how people perceive events will play a role. People may perceive and interpret similar events in different ways. The factors affecting this perception change are internal and external factors. These factors are as follows (Tufan, 2006: 46-47);

- Extrinsic Factors: The intensity of the stimuli and its mobility. The difference of the stimulus according to the environment.
- Intrinsic Factors: Personality traits, needs, goals and objectives of the perceiving person.

2.6.4. Anthropology

Anthropology mostly studies primitive societies. The science of anthropology, which examines the evolution from early humans to modern humans, conveys to us the behavior patterns we have acquired since ancient generations. The link between behavioral finance and anthropology is established by the economic anthropology branch of anthropology. Economic anthropology is a field that combines economic and social life factors together (Tufan, 2008:51-53).

2.7. Herd Behavior

Imitating someone has been one of the most basic instincts since the existence of humanity. Herd behavior also emerges as a result of people's enthusiasm for each other or as a result of fashion trends. This situation is also reflected in the field of finance. In general terms, herd behavior can be defined as the behavior that is related to the behavior patterns of other people (Gazel, 2014: 67).

Herding behavior is actually an instinctive behavior of animals. The convergent behavior of individuals interacting socially with each other has been added to the financial literature to examine their behavior. For example, if there is a great interest due to the news about a security, this situation is reflected in the price of the security and individuals enter into the psychology of herd behavior and perform their buying and selling transactions (Çitilci, 2012: 64).

In herd behavior, investors rely on the information and decision-making process of a particular group or investor, rather than their own knowledge or personal insights, and implement the investment decision made by the group or followed

investor. It refers to the tendency of investors to act like a flock and invest in the same assets over a relatively similar timeframe. This is undoubtedly an issue within the field of behavioral finance and is examined with the contributions of studies in the field of social psychology. It is stated that the two most basic theories that combine the disciplines of behavioral finance and social psychology regarding investor behavior are “behavior conditioning” and “expectancy theory” (Kıyılar and Akkaya, 2016: 118).

According to the behavioral conditioning theory, individuals will repeat certain behaviors according to the results of their past experiences, certain behaviors will not be repeated. By avoiding repeatable behaviors that have caused an upset where they are not satisfied with the result; they tend to repeat the behaviors that make them happy instead therefore they aren't disappointed with the results.

Investors also try not to repeat their losing investment decisions after gains or losses but they continue to repeat their investment strategies with the belief that they will regain their profit.

Expectancy theories, on the other hand, are about expectations that motivate an individual to perform a certain action. The degree to which an individual desires a particular outcome is related to the value they can contribute towards. Every goal has some form of value to an individual, and not every goal is shares the equal importance to everyone.

Temporary beliefs about the possibility of a particular behavior resulting in a particular goal also express an individual's expectation. An individual's motivation consists of the individual's expectation of achieving the goal as a result of the action in question and the value attributed to that goal. Thus, if people expect to receive a certain reward as a result of their behavior, they will be more motivated and put in more time and effort. According to this theory, investors will also tend to invest relatively more capital in markets that they can then expect to generate higher returns. They are more motivated and put in more effort. By looking at this theory, investors will also tend to invest relatively more in investment instruments that they expect to generate higher returns. They are more motivated and put in more effort. According to this theory, investors will also tend to invest relatively more in opportunities to generate higher returns.

2.7.1. Rational Herd Behavior

Managers generally do not use or trust their own knowledge to protect their interests and reputations, and accordingly they tend to imitate the decisions of other managers. The tendency of investors in the market to follow and imitate each other is defined as rational herd behavior. Rational herd behavior refers to the investor who voluntarily joins the group. The investor who participates voluntarily thinks that his own knowledge is insufficient compared to the knowledge of the other investor or that it will require high cost and time to analyze on his own therefore by joining the group it eliminates this (Aytekin and Aygün, 2016: 153).

2.7.1.1. Information-Based Herd Behavior: The Information Cascade

According to research, economic participants not only rely on their own information when making investment decisions, but also evaluate the information of others and make decisions accordingly. Sometimes investors abandon their knowledge and imitate economic participants who invested before him. Individuals who will invest later with the chain effect will also exhibit herd behavior by imitating previous individuals. People encountering the same information may achieve similar results. This behavior can create an information cascade. The information cascade emerges when individuals ignore their own information and imitate the information of others (Bilgin, 2018: 54).

People tend to make mistakes with the information they get from other individuals, even if their own knowledge will carry them to an important place. This situation manifests itself in the form of fluctuations in the markets, regardless of the economic situation. Investors see the reason for these fluctuations in the market as the fluctuations arising from the buying and selling transactions of individual investors who obtain information that they did not obtain. Therefore, they participate in the buying and selling process themselves. This type of behavior causes the fluctuations in the markets to continue.

As new fluctuations emerge in the market, new investors also participate in this fluctuation. In a sense, the information flow becomes a cascade. With new investors joining, volatility manifests itself as new cascades. From this point of view, the factor causing the fluctuation is not the preferences of the investors, but the effect of other investors (Böyükaslan, 2012, p. 121-122).

To express the concept of information waterfall gradually (Ertan, 2007, pp. 48-9);

Stage 1: Investment prices enter a state of fluctuation that cannot be explained by any economic event or crisis.

Stage 2: Retail investors believe that the cause of these fluctuations is that other investors are using information they do not have and that other investors are trading.

Stage 3: They act on these ideas. This behavior causes market disruptencies.

Stage 4: This new surge caught the attention of other investors who were not affected by the waterfall until then. Investors get the idea that the volatility in the market will continue.

As a result, with the participation of new investors, the rise or fall of prices in the market will continue for a period. This is risky since investors who participate in this at the very beginning will not be guaranteed to make a profit. This factor causes fluctuations in the market, without any actually having a valid explanation.

2.7.1.2. Respect-Based Herd Behavior

Some managers with a good reputation in the company implement the investment decisions of other managers by ignoring their personal information to boost their reputation. According to Keynes, it is assumed that there are two types of managers, intelligent and less intelligent managers. Going by this, smart managers pick up on some signals about the value of the investment in advance using their own interpretation, but less experienced managers can have doubt in the information that they gather (Kıyılar and Akkaya, 2016: 215).

2.7.1.3. Pay-Based Herd Behavior

Pay-based herd behavior is more of an interest to institutional investors. This is due to institutional investors having a higher level of knowledge and tend to follow this sort of behavior more. As a result of the evaluation of the performances of the managers, a competitive environment emerges among them and this situation can trigger the tendency to show the signals of this herd behavior. Some studies have shown that young managers are more likely to imitate the behavior of experienced managers. The reason for this is that young managers who do not show the expected

work performance are more likely to increase the risk of their jobs (Hayta, 2014: 342).

2.7.3. Irrational Herd Behavior

Investor psychology is at the heart of irrational herd behavior. The investor ignores his personal experience and knowledge and follows the investment decisions of other investors for reasons such as social pressure and current trends.

Individuals who act outside the majority and have the fear to fail will follow this behaviour, thinking that they will be successful by following the movements of the majority rather than sticking to their own financial decisions (Aytekin and Aygün, 2016: 153).

2.8. Stock Concept and Definition

Shares are the documents that are valuable documents prepared and given to the shareholders of a company whose capital is divided into shares on the stock market (Mumcu, 2005: 3).

The stock shows a certain part of the company's capital and the company's articles which shows how many shares the total capital will be divided into and how much the allocated shares will represent for the company's capital (Oktay, 2013: 31). The person holding the shares shows its ownership with the relevant company in proportion to the amount invested (Kanat, 2011: 15).

However, limited partnership companies whose capital is divided into shares cannot sell their shares through public offering. Therefore, the concept of stock refers to the stocks belonging to joint stock companies (Aydın et al., 2011: 165). Holding the shares of the joint stock company gives the right of partnership and also provides other rights to shareholders. These are the rights given to shareholders;

- The right to receive a share of the annual net profit of the company
- Priority right to participate in the paid capital increase (preference right)
- In case of liquidation of the company, the right to become a partner in the balance remaining after liquidation in proportion to its share percentage
- The right to elect and be elected in the board of directors by attending the general meetings

- Right to vote for decisions within the company
- Right to information (BIST)

The stock market is a subsystem of the entire economy and the capital market, and this market is affected by many economic and political external factors (Turanlı et al. 2002:2). The shares of companies in different sectors and their right to buy new shares can be traded on the Borsa Istanbul Equity Market. This market provides a reliable investment environment for all investors regardless of their investment size.



THIRD PART

EVALUATION OF FINANCIAL BEHAVIOURS IN TERMS OF DEMOGRAPHIC CHARACTERISTICS AND FINANCIAL PROFILES OF INDIVIDUAL EQUITY INVESTORS

In the final part, the purpose, importance and scope of the study will be emphasized by using the transfers in the previous sections. The methods and hypotheses used in the study will be explained and the findings obtained in the research will be included.

3.1. Subject and Purpose of the Research

Individual investors differ in terms of personality traits and approaches to investment situations. Due to these differences, while making financial decisions, they make different preferences by turning to different tendencies. The traditional finance approach assumes that it always shows realistic approaches, not taking into account the psychological and financial behaviours of each and every investor.

However, individual investors may differ in the face of behavioral and psychological factors. In this study, the effect of financial behaviours on the investment decisions of individual stock investors is investigated. In the study, it is aimed to analyze the socio-demographic characteristics and financial profile variables of the participants in terms of financial behaviours.

3.2. Importance of Research

In today's conditions, the importance of cognitive psychology is increasing day by day. Finance experts and researchers have seen that they cannot explain market anomalies, abnormal price changes or economic situations by basing them on existing financial models. Therefore, the importance of cognitive psychology has increased and researchers have started to pay more attention to the role cognitive psychology has to play.

Therefore, finance behaviours can play an important role in today's world. Investment decisions taken and implemented by investors always make sense to the investor. This is one of the most important reasons for the rise of financial decisions. There are many financial models available to investors. However, despite these

patterns, market anomalies are still inevitable. Finance is important at this point and clarifies the reasons for this situation. This plays an active role in all investment vehicles, not just stocks. The theme of this thesis and research focuses on logical errors that investors think are true but are actually wrong.

2.3. Research Method

The survey method was used to collect the data to then be used in the research. By making use of previous studies by Ateş (2007) and Büyükaslan (2012), additions were made to the survey questions and the participants were asked to respond. In the data collection study carried out between 01 April and 05 May 2021, a total of 191 participants were obtained by the survey method. SPSS 23 statistical software package program was used to evaluate and analyze the data applied with random sampling methods. The questionnaire used in the study to analyze the data is divided into three parts.

In the first part, in order to reveal the demographic characteristics of individual investors, gender, age, marital status, education level, working hours, income levels were asked and answers were received.

In the second part of the survey, to determine the financial profiles of the investors, the participants were asked; how long they have invested for, what type of stock they prefer to invest in, how often they follow their investments and on which information sources do they make their investments on. Also, their attitude towards risk, how often they follow financial developments were asked. In addition questions such as how much share they allocate from their income to invest, and the retention period of their investments were mentioned.

In the third part of the survey, questions were prepared and presented to the participants in order to determine how and to what extent the investors participating in the survey were affected by financial behaviours. In this part of the questionnaire, a 5-point Likert Scale was used. The suggestions for the answers were; strongly Agree (5), Agree (4), Undecided (3), Disagree (2), Strongly Disagree (1). A total of 9 questions were asked. As a result of the reliability analysis, the Cronbach's Alpha value of the scale was 0.712. This indicates that our study can be classed as reliable.

3.4. Assumptions and Limitations of the Study

The research has been handled from the point of view of individual stock investors, and the information used in the research is limited to 191 individual investors.

Therefore, the results only reflect the status of the people used in these samples. The survey method was applied to the individual investors within the scope of the research. Therefore, the results obtained are limited only to the questions in the questionnaire. It is assumed that the participants correctly understood the questions in the applied questionnaire and gave the correct answers.

3.5. Research Model and Hypotheses

In this study, it is aimed to reveal whether the financial behaviours of individual stock investors differ significantly according to their individual financial investment characteristics as well as demographic characteristics. For this purpose, the models and hypotheses developed for the research are as follows (Figure 1).

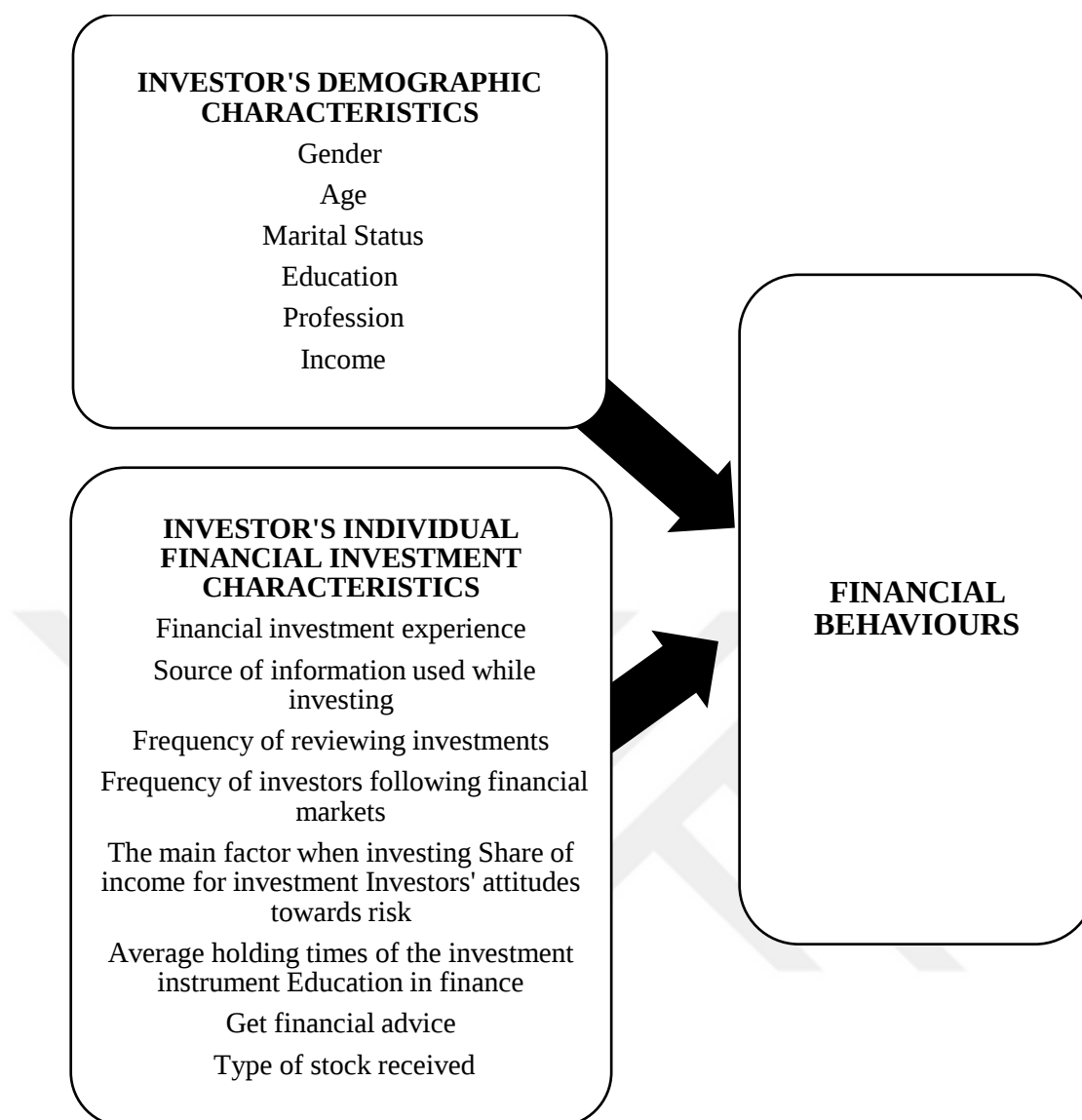


Figure 1:Model of the Research

Chart 1:Research Hypotheses

Hypothesis No.	Hypotheses
H1	Financial behaviours of Turkish individual stock investors differ according to their gender.
H2	Financial behaviour of Turkish individual stock investors differ according to their age.
H3	Financial behaviour of Turkish individual stock investors differ according to their marital status.
H4	Financial behaviour of Turkish individual stock investors differ according to working time
H5	Financial behaviour of Turkish individual stock investors differ according to their educational back ground.
H6	Financial behaviour of Turkish individual stock investors differ significantly according to their income status.

H7	Financial behaviour of Turkish individual stock investors differ significantly according to the investment period groups.
H8	Financial behaviour of Turkish individual stock investors differ significantly according to the information sources they use.
H9	Financial behaviour of Turkish individual stock investors differ significantly according to the frequency of reviewing investments.
H10	Financial behaviour of Turkish individual stock investors differ significantly according to the factors they rely on while investing.
H11	Financial behaviour of Turkish individual stock investors differ significantly according to the share they allocate from their income for investment purposes.
H12	Financial behaviour of Turkish individual stock investors differ significantly according to their financial education.
H13	Financial behaviour of Turkish individual stock investors differ significantly according to their financial advisory services.
H14	Financial behaviour of Turkish individual stock investors differ significantly according to the type of stock purchased.
H15	Financial behaviour of Turkish individual stock investors differ significantly according to their attitudes towards risk.
H16	Financial behaviour of Turkish individual stock investors differ significantly according to the average holding time of the investment instrument.
H17	Financial behaviour of Turkish individual stock investors differ significantly according to the frequency of investors following financial markets.

3.6. Findings of the Research

3.6.1. Descriptive Findings of Participants' Demographic Characteristics and Financial Profiles

Chart 2: Demographic distribution of the participants

Gender	Frequency	Percent	Cumulative Percentage
Woman	86	45.0	45.0
Male	105	55.0	100.0
Age	Frequency	Percent	Cumulative Percentage
Ages 24-28	53	27.7	27.7
Ages 29-35	57	29.8	57.6
Ages 36-45	31	16.2	73.8
Age 46 and above	50	26.2	100.0
Marital status	Frequency	Percent	Cumulative Percentage
The married	83	43.5	43.5
Single	108	56.5	100.0
Working Year	Frequency	Percent	Cumulative Percentage
1-3 years	47	24.6	24.6
4-7 years	36	18.8	43.5
8-12 years	27	14.1	57.6
13-15 years	81	42.4	100.0
Educational Status	Frequency	Percent	Cumulative Percentage
High school	17	8.9	8.9
University	87	45.5	54.5
Masters	83	43.5	97.9
Doctorate	4	2.1	100.0
Income	Frequency	Percent	Cumulative Percentage
2000-2.999 TL	18	9.4	9.4
3,000-4,999 TL	26	13.6	23.0
5.000-6.999 TL	37	19.4	42.4
7.000 TL and above	110	57.6	100.0

- 86 (45%) of the participants are female and 105 (55%) are male.
- 53 (27.7%) of the participants were between the ages of 24-28, 57 (29.8%) were between the ages of 29-35, 31 (16.2%) were between the ages of 36-45, 50 (26.2%) are people aged 46 and over.
- 83 (43.5%) of the participants were married and 108 (56.5%) were single.
- 47 (24.6%) of the participants were 1-3 years, 36 (18.8%) 4-7 years, 27 (14.1%) 8-12 years, 81 (42.4%) He has been working for 13-15 years.
- 17 (8.9%) of the participants were high school, 87 (45.5%) undergraduate, 83 (43.5%) graduate, 4 (2.1%) doctorate degrees.

- Eighteen (9.4%) participants were 2000-2.999 TL, 26 (13.6%) 3.000-4.999 TL, 37 (19.4%) 5.000-6.999 TL, 110 (57%) 6) Has an income of 7.000 TL or more.

Chart 3: Distribution of participants' financial profiles

Investment Experience	Frequency	Percent	Cumulative Percentage
Less than 1 Year	51	26.7	26.7
1-3 Years	52	27.2	53.9
Between 4-6 Years	27	14.1	68.1
Between 7-9 Years	8	4.2	72.3
10 Years and Above	53	27.7	100.0
Information source	Frequency	Percent	Cumulative Percentage
Television	one	,5	,5
Internet	43	22.5	23.0
Social media	9	4.7	27.7
Friend recommendation	39	20.4	48.2
Analysis and Reports of Intermediary Institutions	39	20.4	68.6
Recommendations of Investment Advisors	20	10.5	79.1
Annual Activity Reports of Companies	22	11.5	90.6
Press Releases of Companies	4	2.1	92.7
Public Disclosure Platform	14	7.3	100.0
Investment Review Frequency	Frequency	Percent	Cumulative Percentage
Everyday	69	36.1	36.1
Several Times a Week	38	19.9	56.0
Every week	14	7.3	63.4
A Few Times a Month	26	13.6	77.0
Monthly	15	7.9	84.8
Every Few Months	9	4.7	89.5
Not Often	20	10.5	100.0
Factor Considered While Investing	Frequency	Percent	Cumulative Percentage
Analysis Methods	56	29.3	29.3
Exchange	30	15.7	45.0
Interest rates	11th	5.8	50.8
Brokerage Referrals	9	4.7	55.5
Tips Taken	34	17.8	73.3
Political Stability	15	7.9	81.2
Economic Stability	36	18.8	100.0
Share of Revenue for Investment	Frequency	Percent	Cumulative Percentage
Less than 10%	56	29.3	29.3
10-25%	71	37.2	66.5
26-40%	31	16.2	82.7
41-60%	19	9.9	92.7

61% and Above	14	7.3	100.0
Education / Course in Finance	Frequency	Percent	Cumulative Percentage
Yes	102	53.4	53.4
No	89	46.6	100.0
Consultancy service	Frequency	Percent	Cumulative Percentage
Yes	45	23.6	23.6
No	146	76.4	100.0
Stock Type	Frequency	Percent	Cumulative Percentage
Build	15	7.9	7.9
Sporty	2nd	1.0	8.9
Banking	27	14.1	23.0
Food	20	10.5	33.5
Automotive	11th	5.8	39.3
Other	116	60.7	100.0
Investor's Attitude to Risk	Frequency	Percent	Cumulative Percentage
A risk-loving investor	29	15.2	15.2
An investor who is ready to take risks after adequate research	81	42.4	57.6
A cautious investor	52	27.2	84.8
A risk averse investor	29	15.2	100.0
Average Stock Holding Time	Frequency	Percent	Cumulative Percentage
less than a week	14	7.3	7.3
A few weeks	41	21.5	28.8
One month	19	9.9	38.7
A few months	75	39.3	78.0
Year	15	7.9	85.9
More than one year	27	14.1	100.0
Frequency of Following Developments in Financial Markets	Frequency	Percent	Cumulative Percentage
Everyday	128	67.0	67.0
Once a week	34	17.8	84.8
Once in a month	12	6.3	91.1
Every few months	8	4.2	95.3
I don't follow	9	4.7	100.0

- 51 (26.7%) of the participants were less than 1 year, 52 (27.2%) 1-3 years, 27 (14.1%) 4-6 years, 8 (4%) ,2) Between 7-9 years, 53 (27.7%) of them have been investing in stocks for 10 years or more.
- 1 (.5%) of the participants was television, 43 (22.5%) internet, 9 (4.7%) social media, 39 (20.4%) friend recommendation, 39 (20.4% of brokerage houses' analysis and reports, 20 (10.5%) recommendations of investment advisors, 22 (11.5%) companies' annual reports, 4 (2.1%) companies' press

releases and 14 (7.3%) use the public disclosure platform as their primary source of information when investing.

- 69 (36.1%) of the investors every day, 38 (19.9%) several times a week, 14 (7.3%) every week, 26 (13.6%) several times a month 15 (7.9%) review their investment decisions every month, 9 (4.7%) every few months, 20 (10.5%) without a certain frequency.
- A sum of the participants, 56 (29.3%) analysis methods, 30 (15.7%) exchange rates, 11 (5.8%) interest rates, 9 (4.7%) brokerage house referrals, 34 (17.8%) of the tips received, 15 (7.9%) political stability, 36 (18.8%) economic stability factors are taken as basis while investing.
- 56 (29.3%) of the participants spend less than 10% of their income, 71 (37.2%) 10-25% of their income, 31 (16.2%) 26-40% of their income , 19 (9.9%) use 41-60% of their income, 14 (7.3%) use 61% or more of their income to invest.
- A number of the participants, 102 (53.4%) received a course or training in finance, and 89 (46.6%) did not receive any education or training in finance.
- 45 (23.6%) of the participants receive consultancy services in investment decisions, while 146 (76.4%) do not receive financial consultancy services.
- 15 (7.9%) of the participants were construction, 2 (1.0%) sportive, 27 (14.1%) banking, 20 (10.5%) food, 11 (%) 5,8% of them are automotive and 116 (60.7%) of them are other shares.
- Some of the participants, 29 (15.2%) are a risk-loving investor, 81 (42.4%) are an investor who is ready to take risks after adequate research, 52 (27.2%) are a cautious investor, 29 (15.2%) describe him as a risk-averse investor.
- 14 (7.3%) of the participants were less than a week, 41 (21.5%) a few weeks, 19 (9.9%) a month, 75 (39.3%) a few months, 15 (7.9%) hold their investments for one year and 27 (14.1%) for more than one year.
- 128 of the participants (67.0%) daily, 34 (17.8%) once a week, 12 (6.3%) once a month, 8 (4.2%) every few months they follow the developments in the markets, while 9 (4.7%) do not follow the developments.

3.6.2. Evaluation of behavioral finance in terms of demographic characteristics of participants

H1: Financial tendencies of Turkish individual stock investors differ according to their gender.

Chart 4: Differentiation of financial behaviours according to gender variable

Behavioral Finance Level	Gender	n.	Rank Avg.	Rank Sum	U	Z	p
	Woman	86	102.23	8792,00	3979,000	-1,414	,157
	Male	105	90,90	9544,00			

The determination of whether the financial behaviours of the investors differed according to the gender variable was made using the Mann Whitney U test, which is one of the appropriate analysis methods for non-parametric distributions, since the distributions between the groups did not show homogeneity. As a result of the test performed to determine whether the levels of the participants differ according to the genders of the participants, no statistically significant difference was found between the genders ($p=,157$). Thus, H1 is rejected.

H2: Behavioral finance tendencies of Turkish individual stock investors differ according to their age group.

Chart 5: The differentiation of financial behaviors according to the age of the participants

Age	n.	Ranking Avg.	X2	P
20-30	53	103.39	6,471	,091
31-40	57	87.89		
41-50	31	80.79		
51 years and older	50	106.84		

The determination of whether the behavioral finance levels of the investors differ according to their age group was made using the Kruskal-Wallis test. According to the results of this test, it was determined that the financial characteristics of the investors did not differ according to their age group ($p=,091$). Accordingly, H2 was rejected.

H3: Financial characteristics of Turkish individual stock investors differing according to their marital status.

Chart 6: Differentiation of financial behaviours according to marital status variable

Behavioral Finance Level	Marital status	n.	Rank Avg.	Rank Sum	U	Z	p
	The married	83	90.79	7535.50	4049,500	-1,145	,252
	Single	108	100.00	10800.50			

The determination of whether the financial behaviours of the investors differed according to the marital status variable was made using the Mann Whitney U test, which is one of the appropriate analysis methods for non-parametric distributions, since the distributions between the groups did not show homogeneity. In order to determine whether the participants differ according to the marital status of the participants, no statistically significant difference was found between the genders as a result of the test ($p=,252$). Thus, H3 was rejected.

H4: Financial behaviours of Turkish individual stock investors It differs according to the working time.

Chart 7: Variation of investors' according to working time variable

Operation time	n.	Ranking Avg.	X2	P
1-3 years	47	89.44	9,889	,020
4-7 years	36	117.60		
8-12 years	27	75.65		
13-15 years	81	96.99		

The determination of whether the investors differ according to their working hours was made using the Kruskal-Wallis test, since the distributions between the groups did not show homogeneity. As a result of this test, it was determined that the investors differ according to their working hours ($p=,020$). Accordingly, H4 was accepted.

H5: Financial tendencies of Turkish individual stock investors, it differs according to education level.

Chart 8: The differentiation of investors' financial management according to the education level variable

Education status	n.	Ranking Avg.	X2	P
High school	17	61.91	9,196	,027
License	87	100.61		
MSc	83	96.22		
Doctorate	4	135.88		

Behavioral finance levels of investors to the education status variable Since the distributions between the groups did not show homogeneity, the Kruskal-Wallis test, which is one of the appropriate analysis methods for non-parametric distributions, was used to determine whether it differs according to According to this test result, investors' behavioral finance levels educational status differs according to ($p=.027$). Accordingly, H5 was accepted.

H6: Behavioral finance tendencies of Turkish individual stock investors differs according to income.

Table 10: Variation of investors' behavioral finance levels according to income status variable

Income	n.	Ranking Avg.	X2	P
2000-2.999 TL	18	91.97	2,369	,499
3,000-4,999 TL	26	103.88		
5.000-6.999 TL	37	84.86		
7.000 TL and above	110	98.54		
2000-2.999 TL	18	91.97		

Behavioral finance levels of investors difference by income The determination of whether or not there was a difference was made by the Kruskal-Wallis test, since the distributions between the groups did not show homogeneity. According to this test result, investors' financial behaviours differ by income. ($p=.499$). Accordingly, H6 was rejected.

3.6.3. Evaluation of financial behaviours in terms of participant's financial profiles

H7: Financial behaviours of Turkish individual stock investors varies according to the experience (duration) of making financial investments.

Chart 9: Differentiation of investor's behaviours according to their financial investment experience (duration) variable

Investment	n.	Ranking Avg.	X2	P
Less than 1 Year	51	93.49	1,723	,787
1-3 Years	52	92.84		
Between 4-6 Years	27	92.74		
Between 7-9 Years	8	88.50		
10 Years and	53	104.31		

Financial behaviours of investors according to their financial investing experience (duration). The determination of whether there is a difference between the groups was made by the Kruskal-Wallis test since the distribution between the groups did not show homogeneity in the study. According to this test result, the investors differ according to their experience when it comes to making financial investments. It was determined that it did not represent this ($p=.787$). Accordingly, H7 was rejected.

H8: Financial behaviours of Turkish individual stock investors are the source that they primarily benefit from while investing. This differs accordingly to each participant.

Chart 10: The investors are determined according to the information source that is primarily used while investing. *differentiation*

Information Source Used	n.	Ranking Avg.	X2	p
Television	one	178.00	15,270	,054
Internet	43	95.23		
Social media	9	99.78		
Friend recommendation	39	75.46		
Analysis and Reports of	39	93.29		
Recommendations of Investment	20	127.60		
Annual Activity Reports of	22	101.57		
Press Releases of Companies	4	119.13		
Public Disclosure Platform	14	94.32		

The determination of whether the investors differ according to the information source they primarily benefit from while investing was made using the Kruskal-Wallis test as well. It is clear to see that within the distributions between the groups there wasn't any similarities. According to the results of this test, it has been determined that the decisions of investors do not differ according to the information source they use before making the decision to invest ($p=.054$). Accordingly, H8 was rejected.

H9: Financial behaviours of Turkish individual stock investors according to the frequency of investment.

Chart 11: Differentiation of investors' decisions according to investment review frequency variable

Investment Review Frequency	n.	Ranking Avg.	X2	P
Everyday	69	96.71	6,477	,372
Several Times a Week	38	90.97		
Every week	14	126.00		
A Few Times a Month	26	93.42		
Monthly	15	76.57		
Every Few Months	9	100.61		
Not Often	20	97.95		

Investment levels of investors are related to the frequency with which they review their investments. The determination of whether there is a difference between the groups was made by the Kruskal-Wallis test since the distributions between the groups did not show any relatable patterns. By looking at the results of this test, the financial decisions of the investors are related to the frequency of reviewing the investments frequently. It was determined that there was no impact ($p=,372$). Due to this, H9 was rejected.

H10: Financial decisions of Turkish individual stock investors are considered as the basis factors before any investment. This information differs accordingly.

Chart 12: The differentiation of investors' levels according to the factor variable that is taken as basis while investing.

Factor Considered While Investing	n.	Ranking Avg.	X2	P
Analysis Methods	56	101.28	3,954	,683
Exchange	30	100.98		
Interest rates	11th	100.73		
Brokerage Referrals	9	76.00		
Tips Taken	34	86.25		
Political Stability	15	107.43		
Economic Stability	36	91.64		

The determination of whether the investors differ according to the factors that have to be taken into consideration for investing was made using the Kruskal-Wallis test. According to the results of this test, it has been determined that the

financial behaviours of the investors did not have an impact on these factors. =,683). Therefore, H10 was rejected.

H11: Behaviours of Turkish individual stock investors are related to the share of income for the level of investment.

Chart 13: Variation of investors' financial behaviours according to the share in return on income for an investment.

Share of Revenue for Investment	n.	Ranking Avg.	X2	P
Less than 10%	56	83.01	18,707	,001
10-25%	71	84.80		
26-40%	31	113.79		
41-60%	19	123.76		
61% and Above	14	127.71		

The determination of whether the financial behaviours of the investors differ according to the share allocated from the income used for investment was made using the Kruskal-Wallis test, since the distributions between the groups did not show a true value. According to the results of this test, it was determined that the behaviours of the investors differ according to the share allocated from the income for investment ($p=,001$). Accordingly, H11 was accepted.

H12: Behaviours of Turkish individual stock investors can affect their finance education status. This can differ accordingly.

Chart 14: The differentiation of investors financial decisions according to the variable of getting education within finance.

Behavioral Finance Level	Getting Financial Education	n.	Rank Avg.	Rank Sum	U	z	p
	Yes	102	101.33	10336.00	3995,000	-1,431	,153
	No	89	89.89	8000,00			

According to their education in finance, the determination of whether there was a difference in the study was made by means of the Mann Whitney U test, since the distributions between the groups did not show homogeneity. According to this test results of the level of investors' behaviours according to their financial education

status showed that there was no correlation. ($p=,153$). Accordingly, H12 was rejected.

H13: Financial behaviours of Turkish individual stock investors make it possible for them to receive financial consultancy services. This differs accordingly.

Chart 15: The differentiation of investors' behaviours according to the variable of receiving financial consultancy services is shown.

Behavioral Finance Level	Getting Financial Advice	n.	Rank Avg.	Rank Sum	U	z	p
	Yes	45	88.36	3976.00	2941,000	-1,063	,288
	No	146	98.36	14360,00			

The determination of whether the financial behaviours of the investors differ according to their financial consultancy services was determined by the Mann Whitney U test. Seeing as the distributions between the groups did not show homogeneity. As a result of this test, it was determined that the financial behaviours of the investors did not differ according to if they received any financial consultancy services ($p=,288$). Accordingly, H13 was rejected.

H14: Financial behaviours of Turkish individual stock investors differs according to the stock type invested accordingly.

Chart 16: Variation of investors' financial behaviours according to the variable of stock type purchased.

Stock Type	n.	Ranking Avg.	X2	P
Build	15	90,60	3,550	,616
Sporty	2nd	53.25		
Banking	27	92.83		
food	20	85.55		
Automotive	11th	85.00		
Other	116	101.02		

The determination of whether the financial decision levels of the investors differ according to the type of stock purchased, was made using the Kruskal-Wallis test, since the distributions between the groups did not show homogeneity. According to the results of this test, it was determined that the financial decisions of the investors did not differ according to the type of stock purchased ($p=,616$). Accordingly, H14 was rejected.

H15: Financial tendencies of Turkish individual stock investors affect their attitudes towards risk.

Chart 17: Differentiation of investors' financial decisions according to investors' attitude towards risk is the variable.

Investors' Attitudes Towards Risk	n.	Ranking Avg.	X2	P
A risk-loving investor	29	113.36	6,340	,096
An investor who is ready to take risks	81	98.85		
A cautious investor	52	82.22		
A risk averse investor	29	95.38		

The determination of whether the financial behaviour levels of the investors differ according to the investors' attitudes towards risk was made using the Kruskal-Wallis test, since the distributions between the groups did not show homogeneity. According to the results of this test, it was determined that the financial behaviours of the investors did not differ according to the investors' attitudes towards risk ($p=,096$). Accordingly, H15 was rejected.

H16: Financial decisions of Turkish individual stock investors according to the average holding time of the investment.

Chart 18: Variation of investors' financial behaviours according to the variable of average holding time of an investment.

Average Holding Time of Investment	n.	Ranking Avg.	X2	P
less than a week	14	105.79	2,107	,834
A few weeks	41	95.24		
One month	19	84.50		
A few months	75	93.57		
Year	15	103.83		
more than one year	27	102.57		

The determination of whether the financial behaviours differ according to the average holding time of the investment. This was made using the Kruskal-Wallis test, since the distributions between the groups did not show homogeneity. According to the results of this test, it was determined that the financial behaviours of investors did not differ according to the average holding time of the investment ($p=,834$). Accordingly, H16 was rejected.

H17: Financial behaviours of Turkish individual stock investors affect the frequency of investors following developments in financial markets.

Chart 19: The differentiation of investors' financial behaviours according to the variable of frequency of investors following developments within financial markets

Frequency of Following Developments in Financial Markets	n.	Ranking Avg.	X2	P
Everyday	128	93.34	6,926	,140
Once a week	34	93.81		
Once in a month	12	131.21		
every few months	8	113.94		
I don't follow	9	79.17		

The determination of whether the behavioral finance levels of the investors differ according to the frequency of the investors following the developments in the financial markets was made using the Kruskal-Wallis test, since the distributions between the groups did not show homogeneity. According to the results of this test, it was determined that the behavioral finance levels of the investors did not differ according to the frequency of the investors following the developments in the financial markets ($p=,140$). Accordingly, H17 was rejected.

Chart 20:Consequences of the hypotheses

HYPOTHESES NO	HYPOTHESES	RESULT
H _{one}	Financial behaviours of Turkish individual stock investors differ according to their gender.	REJECTED
H _{2nd}	Financial behaviours of Turkish individual stock investors differ according to their age.	REJECT
H ₃	Financial behaviours of Turkish individual stock investors differ according to their marital status.	REJECTED
H ₄	Financial behaviours of Turkish individual stock investors differ according to working time	ACCEPT
H ₅	Financial behaviours of Turkish individual stock investors differ according to their educational back ground.	ACCEPT
H ₆	Financial behaviours of Turkish individual stock investors differ significantly according to their income status.	REJECTED
H ₇	Financial behaviours of Turkish individual stock investors differ significantly according to the investment period groups.	REJECTED
H ₈	Financial behaviours of Turkish individual stock investors differ significantly according to the information sources they use.	REJECTED
H ₉	Financial behaviours of Turkish individual stock investors differ significantly according to the frequency of reviewing investments.	REJECTED

H10	Financial behaviours of Turkish individual stock investors differ significantly according to the factors they rely on while investing.	REJECTE D
H11	Financial behaviours of Turkish individual stock investors differ significantly according to the share they allocate from their income for investment purposes.	ACCEPT
H12	Financial behaviours of Turkish individual stock investors differ significantly according to their financial education.	REJECTE D
H13	Financial behaviours of Turkish individual stock investors differ significantly according to their financial advisory services.	REJECTE D
H14	Financial behaviours of Turkish individual stock investors differ significantly according to the type of stock purchased.	REJECTE D
H15	Financial behaviours of Turkish individual stock investors differ significantly according to their attitudes towards risk.	REJECTE D
H16	Financial behaviours of Turkish individual stock investors differ significantly according to the average holding time of the investment instrument.	REJECTE D
H17	Financial behaviours of Turkish individual stock investors differ significantly according to the frequency of investors following financial markets.	REJECTE D

RESULT

Traditional finance theories are based on the homo economics assumption. “Homo economics” defines rational people. It assumes that hypothetical people called homo economists maximize utility, have all the information that will affect the decisions to be taken, and see people as rational who will make the right decisions.

The rational investor is expected to make decisions as predicted by the expected utility theory. However, there is an important problem that traditional finance theory ignores. The psychology factor is not taken into account in these theories where the human mind is discussed. As time went on, finance theory recognized this importance and began to argue that traditional finance theory was inadequate. At this stage, finance models emerged.

This research was conducted with individual stock investors. In this research, it is aimed to reveal whether the behavioral finance tendencies of individual stock investors show a significant difference according to their individual financial investment characteristics and demographic characteristics. The analysis of the data obtained within the scope of the study was carried out with the help of statistical programmes and some results were obtained. These results are as follows;

86 (45%) of the participants are female and 105 (55%) are male.

53 (27.7%) of the participants were between the ages of 24-28, 57 (29.8%) were between the ages of 29-35, 31 (16.2%) were between the ages of 36-45, 50 (26.2%) are people aged 46 and over. 83 (43.5%) of the participants were married and 108 (56.5%) were single. 47 (24.6%) of the participants were 1-3 years, 36 (18.8%) 4-7 years, 27 (14.1%) 8-12 years, 81 (42%) 13-15 years. 17 (8.9%) of the participants were high school, 87 (45.5%) undergraduate, 83 (43.5%) graduate, 4 (2.1%) of them have doctorate degrees. Eighteen (9.4%) participants were 2000-2.999 TL, 26 (13.6%) 3.000-4.999 TL, 37 (19.4%) 5.000-6.999 TL, 110 (57%) 7.000 TL or more.

Therefore, it is possible to say that most of the participants graduated from undergraduate and graduate schools and that most of the income of the investors is over 7.000 TL. However; most participants have been investing in stocks for 10 years or more. A lot of the participants benefit from television as the primary source

of information while investing. Most investors review their investment decisions every day. Many of the participants rely on the analysis methods factor when making investments. Most of the participants use 10-25% of their income to invest. Some of the participants had a course or training in finance. A large amount of the participants do not receive financial consultancy services. It is clear to see that many of the participants invest in stock types other than construction, sports, banking, food and automotive. Many of the participants describe themselves as an investor who is ready to take risks after adequate research. A lot of the participants hold their investments for several months. More than many of the participants follow the developments in the financial markets every day.

In the study, it was also investigated whether the level of financial behaviours differs according to the demographic characteristics and financial profiles of the investors. Accordingly, it has been determined that the financial behaviours of Turkish individual stock investors differ significantly according to the investor's working time, education level and the share they allocate from their income for investment. Thus, H4, H5 and H11 were accepted, while H1, H2, H3, H6, H7, H8, H9, H10, H12, H13 H14 H15 H16 H17 were rejected.

Suggestions for future work

This study only shows the situation of 191 individual stock investors. This study can be performed on the basis of provinces and comparisons can be made. The research can be handled broadly and can be examined in terms of individual investors in Turkey who invest not only in stocks but also in other investment instruments. In addition, this study can be carried out in different countries and comparisons can be made with Turkey. In another study, the results can be evaluated by considering different demographic and financial profile variables.

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ANKET FORMU

Değerli Katılımcı,

Okumakta olduğunuz anket çalışması, Yeditepe Üniversitesi Sosyal Bilimler Enstitüsü'nde yürütülmekte olan “Türk Yatırımcıların Hisse Senedi Alımını Etkileyen Faktörler” konulu bilimsel bir çalışmaya veri toplamak amacıyla hazırlanmıştır. Bu çalışma tamamen akademik bir amaç taşımaktadır. Vereceğiniz bilgiler ve cevaplar gizli tutulacak, kişi ve ya kurumlarla kesinlikle paylaşılmayacaktır. Ankete katılma nezaketi göstererek, çalışmama verdiğiniz destekten dolayı teşekkür ederim.

Saygılarımla...

1. Cinsiyetini?

Kadın ☐ Erkek ☐

2. Yaşınız?

18-27 ☐ 28-37 ☐ 38-47 ☐ 48-57 ☐ 58 + ☐

3. Medeni durumunuz?

Evli ☐ Bekar ☐

4.Eğitim durumunuz?

İlkokul ☐ Ortaokul ☐ Lise ☐ Ön lisans ☐ Lisans ☐ Lisansüstü ☐
Doktora ☐

5. Mesleğiniz?

Memur ☐ İşçi ☐ Serbest meslek ☐ Emekli ☐ Esnaf ☐ Çiftçi ☐ İşsiz

6.Aylık geliriniz?

0-1500 ☐ 1501-3000 ☐ 3001-4500 ☐ 4501-6000 ☐ 6001 ve üzeri ☐

7. Gelirinizin ne kadarını hisse senedi yatırımına harcıyorsunuz?

Yarısından azını ☐ Yarısını ☐ Yarısından fazlasını ☐

8. Kaç yıldır hisse senedine yatırım yapıyorsunuz?

0-1 ☐ 2-5 ☐ 6-9 ☐ 10-14 ☐ 15 ve üzeri ☐

9. Bir yatırımcı olarak kendinizi nasıl tanımlarsınız?

- ☐ Riski seven bir yatırımcı
- ☐ Yeterli araştırmalardan sonra risk almaya hazır bir yatırımcı
- ☐ Temkinli bir yatırımcı
- ☐ Riskten kaçınan bir yatırımcı

10. Yatırımlarınızı yaparken aşağıdaki kaynaklardan en çok hangisini kullanıyorsunuz?

- ☐ Aile, arkadaş vs. tavsiyesi
- ☐ Yatırım uzmanı tavsiyeleri
- ☐ İnternet(forum siteleri, sosyal medya vb) tavsiyeler
- ☐ Gazeteler/ Dergiler
- ☐ Televizyon
- ☐ İşletmelerim finansal tabloları
- ☐ Finans konusunda aldığım eğitimler
- ☐ Hislerim/sezgilerim
- ☐ Diğer

11.Son bir yıldaki yatırımlarınızın ortalamasını düşündüğünüzde yatırımlarınızda kazanç mı yaşadınız kayıp mı?

- ☐ Kazanç ☐ Kayıp ☐ Ne kayıp ne kazanç

12. Finans piyasalarındaki gelişmeleri hangi sıklıkla izliyorsunuz?

- ☐ İzlemiyorum ☐ Her saat ☐ Gün içerisinde ☐ Haftalık ☐ Aylık

13. Hisse senedinden sonra yatırım yapacak olsanız aşağıdaki yatırım araçlarından hangisini tercih edersiniz?

- ☐ Mevduat ☐ Döviz ☐ Yatırım Fonu ☐ Devlet Tahvili
- ☐ Bireysel Emeklilik ☐ Repo ☐ Altın ☐ Diğer

14. Finans konusunda eğitim / kurs aldınız mı?

- ☐ Evet ☐ Hayır

15. Yapmış olduğunuz yatırımlarda finansal danışmanlık hizmeti alıyorsunuz?

- ☐ Evet ☐ Hayır

16. Hisse senedi alım-satımlarınızı genelde hangi seansta yaparsınız?

- ☐ 1. Seansta ☐ 2. Seansta ☐ Hisse senedi fiyat hareketlerine göre

17. Hisse senedi yatırımlarınızda risk alma düzeyiniz hangisidir?

- ☐ En Düşük ☐ Düşük ☐ Orta ☐ Yüksek

18. Hisse senedi getirisi, firma büyüklüğü, defter değeri / piyasa değeri oranları ve bilanço gibi kavramları hesaplama yöntemleri hakkında bilginiz var mı?

- ☐ Evet ☐ Hayır

19. En çok hangi tür hisse senedini almaktasınız?

- ☐ İnşaat ☐ Sportif ☐ Bankacılık ☐ Gıda ☐ Otomotiv ☐ Diğer

20. Lütfen aşağıdaki önermeleri dikkatlice okuyunuz ve karşılarında yer alan ölçekte size en uygun gelen seçeneği (X) şeklinde işaretleyiniz. Boş alan bırakmamanızı rica ederim.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
BIST100'de yer alan hisse senetlerini zarar etse bile uzun vadede elimde tutuyorum.					
Gazetede yatırım yaptığım hisse senediyle ilgili kötü bir haber çıkınca hisse senedimi satıyorum.					
Piyasa faizinin %10 olduğu ortamda %5 kazancı bulduğumda satış işlemi yaparım.					
Bir hisse senedinin yıllık bazda %10 ve üzeri kazanç getireceğini bekleyen bir yatırımcıysam, hissenin o yıl içinde %15 kaybettiğini gördüğümde satış işlemi yaparım.					
Bir hisse senedi son zamanlarda sürekli kazandırıyor ise o hisse senedini almam. Aynı hisse senedi son zamanlarda kaybettiriyorsa o hisse senedinin gelecekteki durumunu değerlendirir ve portföyüme almak için gözlemlerim.					
Eğer hisse senetlerine yatırım yapıyorsam ve başka finansal araçların daha fazla kazandırdığını gözlemlesem bile, hisse senedi alım - satımı yapmaya devam ederim.					
Güvenli ancak düşük getirili yatırım araçlarını güvensiz ancak yüksek getirili yatırım araçlarına tercih ederim.					
Hangi yatırım aracını kullanacağımı dini inançlarıma ve politik görüşlerime göre belirlerim.					
Herhangi bir nakit ihtiyacım olduğunda, %15 kaybettiren hisse senedim yerine, %10 kazandıran hisse senetlerimi satarım.					
Piyasada yer alan diğer yatırımcıların gözlem ve hareketlerine önem verir ve genellikle çoğunluğun kararlarını takip ederim.					
Finansal piyasalardaki çoğu yatırımcının tercih ettiği yatırım aracının daha yüksek getiri sağladığına inanırım.					

Yatırım kararlarımı verirken yakın iletişim halinde olduğum insanların yatırım kararlarını dikkate alırım.					
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