

THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

The Impact of Behavioural Factors on Investment Decision Making in Colombo Stock Exchange

J.W.S.M.D.S Mahanthe

Faculty of Management Studies, Department of Accountancy and Finance
Rajarata University of Sri Lanka, Sri Lanka

DDK Sugathadasa

Faculty of Management Studies, Department of Accountancy and Finance
Rajarata University of Sri Lanka, Sri Lanka

Abstract

The present study has investigated the Impact of Behavioral Factors on Investment Decision Making in Colombo Stock Exchange (CSE) of Sri Lanka with overconfidence, availability bias, conservatism and herding effect to identify the most significant behavioral factor that influence investor's investment decision making. The key objective of this study was to identify the main behavioral factors on investor's investment decision making in Colombo Stock Exchange and secondary objectives were to identify the relationship between overconfidence, availability bias, conservatism and herding effect for the investment decision making in CSE. Structured questionnaire based on five-point Likert scale was used and it was able to collect data from 75 investors in Western Province according to convenient sampling method. Multiple regression analysis was applied as main statistical tool to test hypothesis of the study while internal consistency of questionnaire measured from Cronbach's alpha on all variables indicated the values greater than 0.7 by implying a satisfactory level of reliability. The findings of this study concluded that overconfidence, availability bias and herding effect emphasized positive significant relationship between investment decision making in CSE excluding conservatism which indicated a negative relationship with investment decision making but statistically significant at 0.01 level. Based on the findings it can be generalized that overconfidence, availability bias and herding effect are the most prominent factors for investor sat investment decision making in CSE.

Keywords: *Overconfidence, Availability bias, Conservatism, Herding effect, Investment decision making*

1. Introduction

Investment is the commitment of money or capital to purchase a financial instrument or other assets in order to gain profitable returns in the form of interest, income or appreciation of the future value of the instrument or future market value of assets (Hampton, 1999). In an economic context investment is the purchase of goods that are not consumed today but are used in the future to create wealth and investment decision making is deemed to be one of complex process which includes analysis of several factors through various step. Decision making can be defined as the process of choosing a particular alternative from a number of alternatives. Investment decision making is thereby a process by which an investor responds to the opportunities and threats that confront him/her by analyzing the options and making determination/decision about specific goals and course of action (Akintoye, 2006). Investment decision makers can be dividing into two parts namely individual investors and institutional investors. Common objective of all kind of investors is to maximize the actual return and minimize the risk. Individual investors usually act rationally when making their investment decision and select their optimum portfolio weighting by evaluating the risk-return tradeoff in a mean-variance efficient frontier. As a crucial thing, making investment decision is highly depended upon numerous external and internal factors. Basically, those internal factors link with the human behavior and external factors link with the company performance and market information. Some internal factors or behavioral factors which depend on the investor's mind would be overconfidence, conservatism, availability bias, herding activities, market factors, anchoring, representativeness, gambler's fallacy, loss aversions, regret aversions, etc.

When consider about the empirical evidences on this regard, different scholars have conducted many studies in different approaches to investigate the relationship between behavioral factor and investment decision making. Some researchers stated that behavioral factors have a significant impact on the investment decision making in the market. Accordingly Bakar & Amelia (2016) stated that behavioral factors including overconfidence and conservatism have significant impact on investment decision in the Malaysian Stock Exchange and in advance Babajide & Adetiloye (2012) had conducted empirical study to find out the relationship between behavioral bias and investment decision among the Nigerian Security Market and it found that all behavioral bias (overconfidence, loss aversion, confirmation bias, framing, anchoring and status-quo bias) have positive significant relationship for investment decision making in the Nigerian Security Market. Agreeing to previous studies, Waweru (2008) stated that herding effect and market factors have the highest impact on investment decision making in Nairobi Stock Exchange. Conversely, there are some scholars who have

stated that behavioral factors have no significant impact or negative relationship on the investment decision making in the market. As an example, Ngoc (2014) stated that behavioral factors including anchoring, gambler's falling and loss aversions haven't significant relationship with investment decision making of security company in the Ho Chi Minh City of Vietnam and Wamen (2013) described how the behavioral factors would impact on investment decision making in Kenya Stock Exchange and emphasized that risk aversion factors (loss aversions) has lower level impact on investment decision in Kenya Stock Exchange. Though there is a dearth of studies in this regard by Sri Lanka context, Kengatharan (2014) had investigated on the behavioral factors influencing individual investor's decision making at the Colombo Stock Exchange and also examined the relationship between these factors and investment performance at the CSE. The results of this study indicated that most of the variables from all factors have moderate impacts on the investment decision making and anchoring variable from heuristic factor has high influence and choice of a stock variable from herding effect factor has low influence on investment decision. These studies also examined the influence of behavioral factors on investment performance and among all only three variables were found to be influenced the investment performance such as choice of a stock has a negative impact from herding factor and overconfidence from heuristics factor has a negative effect on investment performance.

The present study is to be performed regarding the behavioral factors on investment decision making in the Colombo Stock Exchange in Sri Lanka, would be facilitated for many parties. The key beneficent party would be the stock market investors who would be knowledgeable enough with the impact of their own behavioral factors on their decision making in the stock market. This information would be useful for making favorable investment decision and to avert unfavorable decisions to maximize their wealth. Furthermore, it will be advantageous to stock market regulators and policymakers in a way of assisting them in understanding the role of behavioral factors which inherited in investor decision making and that may be in line with the necessity of stock brokers at the stock market to upgrade their client's investment activities into a superior level.

Owing to above contradictions in the empirical findings and significance, this study found that there is a question to be addressed "Is there any impact of behavioral factors on investment decision making in Colombo Stock Exchange?" Therefore, this study is aimed to examine the impact of behavioral factors on investment decision making in Colombo Stock Exchange. The behavioral factors are comprised with overconfidence, availability bias, conservatism, and herding behavior of the investors of CSE. The population includes all the Western Province stock holding investors in Colombo Stock Exchange which greater than ten thousand investors including institutional investors and individual investors. Institutional investors included banks, brokerage companies listed in Colombo Stock Exchange, private listed companies, etc. while individual investors are included with businessman, undergraduate investors, company executive officers, doctors, bachelors, etc. based on convenience sampling method 75 investors are qualified as sample space to collect the qualitative data of behavioral factors by using structured questionnaire. As a behavioral study, this would be facilitated to identify the real picture of mind sets of investors on their decision-making practices.

2. Literature Review

2.1. Theoretical Review

2.1.1. Investment Theories

Neumann & Morgenstern (1953) have introduced Expected Utility Model in 1953 which considered being the foundation of the modern investment theories that guided for investors to get the profitable decision in the stock market, based on the risk return trade off. Basically, the investor's choice will depend upon their risk preference. Some investors like to get the more risk but some may not. However, risk and return have a positive relationship. A rational investor maximizes his utility and he expects to minimize related risk.

2.1.2. Portfolio Theory

The portfolio theory is based on the expected utility model of Neumann & Morgenstern (1953). Markowitz (1952) introduced mean variance analysis for investors to maintain a diversified portfolio. The mean variance analysis is concerned with how an investor should allocate his capital among various securities available in the security market. Accordingly, an efficient portfolio has the maximum expected return for a given variance or minimum variance for given expected return. By selecting securities with negative correlation of returns, it is feasible to reduce overall risk of the portfolio. On such situation, return of one asset goes down and it may be affected for another asset's return go up. Furthermore, Markowitz (1952) introduced efficient frontier curve for investors. All the investors need to select the portfolio located on the point of efficient frontier because all the portfolios on efficient frontier curve always minimize the portfolio risk and maximize the overall portfolio return. Markowitz (1952) offers a good explanation of the phenomena of the portfolio through diversification. Sharpe (1964) and Mossin (1966) introduced a number of assumptions have extended the Markowitz Efficient Frontier Framework. This work resulted for Capital Assets Pricing Model (CAPM). The model provides a simplified opinion by comparing each security's return with a single yard stick. CAPM is a single factor model depending only upon the security market. The model based on assumption that the market is efficient and investor's measure risk and returns by using variance. Each individual stock adds an amount of risk, which is the systematic risk and depends upon the response to the economic and political environment. Systematic risk can't be avoided by diversification. It should remain even in the most efficient portfolios. But unsystematic risk can be diversified.

The CAPM exhibits the linear linkage between systematic risk and return and indicates that it is not possible to increase returns without increasing risk.

2.1.3. Behavioral Finance Theory

The behavioral finance theory started emerging in the early 2000s and it introduced by Thaler (1985). It is stated that behavioral finance as a "simply open-minded finance". Behavioral finance theory is opposing the Efficient Market Hypothesis because behavioral finance theory always based on the human mind. But efficient market hypothesis link with the market information and market prices always reflect all available information. Behavioral finance tries to evaluate the gap between finance and psychology and it does not assume rational factors or losses market. It suggests that the institutional environment is very important and also it suggested that investors do not always act rationally when making an investment decision, even if they possess the input required making a rational decision, such as knowledge and understanding. Slovic (1972) stated that "a full understanding of human limitation will ultimately benefit the decision maker more than will naive faith in the infallibility of his knowledge". According to the Ritter (2003), behavioral finance is based on psychology and he suggests that investor decision processes are subject to several cognitive illusions. These illusions are divided into two main groups as illusions caused by heuristic decision process and illusions caused by prospect theory.

2.2. Empirical Review

2.2.1. Overconfidence on Investment Decision Making

Some people overestimate the reliability of their knowledge and skills. The sense of over estimation in human minds is meant by overconfidence which leads investors to overestimate their predictive skills and believe. Odean (1998) states that investors with a higher degree of overconfidence choose in general riskier portfolio than those with a lower degree of overconfidence. Qobri & Shabbir (2014) examined the impact of overconfidence and illusion of control biases on investor's decision making in Islamabad Stock Exchange in Pakistan. The main objective of the study was to check the impact of overconfidence and illusion of control on the investment decision making process. The data have been collected from the investors and brokers of Islamabad Stock Exchange by using questionnaires. The research results showed that the overconfidence was significantly impact in investor decision making in Islamabad Stock Exchange. Furthermore, researcher stated that people think their knowledge, experience, and wealth have a great impact on the investment decision while male investors were more overconfidence than female investors.

According to Bakar & Amelia (2016), the overconfidence bias which is related to the self-attribution bias is the tendency of an individual to attribute his success to his own talent and ability while blaming bad luck for his future, making himself overestimating his talent. The scholars have investigated the relationship between psychological factors, namely overconfidence, conservatism bias, herding effect and availability bias and investor's decision making in the Malaysian Stock Market. Multiple regression formula was applied to estimate the effect of the selected behavioral factors on investor's decision making. The regression results have showed that the behavioral factor of overconfidence has a positive effect on investor's decision making.

2.2.2. Herding Behavior on Investment Decision Making

Herding behavior, identified as the tendency of investor's behaviors to follow the other's actions. On investment point of view, herding behavior is in the sense of how certain investor's perception on investment would be depended upon one another. Luong & Doan (2011) showed that the herding individual will base his investment decision on the crowd action of buying and selling, creating speculative bubbles phenomenon hence making the stock market to be inefficient. Ngoc (2014) examined the influence of behavioral factors on decisions of individual investors at the Security Company in Ho Chi Minh City of Vietnam. Independent variables of the study were behavioral factors including herding, market factors, prospect, overconfidence-gamble's fallacy, anchoring-ability bias, while the dependent variable was investor's decision making. The herding factor included in this study has addressed the facts of following other investor's buying and selling, choice of trading stock and volume of trading stock and market factors of price changes and market information. Research findings revealed that herding factors have positive and significant relationship with the investor's decision of individual investors at the Security Company in the Ho Chi Minh City of Vietnam. An empirical study by Wamen (2013) designed the analysis to investigate the impact of behavioral factors on investment decision making in Kenya Stock Exchange by focusing on investment banks in Kenya. The scholar mainly concentrated to find out the relationship between behavioral factors which comprised with risk aversion, prospecting, anchoring and herding on investment decision making through primary data. The questionnaire had consisted with both close and open-end questions and the ultimate results of this study stated that all behavioral factors in the consideration affected on investment decision in Kenya stock market. Furthermore, study revealed that herding effect was having a significant impact on investment decision.

2.2.3. Availability Bias on Investment Decision Making

Availability bias depends on the investor's behavior. The availability bias happens when the investor acts upon recent information that is obtained easily. Nofsingera & Varmab (2013) indicated that investors always use special thing in their mind for investor have a strong tendency to focus their attention on a particular fact rather than the overall situation, only because this particular fact is more present or easily recalled in their minds. Barber & Odean (2001) stated that most of investors are placing undue weight on the easily available information in the market and also, he explained most of the

investors are like to buy securities of local companies rather than international companies. Backed by numerous literatures, Kengatharan (2014) investigated on the behavioral factors influencing on individual investor's decision making at the Colombo Stock Exchange and also examined the relationship between these factors and investment performance at CSE. The study mainly tested the existing theories in behavioral finance and all theories have divided under sub categories explicitly heuristic theory, market factors, prospect theory and herding effect. The population this study was individual investors of CSE and researcher used stratified sampling techniques and initially used convenience sampling method to collect the relevant data. The study results highlighted that most of the variables from all factors have moderate impacts on the investment decision making and anchoring variable from heuristic factor has high influence and choice of stock variable from herding effect factor has low influence on investment decision. Furthermore, availability biases from heuristic factors have a moderate impact on investment decision in CSE.

2.2.4. Conservatism on Investment Decision Making

Conservatism means investors are using traditional technique for making an investment decision and they don't use new market information and relevant information for investment. The conservatism bias means investors are slow to react and to update their belief in response to recent evidence and development (Bakar & Amelia, 2014). Lim (2012) designed a study to examine the relationship between psychological biases, including overconfidence, conservatism bias, herding and regret on decision making of investors in the Malaysian Stock Market. Findings of this study emphasized that overconfidence bias; conservatism bias and regret have positive significant impacts on investor's decision making in the Malaysian Stock Market. Furthermore, it revealed herding behavior has no impact on investor's decision making in the Malaysian Stock Market. In advance Bakar & Amelia (2016) conducted an empirical study to investigate the relationship between psychological factors, namely the overconfidence, conservatism bias, herding effect and availability bias on investor's decision making in the Malaysian Stock Market and as a main factor it pointed out that the conservatism have a positive effect on investor's decision making.

2.2.5. Behavioral Factors on Investment Decision Making

On the study of behavioral finance and investor mind in investment decision making, Masomi & Ghayekhloo (2011) examined the role of behavioral finance and investor psychology at Tehran Stock Exchange with special reference to 23 institutional investors. The behavioral factors were including with representativeness, overconfidence, anchoring, gambler's fallacy, loss aversion, regret aversions and mental accounting affected the decisions of the institutional investors operating at the Tehran Stock Exchange and also these factors were classified into four main figures such as heuristics process, market information, herding effect and prospect theory. The data have been collected from questionnaires and research findings showed that both behavioral factors including heuristic processes, prospect theory and market information have the highest impact on investment decision-making in Tehran Stock Exchange.

Abiola (2012) investigated the investor's behavioral bias and the security market among the Nigerian Security Market. This study adopted a primary data approach to investigate the effects of behavioral bias on security market performance in Nigeria. Behavioral bias has included bunch of behavioral factors such as overconfidence, loss aversion, confirmation bias, framing, and anchoring and status-quo bias. The two main objectives of this study were to examine in what extent the behavioral bias among security market investors would impact on decision making in Nigeria and to investigate the effects of behavioral bias on stock market performance in Nigeria. The researcher used random sampling technique to select 300 security market investors as the sample space while data were collected through questionnaire which made up 20 items on the six behavioral biases and he found that all behavioral bias have a positive significant relationship for market performance except the framing factors.

Wamen (2013) designed his study on evaluating the influence of behavioral factors on investment decision in Kenya Stock Exchange with the population of 17 investment banks in Kenya. The researcher mainly focused to find out the relationship between behavioral factors and investment decision making. Risk aversion, prospecting, anchoring and herding were consisted with the behavioral variables of this study while the questionnaire consisted with both close and open-end questions. The ultimate results of this study indicated that all behavioral factors were affected to the investment decision in Kenya stock market. Furthermore, the study stated that herding effect having more impact on investment decision relevant to the prospecting and anchoring. Finally, the risk aversions factor has the lower level impact on investment decision on Kenya stock market.

With the perspective of demographic factors, Hassan & Habib (2014) conducted their study to find out the impacts of gender and age on two of the behavioral factors such as overconfidence and loss aversion with reference to Pakistan. Researchers have used questionnaire-based survey method to collect data from the sample including 391 individuals of Pakistan while R-square and correlation analysis have been used to estimate the relationship between independent variables and dependent variables. At the end the study noted that male and older investors seem to be more overconfident and women and older investors seem to be more loss averse. Furthermore, the study stated that investor's gender and age have a positive relationship with the overconfidence and loss averse.

Atif (2014) observed the interrelationship of behavioral biases and effects of these biases for investment decision in the Islamabad Stock Exchange. This study focused on three main biases including self-attribution, overconfidence bias and over optimism bias. The main purpose of this study was to find out the relationship among the biases and their effect on the investment decision making of the investor in the Islamabad Stock Exchange. Findings of study showed that all biases were negatively affected for the decision making of Pakistan investors of Islamabad Stock Exchange except the overconfidence bias. Since finding showed that investor's overconfidence bias has a positive relationship/ positively effect

for the investment decision in the Islamabad Stock Exchange. Kumar & Goyal (2015) studied behavioral biases including overconfidence, disposition effect, herding bias and home bias/ familiarity bias on investment decision making. They have used systematic literature review method to review and analyze articles related to behavioral biases in investment decision making including 177 selected studies. As this study was vested with empirical findings of previous scholars, it was concluded behavioral biases have an impact on investment decision making.

Bakar & Amelia (2016) examined the relationship between psychological factors containing overconfidence, conservatism bias, herding effect and availability bias on investor's decision making in the Malaysian Stock Market. Data was collected from questionnaires from sample size of 200 respondents including lectures, students of finance, bank officers, executives and managers who were involved in Malaysian Stock Market and also used three major sampling techniques as convenience sampling, quota sampling and snowball sampling techniques. The questionnaire was consisting with Likert scales and close-end questions while multiple regression formula was applied to estimate effect of the selected behavioral factors on investor's decision making. The regression results showed that the behavioral factors of overconfidence have a positive effect on investor's decision making as the estimated coefficient and availability bias has positive significant impacts on investor's decision making in the Malaysian Stock Market. However herding effect and conservatism were found to have no significant impact on investor's decision making.

3. Methodology

The study aims at identifying the impact of behavioral factors on investment decision making in Sri Lanka. Accordingly, 75 respondents were qualified to the sample and data were gathered through structured questionnaire by having interviews with selected investors in Western Province. Overconfidence, Conservatism, Herding effect and Availability bias have been considered as independent variables and dependent variable would be the Investment Decision Making of individuals in Colombo Stock Exchange as shown in Figure 1.

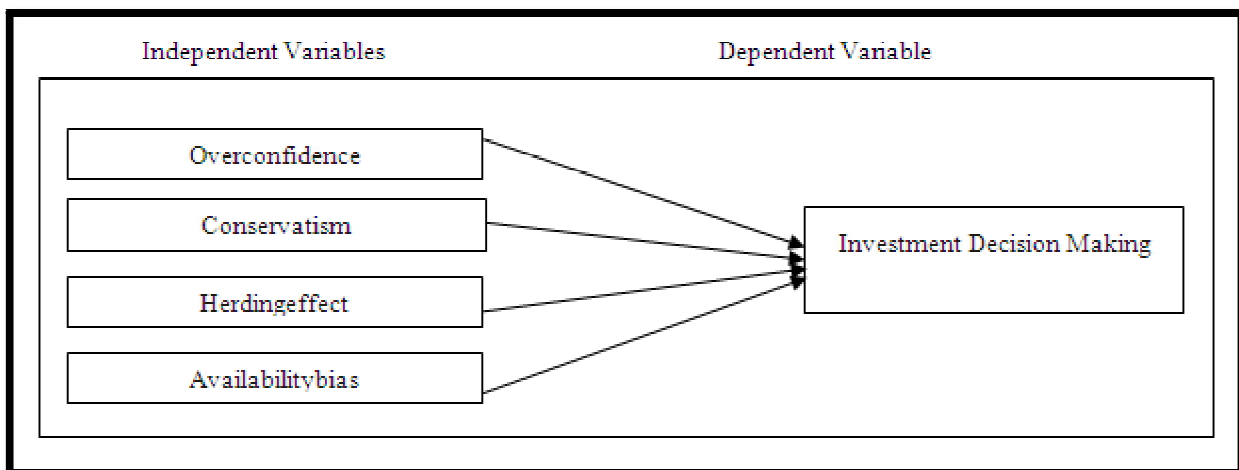


Figure 1: Conceptual Framework
Source: Developed by Research

Hypotheses: Following the studies of Bakar & Amelia (2016), Lim (2012), Kengatharan (2014) and many others assumed that there is a significant impact of microfinance on poverty alleviation. According to this study the hypotheses are;

- H_0 -There is no positive significant relationship between behavioral factors and investment decision making.
- H_1 -There is positive significant relationship between behavioral factors and investment decision making.
- H_{1a} -There is a positive significant relationship between overconfidence and investment decision making.
- H_{1b} -There is a positive significant relationship between herding effect and investment decision making.
- H_{1c} -There is a positive significant relationship between availability bias and investment decision making.
- H_{1d} -There is a positive significant relationship between conservatism and investment decision making.

3.1. Data Collection and Sampling

The study was mainly based on the primary data and the data were collected from 75 respondents who were investing in Colombo Stock Exchange as individual investors. They were mainly vested in Western Province in Sri Lanka and data were collected through structured questionnaire by having interviews with selected investors as the sample space which have been derived through convenience sampling technique.

3.2. Data Analysis

Following analysis tools were used to test the hypotheses of this study such as Descriptive Statistic, Correlation, Coefficients while Regression Analysis as the main tool to draw a better conclusion plus with reliability analysis to test the internal consistency of the questionnaires. To examine the impact of behavioral factors on investment decision making, the applicable regression model is shown as follows:

$$IDM = \alpha + \beta_1 OC + \beta_2 AB + \beta_3 HE + \beta_4 CV + \varepsilon$$

Where,

IDM = Investment Decision Making

OC = Overconfidence

AB = Availability Bias

HE = Herding Effect

CV = Conservatism

α = Constant

ε = Error Term

4. Data Analysis and Discussion

The study has been designed with the analysis tools of Descriptive Statistic, Correlation, Coefficients and Regression Analysis to test whether the created hypothesis which have been used to answer the research questions can be accepted or not. Meanwhile to measures the internal consistency of developed questionnaire based on the average inter-item correlation, reliability analysis has been conducted as follows.

Variables	Cronbach's alpha
Investment Decision Making	0.710
Overconfidence	0.748
Availability bias	0.733
Conservatism	0.702
Herding effect	0.876

Table 1: Reliability Analysis

Source: Research Data

In each variable the internal consistency which measured through Cronbach's alpha value deemed to be greater than 0.7, implied that the reliability of the questionnaire was at satisfactory level.

	Maximum	Minimum	Mean	Std. Deviation
Overconfidence	2.33	4.33	3.3533	.52915
Availability Bias	1.50	4.17	3.5533	.51710
Conservatism	2.67	4.50	3.6400	.42096
Herding Effect	1.50	4.33	3.2867	.66360
Investment Decision Making	2.62	4.25	3.3900	.39526

Table 2: Descriptive Analysis

Source: Research Data

The descriptive analysis Table 2 is showing the descriptive statistics of all the variables which consisting with the Maximum, Minimum, Mean, and Standard deviation of the data set. The mean values of variables are indicating the average values consisting in the data set while standard deviation values imply whether those mean values are concentrated around the mean or scattered far and wide. As it pointed out, all the variables seemed to be scattered far with its mean values respectively.

	IDM	OC	AB	CV	HE
IDM	1				
OC	.334**	1			
AB	.405**	.120	1		
CV	-.241*	.073	.276**	1	
HE	.218*	-.241*	-.150	-.113	1

Table 3: Correlations

* Correlation Is Significant at the 0.05 Level (1-Tailed).

** Correlation Is Significant at the 0.01 Level (2-Tailed).

Source: Research Data

Table 3 shows that correlations of overconfidence, availability bias and herding effect have positive correlation and significant relationship while conservatism appears to be negatively and significantly correlated with investment decision making by means of indication that all considered variables in this study would highly impact on the dependent variable.

$IDM = \beta_0 + \beta_1 OC + \beta_2 AB + \beta_3 HE + \beta_4 CV + \epsilon$				
β_0	β_1	β_2	β_3	β_4
1.629	0.286*	0.393*	-0.349*	0.206*
R Square:0.501		Adjusted R-Square: 0.473		N = 75

Table 4: Results of Regression Analysis

*. Significant at 5%

Source: Research Data

The above table 4 is demonstrating the results of the multiple regression analysis which consisting the values of unstandardized coefficients, R Square and Adjusted R Square of the model for the purpose of exploring relationship between the dependent and independent variable. R represents that the correlation between the observed and predicted values of dependent variable and at R Square value it implies that the 50.1% of variation on investment decision making can be explained by the behavioral factors of this study.

5. Results and Discussion

According to the findings of many other scholars in this field, it has been revealed that the investment decision making is highly affected to the behavioral factors or the nature of investors' perceptions in Sri Lanka and following studies can be considered as comparable investigations with current study.

The study of Bakar & Amelia (2016) had examined the relationship between psychological factors, namely the overconfidence, conservatism bias, herding effect and availability bias and investment decision making in the Malaysian Stock Market. He used data is collected from questionnaires from a sample size of 200 respondents including lectures, students of finance, bank officers, executives and managers who are involved in the Malaysian Stock Market and also used three major sampling techniques including convenience sampling, quota sampling and snowball sampling techniques and Likert scales and close-end questions are applied into the questionnaire. Multiple regression formula was applied to estimate effect of the selected behavioral factors on investor's decision making. The regression results show that the behavioral factors of overconfidence have a positive significant effect on investment decision making and he also found out that availability bias has positive significant impacts on investment decision making in the Malaysian Stock Market. However herding effect and conservatism were found to have no significant impact on investment decision making. In present study results shows that overconfidence and availability bias have a positive significant impact on investment decision making. These findings are quite similar with the results from the above study and the results also illustrates that conservatism has a negative significant impact on investment decision making. However, the results of present study show that herding effect has positive significant impact on investment decision making, which is not in line with Bakar & Amelia (2016) on account of the differences in cultural, social, economic as well as financial perceptions and beliefs of individual investors of Sri Lanka and Malaysia along with countries at large.

In Sri Lankan context, Kengatharan (2014) had investigated on the behavioral factors influencing individual investor's decision making at the Colombo Stock Exchange and also examined the relationship between these factors and investment performance at the CSE. The study had checked and tested the existing theories in behavioral finance and based on these behavioral factors, researcher has created a testing hypothesis. All theories have divided under sub categories. The heuristic theory is divided under four main behavioral variables, including representativeness, overconfidence, anchoring, gambler's fallacy, and availability bias and prospect theory are divided under three main behavioral variables, including loss aversion, regret aversions, mental accounting. Price changes, market information, past trends of stock, fundamentals of underlying stock, customer preference, over-reaction to price change represent the market factors and buying and selling decision of other investors, choice of stock to trade of other investors, volume of stock to trade of other investors and speed of herding represent the herding effect of investors. The population of study was individual investors of CSE and researcher used stratified sampling techniques and initially used convenience sampling method to collect the relevant data. The study used data collected by using a questionnaire for sending target sample. The questionnaire is divided into three parts such as personal information, behavioral factors influencing investment decision and investment performance and 6-point Likert scales are also used to rank the answers of questions. The study results show that most of the variables from all factors have moderate impacts on the investment decision making and anchoring variable from heuristic factor has high influence and choice of a stock variable from herding effect factor has low influence on investment decision. This study also examined the influence of behavioral factors on investment performance however among all variables, only three variables are found out to influence the investment performance such as choice of stock has a negative impact from herding factor and overconfidence from heuristics factor has negative effect on investment performance. Anchoring from heuristics factors has positive effect on investment performance and all other variables including volume of stock, buying and selling and speed herding of herding factor and loss aversion and regret aversion variables of prospect factor and market information and customer preference variables from market factor do not have effect on investment performance and that results supported for present study results of overconfidence and availability bias have positive significant impact on investment decision making in CSE.

6. Conclusion

The present study has investigated the Impact of Behavioral Factors on Investment Decision Making in Colombo Stock Exchange of Sri Lanka. The identified variables for this study are overconfidence, availability bias, conservatism and herding effect and also identify the most significant behavioral factor that influence investor's investment decision making. The key objective of this study was identifying the main behavioral factors on investor's investment decision making in

Colombo Stock Exchange and secondary objectives were to identify the relationship between overconfidence, availability bias, conservatism and herding effect for the investment decision making in CSE. The population of study includes all the Western province investors in Colombo Stock Exchange and used convenience sampling method for selected Western Province stock holding investors in the Colombo Stock Exchange and it consist with seventy-five investors in Western Province. All the data and information for this study are gathered from primary sources using structured questionnaire. Descriptive Statistic and Multiple regression statistical techniques are used to draw conclusions and test the empirical relationships in data. At first; run the reliability test and descriptive statistics are used to check reliability of the questionnaire and all variables get more than 0.7 values and it can be accept and check the features of variables. Secondly, Pearson's coefficient of correlation is used to check the causal relationship between the variables. In here all independent variables such as overconfidence, availability bias and herding effect represent the positive significant relationship between investment decision making in CSE excepting variable of conservatism, it represents the negative relationship with investment decision making. At third multiple regressions is used to test the collective relationship as elaborated in hypotheses and also used to achieve the objectives. Multiple regression statistical technique is used to achieve the objectives. The study's regression result shows that again all independent variables such as overconfidence, availability bias and herding effect represent the positive significant relationship between investment decision making at 0.01 level significant level in CSE excepting variable of conservatism, it represents the negative relationship with investment decision making but statistically significant at 0.01 level. Based on the findings emphasized overconfidence, availability bias and herding effect are the most factors for investor's investment decision making in CSE.

The study contributes to the body of knowledge of behavioral factors on investment decision making in Colombo Stock Exchange. However, in view of the limitations that constrained in this study, it can be provided with suggestions for subsequent studies in future. Asthecurrent study aimed to identify impact of investor's behavioral factors on investment decision making of Western province stock holding investors it can move for another sample segments such as institutional investors, daily trading investors in CSE etc. Furthermore, it can contribute to assessment of other behavioral factors in Colombo Stock Exchange such as anchoring, representativeness, gambler's fallacy, loss aversions, regret aversions, etc. The concepts of behavioral factors can be incorporated with equity price, market turnover in relation with equity prices will be moreover facilitated for investment decision making which may be useful for brokerage companies, stock market regulators and policymakers to make good decision about investor's mind.

7. References

- i. Akintoye. (2006). *Investment Decisions: Concepts, Analysis and Management*. Unique Educational Publishers, Lagos, pp.94-115.
- ii. Atif, K. (2014). Interrelationship of Biases: Effect Investment Decisions Ultimately. *Theoretical and Applied Economics* XXI, 6(595), pp:85-110
- iii. Babajide, A.A., & Abetiloye, K.D. (2012). Investor's Behavioral Biases and the Security Market: An Empirical Study of the Nigerian Security Market. pp.219-229.
- iv. Bakar, S., & Amelia, N.C.Y. (2016). The Impact of Psychological Factors on Investor's Decision Making in Malaysian Stock Market: A Case of Klang Valley and Pahang.
- v. Barber, B.M., & Odean, T. (2001). Boys will be Boys: Gender, Overconfidence, and Common Stock Investment. *The Quarterly Journal of Economics*, pp.261-292.
- vi. Caparrelli, F., Arcangells, A.M.D., & Cassuto, A. (2004). Herding in the Italian Stock Market: A Case of Behavioral Finance. *The Journal of Behavioral Finance*.
- vii. Fisher, I. (1930). *The Theory of Interest*. New York: Macmillan, pp.214.
- viii. Hampton, J. J. (1999). *Financial Decision Making: Concepts, problems and Cases*. 4th Edition.
- ix. Hassan, T.R., Khalid, W., & Habib, A. (2014). Overconfidence and Loss Aversion in Investment Decisions: A Study of the Impact of Gender and Age in Pakistani Perspective. *Research Journal of Finance and Accounting*, Vol.5, No.11, pp.148- 157.
- x. Kafayat, A. (2014). Interrelationship of Biases: Effect Investment Decisions Ultimately. *Theoretical and Applied Economics*, Volume XXI, No. 6, pp. 85-110.
- xi. Kengatharan, L., & Kengatharan, N. (2014). The Influence of Behavioral Factors in Making Investment Decisions and Performance: Study on Investors of Colombo Stock Exchange, Sri Lanka. *Asian Journal of Finance & Accounting*, Vol. 6, No. 1, pp.1-23.
- xii. Kumar, S., & Goyal, N. (2015). Behavioral Biases in Investment Decision Making – Systematic Literature Review. *Qualitative Research in Financial Markets*, Vol. 7, pp. 88 – 108.
- xiii. Lim, L.C. (2012). The Relationship between Psychological Biases and the Decision Making of Investor in Malaysian Share Market. Unpublished Paper International Conference on Management, Economics & Finance (ICMEF 2012) Proceeding, pp.1-16.
- xiv. Luong, L. P., & Thu Ha D. T. (2011). Behavioral Factors Influencing Individual Investors' Decision-Making and Performance A Survey At The Ho Chi Minh Stock Exchange. Unpublished M.Sc. Thesis, Umea School of Business.
- xv. Markowitz, H.M., (1952). Portfolio Selection. *The Journal of Finance*, Vol. 7.
- xvi. Menkhoff, L., Schmidt, U., & Brozynski, T. (2006). The Impact of Experience on Risk Taking, Overconfidence and Herding of Fund Managers: Complementary Survey Evidence. *European Economic Review* 50, pp. 1753–1766.

- xvii. Mosami, S.R., & Ghayekhloo, S. (2011). Consequences of Human Behavior's in Economic: The Effects of Behavioral Factors in Investment Decision Making at Tehran Stock Exchange. IACSIT Press, pp. 234-237.
- xviii. Mossin, J. (1966). Equilibrium in a Capital Asset Market. *Econometrica*, pp. 768-783.
- xix. Ngoc, L.T.B. (2014). Behavior Pattern of Individual Investors in Stock Market. *International Journal of Business and Management*; Vol. 9, No.1, pp. 1-16.
- xx. Neumann, V.J., & Morgenstern, O. (1953). *Theory of Games and Economic Behavior*. Sixtieth Anniversary Edition.
- xxi. Nofsingera, J. R. & Varmab, A. (2013). Availability, Recency and Sophistication in the Repurchasing Behavior of Retail Investors. *Journal of Banking & Finance* 37(7), 2572-2585.
- xxii. Odean, T. (1998). Are Investors Reluctant to Realize Their Losses? *Journal of Finance*, pp.53, 5, 1775-98.
- xxiii. Qabri, S.U., & Shabbir, M. (2014). An Empirical Study of Overconfidence and Illusion of Control Biases, Impact on Investor's Decision Making: An Evidence from ISE. *European Journal of Business and Management*, Vol.6, No.14, pp. 38-44.
- xxiv. Ritter, J.R. (September 2003). Behavioral Finance. *Pacific-Basin Finance Journal*, Vol. 11, No. 4, pp. 429-437.
- xxv. Ross, S.A. (1976). An Arbitrage Theory of Capital Asset Pricing. *Journal of Economic Theory*, pp.341-360.
- xxvi. Sharpe, W. (1964). Capital Asset Pricing of Market Equilibrium under Conditions of Risk. *Journal of Finance*, pp.425-445.
- xxvii. Slovic, P. (1972). Psychological Study of Human judgment: Implications for Investment Decision Making. *The Journal of Finance*, Volume , 27, Issue 4.
- xxviii. Tan, L., Chiang, T.C., Mason, J.R., & Nelling, E. (2008). Herding Behavior in Chinese Stock Markets - An Examination of A and B Shares. *Pacific-Basin Finance Journal* 16, pp.61-77.
- xxix. Thaler, R. (1985). Mental Accounting and Consumer Choices. *Marketing Science*, PP.199-214.
- xxx. Wamen, J.N. (2013). Behavioral Factors Influencing Investment Decision in Stock Market: A Survey of Investment Banks in Kenya. *International Journal of Economics and Finance*, Vol.1, Issue 5, pp.1-15.
- xxxi. Waweru, N.M., Munyoki, E., & Uliana, E. (2008). The Effects of Behavioral Factors in Investment Decision-Making: A Survey of Institutional Investors Operating at the Nairobi Stock Exchange. *International Journal of Business and Emerging Markets*, Vol. 1, No. 1, PP.24-41.