

THE IMPACT OF BEHAVIORAL FACTORS INFLUENCES ON INDIVIDUAL INVESTORS IN STOCK MARKET INVESTMENT

Vipin Benny

Assistant Professor, Research Department of Commerce, St.Thomas' College (Autonomous),
Thrissur, Kerala.

Received: July 22, 2018

Accepted: August 30, 2018

ABSTRACT

The idea of correct prices is a neat and clean way of thinking, but the real question that begs answering is whether or not the law of one price actually exists. Traditional theory argues that "smart money" investors, or those with the highest level of knowledge about financial markets, will counteract any noise caused by those that are trading "irrationally" through arbitrage, however over the past few decades there has been a mounting amount of evidence against the idea of complete arbitrage. This study investigates the factors that have influenced stock market investors in investment decisions. The study based on 250 samples units of stock market investors in the state of Kerala. The results obtained show that financial, economic and personal factors have greater influences on investment decisions of investors.

Keywords: (LTCC, Behavioral finance, EMH, Financial Factors, Economic Factors)

JEL Code: G40, G41

INTRODUCTION:

Beginning in the 1980's, finance theorists first began to consider the idea that the laws of investing were not quite as clean as they had originally theorized. And, as computers have become more powerful it has become possible to analyze the mountains of data to prove these thoughts true. From the collective messiness in breakdowns of traditional finance theory a new field within finance has sprung up. This new field has been named aptly named Behavioral finance. In what is very likely to be termed as an "anomaly" by most traditional economic theories, the foundations of the world economy were shaken by the Financial Crisis of 2008 that originated in the USA and global recession that resulted. A vast majority of economists, and economic forecasters occupying influential seats in governments and financial institutions were caught unawares by this and the follow up events like bankruptcies and defaults. Even after the crisis had begun, many of them were not able to analyze the magnitude or depth of it. Going a bit more into the past, the case of a hedge fund by the name of Long Term Capital Management (LCTM) deserves special mention owing to the fact that, despite being partnered by an ex-vice chairman of the Federal Reserve Board, two Nobel Prize winners in Economics, and having 24 employees with Ph.D.s., it plunged into failure (Nofsinger, 2001). Failures of economists, and consequently the theories they swear by, on various occasions has put forward the question: Are people really rational? Or are they likely to be driven by bouts of emotions like fear and greed which could lead to bad decisions?

STATEMENT OF THE PROBLEM

In classical economic theory, it is assumed that investors are rational and competent. The theory assumes that investors have the same preference, perfect knowledge of all alternatives and an understanding of the consequences of their decisions. Markets are assumed to be efficient. Neither technical nor fundamental analysis would enable an investor to achieve returns greater than those that could be obtained by holding a randomly selected portfolio of individuals stock with comparable risk (Malkiel, 2003). Psychologists from the branches of cognitive and experimental psychology have made the argument that the basic assumptions of classical decision making theory are incorrect since individuals often act in a less than fully rational manner. In particular, the seminal work by Kahneman and Tversky (1979) advocated the prospect theory which assumes departures from rationality. The theory assumes that people are loss averse in which they are more concerned with losses than gains and as a result, a person will assign more significance to avoiding losses than achieving again. Due to positive relationship between stock market and the economy if there is a rise in stock market it will positively affect the economy and vice versa. Therefore the decisions of the investors play an important role in the development of the economy. To understand and to give a suitable explanation to the trends in stock market the Behavioral factors influencing the decisions of the investors and how it affect their investment is to be studied. Organizations can study the relevant factors so that they could give better recommendation and could forecast more accurately. Nowadays a

large amount of stock market anomalies could be seen and there arises a need for studying the affecting Behavioral variables.

OBJECTIVES OF THE STUDY

To find possible Behavioral factors influences individual investors in stock market investment decisions

To identify the ranking of the factors influencing investment decision making process and choosing company shares.

SIGNIFICANCE OF THE STUDY

The study of Behavioral finance is relatively new in comparison to other financial theories. In developed security markets, Behavioral finance is applied widely to explore the behaviours that impact the investment decisions; however, as mentioned above, Behavioral finance has the limited number of application for less developed security markets. This study is done with hope to confirm the suitability of using Behavioral finance for all kinds of stock markets.

PERIOD OF THE STUDY

This study covered a period of 3months from 2017-18. Data collection period was from the month of December 2017 to February 2018.

REVIEW OF LITERATURE

Behavioral finance is a relatively new paradigm of finance, which seeks to supplement the standard theories of finance by introducing Behavioral aspects to the decision making process. Early proponents of Behavioral finance are considered by some to be visionaries. The awarding of the 2002 Nobel Prize in economics to psychologist Daniel Kahneman and experimental economist Vernon Smith vindicated the field. Kahneman studied human judgment and decision making under uncertainty while Smith studied alternative market mechanism through experimental research. This was the first time a psychologist was awarded the Nobel Prize and played a key role in convincing mainstream financial economists that investors can behave irrationally. A number of theories have been developed to explain how and why people make decisions when they spend, invest, save and borrow money (Belsky and Gilovich, 1999) and the factors that influence shares investment decision making. The extensive reviews of the main theories range from theory of Risk tolerance by investors (Bernheim et al., 2001), theory of Efficient market hypothesis (Fama, 1965, 1970; Fama and French, 1993, 1996), and modern portfolio theory (Markowitz, 1952; Lintner, 1965; Sharpe, 1964; Tobin, 1958). The theory of risk tolerance following from the research of Bernheim et al. (2001) is a construct stipulating that the decision to invest depends on willingness to accept higher risk or volatility in exchange for higher potential returns. Accordingly, investors are classified into two as risk tolerant investors and risk-averse investors. A risk tolerant investor will pursue higher potential reward investments even when there is a greater potential of loss. In addition, a risk tolerant person would seek out high-risk investments, even if they add little to his or her portfolio. The theory of planned behavior is a theory about the link between attitudes and behaviour. It was proposed by Ajzen (1985, 1991) as an extension of the theory of reasoned action. Essentially, the theory contends that both attitude and norms toward behaviour are the immediate determinants of intention to perform such behaviour. The theory of planned behaviour has since been widely applied as a very powerful and predictive model for explaining human behaviour. The theory of efficient market hypothesis (EMH) holds that the prices of stocks and other assets automatically incorporate all available information and rapidly adjust to incorporate new information. Market Portfolio Theory, which is also called as portfolio theory or portfolio management theory, is a sophisticated investment approach or strategy which is also a philosophical opposite of traditional stock picking. It is the creation of the economists who try to understand the market as a whole, rather than business analysts who look for what makes each investment opportunity unique. The key tenet of modern portfolio theory therefore is that if one wishes to increase the performance and reduce the risk in overall investment portfolio, he or she should combine investments that are non-correlated with one another. Simply put a diversified portfolio of non-correlated investments that can provide highest returns with the least amount of volatility given that the risk of loss in futures trading can be substantial and an investor could potentially lose more than the initial investment. Warren et al. (1990) and Rajarajan (2000) determined individual investment selections (e.g., stocks, bonds, real estate) stranded on lifestyle and demographic attributes. These investors see rewards as contingent upon their own behaviour. Nagy and Obenberger (1994) examined influencing factors of investors through a set of 34 questions, which found that classical wealth-maximization criteria are important to investors, although they are affected by a

variety of decisive factors while choosing stocks. Merikas, Andreas, George, and Prasad (2004) studied that the most important variables were related to classic wealth maximization criteria. Coverage in the press, statements from politicians and government officials, and political party affiliation were unimportant to most stock investors. Five important factors identified as Accounting Information, Personal Financial Needs, Subjective/Personal, Advocate Recommendation, and Neutral Information. Falk and Matulich (1976) observed the relationship between some personal characteristics of a group of investors and a group of investment advisors, and the degree of risk attributed by them to various types of financial investments through their study in 1976.

RESEARCH METHODOLOGY

Research Design

The study uses descriptive research design and exploratory design to identify the factors affecting the decisions of the individual investors. The design uses questionnaire as the main instrument for collecting data and helps the researcher to generalise the findings to a larger population. It helps to collect quantitative data which could be analysed using inferential statistics. The questionnaire is divided into three parts: personal information, behavioral factors influencing investment decisions, and investment performance.

Research Approach

Deductive approach of reasoning is used to find the most influencing factors affecting the decisions of individual investors. In this study, exploring the Behavioral factors influencing the decision making of investors, which are already “out there”, is the main aim, instead of inferring and building theory, deduction approach seems to be the most appropriate choice. The study starts with reviewing the Behavioral finance theories in general and in stock market in particular, to get the theoretical and conceptual context as well as empirical findings of previous researches, from which the research model and hypotheses are proposed. Then, the questions used in interviews and questionnaires are prepared.

Pilot Study

To test the reliability, variability and efficiency of the research instrument developed, a Pilot study was conducted among 50 selected investors of Thrissur district in Kerala. In this study information was gathered regarding the demographic characteristics of the respondents and their investment habits.

Reliability Analysis

Table 1
Reliability Statistics

| Cronbach's Alpha | No. of Items |
|------------------|--------------|
| 0.798 | 13 |

In order to check the internal consistency of the scaled statements, reliability analysis using Cronbach's Alpha Reliability Test was done. Cronbach's Alpha for these 13 scaled statements was 0.798 which is higher than the standard Cronbach's Alpha of 0.7. Hence it is proved that internal consistency of the scale as a whole is high and the questionnaire can be considered as highly reliable.

Determination of Sample Size

In this study sample size is determined on the basis of the following equation:

$$n = z^2\sigma^2/e^2.$$

Here, n = size of sample.

Z = the value of standard Normal Variable at a given confidence level (It is 1.96 for 95% significance level)
σ = standard deviation of the population (Here standard deviation of the variable which has the greatest variance has been taken),
e = acceptable error (it is assumed as 0.2),
$$n = (1.96)^2(1.72)^2 / (0.2)^2 = 284.1225$$

Therefore sample size is 285.

Sampling Design

Population is infinite in the study as it deals with individual investors in share market of Kerala state. Samples are collected from Kerala state in which Multi-Stage Sampling technique is chosen to get the adequate number of samples.

Stage 1: Firstly the number of share brokers in Kerala is identified which are 45 (<https://www.sebi.gov.in>) and from that the major 5 leading share broking firms are selected by using Simple Random Sampling technique. The share brokers chosen are Motilal Oswal, Karvy, Geojit, Hedge and Share Khan. The district has been selected through PPS (Probability Proportionate Size) sampling method and three districts like Thiruvananthapuram, Thrissur and Cochin was selected through Lahiri method in PPS.

Stage 2: The samples investors were identified from the branches of stock brokers through equal allocation of stratified sampling. Therefore 57 investors were selected from each brokers those who are related to stock market investment.

Hypothesis

- H0: There is no association between the Behavioral factors and the investment decisions of individual investors.
- H1: There is an association between the Behavioral factors and the investment decisions of individual investors.

ANALYSIS AND DISCUSSION

For the purpose of finding the factors influencing the investment decisions of the individual investors Factor Analysis is been carried out. A Five point Likert scale is used to collect the data from the respondents and respondents were asked to express their opinion in which 1 show strongly disagrees and 5 shows strongly agree.

Table 2
KMO and Bartlett's Test

| | | |
|--|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.73 | | |
| | Approx. Chi-Square | 966.623 |
| Bartlett's Test of Sphericity | DF | 78 |
| | Sig. | 0.000 |

Source: Primary Survey

The result obtained from 152 respondents had been thoroughly analyzed and the outputs of the results had been clearly explained in this section. To analyze the strength of association among variables the Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy was applied. The KMO measure of sampling adequacy was computed to determine the suitability of using factor analysis. It certifies whether data are suitable to perform factor analysis. KMO score .754 indicates adequacy for testing as .7 is the required criteria.

Table 3
Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 4.10 | 31.51 | 31.51 | 4.10 | 31.51 | 31.51 | 3.56 | 27.36 | 27.36 |
| 2 | 2.97 | 22.85 | 54.36 | 2.97 | 22.85 | 54.36 | 2.94 | 22.64 | 50.00 |
| 3 | 1.47 | 11.29 | 65.65 | 1.47 | 11.29 | 65.65 | 2.03 | 15.65 | 65.65 |
| 4 | 0.80 | 6.12 | 71.77 | | | | | | |
| 5 | 0.70 | 5.35 | 77.11 | | | | | | |
| 6 | 0.57 | 4.35 | 81.47 | | | | | | |
| 7 | 0.56 | 4.30 | 85.77 | | | | | | |
| 8 | 0.47 | 3.65 | 89.41 | | | | | | |
| 9 | 0.43 | 3.33 | 92.74 | | | | | | |
| 10 | 0.35 | 2.69 | 95.43 | | | | | | |
| 11 | 0.28 | 2.15 | 97.58 | | | | | | |
| 12 | 0.22 | 1.67 | 99.25 | | | | | | |
| 13 | 0.10 | 0.75 | 100.00 | | | | | | |

Source: Primary Survey

Applying SPSS 21, the principal component analysis (PCA) was carried out to explore the underlying factors associated with 13 factors. The above table shows that 65.648% of the influence level comes from the first three factors. The Initial eigen value of the first 3 factors is 4.096, 2.970 and 1.468 which is greater than 1.0 so that factors can be interpreted as significant.

Table 4
Correlation Matrix^a

| Correlation | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|----------------------|------|------|------|------|-----|------|-----|-----|-----|------|------|------|------|
| 1 | 1.0 | 0.5 | 0.4 | 0.3 | 0.2 | -0.1 | 0.4 | 0.1 | 0.0 | -0.1 | -0.1 | -0.1 | -0.2 |
| 2 | 0.5 | 1.0 | 0.6 | 0.4 | 0.3 | 0.0 | 0.5 | 0.1 | 0.0 | -0.1 | 0.0 | 0.0 | -0.2 |
| 3 | 0.4 | 0.6 | 1.0 | 0.3 | 0.4 | 0.0 | 0.5 | 0.2 | 0.1 | 0.1 | -0.1 | -0.1 | -0.1 |
| 4 | 0.3 | 0.4 | 0.3 | 1.0 | 0.1 | -0.1 | 0.2 | 0.0 | 0.0 | -0.1 | -0.1 | -0.2 | -0.3 |
| 5 | 0.2 | 0.3 | 0.4 | 0.1 | 1.0 | 0.4 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.5 |
| 6 | -0.1 | 0.0 | 0.0 | -0.1 | 0.4 | 1.0 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.5 |
| 7 | 0.4 | 0.5 | 0.5 | 0.2 | 0.4 | 0.2 | 1.0 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 |
| 8 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.3 | 0.3 | 1.0 | 0.7 | 0.5 | 0.5 | 0.5 | 0.3 |
| 9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.2 | 0.7 | 1.0 | 0.7 | 0.6 | 0.6 | 0.5 |
| 10 | -0.1 | -0.1 | 0.1 | -0.1 | 0.0 | 0.4 | 0.2 | 0.5 | 0.7 | 1.0 | 0.6 | 0.5 | 0.5 |
| 11 | -0.1 | 0.0 | -0.1 | -0.1 | 0.0 | 0.4 | 0.1 | 0.5 | 0.6 | 0.6 | 1.0 | 0.6 | 0.4 |
| 12 | -0.1 | 0.0 | -0.1 | -0.2 | 0.2 | 0.3 | 0.1 | 0.4 | 0.5 | 0.5 | 0.6 | 1.0 | 0.5 |
| 13 | -0.2 | -0.2 | -0.1 | -0.3 | 0.5 | 0.5 | 0.1 | 0.3 | 0.5 | 0.5 | 0.4 | 0.5 | 1.0 |
| a. Determinant =.001 | | | | | | | | | | | | | |

The correlation matrix shows a determinant of 0.001 which is satisfactory to conduct the factor analysis. The correlation between the items can be positive or negative. Positively correlated items show that if there is any increase in one item results in the level of increase in the other. And if negatively correlated it shows that decrease in one item causes same level of increase in the other. And all the items showing correlation above .6 or higher suggest that there is chance for grouping of these items as factors.

Table 5
Rotated Component Matrix

| Variables | Statement | Estimated Factor Loadings | | | |
|-------------|---|---------------------------|----------|----------|---------------|
| | | Factor1 | Factor 2 | Factor 3 | Communalities |
| Variable 1 | Avoid stocks that have poorly performed | -0.07 | 0.73 | -0.07 | 0.54 |
| Variable 2 | Watch trend analysis for making investment | 0.00 | 0.83 | 0.03 | 0.69 |
| Variable 3 | Investment made in attractive stocks | 0.04 | 0.80 | 0.16 | 0.66 |
| Variable 4 | Analyzing stock indexes for making investment | -0.05 | 0.58 | -0.25 | 0.40 |
| Variable 5 | Your own previous experience in the market for your next investment | -0.10 | 0.38 | 0.86 | 0.89 |
| Variable 6 | Expecting personal gain from investment | 0.32 | -0.04 | 0.67 | 0.55 |
| Variable 7 | Avoid selling shares that have decreased price | 0.20 | 0.68 | 0.32 | 0.61 |
| Variable 8 | Anticipating good market returns from the investment | 0.79 | 0.22 | 0.05 | 0.67 |
| Variable 9 | Expected dividend from your investment | 0.90 | 0.09 | 0.04 | 0.81 |
| Variable 10 | Investment had done in reputed company's shares | 0.80 | -0.03 | 0.17 | 0.67 |
| Variable 11 | Watching some financial indicators and statements | 0.80 | -0.09 | 0.10 | 0.66 |
| Variable 12 | Interested in portfolio diversification for financial benefits | 0.69 | -0.10 | 0.28 | 0.57 |

| | | | | | |
|----------------------|--|--------|--------|-------|------|
| Variable 13 | Consider the information from your close friends & relatives | 0.47 | -0.25 | 0.73 | 0.82 |
| Eigen value | | 4.096 | 2.97 | 1.468 | |
| Percentage variation | | 31.508 | 22.849 | 1.468 | |

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

This study has identified three important factors those have been named based on the variables clustered under a particular factor. The first component based factor is named as Financial Factor. This factor explains the highest percentage of total variance which is 31.508 percent. Investors’ make most of their decisions of share investment by considering good market returns, expected dividend from share, investing in reputed companies, watching financial indicators and statements and through portfolio diversification. Secondly, avoiding stocks that have performed poorly, watch trend analysis for making investment, investing in attractive stocks, avoiding stock index for making investment, avoiding selling of shares whose price has been decreased-these three items can be named as Economic Factor which consists of 22.849% of total variance. And finally the rest 11.290% of total variance is named as the Personal Factors which consist of considering previous experiments for further investment, expecting personal gain and considering information from close friends and relatives.

Ranking of Behavioral Factors

Table 6
Ranking of Financial Factors

| Factor | Variables | Factor loadings | Rank |
|------------------|-------------------------------|-----------------|------|
| Financial factor | Good market returns | .786 | 4 |
| | Expected dividend | .896 | 1 |
| | Investment in reputed shares | .800 | 3 |
| | Watching financial statements | .801 | 2 |
| | Portfolio diversification | .689 | 5 |

The factors are ranked in order to know the order of preference of the shareholders in making the investment decisions. The first factor considered by the investors is Financial Factor upon which most of the decisions are taken. The variables affecting this factor are ranked based on their factor loadings. In the order of their ranks the first rank is given to expected dividend, which means that it is the most influential factor upon which the financial factor gets affected. And the last variable is portfolio diversification which is less important in influencing financial related decisions.

Table 7
Ranking of Economic Factors

| Factor | Variables | Factor loadings | Rank |
|-----------------|------------------------------|-----------------|------|
| Economic factor | Avoid poor performing shares | .728 | 3 |
| | Watch trend analysis | .831 | 1 |
| | Invest in attractive stocks | .797 | 2 |
| | Analyzing stock index | .581 | 5 |
| | Avoid selling price | .682 | 4 |

The second factor which influences the decisions of investors is Economic factors and the variables affecting the factor is ranked in which using trend analysis on some stocks to project the future price movement is the major factor influencing the economic decisions and the least influencing factor is analyzing of stock index.

Table 8
Ranking of Personal Factors

| Factor | Variables | Factor loadings | Rank |
|-----------------|----------------------------------|-----------------|------|
| Personal factor | Previous experience | .855 | 1 |
| | Personal gain | .668 | 3 |
| | Information from close relatives | .732 | 2 |

The third factor is Personal factors which will be varying according to the behaviour of the investors. The most influencing variable is the previous experience of the investor in the stock market which has a factor loading of .855. It is followed by information from close relatives and the least influencing variable in the personal factor is the personal gain of the investor.

Relationship between Behavioral Factors and Investment decisions of Individual investors

H0: There is no association between the Behavioral Factors and the investment decisions of the individual investors.

H1: There is an association between the Behavioral Factors and the investment decisions of the individual investors.

For the purpose of knowing whether there is any association between the Behavioral factors and investment decisions of individual investors, regression analysis was conducted and the results are discussed below.

Regression Analysis – Investment Decisions

The three factors such as financial, economic and personal factors which were emerged from among the 13 attributes of Behavioral variables are used as predictor variables in a regression analysis where the response variable refers to investment decision frequency which was defined as customer’s frequency of agreement ranging from ‘Strongly disagree’, ‘Disagree’, ‘No opinion’, ‘Agree’, ‘Strongly Agree’.The results of regression test are presented in the table.

Table 9
Model Summary

| Model | R | R ² | DF | F value | Standard error of the estimate |
|------------|-------|----------------|----|---------|--------------------------------|
| Regression | 0.780 | 0.609 | 3 | 76.728 | .92710 |

The regression test done between the factor variables and Investment decision frequency has yielded R² value of 0.609 with F value of 76.728which implies that the three factors together predict 61% percent of the variations in Investment decisions. The R value is .780 which indicates that there is high degree of correlation between financial, economic and personal factor (independent variable) with investment decision (dependent variable). This shows that there is a significant relationship between the Behavioral variables and investment decision. Further, the Behavioral factors are also considered to be strong predictors of investment decisions.

Table 10
Analysis of Variance through Dependent and Independent Variables
ANOVA^b

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|--------|-------------------|
| Regression | 197.85 | 3 | 65.949 | 76.728 | .000 ^a |
| 1 Residual | 127.21 | 148 | 0.86 | | |
| Total | 325.05 | 151 | | | |

a. Predictors: (Constant), Personal, Economic, Financial

b. Dependent Variable: How long years are you investing in shares

The table indicates the statistical significance of the regression model that was run. Here p< 0.05 indicates that in overall, the regression model is statistically significant and predicts the outcome variable. That is it is a good fit for the data.

Table 11
Coefficients between Dependent and Independent Variables

| Coefficients ^a | | | | | |
|---------------------------|-----------------------------|------------|---------------------------|--------|------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | | Sig. |
| | B | Std. Error | Beta | t | |
| (Constant) | 3.579 | 0.075 | | 47.594 | .000 |
| 1 Financial | 0.288 | 0.075 | 0.196 | 3.818 | .000 |
| Economic | 1.001 | 0.075 | 0.682 | 13.272 | .000 |

| | | | | | |
|--|-------|-------|-------|-------|------|
| Personal | 0.474 | 0.075 | 0.323 | 6.282 | .000 |
| <i>a. Dependent Variable: How long years are you investing in shares</i> | | | | | |

The coefficient table shows that 1 point increase in the financial factor corresponds to .288 points increase on the years of investment in shares. Likewise for all the predictor variables such as economic variable which results in 1.001 points increase in the years of investment and personal factor showing .474 points increase in the years of investment. At 5% level of significance all the significance levels shows .000 level of significance which means that $p < 0.05$ therefore our null hypothesis is rejected. This means that there is association between the Behavioral factors and the investment decisions of the individual investors. And it can be understood that any increase or decrease in the level of financial, economic and personal factor will result in subsequent changes in the level of investment.

The regression equation of perceptual variables is
$$Y = 3.579 + 0.196 V_1 + 0.682 V_2 + 0.682 V_3 + 0.323 V_4.$$

Here, the dependent variable Y represents Investment Decision and V1 represents the financial factor, V2 is economic factor and V3 shows the personal factor. The regression analysis suggests that the factors, financial, economic and personal are positively associated with the investment decisions and perceived risk is significantly positively associated with the investment decision. These three factors are important in predicting investment decision in such a way that individuals who take investment decision on the basis of financial, economic and personal factors are more likely to take it when it is favourable and others may not go for it. These results indicate that the individual investors consider economic factor as the most important attribute which greatly influences their investment decision. It is seen that the value of R^2 is 0.609 which implies that if we add more related variables in the model, the regression coefficient's explanatory power would increase.

FINDINGS

The finding of the study affirms the impact of Behavioral factors on the investment decisions of the individual investors. Therefore, proper awareness should be given so that the investors are able to decisions free from the various Behavioral biases and could make proper investment decisions by increasing their returns from the stock market trading.

Results from the study are more indicative in nature, than confirmative. However, the findings do open up various research opportunities where the number of biases studied could be reduced and the attempts can be made to produce confirmative results under detailed experimental settings. Two recommendations are:

- (i) Subjects should be randomly split into two groups. One group should be given a knowledge session about a certain bias. Then both groups should be presented with a scenario, which tries to induce the subjects into committing the bias.
- (ii) Subjects should be provided with a scenario where they are likely to be influenced by a certain bias. Then they should be given a knowledge session on the bias. A similar scenario should be presented to the same group a day later, to see if the new awareness has any impact on their decision-making.

CONCLUSION

One word which has dominated the world of financial stock markets since the start is 'Volatility'. Extreme movements in global indices and stock prices because of fear and anticipation has, as it is supposed to, made life tough for a rational investor. Market sentiments have been observed to sway wildly from positive to negative and back, in the shortest timeframes like weeks, days and hours. In this context, understanding irrational investor behavior deserves more importance that it has ever had. Behavioral finance - a relatively new field that came into relevance in the 1980s - studies the effect of psychology on financial decision-making. It studies how investors interpret new information and act on it to make decisions under uncertainty. The science does not try to label traditional financial theories as obsolete, but seeks to supplement the theories by relaxing on its assumptions on rationality and taking into consideration the premise that human behavior can be understood better if the effects of cognitive and psychological biases could be studied in context where decisions are made.

References

1. Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
2. Belsky, G., & Gilovich, T. (2010). Why smart people make big money mistakes-- and how to correct them :

- lessons from the life-changing science of behavioral economics. Simon & Schuster Paperbacks. Retrieved from <https://books.google.co.in/books?hl=en&lr=&id=f1XOuHAqPUkC&oi=fnd&pg=PT9&dq=Belsky+and+Gilovich,+&ots=mBJX5s7kgI&sig=npxGollfDRU-DxKvyeGM3CYtUv8#v=onepage&q=Belsky and Gilovich%2C&f=false>
3. Bernheim, B. D., Garrett, D. M., & Maki, D. M. (2001). Education and saving:: The long-term effects of high school financial curriculum mandates. *Journal of Public Economics*, 80(3), 435–465. [https://doi.org/10.1016/S0047-2727\(00\)00120-1](https://doi.org/10.1016/S0047-2727(00)00120-1)
 4. Bruton, G. D., Merikas, A. G., Prasad, D., & Vozikis, G. S. (1996). MEASURING CORPORATE ENTREPRENEURIAL PERFORMANCE: VALUE CREATION AS AN ALTERNATIVE APPROACH. *Journal of Small Business & Entrepreneurship*, 13(3), 68–85. <https://doi.org/10.1080/08276331.1996.10600530>
 5. Falk, H., & Matulich, S. (1976). The Effect of Personal Characteristics on Attitudes toward Risk. *The Journal of Risk and Insurance*, 43(2), 215. <https://doi.org/10.2307/251976>
 6. Fama, E. F. (1965). The Behavior of Stock-Market Prices. Source: *The Journal of Business*, 38(1), 34–105. Retrieved from https://s3.amazonaws.com/academia.edu.documents/19110451/the_behavior_of_stock-market_prices_fama_1965.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1531040931&Signature=OSV9m0P25BVKcczk8on9cPsFEE%253D&response-content-disposition=inline%253B%2520filename%25
 7. Fama, E. F., French, K. R., Booth, D. G., & Sinquefeld, R. (n.d.). Differences in the Risks and Returns of NYSE and NASD Stocks. Retrieved from www.jstor.org
 8. Kahneman, D., Knetsch, J. L., & Thaler, R. H. (n.d.). Experimental Tests of the Endowment Effect and the Coase Theorem. Retrieved from <http://www.journals.uchicago.edu/t-and-c>
 9. Kahneman, D., & Tversky, A. (1979). On the interpretation of intuitive probability: A reply to Jonathan Cohen. *Cognition*, 7(4), 409–411. [https://doi.org/10.1016/0010-0277\(79\)90024-6](https://doi.org/10.1016/0010-0277(79)90024-6)
 10. MacKinlay, A. C. (1987). On multivariate tests of the CAPM. *Journal of Financial Economics*, 18(2), 341–371. [https://doi.org/10.1016/0304-405X\(87\)90044-4](https://doi.org/10.1016/0304-405X(87)90044-4)
 11. Malkiel, B. G. (2003). The Efficient Market Hypothesis and Its Critics. *Journal of Economic Perspectives*, 17(1), 59–82. Retrieved from <https://pubs.aeaweb.org/doi/pdfplus/10.1257/089533003321164958>
 12. Markowitz, H. (1952). PORTFOLIO SELECTION*. *The Journal of Finance*, 7(1), 77–91. <https://doi.org/10.1111/j.1540-6261.1952.tb01525.x>
 13. Nagy, R. A., & Obenberger, R. W. (1994). Factors Influencing Individual Investor Behavior. *Financial Analysts Journal*, 50(4), 63–68. <https://doi.org/10.2469/faj.v50.n4.63>
 14. Nofsinger, J. R. (2001). The impact of public information on investors. *Journal of Banking & Finance*, 25(7), 1339–1366. [https://doi.org/10.1016/S0378-4266\(00\)00133-3](https://doi.org/10.1016/S0378-4266(00)00133-3)
 15. Sharpet, W. F. (1964). CAPITAL ASSET PRICES: A THEORY OF MARKET EQUILIBRIUM UNDER CONDITIONS OF RISK*. *The Journal of Finance*, 19(3), 426–452. <https://doi.org/10.1111/j.1540-6261.1964.tb02865.x>
 16. Tobin, J. (1958). Estimation of Relationships for Limited Dependent Variables. *Econometrica*, 26(1), 24–36. Retrieved from <http://links.jstor.org/sici?sici=0012-9682%28195801%2926%3A1%3C24%3AEORFLD%3E2.0.CO%3B2-R>
 17. Warren, K. J. (1990). The Power and the Promise of Ecological Feminism. *Environmental Ethics*, 12(2), 125–146. <https://doi.org/10.5840/enviroethics199012221>