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Relationship of Investors Behavior and Their Average Stock Returns in Islamabad Stock Exchange

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ABSTRACT

The basic purpose of this research paper is to find out the investors irrational behavior in Islamabad Stock Exchange of Pakistan. The objective of this research is to analyze the different factors of an investor's perception that affects stock selection decisions and stock exchanges. For this purpose 100 questionnaires were sent to Islamabad Stock Exchange out of which 60 responses were received from total of 100 populations. In this research, we used the Convenience sampling technique, in which we select respondents which are conventiently available. The data was collected from the investors of Islamabad Stock Exchange of Pakistan. The returns for two months were observed for both investor and stock exchange. In this study simple descriptive statistic, regression and correlation are used. It is concluded that 66.9% irrationality of investor's behavior is due to gut feelings which depressed the average returns of investors i.e., 12.5% against the average return of the index i.e., 22%. The investors, while evaluating stocks they are using the indicators of inflation rate, GDP etc. and ignoring the data available in annual reports and prospectus, and the attractive discount rate available for non-stock investments.

Keywords: *Stock Selection Decision, valuation models, returns of investors, GDP, inflation rate, Stock Exchange*

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INTRODUCTION

The established theories of finance ensure a proper rate of return for the investors. This return normally follows the average return of the stock exchange, against this established fact. The average return of an average investor has been very low against the index return. This difference in return attributed to the irrational behavior of the investor. The main idea of this research is to find out the investors irrational behavior on Islamabad stock exchange of Pakistan.

The basic purpose of the behavioral finance is that the investors are working against the traditional theories of finance and are influenced by stock market as they are not behaving rationally (Rabin, 1998).

This research paper explore the investor's behavior at Islamabad stock exchange of Pakistan. This study is essential for the investors as well as for the companies that are listed on Islamabad stock exchange. As individual investors are the decision makers for their investments in future and for the companies the investor's decision is important for their policies and strategies in future.

Stock market is essential for the economic development of a country. The stock market is an important player in the expansion of commerce and industry and in the development of country's economy.it is the responsibility of the state bank, commercial banks and the government to look the functions of the stock market. As stock market is essential for the industry perspective as well as for the perspective of the investor. The stock market consist of both primary and secondary market. As the primary market is essential for issuing of new stocks in the market and secondary market contains buying and selling of stocks which are already issued in the market. A company enhances its funds by either take a loan from a financial institution such as banks or issuing shares on the stock exchange. The stock exchange is an important industry for the companies as they are increasing their funds to expand their business. For the company to be listed on stock market they have to obey certain rules and regulations and meet certain criteria to issue shares in public, as it is the stock market where companies are listed and they issue shares. The companies when share issue for the first time in public they are starting public offerings known as IPO. This function of the stock market helps industry and commerce in their development and growth. The main objective of this study is to find out the investor's perception of different factors that affect the the decision of the stock selection and stock market.

LITERATURE REVIEW

There is a huge literature available regarding the phenomenon of the investor's irrational behavior and a lot of theories of behavioural sciences justify the irrational behavior of investors.

The theory of investor's behavior was firstly presented in 1070s. In 1974, further research has been conducted on the market attitudes and perception, investment patterns, assets holdings of the individual investors (Lease & Schlarbaum, 1974).

The efficient market hypothesis determines that the stock prices predicts all the information available for the public so that the abnormal returns will not be systematically entertained whether the information was associated with the behavior of the investors or not (Winsen, 1976). This shows that investors in some firms misuse certain data which is publically available and also affects their behavior.

The good past performance of the stock market may increase the expectations of the investors in future and he may become overconfident which can leads to the disasters. DeBondt & Thaler (1985) investigate that the past good performers can become future losers and vice versa.

According to Naveed et al. (2011), a lot of research has been done on decision of small investors at Lahore stock exchange and find out that investors in stock market are supposed to perform according to the rationalism provided by the financial theories. This paper attempts to investigate the same phenomenon of the individual investors in LSE. The methodology used for the collection of data is the survey technique, which is used for the collection of data from randomly selected 300 small investors trading in LSE. The result shows that the decision of the individual investors is influenced by theories of behavioural finance rather than the theories of conventional financing. Their findings confirm the realities of prospect theory rather than aversion theory.

Athar & Sania (2009) conducted research on investor's behavior in Karachi Stock Exchange and find out the factors that affect the individual investor's behavior and have taken both the variables of behavioural and utility maximization. In this study 30 different variables from different decision criteria are included. The data for such study is collected from individual investors who buy and sell stocks in Karachi stock exchange through different brokerage houses.

There are almost 200 brokerage houses in Karachi, in which 142 are active brokerage houses and there are almost 400 investors in each brokerage house. Different sets of variables were used to identify those variables which affect investor's decisions while purchasing stocks. Different statistical techniques were used in the research and convenience based sampling is used for the selection of respondents. A primary research was conducted in which data was gathered through questionnaire. A total of 153 questionnaire were distributed among investors who invested in Karachi stock exchange and got a response rate of 100%. In this study, it was concluded that investors rely on the recommendations of family members, coworker's friends and family members but 86% of the investors take their own decisions without any influence. It was found that investor's average return is 10.5% as compared to index return which is 20.4%.

In 2007, Nadisah & Hui conducted research on firm performance and dividend factors in firms on Kuala Lumpur stock Exchange. In this study 30 trading firms from a total of 96 companies were included. Data is collected through random sampling from the firms which are listed on Kaula Lumpur stock exchange. The nine years data has been collected and the time period is from 1992-2000. Different statistical techniques were used to find out the relationship between different variables. The regression and correlation analysis were used to test the

relationship of stock returns and dividends related variables, i.e., dividend stability, dividend yield and returns of the firm or in other words we simply make comparisons of returns of the firm and the average returns of the investors on Malaysia stock exchange.

The research study on the behavior and performance of individual investors in Japan has been conducted by Kenneth et al. (2002) and it has been observed that in Asian culture, the investors are overconfident than in the western culture and similarly the Japanese investors buy stock with high risk, high trading volume, high book to market ratio and get low returns. The investors hold high systematic risk and value firms but still under perform. The individual investors perform poorly while trading in Tokyo stock Exchange. This study is consistent with the findings of overconfidence models in which, we differentiate the sample in bull and bear market, the study reveals that individual investors prefer the stocks with a high systematic risk in bear market while in bull market there exists a strong relationship between individual ownership and beta. The investors in japan hold value stock when market goes up and hold risky stocky when market declines. This shows that how individual hold value and risky stock in different time periods but still has lower performance.

The findings of this study are in consistent with the model of Daniel & Subrahmanyam (2001). The study shows that overconfident investors ignore the systematic risk in bull markets but they rely on their own pricing measures during high valuation periods. In bull markets the individual investors trading activity is higher. The buying behavior of past winners is stronger in bull markets. On the other hand in bear market the investors sell winners and buy losers. The research concluded that individual investors have poor portfolio performance in bull market period. The Japanese investors buy risky and high book to market stocks make poor trading decisions and also buy the recent winners and these behaviors are different in bull as well as in bear markets.

MATERIALS AND METHODS

Research Sample

The data has been collected through questionnaires from Islamabad stock exchange and the technique for data collection is convenience sampling method. In this way we distributed 100 questionnaires out of which the usable questionnaires were 60 and the time period was 2 months for both investors and stock exchange.

Dependent Variable

The dependent variable of this study is Investor's average return.

Independent Variables

Following are the independent variables.

- Past Performance of Stock
- Stock Broker Recommendations
- Guts Feeling
- Friend or Coworker Recommendation
- International Operations
- Perceived Ethics of Firm

Research Technique

In this study simple descriptive statistic, regression and correlation are used.

- Descriptive statistics are used to find out the mean and the standard of the variables for the study.
- Regression analysis is used to find out the relationship between dependent and independent variables.
- Correlation is used to check out the movement of the variables.

Reliability Statistics

For checking the reliability of responses cronbach alpha test is used, and the results are 0.786 overall which is greater than 0.5, it means that the results are acceptable and the responses are reliable.

CORRELATION RESULTS

Interpretation:

It is a symmetrical matrix.

It is a diagonal matrix

Testing procedure

The testing procedure for investor's average return and each independent variables (gut feelings, past performance of the stock, international operations, perceived ethics of the firm, stock broker recommendations, friends or coworker recommendations) have performed through the following steps.

Step 1.

H_0: r=0 (There is no correlation between investor's average return and gut feelings)

H_1: r¹0 (There is strong correlation between the investor's average return and gut feelings)

Table 1. The correlation between variables

		Gut feeling	Past performance of stock	International operation	Stock broker recommendation	Perceived ethics of firm	Friend or coworker recommendation	Investor average return
Gut feeling	Pearson Correlation	1	.177	-.038	.154	-.058	.218	.669**
	Sig. (2-tailed)		.175	.776	.239	.662	.094	.000
	N	60	60	60	60	60	60	60
Past performance of stock	Pearson Correlation	.177	1	.484**	.257*	.173	-.026	.583**
	Sig. (2-tailed)	.175		.000	.047	.186	.841	.000
	N	60	60	60	60	60	60	60
International operations	Pearson Correlation	-.038	.484**	1	.252	.260*	.104	.506**
	Sig. (2-tailed)	.776	.000		.052	.045	.428	.000
	N	60	60	60	60	60	60	60
Stock broker recommendation	Pearson Correlation	.154	.257*	.252	1	.098	.275*	.550**
	Sig. (2-tailed)	.239	.047	.052		.456	.034	.000
	N	60	60	60	60	60	60	60

Perceived ethics of firm	Pearson Correlation	-.058	.173	.260*	.098	1	-.044	.367**
	Sig. (2-tailed)	.662	.186	.045	.456		.736	.004
	N	60	60	60	60	60	60	60
Friend or coworker recommendation	Pearson Correlation	.218	-.026	.104	.275*	-.044	1	.457**
	Sig. (2-tailed)	.094	.841	.428	.034	.736		.000
	N	60	60	60	60	60	60	60
Investor average return	Pearson Correlation	.669**	.583**	.506**	.550**	.367**	.457**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.004	.000	
	N	60	60	60	60	60	60	60

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Step 2. The significance level is given below

Significance level a=0.05

Step 3.

The critical region of the study depends on HA &a

P= 0.000

a= 5% = 0.05

Step 4.

We finally conclude that P<a

i.e. 0.000 < 0.05

So we reject H_0.

Step 5. Interpretation:

As Null hypothesis (H_0) is rejected and alternate hypothesis (H1) is accepted so the result are significant statistically which means that at the level of 5% of significance the given data provides sufficient evidences which can support the alternate hypothesis H1. It means that the variables investor's average return and gut feelings are highly correlated or associated. Similarly there is also high correlation between investor's average return and other independent variables (past performance of the stock, international operations, perceived ethics of the firm, stock broker recommendations, friends or coworker recommendations) by applying the same steps of testing procedure.

Regression analysis: The regression analysis of the variables are explained in the given table:

The result shows the good fitness of the model.

Table 2. Model Summary

Mode	Variables	R	R^2	Adj. R^2	Std. Error
1	Gut feelings	.669	.448	.438	.370
2	Past performance of the stock	.583	.340	.328	.405
3	International Operations	.506	.256	.243	.430
4	Perceived ethics of the firm	.367	.134	.119	.463
5	Stock broker recommendation	.550	.303	.291	.416
6	Friends or coworker recommendations	.457	.209	.196	.443

I) Correlation Coefficient (R)

The correlation coefficient of dependent variable i.e. investor's average return and independent variable i.e. gut feelings is 0.669,between investor's average return and past performance of the stock is 0.583, between the investor's average returns and international operations is 0.506, between the investor's average returns and stock broker recommendation is 0.550, between the investor's average returns and perceived ethics of firm is 0.367 and between the investor's average returns and friends or coworker recommendations is 0.457.

II) Coefficient of determination (R^2):

The coefficient of determination depicts the amount of variation in dependent variable is explained by independent variable. The table shows the investor's average return is 44.8%, explained by the variation in gut feelings. The variation in the investor's average return are about 34.0% is explained by the variation in past performance of the stock. The variation in the investor's average returns are about 25.6% is explained by the variation in international operations. The variation in the investor's average returns are about30.3% is explained by the variation in stock broker recommendations. The variation in the investor's average returns are about 13.4% is explained by the variation in perceived ethics of firm. The variation in the investor's average returns are about 20.9% is explained by the variation in friends or coworker recommendations.

III) Standard distance (S):

In this data standard distance is measured in the units of investor's average return and it represents the deviation from regression line. The lower the distance "S" is the better the equation predicts the response as S=Ö (y-y) / d.f=.370 for gut feelings, .450 for past performance of the stock, .430 for international operations, .463 for perceived ethics of the firm, .416 for stock broker recommendations and .443 friends or coworker recommendations.

The given table of ANOVA shows us the total impact on the model. As it explained the variation in response data and the unexplained variation in data.

As the value of P is 0.000.if the value of P <a, so we reject H_0 and if the value of P>a so we do not reject null hypothesis (Ho).

Based on the data, the investor's average return and the observed level of significance is less than the given level of significance i.e., 5%, so we reject null hypothesis and concluded that data is statistically significant at 5%.which means that the predictor variables have a significant contribution in investor's average return.

The regression equation is

$Y= a+ b_1x$

Table 3. ANOVA

Model		Sum of Squares	D.f	Mean Square	F	Sig.
Gut feelings	Regression	6.445	1	6.445	47.066	.000b
	Residual	7.942	58	.137		
	Total	14.387	59			
Past performance of stock	Regression	4.888	1	4.888	29.845	.000
	Residual	9.499	58	.164		
	Total	14.387	59			
international operations	Regression	3.688	1	3.688	19.990	.000
	Residual	10.700	58	.184		
	Total	14.387	59			
stock broker recommendation	Regression	4.353	1	4.353	25.158	.000
	Residual	10.035	58	.173		
	Total	14.387	59			
perceived ethics of firm	Regression	1.933	1	1.933	9.002	.000
	Residual	12.454	58	.215		
	Total	14.387	59			
friend or coworker recommendation	Regression	3.010	1	3.010	15.347	.000
	Residual	11.377	58	.196		
	Total	14.387	59			

a. Dependent Variable: investor average return

b. Predictors: (Constant), gut feeling, past performance of stock, international operations, stock broker recommendation, perceived ethics of firm, friend or coworker recommendation

Investor's average returns = 2.475, 0.346 gut feelings.

1. "a" is Investor's average returns

2. "b1" is increase in investor's return due to unitary increase in gut feelings.

Testing procedures for b1: (gut feelings)

The followings steps has been carried out for the testing procedures of b1

Step 1.

H_0: b1=0 (gut feeling has no significant impact on investor's average return)

H_1: b1¹0 (gut feeling has significant impact on investor's average return)

Step 2.

Table 4. Coefficients The regression equation

Model	Un standardized Coefficients		Standardized Coefficients	T	Sig.	95% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	partial	Part
(Constant)	2.475	.211	.669	11.74	.00	2.053	2.897	.669	.669	.669
Gut feeling	.346	.050		6.860	.00	.245	.447			
(Constant)	2.818	.202	.583	13.9	.00	2.413	3.222	.583	.583	.583
Past performance of stock	.310	.057		5.46	.00	.197	.424			
(Constant)	2.685	.274	.506	9.81	.00	2.137	3.233	.506	.506	.506
	.305	.068		4.47	.00	.168	.441			
(Constant)	2.552	.271	550	9.42	.00	2.010	3.094	.550	.550	.550
Stock broker recommendation	.334	.067		5.01	.00	.201	.468			
(Constant)	3.221	.229	.367	14.0	.00	2.762	3.679	.367	.367	.367
Perceived ethics of firm	.188	.063		3.00	.00	.062	.313			
(Constant)	2.864	.266	.457	10.755	.00	2.331	3.397	.457	.457	.457
Friend or coworker recommendation	.245	.062		3.91	.00	.120	.370			

The level of significance is given as:

Level of significance: a=0.05

Step 3.

The t statistics has been calculated through the given formula

T- statistics: t(cal)= b-b/sb =0.669

Step 4. Critical region

The critical region depends on H_1 &a

As,

P= 0.000

a= 5% = 0.05

Step 5. Conclusion:

As we concluded that the,

P<a

i.e. 0.000< 0.05, so here we reject H_0.

Step 6. Interpretation

Here null hypothesis (Ho) is rejected as the results are statistically significant. At significance level of 5%, the given data provides sufficient evidence to support H_0 and we are concluded that gut feelings have significant impact on investor's average return.

Similarly the other independent variables (past performance of the stock, international operations, perceived ethics of the firm, stock broker recommendations, friends or coworker recommendations) have also significant impact on investor's average return at 5% level of significance by using the same steps of regression equation.

CONCLUSION

In this study we used accounting information for investors, which are derived from financial statements of the firms. Concerns such as the perceived ethics of firm, friend or coworker recommendations are not considered by investor's while making investment decisions. Stock broker recommendation, international operations, past performance of the stock and gut feelings are considered by investors while taking investment decision. 66.9% of the sample investors are relaying on gut feeling or in other words self-reliant and taking their own decisions without any influence. This research depends on the behaviour of individual investment in Islamabad stock exchange inside the boundary of rationality.

It is concluded that 66.9% irrationality of investor's behavior is due to gut feelings which depressed the average returns of investors i.e. 12.5% against the average return of the index i.e. 22%. Individual investors used the current economic indicators like inflation rate and GDP etc. rather than using valuation models and also ignore the listing of firms, the data in annual reports and prospectus as well as the discount rate for attractiveness of non-stock investments.

RECOMMENDATIONS

Based on the above findings, following recommendations are suggested:

As in research Factors Influencing Individual Investor Behavior conducted in UAE Financial Markets, investors followed the professional advice and their average returns were too close to index return. If the investors of ISE also follow the professional advice they may get their return equivalent to the index returns. As it is concluded from the literature review that those investor's who are following the reliable and best ways are getting better returns than the others.

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