Research Journal of Management Sciences ISSN 2319–1171
Vol. **4(8),** 6-10, August **(2015)** *Res. J. Management Sci.*

A Study of Investor Behavior and its Impact on Trading Activity of Stocks

Shahzadi Marvi Humayun
Department of Management Sciences, Abdul Wali khan university Mardan, PAKISTAN

Available online at: www.isca.in, www.isca.me
Received 16th June 2015, revised 8th July 2015, accepted 3rd August 2015

Abstract

A research study was conducted in an area of stock markets in order to investigate the impact of investor behavior on trading activity of stocks. The study was focused on KSE (Karachi Stock Exchange). The study was carried by using VAR (vector auto regression model). The main objective was to study the interaction of investor overconfidence and stock returns. In order to achieve this objective the data for different variables was taken from Balance sheet Analysis published by State Bank of Pakistan website of KSE and Open doors, the study was longitudinal in nature, as data of various years were collected and analyzed. In this study data from 2000 till 2012 was used. Data base was consists of daily and monthly observations of KSE, monthly observations for trading volume and returns while estimate of volatility was constrained by the availability of daily returns. The main focus was on monthly observations under the perspective that was change investor overconfidence occur over monthly or annual horizons. A vector autoregressive response functions were used in order to study the interaction between investor behavior, market returns and trading proxies. The model selection was based on econometric theory. Returns on KSE 100 index are used as proxy for market returns (RET).KSE 100 index is a value weighted index of 100 companies while it hold over 90% of total market capitalization of the companies listed on Karachi Stock Exchange. The results of the VAR infer that volume is in And there is an insignificant relationship between overconfidence and trading stock activity that Overconfidence of investors has negative impact on trading stock activity investor's overconfidence keeps the turnover at more elevated level and there is no relationship between monthly volumes with previous market returns that Increase in trading activity doesn't add to monthly volatility in stock returns. Granger causality test was used to approve the result of VAR. Thus granger test reveal that monthly volatility has impact on return. The result was in conformity with the findings of VAR and Null hypothesis has been accepted.

Keywords: overconfidence, impact, investor behavior, stock market, KSE.

Introduction

Behavioral finance is the study of the psychology, influence on the behavior of financial investor and subsequently the effects of the behavior on financial markets[1].

Investor Behavior: Investors are very complicated and they behave differently therefore they are always in the focus of old theories as well as new Psychological theories based on investor behavior, the modern theories focuses on rational behavior of investors to maximize wealth. Distinctions in personality and behavior of investors are very important for achieving different results i.e. decision making in stock markets. Therefore Behavior finance focus all those factors which effect investors behavior and make able them to invest or disinvest in stock market.

Psychological Factors: All humans being are different from each other's and they show different behavior in different situations i.e. they are different according to their mental level, according to financial status, age, sex, social and economic status etc[2]. All financial theories are mostly focused on the same common idea that individuals or investors must aware about all information related to stock markets and only the experienced investors can make best decisions. Psychological factors are very important for individuals and investors in their life and they effect differently in their life not only stock market but in every aspects of their life. Some time their impact is positive and some time they effect negatively. In positive sense all these psychological factors make the investors more confidant and competent to make perfect decision and open up new ways for decisions making in stock markets. While in negative sense some time investors make same mistake again and again[3].

Some psychological factors that are consider being important in trading activity some of the m are[4]. Overconfidence, Heuristics, Individual differences, Age, Socioeconomic status (SES), Cognitive biases, Cognitive abilities, past experiences, Belief in personal relevance[5].

Recent study shows the impact of investor's behavior on trading activities of stocks in stock market of Pakistan. This study addresses overconfidence and its implication on market efficiency and investors 'rational behaviors.

Impact of overconfidence on trading activity of stocks: Overconfidence leads investors to overweight their private information in evaluating the worth of securities, causing the stock price to overreact. Trading volume is effected by overconfidence.

Similarly more efficient and experienced investors are more confidants in making decision in stock market because decision making needs information's and awareness. While the investors who are less experienced and have little knowledge they are less confidant about decision making in stock market. And due to their lack of information they buy stock with higher prices and sell it with low prices, make same mistakes again and again. Generally investors believe and traditional finance suggests that stock market of Pakistan are not impressive due to less experienced investors and lack of knowledge and awareness mostly investors are trapped by personality traits.

Methodology

Research Strategy: Research strategy influences the tools and other methods associated with the research, thus a careful selection of strategy was required. Already established concepts were tested and data from different websites were compared together for better results.

Instruments: Data was taken from different websites i.e. State Bank of Pakistan, KSE and Open doors processing of data was done by using Microsoft Excel and Gretl was also used for data processing.

Procedure: The data set consists of daily and monthly observations on Karachi Stock Exchange (KSE) from 2000 to 2012. Studies argue that change in investor overconfidence can occurs on daily, weekly, monthly or annual basis; therefore we analyze daily and monthly data. We took daily and monthly data. We calculated daily market return by the formula. The data is compiled from official website of Karachi Stock Exchange. And monthly reports of State Bank of Pakistan. We calculated total trading value by total market capitalization to form market turnover as proxy to trading activity in KSE. We divided daily market trading values to get daily market returns. The model selection was based on econometric theory. Returns on KSE 100 index are used as proxy for market returns (RET). KSE 100 index is a value weighted index of 100 companies while it hold over 90% of total market capitalization of the companies listed on Karachi Stock Exchange. KSE 100 index as a total return index adjusts the dividends, bonus issues and right issues. We calculated the index returns as difference of natural log of ending value of index on daily and monthly basis
Ln (Pt) Ln (Pt-1) =Ln (Pt/Pt-1)

Results and Discussion

The data set consists of daily and monthly observation on Karachi Stock Exchange (KSE) from 2000 to 2012. The primary goal of the study was to measure the associations among stock returns and overconfidence of investors.

Vector Auto regression: This model includes two subordinate factors. To discipline the association between trading intermediaries volume) and market return we use vector autoregressive VAR and impulse response functions. We utilize the accompanying type of Vector Auto Regression model.
$Yt= a+\sum Ak\ Y\text{-}t+\sum BXt\text{-}1+et$

Hence; Yt: nx1 vector of dependent variables (trading proxy and return: volume and return). Xt: nx1 vector of independent factors volatility and Dispersion. et : a nx1 remaining vector . It traces the contemporary relationship between dependent factors. Ak: the matrix that measures how trading proxy and returns react to their lags. B1: this shows how returns and trading proxy respond to month t-1 existence of independent factors. K et L: shows the number observations of dependent and independent factors. Schwartz SC and Akaike 1974 AIC specific data criteria rae chosen for K and

Vector Auto Regression Estimation of Stock Market and Outcomes: The following tables summarize the results of VAR for detrended turnover or volume, Volatility and market returns for monthly and daily observations.

Above table shows that the monthly volume which represents current trading activity does not have any relationship with monthly volatility, this can be seen from the higher p value which is more than .05 showing insignificance relationships with monthly volatility. However, monthly volume has a significant relationship with its previous value. This can be seen from the lower p value which is .0605. Furthermore, the results show that monthly volume does not have any relationship with market returns which is observed from the high p value showing an insignificant relationship. This whole scenario shows that our first hypothesis for the study is rejected and the investors are not overconfident because there is no relationship of monthly volume with previous market returns.

Above table shows that monthly volatility is a dependent variable while its own previous /lagged values are independent variables as well as monthly return and monthly volume is an independent variable. Our second hypothesis postulates that monthly volume increases volatility. However the results indicate that there is insignificant relation of monthly volume and monthly volatility. It rejects our second hypothesis of the study which means that increase in trading activity doesn't add to monthly volatility is stock returns.

Above table shows that monthly return is a dependent variable while monthly volatility and monthly volume are independent variable. Its own lagged values are independent variables. Monthly return shows the current trading activity which does not have any relationship with monthly volatility; this can be seen from higher p value which is more than .05 showing insignificance relationships with volatility. Thus monthly return has a significant relationship with monthly volume. This can be seen from lower p value which is 0.0605. Moreover, results shows that monthly return does not have any relationship with monthly volatility and its own previous/lagged value which is observed from high p value showing an insignificant

relationship Its hypothesis has been rejected and the investors are not confident because there is no relationship of monthly return to its past market return.

Granger Causality Tests: To check the impact of monthly returns on monthly volatility Granger causality test has been conducted under the following hypothesis: Ho: mret (returns) granger cause granger cause mvolt volatility)

Ho: mvolt granger causes mret

Table-1
Table Representing Monthly Volume

Monthly Volume				
	Coefficient	**Std. Error**	**t-ratio**	**p-value**
const	48734.4	26284.8	1.8541	0.06603*
MonthlyVolatility_1	−617342	624719	-0.9882	0.32492
MonthlyVolatility_2	−465506	612015	-0.7606	0.44829
MonthlyVolatility_3	−544234	653136	-0.8333	0.40625
MonthlyVolatility_4	−839485	597791	-1.4043	0.16265
MonthlyVolume_1	−0.0402668	0.0212629	-1.8938	0.06051*
MonthlyVolume_2	−0.0499559	0.0332172	-1.5039	0.13507
MonthlyVolume_3	−0.055966	0.0362625	-1.5434	0.12521
MonthlyVolume_4	−0.0435257	0.0276997	-1.5713	0.11857
MonthlyReturn_1	44885.2	33882.7	1.3247	0.18762
MonthlyReturn_2	−61780.4	70532.6	-0.8759	0.38272
MonthlyReturn_3	62616.5	43001.6	1.4561	0.14780
MonthlyReturn_4	−53546	64011	-0.8365	0.40443

Table-2
Table Representing Monthly Volatility

Monthly Volatility				
	Coefficient	**Std. Error**	**t-ratio**	**p-value**
const	0.0086906	0.00159151	5.4606	<0.00001
MonthlyVolatility_1	0.357913	0.089083	4.0178	0.00010
MonthlyVolatility_2	0.0681134	0.0865475	0.7870	0.43273
MonthlyVolatility_3	−0.107941	0.0928921	-1.1620	0.24740
MonthlyVolatility_4	−0.0257684	0.0775652	-0.3322	0.74027
MonthlyVolume_1	−1.73547e-08	1.44362e-08	-1.2022	0.23152
MonthlyVolume_2	3.20303e-09	5.68816e-09	0.5631	0.57435
MonthlyVolume_3	−1.90254e-09	4.45295e-09	-0.4273	0.66991
MonthlyVolume_4	−2.89591e-09	2.82882e-09	-1.0237	0.30790
MonthlyReturn_1	−0.00190088	0.00853506	-0.2227	0.82411
MonthlyReturn_2	0.00901431	0.00577015	1.5622	0.12070
MonthlyReturn_3	−0.00477941	0.00633075	-0.7550	0.45167
MonthlyReturn_4	0.0139479	0.00932536	1.4957	0.13719

Table-3
Table Representing Monthly Return

Monthly Return				
	Coefficient	**Std. Error**	**t-ratio**	**p-value**
const	48734.4	26284.8	1.8541	0.06603*
Monthly Volatility_1	−617342	624719	-0.9882	0.32492
Monthly Volatility_2	−465506	612015	-0.7606	0.44829
Monthly Volatility_3	−544234	653136	-0.8333	0.40625
Monthly Volatility_4	−839485	597791	-1.4043	0.16265
Monthly Volume_1	−0.0402668	0.0212629	-1.8938	0.06051*
Monthly Volume_2	−0.0499559	0.0332172	-1.5039	0.13507
Monthly Volume_3	−0.055966	0.0362625	-1.5434	0.12521
Monthly Volume_4	−0.0435257	0.0276997	-1.5713	0.11857
Monthly Return_1	44885.2	33882.7	1.3247	0.18762
Monthly Return_2	−61780.4	70532.6	-0.8759	0.38272
Monthly Return_3	62616.5	43001.6	1.4561	0.14780
Monthly Return_4	−53546	64011	-0.8365	0.40443

Table-4

	Dependent variable: Monthly Return			
Const	Coefficient	Std. error	t-ratio	p-value
Monthly Volatility	0.0498530	0.0147543	3.379	0.0009 ***
	−2.92547	1.03745	−2.820	0.0055 ***

The p-values of o.5 or less will reject the null hypothesis this test is directed close by VAR and generally approves the outcomes of Vector auto regression. Thus for such reasons this test not directed. Thus ganger test reveal that monthly volatility has impact on return .Null hypothesis has been accepted. This result is in conformity with our findings.

Findings of VAR: Data were consists of daily and monthly observations of KSE. According to the research analysis, Table 1 shows that the monthly volume which represents current trading activity does not have any relationship with monthly volatility. And the first hypothesis for the study is rejected and the investors are not overconfident because there is no relationship of monthly volume with previous market returns. Table 2 indicates that there is insignificant relation of monthly volume and monthly volatility. It rejects the second hypothesis of the study which means that increase in trading activity doesn't add to monthly volatility in stock returns. Table-3 shows that monthly return does not have any relationship with monthly volatility and its own previous/lagged value which is observed from high p value showing an insignificant relationship. Its hypothesis has been rejected and the investors are not confident because there is no relationship of monthly return to its past market returns. Null hypothesis is rejected because of p value which is less than 0.5. Thus this test shows the effect of turnover on return Granger test approved the result of VAR. Monthly volatility has impact on monthly return.

Discussion: The overconfidence is important for trading stock activity[6]. Overconfidence influence investor to make them over optimistic about their prior knowledge and information's they used in decision making process in stock market. While some time it negative impact the investors and they fail to make best decisions. While this influence may lead to poor decisions some times, overconfidence enables individuals to make efficient decisions[7]. Investors were more confidants who used their prior knowledge for decision making process they were more competent and able to perform in desired way. They observed that prior knowledge and information are necessary for perfect decisions because it increase the competence level and make the investor more overconfident about their work[8].

The present study was conducted on Karachi stock exchange (KSE) and the data set was consists of daily and monthly observations on Karachi Stock Exchange (KSE) from 2000 to 2012 .Studies argue that change in investor overconfidence can occurs on daily, weekly, monthly or annual basis; therefore we analyze daily and monthly data. We took daily and monthly data. We calculated daily market return by the formula .The data is compiled from official website of Karachi Stock Exchange. And monthly reports of State Bank of Pakistan. We calculated total trading value by total market capitalization to form market turnover as proxy to trading activity in KSE. We divided daily market trading values to get daily market returns. The model selection was based on econometric theory. Returns on KSE 100 index are used as proxy for market returns (RET). KSE 100 index is a value weighted index of 100 companies while it hold over 90% of total market capitalization of the companies listed on Karachi Stock

Exchange. KSE 100 index as a total return index adjusts the dividends, bonus issues and right issues. We calculated the

index returns as difference of natural log of ending value of index on daily and monthly basis.

The present study concluded that there is an insignificant relationship between overconfidence and trading stock activity. Overconfidence of investors has negative impact on trading stock activity. Investor's overconfidence keeps the turnover at more elevated level as there is no relationship of monthly volume with previous market returns that Increase in trading activity doesn't add to monthly volatility in stock returns. And there is no relationship of monthly return to its past market returns.

Conclusion

There is an insignificant relationship between overconfidence and trading stock activity. Overconfidence of investors has negative impact on trading stock activity. Investor's overconfidence keeps the turnover at more elevated level as there is no relationship of monthly volume with previous market returns that Increase in trading activity doesn't add to monthly volatility in stock returns. And there is no relationship of monthly return to its past market return

Delimitations of the study: Although the study of investor behavior and its impact on trading stock activity is a global issue throughout the world, but the shortage of time and resources at the disposal of the research and the scope of the present has limited the investigation to only the selected areas of stock market in Pakistan.

The study was delimited to only one psychological factor that was overconfidence and its impact on trading stock activity.

References

1. Sewell M., *Behavioral Finance*, University of Cambridge**, (2007)**

2. Imran A, *Study of Psychological Factors*, **(2012)**

3. Thaler B., *Study of Psychological Factors*, **(2001)**

4. Cindy Dietrich, *Study of Psychological Factors*, **(2010)**

5. Simon R.M, *Relationship between Investor behavior and Decision making*, **(2008)**

6. Shah A.K. and Oppenheimer, D.M., Heuristics made easy: An effort-redu framework, *Psychological Bulletin*, **134(2)**, 207-222, **(2008)**

7. Chandra A, Cause and Effect between FII Trading Behavior and Stock Market Returns, *Journal of Indian Business Research*,**4(4)**, 286-300, (**2012)**

8. Tariq. B, Investor Overconfidence and Stock Returns Evidence from Pakistan, *Journal of Business and Management* (IOSR-JBM), **(2013)**

9. Kita R, Effect of Overconfident Investor Behavior to Stock Market Graduate School of Information Science, Nagoya University, *Journal of Advanced Computational Intelligence*, **14(6)**, **(2010)**

10. Suman D.P., Warne Investment Behavior of Individual Investor In Stock Market, *Journal of Research in Finance & Marketing*, **(2)**, (**2012)**

11. Stephen V. Burks, *Overconfidence is a Social Signaling Bias*, University of Minnesota Morris, **(2010)**