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# *Financial and Investment Decisions between Behavioral and Traditional Finance*

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**Abstract:**

We aim to study the impact of human behavior on financial and investment decisions, using the descriptive and analytical approach. We concluded that the traditional financing model provides a poor description of financial behavior. In contrast, the main idea in behavioral finance is that investing behavior exists and differs from what the traditional financing model assumes. And it affects the financial markets, and improves our understanding of financial decisions and their impact on market prices. That proves that in many cases behavioral finance is better at predicting the behavior of financial markets.

**Keywords:** Behavioral finance, Financial decisions, Investment decisions, Investor behavior, Traditional finance.

**Jel Classification Codes** : G40, G41, G10.

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## 1. Introduction

(Shefrin, 2000) and (Statman, 1999-2004) are two of the most prominent pioneers of behavioral finance, as well as others from the field of psychology who have had a significant impact on behavioral finance and economics, such as (Gilovich, 1991), (Dawes, 2001), and (Statman, 1999-2004). (Plous, 1993), who have contributed to behavioral finance literatures. Add to that the most recent studies in behavior, which includes insights from economics, finance, psychology, and cognitive neuroscience (Loy, 2005, p. 1).

Over the last decade, the term "behavioral finance" has become widespread in the financial sector. Several investment companies are currently applying behavioral finance studies to provide financial services (Baltussen, 2009, p. 3). By applying behavioral science insights to financial markets and their participants, behavioral finance aims to increase understanding of financial markets and their participants (such as psychology and sociology). This contrasts with the traditional finance paradigm, which assumes that economic agents are rational in order to comprehend financial decisions. That is, they must act in an unbiased manner and make decisions that maximize their self-interest, but this concept involves unrealistic assumptions about human behavior and the functioning of financial markets. For example, the traditional model assumes that economic agents correctly process new information and make acceptable and valid decisions. In reality, however, agents must be able to incorporate and consider many different information and must fully understand the future consequences of all their actions. Moreover, the prices of the securities must reflect their intrinsic value. In fact, human beings do not possess all of these abilities and characteristics. Some have preferences that differ from rational factors, and their ability to process information and solve complex problems is limited in addition to social considerations and constraints (Baltussen, 2009, p. 4). Therefore, classical finance theories may give an inaccurate description of financial behavior. In fact, many studies confirm this proposition in

the overall behavior of financial markets, investors, and managers (Baltussen, 2009, p. 7).

**Problematic:**

The core concept of behavioral finance is that investment behavior exists, differs from what traditional finance theories assume, and has an impact on financial markets (Baltussen, 2009, p. 10). Behavioral finance theories have shown in a number of recent studies to be able to explain many empirical results that traditional finance theories have been unable to explain. Behavioral finance's findings have also shown to be effective tools for improving individual investing decisions.

The key problem can be highlighted in the following question:

**Does behavioral finance affect financial and investment decisions?**

The main problem can be addressed and analyzed by answering the following sub-questions:

- What is behavioral finance? What are its foundations? As well as its patterns? What about his theories?
- How do behavioral finance and traditional finance relate to one another?
- Does behavioral finance have an impact on financial and investment decisions?

**Hypotheses**: The following hypothesis guided the research:

Behavioral finance has an impact on financial and investment decisions.

The basic hypothesis is subdivided into sub-hypotheses:

- Financial and investment decisions have an integrated relationship with Behavioral finance.
- Behavioral finance explains many anomalies in financial and investment decisions.

**Objective**:

The goal of this study is to create a general framework of behavioral finance research and to explain how traditional and behavioral finance are related. It also highlights the contrasts between the two groups (behavioral and traditional) in the context of behavioral finance: behaviorists say that behavioral theories are required to explain anomalies that cannot be tolerated by traditional theories ( Noyes & Bloomfield , 2010, p. 17). Traditionalists, on the other hand, argue that competitive institutions make any deviation from the economic man irrelevant as long as the assumption's simplification is sufficient to forecast how the observed variables would interact. These two philosophical viewpoints are both powerful, but they are both incomplete.

**Research Methodology**:

We used a descriptive-analytical method to investigate and discuss research hypotheses and draw conclusions by describing and analyzing research data in order to determine the causes and outcomes to provide useful suggestions and recommendations.

## 2. Behavioral finance definition:

### 2.1 The Blossoming of Behavioral Finance:

In the 1990s, academic debate shifted away from econometric analyses of time series on prices, dividends, and earnings and toward developing models of human psychology as it relates to financial markets. The field of behavioral finance developed. And The theoretical models captured significant variations because researchers

saw too many anomalies and lacked inspiration. Campbell, Lo, and MacKinlay's book "The Econometrics of Financial Markets", published in 1996, summarized a large body of empirical work that laid the groundwork for a financial revolution (Shiller, 2002, p. 13).

## 2.2 Behavioral finance core principles:

Behavioral finance emerges in the literature in a variety of forms and perspectives. We believe that the first step in defining behavioral finance is to define the link between psychology, sociology, and finance (Figure 1).

**Fig.1. Basis of behavioral finance**


**Source**: (Ricciardi, 2005, p. 10).

Traditional finance remains the focus when studying behavioral finance concepts; however, behavioral aspects of psychology and sociology are key motives.

## 2.3 Definition of behavioral finance:

Finance in general, is defined as a collection of facts, scientific foundations, beliefs about getting funds from different sources and putting them to use by individuals, businesses, and governments. (Al-Sharrah, 2005, p. 23) Modern finance has made significant advances in recent decades. Behavioral finance has emerged as a new entry point into the financial markets. It is defined as the process of choosing an alternative investment from among a variety of options; any activity that occurs after a detailed analysis of all of these alternatives, and thus explains investor thinking process, including the impact of emotion on the decision-making process. Essentially, behavioral finance attempts to explain what, why and how financing and investment takes place from a human perspective (Figure 2).

**Fig.2. Behavioral Finance Case Study Methodology**

**The What?** Behavioral finance incorporates the cognitive processes and the emotional dynamics concerning the decision making process of investors. The field has a solid foundation from various social sciences and business disciplines that offers a different vantage point of finance and investing.

**The Why?** The emergence of alternative viewpoints from academic scholars and investment professionals since standard finance falls short in many instances.

**The How?** Many academic studies have utilized a wide range of research methods associated with the fields of psychology or finance that have investigated the behavior of individuals, groups, organizations or markets

**The When?** The last 25 years the field began to blossom from the origins of psychology and behavioral economics. Especially, the last ten years has seen a substantial increase in the research, publication, and investment strategies associated with the science of behavioral finance.

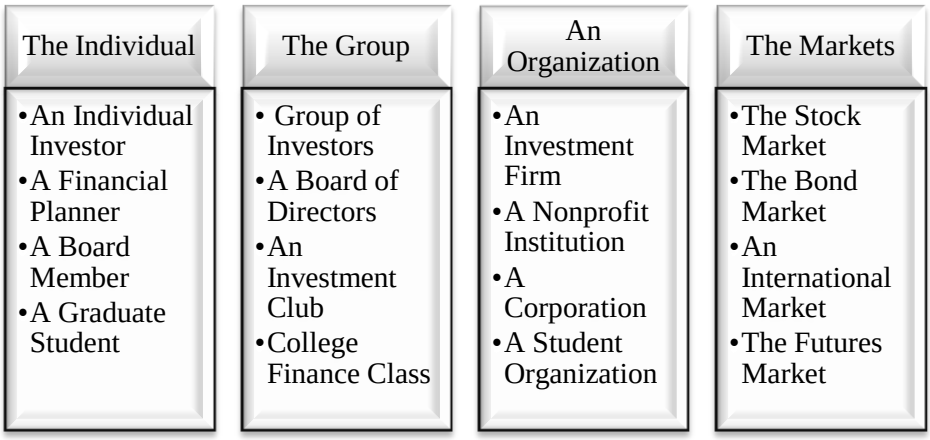
**The Who?** "Behavioral Finance Scholars from Academia" and "Investment Professionals from Wall Street to Main Street.

**The Where?** Extensive research studies have appeared in academic journals, investment periodicals, dissertation proposals, and books as well as conceptual articles in magazines and local newspapers

**Source**: (Ricciardi, 2005, p. 6).

Behavioral finance examines financial markets and attempts to explain anomalies such as the January effect, speculative market bubbles, financial breakdowns, and crises. Behavioral finance is the study of psychological and social factors that influence an individual's, group's, or organization's financial decision-making process, as shown in Figure 3 ( Ricciardi & Simon , 2000, p. 7).

**Fig.3. Behavioral Finance Decision Makers**




**Source**: (Ricciardi, 2005, p. 7).

2.3 **Behavioral Finance Patterns:**

Some of these patterns are as follows (Al-Jubouri, 2014, p. 792):

- **Inference**: Due to the increased spread of information for decision makers, the greater usage of heuristics is often an unavoidable method.

- **Overconfidence:** which may sometimes lead to less diversification and increase in bad investments.

- **Mental Accounting**: The tendency of decision makers to separate different types of possibilities into separate accounts, and then apply theoretical decision probability rules to each

account by ignoring the possible interaction between the accounts.

- **Disposition effect:** People tend to change wrong answers, simply because they think that all other groups can't be wrong. It results in irrational behavior that may cause fluctuations in the market.

- **Misunderstanding random**: Seeing patterns that do not exist, which leads to irrational decisions. Four fallacies of human beings can be identified: limited attention, faulty memory, limited comprehension abilities, and limited communication abilities.

- **Adherence and bias** (focus) on relevant data indicates an entrenched decision-making process that requires quantitative evaluation and such evaluations may be influenced by others' suggestions.

- **Fear of change**: resulting in a strong status quo bias.

## 3. Behavioral Finance and Financial and Investment Decisions:

### 3.1 The impact of the psychological state of investors on their decisions:

Adam Smith realized how powerful sentiment and behavioral biases can be overall economic and financial decisions made by business leaders a long time ago, and now this theory, which was formerly considered speculative, has evolved into a self-contained science known as behavioral finance. Many issues arise from behavioral finance. Sociologists and rational choice theorists, for example, acknowledge that everything social actors do has a purpose and that nothing happens by accident. This viewpoint on behavioral finance, on the other hand, is contradictory to it. As a result, according

to advocates of behavioral economics, it is these biases that play the most important role (Ulwani , 2020).

Here, we summarize the psychology that may be of particular interest to financial investors (Barberies & Thaler , 2002, p. 12):

- Beliefs;
- Overconfidence;
- Optimism and wishful thinking;
- Representativeness;
- Conservatism;
- Belief perseverance;
- Anchoring;
- Availability biases.

### 3.2. Behavioral Finance and financial Decisions:

In his book, Behavioral Finance and Wealth Management, Michael Pompian attempts to explain the impact of these behavioral biases on financing decisions; In terms of granting or preventing it, and in financing and investment decisions as well: Excessive confidence, profound perceptions, cognitive dissonance, the illusion of control, conservatism, the status quo, and optimism are the most notable of these biases (Ulwani , 2020).

According to the Faculty Chair Richard Zeckhauser; Investment Decisions and Behavioral Finance will enable you to (Zeckhauser, 2021):

- Understand the applied science of effective decision making.
- Discover how our brains are not wired to deal with the decisions that modern financial markets require and ways to adjust for these shortcomings.
- Learn how and why financial bubbles develop and strategies for recognizing them.

- Identify the psychological reasons that lead investors to make severe investment errors.

### 3.3. Behavioral finance vs. traditional finance:

Traditional financial theory implies that market participants make rational decisions all of the time, although this is not always the case. Investors' emotions and psychological states frequently affect their actions, causing them to act irrationally. As a result, behavioral finance tries to explain why people make illogical financial decisions by combining behavioral theory and cognitive psychology with traditional finance and economics (Mustafa, 2018).

The capital asset pricing model and the efficient market hypothesis are two theories that imply that most people act rationally. Although these ideas were first thought to be useful and capable of describing specific events, scholars have discovered several unforeseen and unproductive financial and economic actions throughout time. Traditional economic theory says that emotions and other external influences have little influence on people's economic decisions, but the real world has proven to be a chaotic place where investors might act irrationally. As a result, scholars are turning to cognitive psychology to evaluate unreasonable and irrational actions that current funding has been unable to explain (Baltussen, 2009, p. 8).

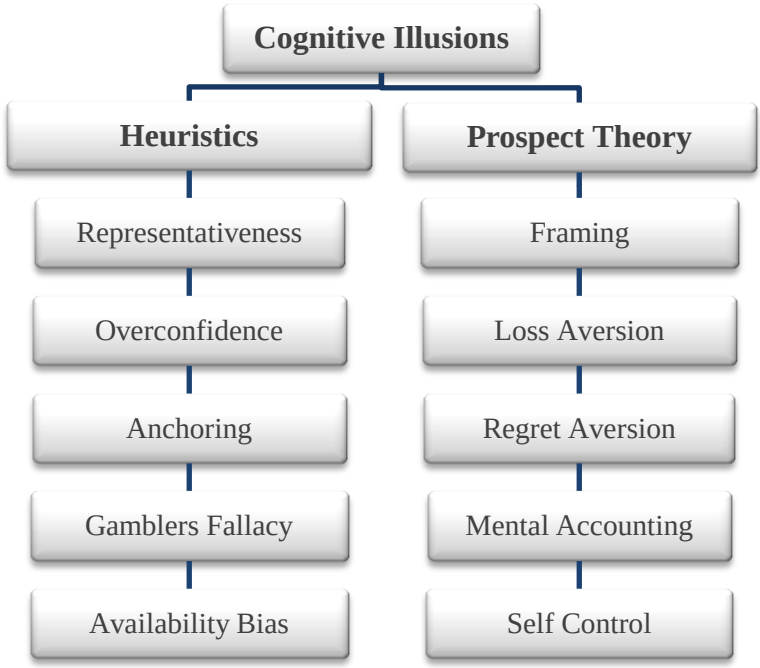
According to the classic financial researcher, economic incentives are directed by the economic man. The latter makes fully logical decisions, applies infinite processing power to any available data, and adheres to the preferences of conventional anticipated utility theory. However, the assumption of the economic man is wrong. Behavioralists in finance seek to replace the economic man with a more realistic model (Bloomfield & Noyes., 2010, p. 13).

Thaler R. H, 2005, the founder of behavioral finance, says in one of his lectures to an advocate of the traditional school. «The

difference between us is that you think people are as smart as you, while I presume people are stupid like me"

What traditional financial theory says in conclusion is that, the decisions made by the investors are usually rational. Whereas the modern theories suggest that no such considerations compel the decision-makers. Most of the time, decisions of investors are inconsistent, or in others words we can say that cognitive illusions play a vital role to divert the human decisions, which have been categorized into two as shown in the figure below (Jahanzeb, Muneer , & Rehman , 2012, p. 533):

**Fig.4. Cognitive Illusions**




**Source**: (Agha, Saqib, & Saif-ur, 2012, P. 533).

### 3.4 Evaluation of behavioral finance theory:

In recent years, behavioral finance theory has gained supporters, but it has also attracted critics. Eugene Fama, the creator of the Efficiency Market Theory, is one of its most vocal critics, arguing that while financial theory cannot explain all irrational circumstances, Efficiency Market Theory cannot be totally abandoned for the sake of behavioral finance. Many of the flaws in classical models can be seen as one-time occurrences that are addressed over time, whereas behavioral finance outcomes appear to be contradictory.

When it comes to probabilities, on the other hand, a lack of understanding can lead to inaccurate forecasts known as gambler's error. It occurs when a person feels a random event is twice as likely to occur after a collection of circumstances has occurred. This logic is flawed since past experiences have no bearing on the likelihood of certain events occurring in the future (Mustafa, 2018).

To that, add the risks of overconfidence. This makes it difficult to identify the finest stocks to invest in for the long run.

Modern behavioral models do not provide a convincing explanation for why aggregate and firm price behavior differ. Aside from the price-profit connection, discount rates, and company conditions. Earnings are, in fact, intimately linked to changes in discount rates. This shows that changes in discount rates account for a significant amount of the returns. The findings contradict theoretical models that suggest that discount rates and cash flows should move in opposite ways ( Kothari, Lewellen, & Warner, 2004, p. 30).

Regardless of the foregoing, behavioral finance's success can be attributed to two key elements. No, financial economics in general, and the efficient market hypothesis in particular, have made testable predictions regarding a wide range of events. Second, enormous amounts of data are readily available to validate these precise forecasts (Thaler, 2005, pp. 63-65).

The efficient markets theory, for example, is based on a set of stock price projections. Stock prices, for example, remain valid if asset prices reflect the genuine worth of the security. However, because the intrinsic values cannot always be observed, the efficient market hypothesis principle cannot always be tested. However, in some special cases the hypothesis can be tested by comparing two assets whose relative intrinsic values are known (Mullainathan & Thaler, 2000).

Furthermore, behavioral finance has given finance a more realistic dimension by substituting classical finance's assumptions about investor rationality and market pricing effectiveness (Shefrin, Behavioral Corporate Finance,, 2000, p. 11). As a result, the future of finance will merge behavioral finance's realism with conventional finance's rigor (Shefrin, 2009, p. 158).

## 4. Research Methodology:

The study included 304 industrial companies that are publicly traded on the financial markets of the following countries: Saudi Arabia, Jordan, Kuwait, Egypt, Iraq, the United Arab Emirates, and Qatar. This was for the period 2010-2014, but the sample size was decreased to 251 companies due to a lack of data for some companies. For the independent research variables (the institution's attitude), we employed the analytical technique. For the independent study variables (the institution's risk attitude) and the dependent variables, we used the analytical approach (financial decisions represented by the variables shown in Table 1). The financial manager's attitude toward gains and losses, as well as the change in the leverage ratio, reflected the aversion or inclination for risk.

Table 1 displays the approved variables that represent financing and investment decisions as represented by the determinants that comprise the investment financing structure.

**Table. 1. Summary of Research Variables**

| variable symbol | Variable name | How to calculate the variable |
|---|---|---|
| (Lev) | Leverage | Total debt (long-term debt + current liabilities) divided by total assets. The change in financial leverage is calculated for the previous year. |
| (Tang) | Tangibility | The ratio of fixed tangible assets to total assets. |
| (Prof) | Profitability | The ratio of return before interest, depreciation and tax to the company's total assets. |
| Size | | **The logarithm of the company's total assets.** |
| (Tshield) | Tax shield | Depreciation ratio to the company's total assets. |

**Source**: Prepared by the researcher.

**Description of the study variables:**

Table 2 shows the average of the study variables:

**Table. 2. describes the study variables**

| Variable | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| Lev | .3083552 | .2088311 | .0018236 | .9802632 |
| Size | 2.912092 | .1284525 | 2.27022 | 3.228066 |
| Tshield | .035948 | .0513308 | 0 | .8848541 |
| Tang | .372845 | .2334895 | .0000425 | .948409 |
| Prof | .0466525 | .142625 | -.9687078 | .9348 |

**Source**: Prepared by the researcher based on stata results.

We note that the average debt ratio was 30 percent, while the highest debt ratio was 98 percent, compared to 0.2 percent on average. The gradient in the level of risk aversion in these companies can be deduced from the significant variation in debt ratios. The same can be said about the company's profitability, which ranged from a loss of 96 percent to a profit of 93 percent, i.e. a 4.6 percent average.

To ensure the validity of the model used in the analysis, a set of tests were conducted:

Table 3 presents the findings of the study's correlation analysis, where we can see from the model's correlation matrix that the link between the independent variables is modest, with none above 0.80, indicating that there is no difficulty with linear correlation between the variables (Gujarati, 2003, p. 254) .

**Table 3 Correlation matrix for study variables**

| | Changlev | Logsize | Tshield | Tang | Prof |
|---|---|---|---|---|---|
| Lev | 1.0000 | | | | |
| Size | -0.0307 | 1.0000 | | | |
| Tshield | 0.0153 | -0.0822 | 1.0000 | | |
| Tang | -0.0169 | 0.1191 | 0.2484 | 1.0000 | |
| Prof | -0.0831 | 0.2045 | 0.0502 | -0.0190 | 1.0000 |

**Source**: Prepared by the researcher based on stata results.

Since the presence of heteroscedasticity is a major concern in regression analysis and analysis of variance, we conducted the Breuch-Pagan Cook Weisberg test, which tests the null hypothesis that the variance of errors of all variables is equal, and the test results revealed that the study data are free of heterogeneity of variance (Table 4).

**Table. 4. Breuch-Pagan/ Cook Weisberg test results**

| | **Chi2** | **Prob** |
|---|---|---|
| **Equation** | 2.11 | 0.1430 |

**Source**: Prepared by the researcher based on stata results.

Further tests include The Durbin Watson (DW) statistic, to test for the presence of autocorrelation in the residuals from a statistical model or regression analysis. We found that The Durbin-Watson test

to have a value of 2.03 indicating no autocorrelation was detected in the sample. which proves that the estimated model is statisically significant and valid to explain the phenomenon studied.

**Regression analysis results:**

The linear regression method was used to generate the results (Random Effect model). Based on the findings of the analysis, it is evident that (Table 5):

There is a positive, statistically significant relationship between the change in the financial leverage ratio (Lev) and the tangible ratio (Tang). The study's findings also revealed a negative, statistically significant association between changes in the company's financial leverage ratio and its size, as well as the profitability ratio Prof. That is, contrary to expectations, the higher the company's profits, the lower the debt ratio to prevent risk and sustain profits. There is also a positive relationship between the financial leverage and the Tshield tax rate, but this relationship is not statistically significant.

**Table. 5. Regression analysis results for the study sample**

| Random-effects GLS regression<br>R-sq = 0.4202<br>Random effects u_i ~ Gaussian<br>corr(u_i, X) = 0 (assumed) | | | Number of groups = 251<br>Obs per group: min = 5<br>Wald chi2(4) = 10.00<br>Prob > chi2 = 0.0404 | | |
|---|---|---|---|---|---|
| changlev | Coef. | Std Err. | z | P>z | [95%Conf. |
| Size | -1.559125 | .6555792 | -2.38 | 0.017 | -2.844037 |
| Tshield | .0510793 | .0611054 | 0.84 | 0.403 | -0.068685 |
| Tang | .066079 | .0292871 | 2.26 | 0.024 | .0086774 |
| Prof | -.0620814 | .0216391 | -2.87 | 0.004 | -0.1044932 |
| Cons | 2.969835 | 1.221385 | 2.43 | 0.015 | .5759639 |
| Sigma u<br>Sigma e<br>rho | 0<br>0.11184968<br>0 (fraction of variance due to u_i) | | | | |

**Source**: Prepared by the researcher based on stata results.

The results also show the effect of the independent variable (change in the debt / total assets ratio) on the dependent variables (Tang, Size, Prof ..) when the value of the coefficient of determination ($R^2$) reaches (0.4202), which means that a percentage of the change in the value of the dependent variables is caused by the independent variable shown. As for the other effects, they are caused by other unknown factors that were not addressed in this study.

Based on the results of regression analysis, we conclude that there is an influence relationship between behavioral finance patterns represented by risk preferences (the change in the financial leverage ratio) and financial decisions represented by investment decisions and financial decisions expressed by study variables).

## 5. Study results:

Traditional finance has been the dominant theory in the academic world for the past 40 years. Scholars and investment professionals, on the other hand, have begun to examine behavioral finance, an alternative theory of finance. Behavioral finance aims to explain how psychological elements influence person's investment and financial decisions.

Behavioral finance brought a realistic dimension to finance, replacing the unrealistic assumptions traditional finance made about that investors, managers are perfectly rational and that market prices are efficient. Meanwhile, much of the behavioral finance research lacks accuracy, although some of its claims seem incorrect. The future of academic finance will combine the realism of behavioral finance with the rigor of traditional finance.

As a result, Behavioral finance is not a substitute for traditional approaches such as the market efficiency hypothesis, but rather it contributes with it to provide a better understanding of the behavior of managers and investors of real market practices to reach and finance the best investment decisions.

## 6. Conclusion:

The traditional financing model aims to understand financial decisions by incorporating optimal representation elements and market processes that rectify mispricing. That is, it is presumptive that people act logically. However, this approach is based on irrational assumptions about human behavior and financial market functioning. Indeed, evidence from both real data and experience shows that the traditional model frequently fails to accurately describe financial behavior and markets. Behavioral finance, on the other hand, is based on the idea that investment behavior exists that differs from what the traditional finance model assumes, and that this behavior has an impact on financial markets.

The field of behavioral finance aims to improve our knowledge of financial decisions and their impact on market pricing by incorporating insights from psychology and other behavioral sciences. This shows that, in many circumstances, behavioral finance outperforms traditional financial models in predicting the behavior of financial markets and investors. Thus, based on the above, the main hypothesis and sub-hypothesis can be proven. Behavioral finance, in other words, plays an important role in shaping financial and investing decisions. This means that behavioral finance and financial and investing decisions have a tight relationship, and behavioral finance can be seen of as a complement to standard finance theories because it tries to explain numerous anomalies in these decisions. Behavioral finance, on the other hand, is a relatively new field, and there are other behaviors that need to be investigated further. Here are some recommendations for moving this field forward:

- How do investors build their investment portfolios?
- What methods do they use to choose between assets?
- When do assets attract their attention?
- When do investors become overly optimistic or pessimistic?
- How do people respond to sudden increase in fear in the markets?

- What impact does this have on their expectations and decisions?
- What determines the value they allocate for investment?
- How do these aspects affect decisions and financial markets?

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