

## **Behavioral Influences in Investor Decisions – An Indian Perspective**

1. *Mr.K.Riyazahmed, Assistant Professor, MBA, Sona college of Technology, Salem.*
2. *Dr.MG.Saravanaraj, Director in Management Studies, SNS College of Technology, Coimbatore.*

### **ABSTRACT**

Modern finance theories are built on the fundamentals of 'neo classical' economics. It says that, investors always make 'rational' decisions. But, market crashes, bubbles, and other shocks in the economy shows that, investors are not always rational and evident proves are even brought into notice that they are highly irrational in taking decision. Although behavior of investors has been studied for hundreds of years, behavioral finance which considers the reactions of buyers in stock markets is quite a new area. Behavioral theories which are based on consumer psychology attempt to understand how emotions affect the individual decisions of investors.

The main objective of this study is to extract the factors affecting Indian investor's decision while buying or investing in Indian stock markets. In addition, the relationship between the factors and the investment performance is also studied. The study begins with detailing existing behavioral theories, based on which hypotheses are proposed. Questionnaires distributed to various individual investors in Salem district and data are collected. Collected data were then analyzed using statistical software like SPSS. Behavioral variables are studied factor analysis and the influence of factors on behavioral decisions is tested using Regression analysis. Outcome of this analysis will give a clear picture of most influential behavioral factors and its level of influence in investor decisions. Semi structured interviews with the investment bankers and brokers are then conducted to have a better understanding of investor's behavior.

Factor analysis results show that theoretical grouping of behavioral factors into Herding, Prospect, Market, Overconfidence, and Anchoring are not supported in the analysis results. But based on the existing theoretical model, regression analysis is proceeded to know the impact of theoretical factors. From the analysis, in total, most of the behavioral variables of four factors: Prospect, Herding, market variables have high impact on investor decisions. Participation of investors in the stock markets is gradually growing in the recent years and investors are well informed about the process of investing, these days it becomes a necessity for investment houses, fund managers, trading firms, and individual investors to have a greater understanding of behavioral factors and its effects on the stock prices to keep investment performance 'optimum' at any mood of the stock market.

*Keywords: Anchoring effect, Behavioral finance, Herd behavior, Investor behavior, Prospects.*

## 1. INTRODUCTION

Growth in any investment is a positive signal of a growing economy. Stock markets play an important role in channelizing investments among various economic agents of a country. So it is said that the movement of stock markets represents, the 'health' of any economy. And most importantly stock market movements are outcomes of investor decisions.

Financial theories are the base through which we understand the system of financial operations. Modern financial theories are built on the foundation of 'Neo classical' economics, which says that investors make decisions through 'rationality'. But, research studies clearly say that investors are not always making rational decisions. This practical difference paved way for a new segment of finance named 'behavioral finance'. Behavioral finance theories are helpful in understanding the psychology of why people buy or sell stocks (Waweru et al., 2008, p.25). Many researchers consider behavioral finance theories are good to understand and explain the feelings and cognitive errors affecting investment decision making (Waweru et al., 2008, p.25).

Due to positive correlation between stock market and economy, the rise of stock market will positively affect the development of an economy and vice versa. It will be helpful for investors to understand the behavioral factors which influence their decisions, and through that they better the return on investments. Security trading organizations may use this information for better understanding about investor psychology to forecast more accurately and give recommendations.

## 2. RESEARCH METHODOLOGY

In any science, advancements are made through the interplay of theory and empirics. Observations suggest appropriate theory, and models are tested using the data. When the data are inconsistent with the theory, new models are formulated. The communication between theory and evidence is the ebb and flow of science, and academic finance works in the same way (Lucy F. Ackert & Richard Deaves., 2011 p.2).

In general, theory is built and tested based on two different approaches: Induction and deduction. When deductive approach is used, researchers start with the existing theories and logical relationships among concepts, and then continue to find empirical evidences. In contrast in inductive researches theory is developed based on the empirical reality and researchers infer the implications of the findings for the theory that prompted the research (Gauri & Gronhaug, 2010, p.15-16; Saunder et al., 2009, p.124-126).

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. Deductive approach is usually associated with quantitative and qualitative data collection and analyzing through statistical methods. So, this study is based on 'deductive approach', in which questionnaires are sent to 100 investors in Salem district and interviews are conducted with investment professionals for better understanding of behavioral factors.

### 3. LITERATURE REVIEW

Traditional finance stands on the foundation that humans are homo-economicus. Which is based on the belief that human are rational in decision making. But empirical evidence shows a fact that people are not always rational, their financial decisions may be driven by behavioral preconceptions. Thus studying investor behavior becomes vital in the fields of finance and marketing to explore the factors and its impacts on buyer's decisions on purchase and sales of securities. In case if the decisions of investors does not falls with rationality, effects of 'behavioral biases' should be identified. It will be more important if their cognitive errors affect 'prices' and are not arbitrated away easily (Kim & Nofsinger, 2008, p.2). The mid 1980's is considered as the beginning of this research area. Share markets are proved to overreact to information by Debondt & Thaler (1985, p.392-393). If these studies are the genesis of behavioral finance, this area has over two decades of development.

Behavioral finance papers are mainly based on the data of stocks that do not match well with the traditional theories of Market efficiency and asset pricing models. According to Ritter (2003, p.429), behavioral finance is based on psychology which suggest that human decision process are subject to several cognitive illusions and biases. These illusions are divide into four groups: Heuristics factors, Prospect factors, Herding factors and market factors.

a) **Heuristics** are defined as a 'rule of thumb', which makes decision making easier especially in complex and uncertain environments (Ritter, 2003, p.431) by reducing the complexities of assessing probabilities and predicting values to simpler judgements (Kahneman & Tversky, 1974, p.1124). Kahneman and Tversky seems to be ones of the first writers studying the factors belonging to heuristics when introducing three factors namely Representativeness, Availability bias and anchoring (Kahneman & Tversky, 1974, p.1124-1131). Waweru et al. also list two factors named gamblers fallacy and overconfidence into heuristic theory (Waweru et al., 2008, p.27)

b) **Prospect theory** and Expected utility theory (EUT) are considered as two approaches to decision making from different perspectives. Prospect theory focuses on 'subjective' decision making influenced by investors value system, whereas EUT concentrates on investors rational expectations (Filbeck, Hatfield & Horvath, 2005, p.170-171). EUT is the normative model of rational choice and descriptive model of economic behavior, which dominates the analysis of decision making under risk. Nonetheless, this theory is criticized for failing to explain why people are attracted to both insurance and gambling (Le Phuoc Luong & Doan R. Hedtroim, 2011, p.19). Prospect theory explains some state of mind affecting an individual decision making process including regret aversion, Loss aversion and mental accounting (Waweru et al., 2003, p.116)

c) **Herding effect** in financial market is identified as tendency to investor's behaviors to follow other's reactions. In the perspective of behavior, herding can cause some emotional biases, including conformity, congruity and cognitive conflict, the home bias and gossip. Investors may prefer herding if they believe that herding can help them to extract useful and reliable information (Le Phuoc Luong & Doan R. Hedtroim, 2011, p.21).

d) **Market factors** such as price changes, market information, fundamentals of underlying stocks, customer preference, over reaction to price changes and fundamentals of

underlying stocks have an impact on investor's decision making. (Waren et al., 2008, p.36). Normally changes in the market information, fundamentals of underlying stock and stock price cause over reaction and under reaction to the price change. These changes are empirically proven to have high influence on decision making behavior of investors.

**Behavioral factors influencing the investment decision making** (source: Waweru et al., 2008)

**Table 3.1 Grouping of various behavioral variables**

Group	Behavioral variables
Heuristic theory	Representativeness, Overconfidence, Anchoring, Gambler's fallacy, Availability bias.
Prospect theory	Loss aversion, Regret aversion, Mental accounting.
Market factors	Price changes, Market information, Past trends of stocks, Fundamentals of underlying stocks, customer preference, over reaction to price changes.
Herding effect	Buying and selling decisions of other investors, choice of stocks to trade of other investors, Volume of stocks to trade of other investors, Speed of herding.

As mentioned in the literature review, it is undoubted that behavioral factors impact the investment decisions of the investors in the financial markets, especially in the stock markets. This study explores the influence levels of behavioral variables on the individual investors' decisions and their investment performance as in the following hypotheses.

**Hypothesis H1:** The behavioral variables that influence the investment decisions of individuals are grouped into four factors as the reviewed theories: Heuristics, Prospect, Market, and Herding. This hypothesis is tested through factor analysis.

**Hypothesis H2:** The behavioral variables have influences on investor's decisions. This hypothesis is tested by regression analysis, having investment decision as dependent variable and Heuristics, Prospects, Market forces, Herding as Independent variables.

#### 4. RESEARCH DESIGN

Research design provides the frame work of data collection and analysis (Gauri &Gronhaug, 2010, p.54; Bryman & Bell, 2007, p.40). In order to understand the common behavior of individual investors case study or experimental design or longitudinal design are not suitable but cross sectional design. Cross sectional design is employed; data from more than one case at one single time is collected and analyzed. The patent of the association is examined by using the collected quantitative or quantifiable data (Staunders et al., 2009, p.155).

Among various types of data collection methods structured interviews, semi structured interviews, unstructured interviews, self-completion questionnaire, observation group discussion etc. Self-completion method is chosen for collecting quantitative data and semi structured interviews is selected to gather qualitative data for this study.

Hair, Black, Babin, Andersion and Tatham (1998, p.111) suggest that with quantitative research, at least 100 respondents should be studied in order to have a fit in the statistical methods of data analysis. Data are collected from 100 respondents in Salem region with convenience sampling method. The questionnaire is divided into three parts: personal information, behavioral factors influencing investment decisions, and investment performance. In the part of personal information nominal and ordinal measurements are used. Behavioral variables are measured through 5 point Likert scale.

The collected data are processed and analyzed through correlation, factor analysis and regression methods to test the theoretical model and the impacts of behavioral variables on Investor's decisions.

#### 5. EMPRICAL FINDINGS

##### Data Background

From 100 respondents data were collected and the profile of respondents with gender, age, time for attending the stock markets are given in the below figure.

**Figure 5.1 Distributions of Gender, Age and time for attending the stock markets**

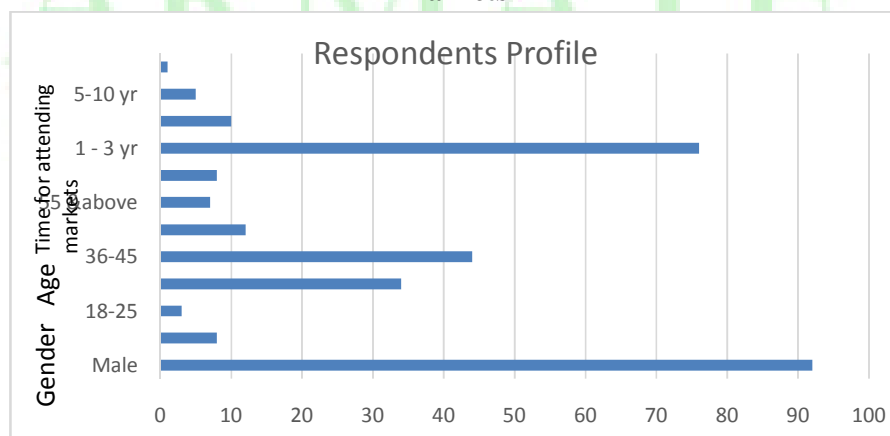




Figure 5.1 shows that number of male are very higher than the female investors and investors with the frequency of investments up to 1-3 years are 75% of the total respondents. This means, most of the individuals have just paid attention to the stock markets.

### Impact levels of Behavioral factors on individual's investment decisions

The impact levels of behavioral variables on the investment decisions of individuals are identified by calculating the values of sample mean of each variable. Mean values of these variables can decide their impact levels on the investment decision as the following rules:

- Mean values less than 2 shows that the variables have *very low* impacts
- Mean values are from 2 to 3 shows that the variables have *low* impacts
- Mean values are from 3 to 4 shows that the variables have *moderate* impacts
- Mean values are from 4 to 5 shows that the variables have *high* impacts

**Table 5.1 Mean and standard deviation values of variables**

Var	Description	Mean	S.D
I1	The return rate of your recent stock investment meets your expectations.	1.65	0.8
I2	Your rate of return is recently equal to or higher than the average return rate of the market.	2.32	0.9
I3	You feel satisfied with your investment decisions in the last year ( including selling, buying, choosing stocks, and deciding he volume)	1.72	0.9
H1	You believe that your skills and knowledge of stock market can help you to outperform the market.	2.82	1
H2	You are normally able to anticipate the end of good or poor.	2.45	0.7
H3	You forecast the changes in stock prices in the future based on the recent stock prices.	2.39	0.6
H4	You prefer to buy local stocks than international stocks because the information of local stocks is more available.	2.81	0.7
P5	After prior loss you become more risk averse.	4.18	0.8
P6	You avoid selling shares that have decreased in value and readily sell shares that have increased the value.	3.06	0.9
P7	You tend to treat each element of your investment portfolio separately.	1.77	0.7
P8	You ignore the connection between different investment possibilities.	4.08	0.6
M9	You consider carefully he price changes of stocks that you intend to invest in.	3.49	1.1
M10	Market information is important for your stock investment.	4.17	0.4
M11	You put the past trends of stocks under your considerations for your investment.	3.57	3.6
H12	Other investor's decisions of choosing stock types have impact on your investment decisions.	3.63	1.5
H13	Other investor's decisions of the stock volume have impact on your investment decisions.	3.65	1.5
H14	Other investor's decisions of buying and selling stocks have impact on your investment decisions.	3.65	1.5

<b>H15</b>	You usually react quickly to the changes of other investor's decisions and follow their reactions to the stock market.	3.78	1.4
------------	--	------	-----

## 6. ANALYSIS AND DISCUSSIONS

### 6.1 Factor Analysis to test Variable groupings

Factor analysis is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called 'factors'. The first thing to do in factor analysis is to do when conducting a factor analysis is to look at the inter correlation between variables. If our test questions measure the same underlying dimension (or dimensions) then we would expect them to correlate with each other (because they are measuring the same thing).

If we find any variables that do not correlate with any other variables (or very few) then we should consider excluding these variables before the factor analysis is run. The opposite problem is, when variables correlate highly, known as Multicollinearity. Although mild multicollinearity is not a problem for factor analysis it is important to avoid *extreme multicollinearity* and *singularity* - variables that are perfectly correlated. (Field., 2005).

#### 6.1.1 Data screening through Correlation Analysis

Correlation analysis shows that variables HR12, HR13, HR14, HR15 showed high correlation more than 0.9. Multicollinearity exist among these variables. So Variable HR12 is only taken for further analysis to avoid multicollinearity in running factor analysis. No Multicollinearity is found after excluding three variables.

**Table 6.1 Correlation results**

Correlation Matrix <sup>a</sup>															
	I1	I2	I3	H1	H2	H3	H4	P5	P6	P7	P8	M9	M10	M11	HR12
I1	1	0.493	0.844	0.612	0.653	0.708	-0.419	-0.421	0.636	0.516	-0.417	0.531	0.279	0.715	-0.517
I2	0.493	1	0.506	0.561	0.595	0.613	-0.186	-0.596	0.043	0.753	-0.532	0.854	0.173	0.499	-0.6
I3	0.844	0.506	1	0.658	0.632	0.698	-0.494	-0.497	0.668	0.465	-0.365	0.625	0.499	0.694	-0.645
H1	0.612	0.561	0.658	1	0.898	0.829	-0.666	-0.607	0.531	0.561	-0.484	0.718	0.488	0.861	-0.799
H2	0.653	0.595	0.632	0.898	1	0.948	-0.566	-0.689	0.558	0.658	-0.655	0.647	0.367	0.812	-0.731
H3	0.708	0.613	0.698	0.829	0.948	1	-0.544	-0.665	0.529	0.595	-0.595	0.6	0.237	0.731	-0.676
H4	-0.419	-0.596	-0.494	-0.666	-0.566	-0.544	1	0.156	-0.486	-0.246	0.206	-0.266	-0.286	-0.636	0.47

	9	6	4	6	6	4			5			1	7	1	
P5	- 0.42 1	- 0.59 6	- 0.49 7	- 0.60 7	- 0.68 9	- 0.66	0.15 6	1	- 0.33 4	- 0.62 6	0.54 6	- 0.56 2	- 0.30 9	- 0.55 7	0.76 7
P6	0.63 6	0.04	0.66 8	0.53	0.55	0.52 9	- 0.48 5	- 0.33 4	1	0.23 3	- 0.28	0.25 5	0.35 5	0.72 6	- 0.40 6
P7	0.51 6	0.75 3	0.46 5	0.56 1	0.65 8	0.59 5	- 0.24	- 0.62 6	0.23 3	1	- 0.86 8	0.66 4	0.22 6	0.58 6	- 0.55 6
P8	- 0.41 7	- 0.53 2	- 0.36 5	- 0.48 4	- 0.65 5	- 0.59 5	0.20 6	0.54 6	- 0.28	- 0.86 8	1	- 0.45 6	- 0.19 6	- 0.50 2	0.44 1
M9	0.53 1	0.85 4	0.62	0.71	0.64	0.6	- 0.26 1	- 0.56 2	0.25 5	0.66 4	- 0.45 6	1	0.48 3	0.65 5	- 0.62 6
M1 0	0.27 9	0.17 3	0.49 9	0.48 8	0.36 7	0.23 7	- 0.28 7	- 0.30 9	0.35 5	0.22 6	- 0.19 6	0.48 3	1	0.53 9	- 0.49 2
M1 1	0.71 5	0.49 9	0.69 4	0.86 1	0.81 2	0.73 1	- 0.63 1	- 0.55 7	0.72 6	0.58 6	- 0.50 2	0.65 5	0.53 9	1	- 0.74 1
HR 12	- 0.51 7	-0.6	- 0.64 5	- 0.79 9	- 0.73 1	- 0.67 6	0.47	0.76 7	- 0.40 6	- 0.55 6	0.44 1	- 0.62 6	- 0.49 2	- 0.74 1	1

### 6.1.2 KMO and Bartlett's test

Kaiser Meyer Olkin measure of sampling adequacy and Bartlett's test of sphericity are two important parts of factor analysis. KMO statistics value between 0 and 1. A value of 0 indicates diffusion in the pattern of correlations. A value nearer to 1 indicates patterns of correlations are relatively compact. Bartlett's measure tests the null hypothesis that the original correlation matrix is identity matrix (Field, 2005). Therefore the test should be significant at  $p < 0.01$ . The result reveals that KMO value lies 0.775 and significance value  $p$  is  $< 0.01$ . Therefore factor analysis is appropriate.

**Table 6.2 KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.775
Bartlett's Test of Sphericity	Approx. Chi-Square
	1928.942
	Df
	105
	Sig.
	.000

### 6.1.3 Factor Extraction

For the study *Principle component analysis* method of factor analysis is used. The interpretability of factors can be improved through factor rotations. Rotation maximizes the loading of each variable on one of the extracted factors whilst minimizing the loading on all other factors (Field, 2005). Theoretically factors in this



study are correlated. So, *direct oblimin* type of rotation has been used. Number of factors to be extracted is specified as 5 based on the theoretical background of the study. Eigen value associated with each factor represents the variance explained by that particular linear component and it is displayed as a percentage of variance explained. Factors with Eigen values more than 1 explain relatively large amount of variance.

From the results components 1 to 3 has Eigen values more than 1. Components 4 and 5 has Eigen values nearer to 1.

**Table 6.3 Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.838	58.922	58.922	8.838	58.922	58.922	5.784
2	1.788	11.921	70.843	1.788	11.921	70.843	3.528
3	1.020	6.801	77.644	1.020	6.801	77.644	3.460
4	.805	5.364	83.008	.805	5.364	83.008	5.730
5	.738	4.918	87.926	.738	4.918	87.926	5.753
6	.636	4.238	92.164				
7	.338	2.254	94.417				
8	.300	1.997	96.414				
9	.190	1.269	97.683				
10	.126	.841	98.525				
11	.090	.597	99.122				
12	.054	.360	99.481				
13	.036	.239	99.721				
14	.027	.183	99.903				
15	.014	.097	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pattern matrix shows the factor loadings of various variables in different factors. The suppression of loadings less than 0.4 and ordering variables by loading size also makes the interpretation easier (Table 6.4). The content of the variables that load on to the same factor has to be looked upon to find a common theme. If the mathematical factor produced by the analysis represents some real world construct then common themes among highly loading questions can help us identify what the construct might be.

Results show that the variables H1, H2, H3, H4, HR12, and M11 fall into component 1. I2 and M9 fall in component 2. M10 and P5 fall in component 3. I1, I3, P6 fall in component 4. P8, P7, P5 fall in component 5. From the analysis it is revealed that the initial questionnaire structured by having 5 components theoretically, are not supported in the results. There are two possibilities here. The first is that the questionnaire failed to measure what is set out to

but does measure some related constructs. The second is that these five constructs has a common theme among themselves for which further study has to be taken to find out clearly the constructs.

For analysis purpose, we take theoretical constructs and try to analyze the level of impact of variables on investor decisions through regression analysis.

**Table 6.4 Pattern Matrix<sup>a</sup>**

	Component				
	1	2	3	4	5
H4	-.980				-.171
H1	.685	-.192	.205		-.163
H2	.561			.106	-.457
H3	.530	-.157	-.154	.272	-.346
HR12	-.436	.253	-.385		.241
M11	.425		.276	.323	-.216
I2		-.816		.139	-.213
M9		-.695	.275	.231	
M10			.962		
I1		-.146	-.110	.929	
I3		-.194	.189	.805	
P6	.154	.489	.174	.707	-.144
P8		-.103			1.008
P7		-.244			-.785
P5		.163	-.266		.623

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

## 6.2 COMPUTING NEW VARIABLES

From the variables 15 variables collected, new set of five variables are created using the mean of different groups. Average of different groups gives new variables like Heuristics, Herding, Prospects, Market Forces, Investment performance. These variables are further used for the regression analysis, to study the impact of other four variables on Investment performance.

## 6.3 REGRESSION ANALYSIS TO FIND IMPACT OF VARIABLES

Regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables (or 'predictors').

*Dependent variable = Investment performance*

*Predictors or Independent variables = Heuristics, Herding, Prospects, Market forces.*

Regression analysis is run through 'Enter' method in SPSS.

**Table 6.5 Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841 <sup>a</sup>	.707	.695	.40269

a. Predictors: (Constant), herding, prospects, Heurstcs, marketforces

The value of R (0.841) represents the correlation between variables. The value of R<sup>2</sup> is .707 which tells that the four independent variables predict the Independent variable to 70.7%. The remaining 29.3% is predicted by some other variables. Therefore there must be other variables that have an influence also. The ANOVA part of the output shows the F ratio and significance value. For these data F is 57.339 and significance less than 0.01. Therefore we conclude that our regression model results in significantly better prediction.

**Table 6.6 ANOVA results**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	37.193	4	9.298	57.339	.000 <sup>a</sup>
Residual	15.406	95	.162		
Total	52.599	99			

a. Predictors: (Constant), herding, prospects, Heurstcs, marketforces

b. Dependent Variable: InvPer

**Table 6.7 Coefficients of regression**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-2.401	.728		-3.299	.001		
	Heurstcs	.493	.150	.326	3.295	.001	.315	3.171
	prospects	.468	.187	.153	2.497	.014	.821	1.218
	marketforces	.479	.122	.406	3.933	.000	.289	3.458
	herding	-.087	.048	-.175	-1.820	.072	.332	3.008

a. Dependent Variable: InvPer

## 7. CONCLUSIONS

Results of the analysis show that the variables do not fall in to theoretical factors. Even then a strong relationship exists among the variables studied. When existing theoretical model is tested to know the impact of the factors on investor decisions, a positive result is shown, thus

proves the interrelationship among variables. Factors generated through factor analysis fall into three components. But it is found to be no commonality among the components of each factors segregated. So in order to test the exiting model, fixed number of factors (Five) was generated and used for regression analysis. Regression results show the strong influence of all the factors on investor performance. This study can further be taken to analyze the same structure in different samples to explore the first level components (three) better and understand its influence in investor decisions.

## 8. REFERENCES

- Allen, D. W. and Evans, A. D. (2005). Bidding and overconfidence in experimenting financial markets. *Journal of Behavioral Finance*, 6 (3), 8–120.
- Le Phuoc Luong and Doan Thi Thu Ha (2011). Behavioral factors influencing individual investors decision making and performance. Umeå School of Business, 52-100.
- Barber, B. and Odean, T. (2002). All that glitters: the effect of attention and news on the buying behavior of individual and institutional investors. *Working Paper* (University of California, Berkeley, CA).
- Canh, N. T. (2008). *The factors impact the supply and demand of securities at the Ho Chi Minh City Security Market* (Cac yeu to anh huong den cung-cau chung khoan tai thi truong chung khoan thanh pho Ho Chi Minh). Ho Chi Minh City Department of Stock Exchange.
- Collis, J. and Hussey, R. (2009). *Business Research: A practical guide for undergraduate & postgraduate students*. Third edition. China: Palgrave Macmillan
- Gervais, S., Simon, H. and Odean, T. (2001). Learning to be overconfident. *The Review of Financial Studies*, 14 (1), 1–27.
- Kaminsky, G. L. and Schmukler S. L. (1999). What triggers market jitters? A chronicle of the Asian crisis. *Journal of International Money and Finance*, 18 (4), 537–560.
- Liu, Y., Wu, A. D., and Zumbo, B. D. (2010). The Impact of Outliers on Cronbach's Coefficient Alpha Estimate of Reliability: Ordinal/Rating Scale Item Responses. *Educational and Psychological Measurement*, 70 (1), 5–21.