The impact of abnormal returns of shares on slump of one-day shares price in 50 top companies listed in Tehran Stock Exchange (2003-2013)

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Abstract: Shares return is one of the basic criteria for making decision in Stock exchange which itself contains information and most actual and potential investors use it in their financial analysis and predictions and on the other hand, abnormal return of shares always causes the fluctuations in shares market that in standard event study methodology, abnormal returns is the difference between the actual return and expected return (normal). Each event may effect of its kind on the market. In the meantime, economic and political events have more effect on the process of economic activities of firms. So, based on this, the main objective of this research is to study the impact of abnormal returns of shares on slump of one-day shares price in 50 top companies in Tehran Stock Exchange (2003-2013) with using of panel data method. The results of this research indicates that variables of market risk, the ratio of market value on book value, total debt to total asset, illiquidity, standard deviation of shares returns and industry dummy variable, have positive and significant effect on dependent variable of shares slump and the variables company size, the ratio of cash assets, the ratio of profit before interest and tax to total assets, cash flows of each share and abnormal returns of shares have negative and significant effect on dependent variable of shares slump.

Key words: Abnormal returns of shares; Slump of one-day shares price; 50 top companies in Tehran Stock Exchange

1. Introduction

In small and emerging stock exchange, trade lag of many shares has been prevalent phenomenon. Included in Tehran Stock Exchange, closing shares symbol or lack of supply or demand for many shares in some days of year is evident that creates some limitations for event researches and measuring variables such as: Beta and standard deviation of returns (Ghaemi et al, 2011). The return of shares is one of the fundamental criteria for making decision in stock exchange which itself contains information and most actual and potential investors use it in their financial analysis and predictions.

However, it is also important to note that during the last three decades, researchers have paid special attention to the topic of profit quality and the attempt has been on the issue that achieves a reasonable and valid methodology to assess profit quality and to identify the effective factors. Most researches related to profit quality have been concentrated on the issue of the effect of change in accounting estimations. Accounting estimations are part of accruals which change in those causes the change in current profit. On the other words, when abnormal accruals are affected changes, the return of shares of any company is also affected the fluctuations.

Also, Coks and Piterson (1994) express that one-day reducing event in shares price is efficient in

violating market hypothesis and it starts at the beginning of forth day and the price will finish till 20 days after price reducing event. At the end, they showed more evident in rejecting ever reaction hypothesis and they mentioned that the performance of shares during the period of price reducing event is worth to compare with the day of price reduction. This kind of literature has not considered the price movement of shares with considering the effect of industrial period and also how the quick release news affect on price rollback. With considering these issues, the response from price rollback to company shares price may find.

Yoo and Listiko (2011) in an article entitled "abnormal return of shares for a company and competitors: tracking a large decrease in shares price in one day", have been dealt with the study of obvious violation cases of efficient markets hypotheses about a large decrease in shares price. The main finding of this research show that after any event, shares experience the positive abnormal return for three days and after that it also experience the negative abnormal return for 17 days. In addition, in this research, significant statistical relationship has been observed between shares return and company previous variables which can explain the effect inside the industry about this.

In the meantime, Tehran Stock Exchange index have been faced to several fluctuations in recent years that each has had different characteristics in terms of size and direction. Falling index is studied as an important phenomenon in economy and many

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studies have been conducted on the causes of it. However, few studies have been focused to examine the relevance and impact of the event on companies listed in Stock Exchange. In this research, it is attempted to deal with the study abnormal return of shares and special characteristics about slump of one-day shares price with event studies. So, this research with collecting some happened event before event time, is to study the issue that in time of slumping price of shares in one day, which companies are affected and whether we can consider common characteristics for these companies or not? The reason of this research is to study the effect of abnormal return of shares with one-day slump price shares on companies listed in Tehran Stock Exchange during period of 2003 to 2013.

2. Research model and research variables

This study is functional and therefore, it is dealt with by using the following method to estimate the model with using of panel data method. The following equation for the drop in prices on all the companies whose shares are traded on the market in the slump day, were examined. The happened event in slump day of shares price for each slump is used in this equation and returns of calculated shares for that day is applied as dependent variable (Wang et al, 2010).

$RET_t = \beta_0 + \beta_1\ BETA + \beta_2\ SIZE + \beta_3\ MVBV + \beta_4 ILIQ + \beta_5\ TDTA + \beta_6\ LAR + \beta_7 CFPS + \beta_8\ BEP + \beta_9\ SDLR + \beta_{10}\ LR1 + \beta_{11}\ LR2 + B_{12}\ LR3 + \beta_{13} IND + \varepsilon_t$

In this research, the following variables identify as control variables:
- Company size (SIZE): in here, the meaning of size is the natural logarithm of market value of published shares at the end of financial year of the company. Using of natural logarithm causes that possible coefficient of these variables in model is not affected by the effects of large scale.
- Market risk (BETA): in the traditional capital asset pricing model, the return of shares will be explained by market risk. This way is one of the methods for pricing the exchange of the capital asset pricing model. Based on this model, the price of capital assets is determined by systematic risk (BETA). There is a direct relationship (positive) between Beta and shares return in this model. In this research, Beta is used as an explanation variable in the model to determine the amount of its effect on return the day of market falling (Sharp, 1964).
- The ratio of market value to book value (MVBV): in addition to Beta, it is used of company size and the ratio of market value to book value for showing assets return.
- Illiquidity (ILLIQ): is been said to returns of shares from 30 to 252 days before market falling and is used as explanation variable.
- Total debt to total assets (TDTA): this variable is also used as an explanation variable.

- The ratio of cash assets (LAR): is used as another feature of the company to determine the amount of its effect in shares return in day of market falling.
- The ratio of profit before tax and interest to total assets (BEP): with calculating the ratio of profit before tax and interest to total assets, another feature of the company will be measured.
- Cash flow per share (CFPS): is one of the most effective factors on investment in company and the price of share therefore, the ratio of cash flow per share is another explanation variable.
- Standard deviation of shares returns of 30 to 252 days before the fall of the market (SDLR).
- Abnormal return of shares
- The effect of industry (IND): for determining the effect of related industry in day of fall of market, the dummy variable is used. This way in the day of event for companies those are attended in the industry index, amount of "1" and otherwise amount of "0" will be considered (Wang et al, 2010).

The regression model of this study is linear and for estimating model parameters, least square method with panel data method will be used.

In most previous researches, it has been dealt with the study of effect of effective factor on share price slump and so far, the effect of effective factors on sudden fall in specific days in year has not studied and since that this fall and daily fluctuations are effective in making decision for investors and stockholders and sometimes it faces to long queue of sale or buy which caused ravages in system of Stock Exchange and distracts the investors correct orientation, this research has been dealt with the study this issue. According to the obtained results of this research, planners and investors can deal with to decrease the effective factors on this one-day falling price and reduce the risk concepts of this issue and to push investors to invest more in Stock Exchange.

3. Model estimation

Table 1: The results of F Limer test and Hasman for model (1)

P-Value	Amount of statistic	Statistic	Test
0/0053	1/3652	F	F Limer
0/0285	22/845	χ^2	**Hasman**

According to the results of F Limer test and its P-Value (0/0053), the H0 hypothesis of test in ensure level of 95 percent is rejected and it indicates that we can use panel data method. Also with regard to the results of Hasman test and its P-Value (0/0285) which is less than 0/05, the H0 hypothesis of test in ensure level of 95 percent is rejected and H1 hypothesis is accepted. Therefore, the model is necessary to estimate with fix effect method. The results of model estimation are as follow in Table 2.

In examining the significance of the model with regard to the issue that the probability amount of F

statistic is smaller than 0/05 (0/0001) with ensuring 95 percent, the significance of the model is confirmed. The determination coefficient of the model also says that 75 percent of companies shares

price slump id determined by inserted variables in the model.

Table 2: the results research first hypothesis test with the use of fix effect method

Effect	P-Value	Statistic t	coefficient	Variable
Dependent variable: one-day shares price slump- number of companies: 50 companies
Positive	**0/0023**	**2/8745**	14710**/**	Fix component
Negative	**0/0043**	**-2/3745**	1421**-0/**	Company size
Positive	**0/0021**	**2/4175**	0412**0/**	Market risk
Positive	**0/0000**	**4/3624**	1314**0/**	The ratio of market value to book value
Positive	**0/0032**	**3/7125**	00**/032**	Total debt to total assets
Positive	**0/0023**	**2/7451**	0941**0/**	Illiquidity
Negative	**0/0043**	**-2/8225**	**-0/1524**	The ratio of cash assets
Negative	**0/0021**	**-3/7125**	**-0/1223**	The ratio of profit before tax and interest to total assets
Negative	**0/0000**	**-4/3741**	**-0/0784**	Cash flow per share
Positive	**0/0032**	**2/0977**	**0/4032**	Standard deviation of shares return
Negative	**0/0043**	**-2/4125**	**-0/4537**	Abnormal return of shares
positive	**0/0032**	**3/0385**	**0/0032**	Industry dummy variable
0/75		Determining coefficient model
1/6560 **(0/0001)**		Statistic F $(P-Value)$

In examining the significance of the coefficients with regard to presented results in table 2 is as follow:

The results show that the effect of company size in amount of -0/1421 units on dependent variable of shares slump has been negative and significant, the results also show that the effect of market risk variable in amount of 0/0412 units on dependent variable of shares slump has been positive and significant, on the other words, whatever company Beta risk is higher, it experiences more slump, the results also show that the effect of the ratio of market value to book value in amount of 0/1314 units on dependent variable of shares slump has been positive and significant, on the other words, whatever the ratio of market value to book value of the company is higher, it experiences more slump, also the results indicate that total debt to total assets in amount of 0/0320 units has had positive and significant effect on dependent variable of shares slump and it shows that with increase the ratio of debts, kind of risk is imposed to company. According to the results of the research, the effect of illiquidity variable in amount of 0/0941 units on dependent variable of shares slump has been positive and significant, on the other words, whatever illiquidity of the company is higher and company approach to days of fall of market, it has experienced more slump, also results indicate that the ratio of cash assets in amount of -0/1524 units has had negative and significant effect on dependent variable of shares slump and it shows that increase the ratio of cash assets is a kind of decreasing risk for companies which the results can be less slump in the one-day shares price. The results also show that the effect of the ratio of profit before tax and interest to total assets in amount of -0/1223 units on dependent variable of shares slump has been negative and significant, on the other words, whatever the ratio of

profit before tax and interest to total assets of the company is higher, it experiences less slump, also the results indicate that cash flow per share in amount of -0/0784 units has had negative and significant effect on dependent variable of shares slump and it shows that increase the cash flow per share is a kind risk control for the company which the results can be less slump of one-day shares price. Also the results show that the effect of standard deviation shares return variable in amount of 0/4032 units on dependent variable of shares slump has been positive and significant, on the other words, whatever the standard deviation shares return of the company is higher, it experiences more slump, the results of the research show that the effect of abnormal return of shares in amount of -0/4537 units on dependent variable of shares slump has been negative and significant, on the other words, whatever abnormal return of shares is higher, company experiences less one-day slump price, also the results indicate that the effect of industry dummy variable per share in amount of 0.0032 units on dependent variable of shares slump has been positive and significant and it shows that the companies those are attended in the day of event in industry index, they are imposed kind of risk which the results can be more slump in one-day shares price. Tests on remains of research are as follow Table 3.

4. Conclusion and recommendations

The results show that the effect of variables market risk, the ratio of market value to book value, total debt to total assets, the variable of illiquidity, standard deviation share return on dependent variable of shares slump has been positive and significant. Also the results indicate that the effect of variables the ratio of cash assets, the ratio of profit before tax and interest to total assets, cash flow per

share and the effect of abnormal return of shares on dependent variable of shares slump has been

negative and significant.

Table 3: The results of tests related to statistical assumptions of model (1)

statistical Ramsey		Statistical Durbin-Watson	Statistical Breusch-Pagan		Statistical Jarque-Bera	
$P-Value$	F	D	$P-Value$	F	$P-Value$	χ^2
79470/	27410/	262/	00940/	41254/	34210/	**41871/**

According to the results in above, it is recommended that:
- Management policies should be based on decreasing Beta risk in company to control one-day slump of shares price.
- For less slumping one-day of shares price, the management policies should be based on decreasing the ratio of market value to book value.
- For less slumping one-day of shares price, total debt to total assets should be decreased.
- Management policies of the company should be based on decreasing illiquidity of the company for slumping one-day shares price.
- Policies should be based on increasing the ratio of cash assets for less slumping one-day of shares price.
- The management policies of stock exchange companies should be based on increasing the ratio of profit before tax and interest to total assets for less slumping one-day of shares price.
- For less slumping one-day of shares price, cash flows of the company should be increased.
- For more controlling one-day slumping of shares price, the policies should be based on decreasing standard deviation shares return.
- To control one-day slumping of shares price, weekly, monthly and yearly cumulative returns.

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