

# Stock Investors' Overconfidence: Evidence from Islamabad Stock Exchange

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## Abstract

*This study focuses on the psychological aspect of the stock investors at Islamabad Stock Exchange and its effect on their investment decision. In particular, we studied the overconfidence Phenomenon and its possible determinants through a survey methodology. These determinants include age, trading experience, academic qualification, income sources and performance of investment in stocks. Our sample consists of 113 randomly selected floor traders. The results show that Pakistani investors are overconfident of their trading skills and investment decisions. A stepwise regression analysis shows that education is the only factor that positively and significantly increases overconfidence and the rest of the factors affect overconfidence of investors negatively. Statistical analysis was performed using SPSS.*

**Keywords:** Behavioral Finance, Overconfidence, Investor Psychology, Experience, Community effect

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## INTRODUCTION

A second thought to investors' rationality is now inevitable in view of the piling proof against it. Researchers attribute the behavioral biases of investors and stock market anomalies to psychological concepts such as overconfidence. "In the most basic form, overconfidence can be summarized as unwarranted faith in one's intuitive reasoning, judgments and cognitive abilities" Pompian (1998). Odean (1998) argues that investors are overconfident of their abilities, knowledge, which make them trade excessively for a lower level of expected utility. Researchers like Odean, (1998, 1999), Benos(1998), Barber and Odean (2000, 2001), Pompian(2006), Graham et al.(2006), Grinblatt and Keloharju(2009), Trinugroho and Sembel(2011) provided empirical support to this phenomenon. Occurrence

of overconfidence in trading has been observed both in volume and frequency. Glaser and Weber (2003) and Statman et al. (2003) revealed that overconfident investors tend to trade in larger volume, the researcher used a large sample obtained from surveys conducted in 18 countries. So far as the investment performance of overconfident investors is concerned, Biais et al. (2002), Kirchler and Maciejovsky (2002) and Pompian (2006) found that overconfident investors achieve lower returns than their rival investors. In the recent past researchers have focused on finding the reasons and factors that could possibly make investors overconfident. Gervais and odeant (2001) observed that the trader's overconfidence has an inverse relation with his experience. Likewise, Locke and Mann (2001) concluded that experience has inversely

related to overconfidence whereas investment performance has a positive impact on investor's overconfidence. On the contrary Kirchler and Maciejovsky (2002) claimed that the degree of overconfidence increases as the traders gain more and more experience. Moreover, Menkhoff et al. (2006) argued that variability in empirical results regarding factors affecting the overconfidence of stock investors arises out of the measurement of variables. Whatever, the reason may be, one can observe a certain degree of variation in findings of various researchers.

Barber and Odean (2001) suggested that overconfidence also depends on the gender of investors. While analyzing data obtained from a brokerage firm, they observed that men are more overconfident than women and according to researchers; another implication of this overtrading is that they achieve lower returns as compared to their counterparts.

It is a fact that cognitive psychology plays an active role in the process of financial decision making. If we want to probe into the investor's decision making process; we shall have to study and understand the judgmental and cognitive biases which actively affect the investor's decision making process. Overconfidence bias is reflected in the excessive trading by stock investors. It is important to know that why some investors trade with higher frequency than the others.

Furthermore, understanding, different facets of investor's psychology helps in analyzing different moves of financial markets. Findings of the study can be utilized by investors for making robust investment decisions. To the best of our knowledge, this is the first study to examine investor overconfidence in Pakistan through collecting data directly from stock investors. Indeed in other parts of the

world, researchers have studied investor's overconfidence but according to Chuang and Wang, 2005; Chuang et al., 2010 overconfidence differ from one culture to another. We have studied the impact of factors like age, experience, academic qualification, Investment performance, advice of colleagues and friends on the investor's overconfidence. These results are consistent with Kirchler and Maciejovsky (2002) and Glaser et al. (2005, 2007) and Dima et al (2011).

The remainder of the study is organized as follows. Section 2 describes our data and methodology. Section 3 reports the empirical results and Section 4 concludes on the main findings.

## **MATERIALS AND METHODS**

Data were gathered through a questionnaire distributed to investors registered at ISE. The Questionnaire was supplied to 150 randomly selected investors but only 113 of them responded. The questionnaire consisted of three parts as follows: part 1 provides information about the demographic characteristics of investors including age, academic qualifications, years of experience in stock trading and sources of income. Age consists of four levels, 21-30, 31-40, 41-50, 51 and over. Academic qualifications consist of 3 levels, School, College, and University. Part 2 consists of 12 questions as a whole out of which six questions measure overconfidence and the rest of the questions aimed at identifying some of the factors like community effect, investment experience and investment performance which may possibly contribute to stock investor's overconfidence. Data has been collected by using 5-likert scale (Strongly disagree, disagree, neutral, Agree and strongly Agree).

#### DESCRIPTIVE STATISTICS

Age in Years	Frequency	Mean of overconfidence On five Likert Scale	Standard Deviation
21-30	21	3.32	1.744
30-40	30	3.14	1.162
40-50	45	2.0442	.79495
51 and Above	21	2.9027	.42183

#### Education level

School	17	3.4	.61874
College	31	3.65	.34356
University	65	3.74	.1964

#### Trading Experience

1-5 years	60	3.11	.71874
5-10 years	37	2.7345	.44356
10-20 years	12	3.1504	.91964
20 years and above	04	2.53	.43200

#### Income source

Single source	34	3.11	.564
Two sources	62	2.7345	.325
More than two sources	15	3.1504	1.01964

#### Investment Performance

Successful (positive return)	39	2.44	.532
Unsuccessful (negative return)	74	2.10	.343

In general descriptive statistics show that with increasing level of education, investors show an inclination towards overconfidence. As the mean on five likert scale show an increasing mean value. The rest of the variables do not exhibit a clear trend. So with some degree reservation we may assume that education may have a significant impact on stock investor's overconfidence. The regression analysis will confirm the impact (either positive or negative) of each independent variable on the dependent variable.

Overconfidence of stock investors was measured with the help of following questions

1. Prediction of 2007 crash of stock exchange was easy
2. I have no control in picking investment that will outperform the market*
3. Performance of a stock can be easily predicted
4. Return on my investment increases due to my investment skills
5. Relative to other investors I have above average investment skills
6. I have no control on the return of my investment
7. I started trading on the advice of my relatives/friends
8. Looking at the success of my friends in stock trading I trade more frequently
9. While making a sell or buy decision, I consult my more experienced friends
10. A good sell or buy decision encourages me for another transaction
11. After a poor sell or buy decision I trade more frequently
12. The more I trade the more I'm becoming a good trader
13. With age and trade experience my trading frequency is increasing
14. With increasing trade experience I have become a more careful trader
Valid N (list wise)
*. Reverse scaling

## RESULTS AND DISCUSSION

Stepwise regression was run for identifying the most relevant factor affecting overconfidence. The regression analysis indicates that education is the only factor that positively and significantly affects investors' overconfidence. Surprisingly the rest of the items are significantly but negatively affecting overconfidence of stock investors.

The best theoretical regression model tested through SPSS is as under (see table-1):

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e \text{ (with } R^2 = 0.961 \text{)}$$

As the model indicates, the study has analyzed the impact of four independent variables on overconfidence of stock investors which is the dependent variable: Here, Overconfidence is Y, Income Level is  $x_1$ , Education Level  $=x_2$ , Investment Experience in stocks  $=x_3$ , Trading Frequency  $=x_4$  Investment Performance  $=x_5$

Table-1:

a. Dependent Variable: OC							
1. Predictors: (Constant), $X_1$							
2. Predictors: (Constant), $X_1, X_2$							
3. Predictors: (Constant), $X_1, X_2, X_3$							
4. Predictors: (Constant), $X_1, X_2, X_3, X_4$							
5. Predictors: (Constant), $X_1, X_2, X_3, X_4, X_5$							
Model	R Square	Adjusted R Square	Change Statistics	R Square Change	F Change	df1	Sig. F Change
1	0.653	0.65	0.653	209.3	1	111	0
2	0.744	0.739	0.091	38.93	1	110	0
3	0.94	0.939	0.196	359.1	1	109	0
4	0.954	0.953	0.014	32.98	1	108	0
5	0.961	0.959	0.006	17.63	1	107	0

The optimum model is as under (see table-2),  
 $Y = 4.305 - 0.298X_1 + 0.459X_2 - 0.37X_3 - 0.045X_4 - 0.086X_5 + e$

Table-2:

	beta	SE	t	sig
(Constant)	4.305	0.118	36.464	0
Incom	-0.298	0.007	-42.014	0
EDu	0.459	0.019	23.911	0
InvExp	-0.37	0.02	-18.905	0
Trade	-0.045	0.009	-5.259	0
InvPer	-0.086	0.021	-4.199	0

**Limitations:** With large sample, the results may be more reliable and can be generalized. So, one of the major limitations of the study is that the sample size is not large enough. Second the investors at floor are so busy in their analysis of the market that they respond in hurry which may affect the quality of data adversely.

## CONCLUSION

In general stock investors at ISE are overconfident although only one factor i.e.

education has a positive and significant impact on overconfidence of stock investors as identified by stepwise regression but descriptive statistics also show inclination of investors toward overvaluation of their investment skills. The bias of overconfidence may involve the traders in unnecessary excessive trading which may lead to negative returns and consequently the loss of investors hard earned money.

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