

# **EFFECT OF OPTIMISM, OVERCONFIDENCE, AND STATUS QUO BIAS ON STOCK MARKET PERCEIVED PERFORMANCE: EVIDENCE FROM ISLAMABAD STOCK EXCHANGE**

**MAISAM ALI<sup>\*</sup>, FARHANA RAHEEM<sup>\*</sup>,  
SAMRA TABASSAMAND<sup>\*</sup>, TATHEER ABBAS<sup>\*</sup>**

## **ABSTRACT**

This research examined the influence (impact) of individual investor's behavior on perceived stock market performance. Optimism, overconfidence and status quo biases were investigated to know their impact on stock market participation. The questionnaire method was used to collect the data. The data has been collected through 95 sample questionnaires distributed among individual investors in Islamabad Stock Exchange. While analyzing the data, correlation (Pearson) and regression (linear model) techniques were used. The results indicated that optimism, overconfidence and status quo biases did not have significant impact on stock market participation.

**KEYWORDS:** Individual Behavior, Optimism, Overconfidence, Status Quo, Stock Market Participation, Regression, Correlation, Islamabad Stock Exchange.

## **INTRODUCTION**

Stock markets are considered as more volatile, unpredictable and oversensitive to unforeseen shocks and news. It takes no time to crash the market tricks. All at once, stock markets are stretchy and recover speedily after shocks. The part and importance of individual investors and their trading performance in stock market is also very precarious, because it affects the decision making about investment.[30] The study illustrated that the traditional portfolios approach was dominated detailing at that investors were minimizing risk by increasing investment instruments in portfolio. However,

risk is not reduced just by increasing the number of securities in the portfolios but the degree and relationship between them also matter. Considering all these factors, later on irrational factors (individual behaviors) were identified which laid down the base for behavioral finance and the studies of psychology.[1] Behavioral finance depends on the investors' behaviors and their decision making regarding investment in stock markets. It deals with the psyche of the investors in stock markets. Investors' decisions affect stock market performance in various ways.

---

<sup>\*</sup>Students of Management Science Department, Capital University of Science and Technology Islamabad, Pakistan.

**Correspondence E-mail Id:** editor@eurekajournals.com

Current research will investigate the impact of optimism, overconfidence and status quo bias on stock market perceived performance. The investors' perceptions vary expressively for the period of the crisis, with risk forbearance and risk perceptions being less volatile than profit expectations. Individual investors' perceptions support to describe their stock-market involvement.[18]

All biases are deviated from efficient market hypothesis (EMH). Markets are assumed to be efficient. Stocks always trade in their fair value, there is no chance to trade undervalue stocks or mispriced stocks. However market efficiency, the assumption that prices completely reflect existing information, is a defective explanation of price development like all models.

EMH also assumed that investors make rational decisions based on fully available information. But when investor avails biased information and facts or is going to take decision emotionally, he may take biased decision. Reason behind it is that investor thinks emotionally either in anger or in the state of fear or joy. He or she may suffer from biased results and manipulated information as well as facts and figures.[8]

The study is intended to investigate the behavioral biases of an individual investor that affect stock market perceived performance. These biases are cause underperformance among investors. When the investors make decisions they do not regard these irrational behaviors, which results into poor performance and loss. The phenomenon is several times noted in stock markets like stock market bubble bursts followed by great depression.

The sole reason is irrational and is a biased decision of the investors. Similarly, in our country most of the investors do not have financial literacy and are unable to interpret the

information when they go for investment in stock market. They commit errors in one way or the other as they do not understand how to make rational decisions about investment.[11]

Our objectives include:

- To investigate how behavioral biases affect stock market perceived performance
- To check the impact of optimistic behavior of an investor on stock market performance
- To check the impact of overconfidence bias on investing behavior of an individual investor in stock market
- To find out the ways to overcome effects of behavioral bias on stock returns and market forecasts

## **THEORY AND THEORIZATON**

Prospect theory, which is a behavioral model, shows how people decide between alternatives that involve risk and uncertainty. It demonstrates that people think in terms of expected utility relative to a reference point. When investors go for decision making regarding stock market participation they fix a reference point around which they make portfolios. They weight and value the gains more than the losses.[25,27]

The application of the prospect theory is that when the investors make decisions about stock market participation, they make portfolios based on perceived gains and utilities. The set a reference point (purchase price) with which they compare their outcomes. They are more concerned with the gains than losses. They ignore certain factors which minimize gains and maximize losses. So, they frame their portfolios into different mental accounts and attach different utilities to them. But the point is that they make decisions that give them maximum utility, although their decision criteria would be subject to decision biases.[25,27,44]

## **SIGNIFICANCE OF STUDY AND FUTURE RESEARCH ASPECTS**

The aim of the study is to enlighten the influence of behavioral factors (biases) on the stock market perceived performance as well as investor financial decision making. The research findings of the current research study are useful for financiers (investors), the ones who make policies, financial consultants, and students. Moreover, contribution of this study in the existing literature is that no study was presented about Islamabad stock exchange to cover the effects of these behavioral biases: Optimism bias, Overconfidence bias, Status Quo bias - on perceived stock market performance.

## **LITERATURE REVIEW**

### **INVESTOR BEHAVIOR**

In this section, we inter-relate the review of literature and develop hypotheses concerning the estimated impact of behavioral biases of investors on stock market performance. In stock market, investors' perceived performance is usually based on their decision tools which strengthen their beliefs and perceptions towards investment decisions. They follow irrational decisions due to lack of knowledge and analysis.[23] The current literature is organized to explain optimistic bias, overconfidence bias and status quo bias that affect stock market perceived performance.

### **OPTIMISM BIAS**

Different authors contributed to the errors (biases) which lead to the area of judgments and decision making as cognitive illusions and these illusions are not easy to eliminate. Furthermore, optimism bias is one of them.[26] There are four classes of judgment and decision making biases: Heuristic Simplification, Self-deception, Emotion and Self-control, and Social

Interactions where optimism falls in self-deception.[17] It is actually the tendency of investors who always think that bad things will not happen to them. Thinking positive is important to survival but it can also lead to underperformance and wrong decision without critical analysis. So, most of the time investors underestimate the unfavorable situations of the investment (Icekson, Roskes & Moran, 2014, Chira, Adams & Thornton, 2008, & Bashir, Javed, Ali, Meer, & Naseem, 2013).

Economic factors and political factors also influence the investors' behaviors and their optimistic thoughts and beliefs. In political climate of US, individuals exhibit more optimistic behavior and consider market more undervalued when their desired party is "in power" and investors make bad investment decisions when opposite party is in power.

They trade actively and excessively but not wisely. So, this leads them to their biased behavior towards investment decisions. Similarly, the effects of optimism exist positively relative to economic conditions because optimistic people are harder to do work, desire to retire later, are more likely to remarry, save more and invest more in individual stocks.[9,38]

Many empirical studies argue that gender factors also play a role in investors' behavior towards decision-making. The study, presented by Jacobsen, Lee, Marquering, Zhang (2013), illustrated that optimists hold up to 15% more equity and a very optimistic woman holds up to 5% more equity than a very optimistic man. US optimistic investors invest more in equity, holding 50% of their portfolios versus 35% held by the pessimistic. In another study, Oran & Perek (2013) argued that regarding managerial optimism, optimistic managers take biased decisions relative to investment and financing, mergers and acquisitions and entrepreneurial matters.

Weather conditions and seasonal effects also influence investors' behavior by influencing their moods. Baker, & Nofsinger, (2002) described the relationship of mood and optimism with investor behavior in brief manner. People are more optimistic when they are in a good mood instead of bad moods. The reason behind this is that bad moods inspire to think critically about situations while people in good moods take decisions without detailed analysis. Optimism bias affects investors in two ways. Firstly, optimism becomes a hurdle in order to perform critical analysis before taking stock decisions. Secondly, optimistic investors ignore negative information about their stocks or portfolios, similar to cognitive dissonance.

### **OVERCONFIDENCE BIAS**

Different works have been done on overconfidence bias as an error leading to biased decision and poor performance of investment. One study has been conducted by Iqbal, Ahmed, Abrar & Hassan (2014), who have used primary data collected from investors in Pakistan stock market. They used a process known as AHP which is Analytic Hierarchy Process. It was used to check the importance of diverse behavioral traits of individual investor. This study shows that in Pakistan stock market, individual investors are more overconfident. Another study completed by Bashir, Javed, Ali, Meer, & Naseem (2013) examined the impact of overconfidence. They used Pearson correlation and linear regression model techniques for analysis. Results show significant impact of overconfidence on investor decision making.

In another study, Inaishi, Toya, Zhai, & Kita [20] examined the impact of overconfidence bias on stock market and its performance as well. They studied the relationship between overconfident investors and stock market. In the study, they used the simulation technique, that is, Multi Agent Simulation. The relationship showed that

that rising trend in the market makes the investors rather more overconfident. In addition, Gervais, Heaton, & Odean, (2002) described the investment policy aspect of investors. They argued that shareholders give preference to overconfident managers with less ability over rational managers having greater ability. Moreover, gender also has relationship with overconfidence bias as males are more over confident than females, the reason behind this is that the males are more active in trade as compared to females and the males stay online for a longer time and can access the database easily as compared to females.[7]

### **STATUS QUO BIAS**

There are different research studies conducted to examine the effect of status quo bias over stock market performance. One study shows that "This factor identifies that the investors do not want to change their current position. They believe that they are well acquitted with it. So, once they get familiar with certain stock in the market, they start purchasing and holding it irrespective of the other costs and benefits. Particularly this is the case with some senior employees of the company. They hold the stock of the company where they work and get familiar with and ignore other stocks" [1 (p.6)].

Identifying the effect of status quo on stock market performance, Babajida & Adetiloye [4] investigated Nigerian stock market. They took data of last twenty years and distributed questionnaires among 300 respondents. Results show the negative relation between stock market performance and status quo due to indirect involvement in trade activity.

In an empirical study, Bashir, Javed, Ali, Meer, & Naseem (2013) examined that how investors' biases could affect their decision of investment. They examined the effects of status quo using Pearson correlation and linear regression model techniques and identified that status

quo has a significant relation but no impact on investor's decision making.

Still another research conducted by Kempf and Ruenzi (2010), identified that investors showed the bias of status quo when they were to decide for a particular investment. They used the same decision criteria as they had used previously, although the decision was not viable for investment. This bias was explained by Samuelson and Zeckhauser in 1988.

### STOCK MARKET PERFORMANCE

Stock market plays an important role in the economy of a country. It is a leading indicator of the economy where the economy of the country is affected when the stock market is running bull or bearish [32 (p.131)]. There are a number of factors influencing stock market investment. According to a research study in Germany conducted by Baker [5 (p.154-155)], general public tends to invest more in assets rather than shares, and shares are owned mostly by wealthy people and institutions like banks. Another reason of holding low share ownership is the low income and lack of

information about the investment in shares. Still another factor which explains the stock market investment is the price and diversification of the assets. People were found preferring mutual funds due to low cost and high diversification.

### HYPOTHESIS

- H1<sub>a</sub>: There is a significant impact of optimism bias on investors' stock market perceived performance
- H1<sub>b</sub>: There is no significant impact of optimism bias on investors' stock market perceived performance
- H2<sub>a</sub>: There is a significant impact of overconfidence bias on investors' stock market perceived performance
- H2<sub>b</sub>: There is no significant impact of overconfidence bias on investors' stock market perceived performance
- H3<sub>a</sub>: There is no significant impact of status-quo bias on investors' stock market perceived performance
- H3<sub>b</sub>: There is no significant impact of status-quo bias on investors' stock market perceived performance

### THEORETICAL FRAMEWORK

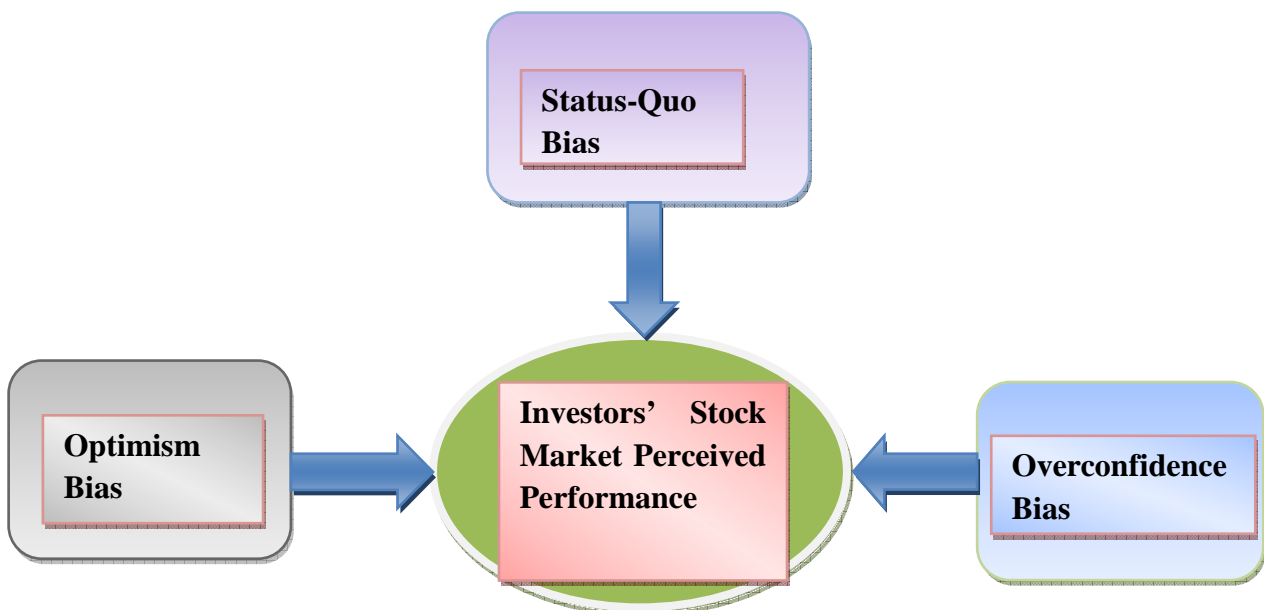


Figure 1. Theoretical Framework showing Effect of different Biases on Investor's Stock Market Perceived Performance

## **METHODOLOGY**

The purpose of this study is to explain the impact of behavioral biases on stock market perceived performance as well as investor's financial decision making. The data used is primary in nature and it is collected from Islamabad Stock Exchange through Questionnaires.

## **RESEARCH DESIGN**

The data collected is primary in nature which was collected through questionnaires distributed among the individual investors in Islamabad Stock exchange. The data was collected irrespective of the gender discrimination. It was ensured that all responses from the investors were proper. The questions related to demographics were answered by selecting one of the options devised on nominal scale while other statements were answered using Likert scale method.

## **DATA SOURCE**

The data was collected first time which is primary in its nature. Questionnaires were used to collect the data. Questionnaires were distributed and filled out by individual investors in the Islamabad stock market.

## **DATA TYPE AND RESEARCH PHILOSOPHY**

The data is quantitative, and the research philosophy used for the quantitative study includes objectivism, positivism and deductive approach. The quantitative data is used to study the behavior rather than the meaning

which is aligned with the branch of finance that is behavioral finance. Moreover, the research is mainly intended to identify the factors that affect the individual investors' investment decision. It is only done through quantitative study effectively. The quantitative research is designed to identify the relationship between the variables. The questions used are closed ended.[30]

## **RESEARCH SAMPLE AND TECHNIQUE**

One hundred questionnaires were distributed among the individual investors using convenience sampling technique. In this type of sampling, investors are selected on the basis of availability.

## **ANALYSIS TECHNIQUE**

The analysis technique used to check the relationship among the variables and their degree of impact on stock market performance is SPSS (Statistical Package for the Science). Pearson correlation is used to check the relationship among variables and linear regression is used to check the impact of variables on stock market performance.

## **DATA RELIABILITY**

**Table 1. Cronbach Alpha values for different Behavioral Biases**

S. No.	Behavioral Biases	Cronbach Alpha
1	Optimism Bias	0.784
2	Overconfidence Bias	0.737
3	Status Quo Bias	0.772
4	Stock Market Participation	0.743

**RESULTS AND ANALYSIS**

**Table 2. Mean and S.D. values depending on different variables**

Variables	Mean	S.D	1	2	3	4	5	6	7	8
1. Gender	1.8789	0.38534								
2. Age	2.5895	0.73651	-0.076							
3. Education	3.9684	0.76426	-0.125	-0.042						
4. Occupation	3.2737	0.79141	0.43	0.177	-0.179					
5. Optimism	4.4863	0.36976	0.189	-0.072	0.115	-0.154	(a=.784)			
6. Overconfidence	4.4175	0.31686	-0.081	0.385**	-0.143	-0.022	-0.066	(a=.737)		
7. Status Quo	3.1184	0.61111	0.203*	0.233*	-0.083	0.092	0.074	0.355**	(a=.772)	
8. Stock Market Participation	3.6175	0.68756	-0.074	0.016	-0.158	0.048	-0.038	-0.099	0.051	(a=.743)

N=95, \*p<0.05, \*\*p<0.001

The descriptive statistics reflect that mean ranges vary from minimum value of 1.8789 (gender) to the maximum value of 3.9684 (education). Similarly it shows that standard deviation which is the dispersion from mean value ranges from 0.31686 (overconfidence) to 0.79141 (occupation).

The predictors do not show significant correlation with stock market participation. Moreover, the sample includes 79.6% (n=78) males and 17.3% (n=17) females.

The age groups are as, 1% (n=1) range below 25 years, 51% (n=50) fall between 25-40 years, 31% (n=31.6) range between 41-55 years and 13.3% (n=13) fall above 55 years.

Furthermore, the sample includes investors with average qualification as 1.0% (n=1) having education below metric, 4.4% (n=4) holding Matric certificate, 11.2% (n=11) holding Undergraduate certificate, 61.2% (n=60) holding Graduate degree, and 19.4% (n=91) holding Master’s or above Master’s degree. Besides, professional investors are accounted 14.3% (n=14), private investors 48% (n=47), business 28.6% (n=28) and others are 6.1% (n=6).

**REGRESSION**

**Table 3. Stock Market Participation based on different Variables**

Predictors	Stock Market Participation		
	Beta (B)	R <sup>2</sup>	ΔR <sup>2</sup>
Step1			
Control Variables		0.186	
Step2			
Optimistic	-0.018		
Overconfidence	-0.43		
Status Quo	0.138	0.258	0.072

N=95 and the control variables were Gender, Age, Education and Occupation

The above regression analysis has been done in two steps in order to test the hypothesis formally. In step one the control variables Gender, Age, Education and Occupation are entered and only the R2 value is reported. In second step Optimism, Overconfidence and Status Quo are regressed on Stock Market Participation.

The value of R<sup>2</sup> = 0.258 shows that about 25.8% of the variations in stock market participation is caused by optimism, overconfidence and status quo collectively. In other words, it can be interpreted that stock market participation is

25.8% explained by optimism, overconfidence and status quo collectively. But remaining 74.2% is not captured in this model which needs to be explored.

## **EQUATION**

$Y = \alpha + \beta (\text{Optimism Bias}) + \beta (\text{Overconfidence bias}) + \beta (\text{Status Quo Bias})$

## **HYPOTHESES TESTING**

The hypotheses predict that the impact of optimism, overconfidence and status quo is significant on stock market participation. To test these predictors, we regressed stock market participation on these predictors (see Table 3). From the results, it is evident that none of the predictors has significant impact on stock market participation. So, the hypotheses H1a, H2a and H3a are rejected and the hypotheses H1b, H2b and H3b are accepted.

## **DISCUSSION**

In the current study, the individual behaviors that affect stock market participation are investigated. The data was collected from 95 individual investors in Islamabad Stock Exchange, through 100 sample questionnaires. The data was coded into SPSS software. Results were drawn from SPSS which are presented in Table 2 and Table 3.

The results showed that none of the dependent variables have significant positive relationship with stock market participation (Table 2). In addition, the regression analysis has shown that optimism, overconfidence and status quo do not have significant impact on stock market participation which supports the hypotheses H1b, H2b and H3b. The analysis also shows that stock market participation is 25.8% as explained by the predictor variables while the rest (74.2%) of the explanation is not captured by this model. The reliability of each questionnaire

instrument is shown which is above the least value set ( $\alpha > 0.7$ ).

## **RECOMMENDATIONS FOR FUTURE RESEARCH**

This research study will help for further research. The current research article is focused on investigating the individual investors whose decisions affect stock market participation. But the investors at institutional level are not considered in this study, which can be explored in future study. Moreover, the study is conducted to investigate the individual investors in Islamabad Stock Market, but still the research can be conducted in other Stock Exchanges like Lahore and Karachi Stock Exchanges.

The data has been collected from 95 individual investors but it can be collected from more investors for more reliable results. Finally in this research study few behavioral factors: optimism, overconfidence and status quo are considered. The study can be extended to explore additional behavioral factors that affect stock market participation.

## **CONCLUSION**

The current research study is organized to investigate impact of behavioral biases on stock market participation (SMP). The article is intended to know the effect of optimism, overconfidence and status quo bias on SMP. It is also intended to know whether the decision of the investors, who are regarding only positive information, affect the SMP and the investors, who underestimate or overestimate the information, can affect the SMP. Also to know if the investors who do not want to change their investment criteria and stick to same information over the period of time can affect the SMP. The literature shows that the investors possessing optimism, overconfidence



and status quo biases have impact on SMP. But, the results revealed that these three biases have no impact on SMP.

However, other studies conducted in different places show different results. The difference in the results can be due to the fact that only 14.3% of the participants comprises of the professional investors. The lack of financial literacy results in inappropriate decisions regarding SMP.

The investors having deep knowledge about investment in stock market and understanding of the biases can outperform in the market as compared to those who don't. So, proper training about investment strategies and specializing in a particular investment field can improve the performance of the investors who participate in stock market. And in turn it will drive the stock market participation in a positive direction.

## REFERENCES

- [1]. Ali M, Rehman MH. Individual behavior and stock market participation. 2016. Available from: [https://docs.google.com/document/d/1wqYFYmd5DSgc1LXLgQQ\\_AaG9IcNM\\_OEPTTmkSP4P0JN8/edit](https://docs.google.com/document/d/1wqYFYmd5DSgc1LXLgQQ_AaG9IcNM_OEPTTmkSP4P0JN8/edit).
- [2]. Alimohamma disagvand B, Matos A. Behavioral Determinants of Stock Market Participation. Europe: Lund University; 2012.
- [3]. Andrews S. Wise Optimism and Well-Being: Are Optimistic Predictions Always Best? San Diego State University. SDSU Theses and Dissertations; 2011.
- [4]. Babajidi AA, Aditiloye KA. Investors' Behavioral Biases and the Security Market: An Empirical Study of the Nigerian Security Market. *Accounting and Finance Research* 2012; 1(1).
- [5]. Baker JC. The German Stock Market. *Financial Analysts Journal* 1968; 24(5): 153-56.
- [6]. Balasuriya J, Muradoglu G, Ayton P. Optimism and Portfolio Choice. 2007. Available from: [http://www.ifd.dauphine.fr/fileadmin/mediatheque/IFD/Households\\_Risk\\_Insurance/Balasuriya\\_Optimism\\_and\\_Portfolio\\_Choice.pdf](http://www.ifd.dauphine.fr/fileadmin/mediatheque/IFD/Households_Risk_Insurance/Balasuriya_Optimism_and_Portfolio_Choice.pdf).
- [7]. Barber B, Odean T. Boys will be Boys: Gender Overconfidence and Common Stock Investment. *Quarterly Journal of Economics* 2001; 116: 261-92.
- [8]. Barberis N, Thaler R. A Handbook of the Economics of Finance: A Survey of Behavioral Finance. 2003. Available from: [https://www.google.com.pk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&sqi=2&ved=0ahUKEwjB48i64XRAhUE7RQKHxU2DO4QFggcMAA&url=http%3A%2F%2Ffaculty.som.yale.edu%2Fnicholasbarberis%2Fch18\\_6.pdf&usq=AFQjCNHHa5QW9WrtmXh1Km4rYW\\_Vgai3\\_Q&sig2=U5aSLeQVjwelurMqgUhKLA&bvm=bv.142059868,d.d24](https://www.google.com.pk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&sqi=2&ved=0ahUKEwjB48i64XRAhUE7RQKHxU2DO4QFggcMAA&url=http%3A%2F%2Ffaculty.som.yale.edu%2Fnicholasbarberis%2Fch18_6.pdf&usq=AFQjCNHHa5QW9WrtmXh1Km4rYW_Vgai3_Q&sig2=U5aSLeQVjwelurMqgUhKLA&bvm=bv.142059868,d.d24).
- [9]. Bonaparte Y, Kumar A, Page J. Political Climate, Optimism, and Investment Decisions. Unpublished working paper. Claremont McKenna College, University of Miami. 2010.
- [10]. Chira I, Adams M, Thornton B. Behavioral Bias within the Decision Making Process. *Journal of Business & Economics Research* 2008; 6(8).
- [11]. Colombo J. The black day - the stock market crash of 1987. 2012. Available from: <http://www.thebubblebubble.com/1987-crash/>.
- [12]. Daiva J, Lina N, Pertas D et al. Personality Types of Lithuanian Individual Investors. 1<sup>st</sup> Annual International Interdisciplinary Conference, 2013.
- [13]. David H. Investor Psychology and Asset Pricing. *Munich Personal REPEC Archive*; 2001.
- [14]. Everts T. CFO, Optimism and Overconfidence. New York: McGraw-Hill; 2007.

- [15]. Felton J, Gibson B, Sanbonmatsu DM. Preference for Risk in Investing as a Function of Trait Optimism and Gender. *Journal of Psychology and Financial Markets* 2002; 4: 33-40.
- [16]. Helweg-Larsen M, Shepperd JA. Do moderators of optimistic bias affect personal or target risk estimates? A review of the literature. *Personality and Social Psychology Review* 2001; 5: 74-95.
- [17]. Hirshleifer D. Investor Psychology and Asset Pricing. *Journal of Finance* 2001; 56(4): 1533-97.
- [18]. Hoffmann AOI, Post T, Pennings JME. Individual Investors and the Financial Crisis: How Perceptions Change, Drive Behavior, and Impact Performance. *Journal of Finance* 2011: 60-74.
- [19]. Icekson T, Roskes M, Moran S. Effects of optimism on creativity under approach and avoidance motivation. *Frontier in Human Neuroscience* 2014; 8: 105.
- [20]. Inaishi R, Toya K, Zhai F et al. Effect of Over confident Investor Behavior to Stock Market. *Journal of Advanced Computational Intelligence and intelligent informatics* 2010; 14(6): 661-63.
- [21]. Jacobsen B, Lee JB, Marquering W et al. Are Women more Risk Averse or Men More Optimistic? Working Paper, Massey University, 2010.
- [22]. Jacobson B, Lee JB, Marquering W. Are men more optimistic? Working Paper, Massey University, 2008.
- [23]. Jagono A, Mutswenje SV. A Survey of the Factors Influencing Investment Decisions: The Case of Individual Investors at the NSE. *International Journal of Humanities and Social Science* 2014; 4(4).
- [24]. Jale SO, Seda GP. An Empirical Test of Optimism Bias in Capital Budgeting Decisions. *Journal of Modern Accounting and Auditing* 2013; 9(2).
- [25]. Kahneman D. Thinking, fast and slow. London: Allen Lane; 2011.
- [26]. Kahneman D, Reipe MW. Aspects of Investor Psychology. *Journal of Portfolio Management* 1998; 24(4): 52-65.
- [27]. Kahneman D, Tversky A. Prospect theory: An analysis of decision under risk. *Econometrica* 1979; 47: 263-91.
- [28]. Kaur M, Vohra T. Women and Stock Market Participation: A Review of Empirical Evidences. *Management and Labor Studies* 2012; 4.
- [29]. Lee K, Miller S, Velasquez N et al. The Effect of Investor Bias and Gender on Portfolio Performance and Risk. *The International Journal of Business and Finance Research* 2013; 7(1).
- [30]. Luong PL, Ha TTD. Behavioral factors influencing individual investors' decision making and performance. Thesis, 2011. Available from: <https://www.google.com.pk/url?sa=t&jrct&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwi9qpKV74XRAhWBSBQKHQOCdu8QFggcMAA&url=https%3A%2F%2Fwww.researchgate.net%2Ffile.PostFileLoader.html%3Fid%3D57225e82eeae391fb767394f%26asetKey%3DAS%253A355923613765632%25401461870210283&usg=AFQjCNFA8VFyAEjMnkKQP6RPaYShFXMg6w&sig2=R2EaUMeYd08DK0k6ULLsrA&bvm=bv.142059868,d.d24>.
- [31]. Nadeem I, Naveed A, Maira A et al. Determinants of Retail Investors Behavior and its impact on Investment Decision. *International Letters of Social and Humanistic Sciences* 2014; 7: 31-43.
- [32]. Nishat M, Saghir A. The Stock Market and Pakistan Economy 1964-87. *Savings and Development* 1991; 15(2): 131-46. Available from: <http://www.jstor.org/stable/25830261>.
- [33]. Papenhausen C. Half full or half empty: The effects of top managers' dispositional optimism on strategic decision-making and firm performance. *The Journal of*

- Behavioral and Applied Management* 2006; 7(2).
- [34]. Park J, Konana P, Gu B et al. Confirmation bias, overconfidence, and investment performance: Evidence from stock message boards. *McCombs Research Paper Series No.IROM-07-10*, 2010.
- [35]. Phan KC, Zhou J. Vietnamese Individual Investors' Behavior in the Stock Market: An Exploratory Study. *Research Journal of Social Sciences & Management* 2014; 3.
- [36]. Pompian MM. Behavioral finance and wealth management. USA: *Wiley*; 2006.
- [37]. Pompian MM. Using Behavioural Investor Types to Build Better Relationships with Your Clients. *Journal of Financial Planning* 2008: 64-76.
- [38]. Puri M, Robinson D. Optimism and economic choice, *Journal of Financial Economics* 2007: 71-99.
- [39]. Qureshi SA. Measuring Validity of the Determinants of Investment Decision Making. *IPEDR* 2012; 55(31).
- [40]. Roca M, Hograth RM, Maule AJ. Ambiguity Seeking as a Result of the Status Quo Bias. *Journal of Risk and Uncertainty* 2006; 32(3): 175-94.
- [41]. Segerstrom SC. Optimism and attentional bias for negative and positive stimuli. *Personality and Social Psychology Bulletin* 2001; 27.
- [42]. Sen R, Tumarkin R. Stocking Up: Executive Optimism and Share Retention. *Journal of Financial Economics* 2015; 118(2): 399-430.
- [43]. Shefrin H. Behavioral Corporate Finance: Decisions that Create Value. New York: *McGraw-Hill/Irwin*; 2007.
- [44]. Shefrin H, Statman M. Behavioral Portfolio Theory. *Cambridge University Press*; 1979.
- [45]. Simon G, Heaton TO. The Positive Role of Overconfidence and Optimism in Investment Policy. The Rodney L. White Center for Financial Research, 2002; 15(2).
- [46]. Sweeny K, Shepperd JA. The costs of optimism and the benefits of pessimism. *Emotion* 2010; 10.
- [47]. Sweeny K, Carroll PJ, Shepperd JA. Is optimism always best? Future outlooks and preparedness. *Current Directions in Psychological Science* 2006; 15: 302-306.
- [48]. Willard TC, Carl RC, Thomas LS. Optimism biases among brokerage and non-brokerage firms' equity recommendations: agency costs in the investment industry. *Financial Management* 1998; 27(1): 17-30.
- [49]. Willard TC, Carl RC, Thomas LS. Optimism biases among brokerage and non-brokerage firms' equity recommendations: agency costs in the investment industry. *Financial Management* 1998; 27(1): 17-30.