The impact of microeconomic factors on the abnormal return of listed stocks in Vietnam

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CHRONICLE	ABSTRACT
	The paper examined the impact of microeconomic factors on the abnormal return of listed stocks on the Vietnam stock market. The research team performed regression analysis based on the data collected from 149 companies listed on Ho Chi Minh City Stock Exchange between 2012 and 2017. The research results show that the variables of profitability, capital structure and the growth rate all had positive impacts on the abnormal return of listed companies. Meanwhile, the size of enterprises was proven to have the reverse impact on the abnormal return.

1. Introduction

Return is one of the most important factors for investors when making an investment decision on stock market. The returns of stocks on the market are always volatile and more or less influenced by the general trend. Therefore, looking into the return of a stock without excluding the benefit from the general market volatility will not help investors accurately assess the internal profitability of the business. Particularly, in the period when the stock market is recovering and growing strongly after a long time of steady growth, further studies of the stock return in terms of abnormal return will enable investors and market participants to accurately assess the attractiveness of an investment opportunity as well as to make rational decisions. It can be seen that although there have been a lot of studies on the stock returns since the 20th century, the conclusions drawn from all existing studies are still contradictory due to differences in the sample size, timeline as well as characteristics of the subjects that are being studied. Meanwhile, the abnormal return of stocks - the interest that investors are paying proper attention to - has not been comprehensively studied. Studies conducted with abnormal return have just been carried out in the modest number, focusing on measuring the abnormal return without highlighting the factors that had impact on the return. A small number of studies examining the impact of financial accounting variables on abnormal return have yielded certain results but the selection of independent variables in the model is still limited and has not yet covered the aspects of production and business as well as the market

performance of enterprises. Therefore, the study of factors affecting the abnormal return of a listed industry group in the market should be paid proper attention to. Based on the above analyses, the study of factors affecting the abnormal return of listed companies in Vietnam has been selected for research.

2. Research overview

Since its inception, the stock market has been constantly evolving and steadily progressing, becoming an effective capital mobilization channel for businesses and an effective investment channel for the public. Investors in the market, when investing in stocks, wish to get back a certain level of return commensurate with the risks they have to face when making an investment decision. It can be said that profit is the leading factor that draws the attention of investors in the market, especially the abnormal return of the stock (the return difference that the stock generated compared with the market or its difference from the level of return the investors expected on that stock) as it has a direct impact on the size and income fluctuation of investors. Therefore, there have been many studies carried out by scholars in the world on return, factors affecting the return of a stock as well as the relationship between income and several financial variables of the business. Studies on the impact of factors on the return of a stock have taken a comprehensive look into the effects of macroeconomic variables together with financial and accounting variables in enterprises, as well as considering the impact of time and season factors on the return.

Among the factors influencing the return, size is an influential factor that has received much attention by studies such as Bagherzadeh (2005), Rahmani and Tajvidi (2006) and Bahramfar and Shams Alam (2004). The researchers used total asset, or logarithm of the total assets to measure the size of the business, producing various results. Zaheri and Barkhordary (2015) reported a positive relationship between the size of listed companies (represented by total assets) and stock returns. The group of indicators showing the market value as well as the comparative relationship between the market value and book value of a stock also had an impact on the stock returns. Some studies demonstrated an inverse correlation between the market value of an enterprise and its stock returns, i.e. a company with a larger market value yields lower return. This can also be considered as the impact of size. The study conducted by Idris and Bala (2015) who supported the reverse relationship between market capitalization and return. In addition, the correlation between book value and market value of the enterprise through the indicator BV/MV (book-to-market value) was also mentioned by many studies (e.g. Bagherzadeh, 2005; Rahmani & Tajvidi, 2006; Zaheri & Barkhordary, 2015). Chan et al. (1991) reported that BV/MV had a positive relationship with the expected return of the firms listed on Japan Stock Market. Rahmani et al. (2006) also revealed that the return of a stock was affected by price/earning P/E of a stock.

The capital structure or financial leverage also had an impact on stock returns. This was tested in the studies conducted by Rahmani et al. (2006), Bahram Far and Shams Alam (2004) and Idris and Bala (2015). In the study by Bahram Far and Shams Alam (2004), it was indicated that the debt-to-equity ratio (D/E) was inversely associated with the stock return, implying that the more debts the company borrowed, the more likelihood of stock return downtrend. However, the recent study performed by Idris and Bala (2015) produced the opposite result, in which the more debt a company borrowed, the greater profits its shareholders received from holding the securities. Financial indicators reflecting the growth possibility also accounted for volatilities in stock returns on the market. The growth potential of an enterprise can be expressed through the growth rate of total assets, revenue, net profit or investment capital. Bavarsad et al. (2014) deemed that total asset growth was considered the most effective measure for changes in stock return in the future. Also according to this study, the growth rate of total assets had a reverse effect on the returns of stocks. However, different from this study, the research performed by Saghafy & Samili (2007) argued that net profit growth together with total assets and dummy variable of auditing the financial statement could explain up to 48% of volatilities in the return of a stock.

The business performance and profitability of an enterprise also had an impact on the return of a stock. The profit that a business generates is crucial to stock returns, which can be clearly seen in the long term

while short-term returns and profits of a business do not develop synchronously in certain time ranges. In their study in 2015, Zaheri and Barkhordary pointed out that return of asset (ROA) had a positive impact on the return while ROE and stock returns were inversely related. Earnings per share (EPS) was also studied to have a positive impact on stock returns, which was perfectly reasonable with the common logic in which, the more profits an enterprise generates for its shareholders, the higher the returns are; positive developments of stock prices will also make the profits held by the shareholders of the enterprises also increase. In addition, some studies have also conducted an assessment of the impact of the variable EPS/P; cash flow per share / price (Chan et al., 1991); accumulated accounting on the return (Bahram Far & Shams Alam, 2004). The research conducted by Bartov et al. (2000) also studied the changes of return after the profit report was published as well as the impact of the ownership rate of institutional investors on the returns of enterprises.

Although there have been several studies on the influential factors on the return of a stock, the number of scientific studies on abnormal returns of stocks is still very limited. Abnormal return of stocks is a part of the return, with a difference from a pre-selected benchmark return level. Measuring the expected returns can help us easily assess the results of stock abnormal return or portfolios with the selected benchmark level. Among the few niche studies on abnormal returns, Barber and Lyon (1997) focused on the methods of measuring long-term abnormal returns through empirical testing and descriptive statistics. According to this study, three approaches were applied to measure abnormal return commensurate with long-term periods (1, 3 and 5 years) based on three (03) benchmarks including benchmark return, expected return of the stock itself based on CAPM model or the return of control company in comparation based on certain criteria.

Researching the impacts on the abnormal return of stocks, Eberhart et al. (2004) examined the relationship between the research and development (R&D) costs and the abnormal returns of stocks in the long term. The results show that there was a relationship between these two variables, but the impact of R&D costs had a certain delay in terms of time. Joseph et al. (2011) forecasted the abnormal return of stocks and trading volumes based on the sensitivity of investors and the results of the study indicated that a level of searching for a stock online could reliably forecast the abnormal return that stock brought in. A further study on the impact of factors on the abnormal returns of stocks was the research conducted by Mothlagh et al. (2016). The study used array data to test the hypothesis pairs: (1) Book value and market value of assets were positively related to abnormal returns of stocks in the future; (2) The impact of the market value of total assets had less explanatory effect on abnormal returns than that of the book value. The test results proved the reverse effect, which is contrary to the hypothesis (1) while accepting the hypothesis (2).

In summary, in the event of the urgency in the study on the abnormal return of the listed companies in Vietnam market, research topics so far show the research gaps. First, there have not been many studies on the abnormal return of stocks in general and the factors affecting the abnormal return of stocks in particular in the world and especially in Vietnam. Second, among the few researches on abnormal return, they only focused on the methods of measuring, choosing the benchmark return without thoroughly researching the factors that could have impact on this abnormal return. Third, the application of the research results to a specific listed industry group based on the characteristics of that industry has never been exploited by previous studies.

3. Research data

In order to analyze the impact of factors on the abnormal return of stocks of listed securities companies, the subject collected and processed the necessary data from audited annual financial statements of companies and markets stock prices of such companies provided by Stoxplus.

Table 1

Statistics of the number of observations in the model

Year	2012	2013	2014	2015	2016	2017
The number of listed enterprises	149	149	149	149	149	149
Total number of observations			894			

Source: Compiled by the research group

First of all, from the collected data, the research team calculated the necessary criteria for the study by using Microsoft Excel 2013. Then the team put these data into Stata statistical software according to Panel Data model, continued to process the collected data by analyzing the correlation among independent variables and statistics describing the variables included in the model such as observing the analysis of descriptive feature statistics of each variable including: mean, maximum value, minimum value and standard deviation. Next, the these data are used as the estimation method in building up the regression model with array data, with the selection among three models: Random Effect Model, Fixed Effect model or Pooled OLS.

4. The model and research hypothesis

The abnormal return of a stock is measured by calculating the difference between the actual return of a stock and that of the market portfolio, which is the return of the VN-Index. To calculate the abnormal return levels for a one-year period, the BHAR formula was used, in which the return of a buy-and-hold investment of a stock minus that of an asset / portfolio with a reasonable expected return, then (BHAR) shows us the long-term abnormal return of a stock based on the compound return.

$$\text{BHAR} = \prod_{t=1}^{n}(1 + \text{Rit}) - \prod_{t=1}^{n}(1 + E(Rit)). \tag{1}$$

To test the impact of factors on the abnormal return of stocks, the research team used the regression model for array data of 149 listed companies in Vietnam stock market. The selected dependent variable in the model was BHAR, which represented the one-year abnormal return of listed companies in the market. The independent variables selected in the model were the financial indicators that represented the groups of influential factors on the abnormal return of the company analyzed above. During the process of conducting the research review, the research group compiled the criteria in each group of factors used for testing in previous studies. However, in order to limit the phenomenon of multicollinearity that affected the results of analysis, the team chose only one to two indicators in each key factor group to put into the model.

Inheriting the theoretical basis and results of empirical test of previous research projects, the paper provided research hypotheses as follows:

4.1. Enterprise size

When the size of an enterprise increases, the enterprise will have much potential to expand production and business as well as to increase the profit scale. Increased scale will cause more difficulties in managing the operations of an enterprise; fluctuations in production and business as well as its profits can also increase. Therefore, the return of stocks will also fluctuate more strongly, causing the abnormal return of stocks to increase. Thus, the paper proposed the hypothesis of the impact of scale on the abnormal return as follows:

Hypothesis 1: Enterprise size has a positive impact on the abnormal return of stocks.

4.2. Market value

When the ratio of BV / MV of the enterprise increases, the abnormal return of stocks will reduce. This can be explained by the fact that a relative increase in the book value of the enterprise in comparison with the market value indicated the market had a tendency to underestimate that enterprise or the enterprise itself overestimated and recorded its values significantly higher, then the fluctuations in the stock prices will be prone to reduction due to investors' cautiousness resulting in the decrease in the difference of benchmark returns. Therefore, the paper proposed the hypothesis in favor of the research results drawn by Mothlagh et al. (2016) as follows:

Hypothesis 2: The ratio of book value on the market value has a reverse impact on the abnormal return of stocks.

4.3 Capital structure

A company that used significant amount of loans in its capital structure would have a higher profitability on equity than its peers with similar capacity. This facilitated the increase in the return of stocks. The hypothesis of the impact of ratio D/A (Debt on the Assets) given in the paper is as follows:

Hypothesis 3: Debt ratio has a positive impact on the abnormal of stocks.

4.4. Profit growth

The profit growth reflected the potential of an enterprise in expanding production investment. The enterprise with higher profit growth rate will have more resources to reinvest for profits; therefore the return of stocks in general and the abnormal return of stocks in particular will also increase. The hypothesis of the impact of profit growth on the abnormal return is as follows:

Hypothesis 4: Net profit growth has a positive impact on the abnormal return of stocks.

4.5. Profitability

Taking the impact of profitability on the abnormal return of stocks into consideration, the study conducted by Zaheri and Barkhordary (2015) produced contradictory results with two variables of ROA and ROE. According to this study, the impact of ROE on the abnormal return was reverse. Based on the above research results, the paper proposed the hypothesis of the impact of equity profitability as follows:

Hypothesis 5: The profitability has a reverse impact on the abnormal return of stocks.

Finally, the established testing model was (See Table 2):

$$BHAR_{it} = \alpha_0 + \alpha_1 SIZETS_{it} + \alpha_2 DOA_{it} + \alpha_3 BVP_{it} + \alpha_4 GROWTHD_{it} + \alpha_5 PROFITABILITY_{it} + \varepsilon_i \quad (2)$$

In which:
$BHAR_i$: outstanding yield of stock i
SIZETS: Scale of total assets
DOA :ratio of Debt On Assets
BVP : Book value to market value
GROWTHD: growth rate of revenue
PROFITABILITY: variable group of profitability including ROA, ROE and ROS
i: the variable of cross element i
t: the variable observed at the moment t
u_i: separate error of each cross element
e_i: common random error

Table 2
The meaning of independent variables

Factor	Indicators and formulas	Meaning	Researches
Size	lnTA = Ln(Total assets)	Reflecting the size of an enterprise through total assets.	Bahram Far & Shams Alam (2004); Bagherzadeh (2005); Rahmani & Tajvidi (2006); Mothlagh et al. (2016)
Capital structure	DOA = Debt/Assets	Reflecting the proportion of debts in the capital structure.	Rahmani & Tajvidi (2006); Idris & Bala (2015)
Market value	BVP = Book value/market value	Reflecting the correlation between the book value and the market value of an enterprise.	Louis Chan & cộng sự (1991); John & cộng sự (2002); Bagherzadeh (2005); Rahmani & Tajvidi (2006); Idris & Bala (2015); Mothlagh et al. (2016)
Growth rate	$\text{Growth} = \frac{NI(t) - NI(t-1)}{NI(t-1)}$	Reflecting the growth rate of an enterprise through the net profit growth.	Saghafy & Salimi (2007)
Profitability	ROE= Return after tax/Equity ROA = Return after tax/Assets ROS = Return after tax /Sales	Reflecting the profitability.	Zaheri & Barkhordary (2015)

Source: Compiled by the research group

The coefficients from α_1 to α_5 show the impact of factors on the abnormal return of stocks. With a certain level of significance, if these coefficients are zero, it means that the coefficient do not yield any statistical significance, i.e. the given factor does not have any impact on the abnormal returns of listed companies on the market.

5. The research result

5.1. Descriptive statistics of data series

Table 3 presents the summary of some basic statistics on variables of the proposed model.

Table 3
Descriptive statistics of variables

Variable	Mean	Standard deviation	Min	Max
ROE	0.1153	0.2771	-2.1404	6.6363
ROA	0.0617	0.0979	-1.7172	0.7836
ROS	0.0167	2.4152	-71.5193	3.3680
SIZETS	14.2274	1.2640	11.5389	19.1854
DOA	0.4703	0.1998	0.0201	0.9045
GROWTHD	0.0901	0.4739	-3.9622	4.5870
ABNORMAL	0.0352	0.5052	-1.0030	2.9353
BVP	0.0016	0.0011	-0.0002	0.0093

Source: Calculated by the research group based on software R

The abnormal return (AR) of listed companies with mean greater than 0 (0.0352) indicated that real income generated from the capital gains that investors received when holding average stocks was higher than initially expected returns. However, the coefficient of variation of AR was quite large at 1435% (indicating that the dispersion of the abnormal return values around the mean was very large. The largest AR value recorded among the companies in this period was quite high 2.9353). It could be seen that the stock values of listed companies significantly vary at different periods or there was a broad difference among companies in the same review period. Return on equity (ROE) reached the average of 11.53% with high standard deviations and high variation at 240%. The major difference was quite large among listed companies and the highest recorded revenue from equity reached 663.63%. The average number of ROE compared with international standards revealed that the majority of businesses in the research scope did not reach the so-called level of Good (According to CANSLIM criteria by O'Neil, enterprises were considered Good when achieving a minimum ROE of 15%). The ratio of return on total assets (ROA) reached 6.17% (the expected rate according to CANSLIM standard is above 7.5%) which is lower

than the international standard. The level of variation reached 158.67% and the highest ratio of return on total assets was recorded at 78.36%.

The ratio of return on sales (ROS) reach the average level of 1.67%. The lowest level was recorded at -7151% and the highest at 336.8% with quite high level of variation of 14462%. This figure shows a large difference in the ratio of return on sales among the companies in the research sample. The size of total assets is represented by (SIZETS) for the large listed companies. The size of the total assets of a large company will help the company obtain more resources to deploy its products and services, diversify and develop new products, thereby generating more profits, creating a premise to increase the capital gains for shareholders holding stocks. With a variation of 8.88%, it was indicated that the difference in the size of enterprises by assets among enterprises was insignificant. Given the huge disparity in the ratios of return on sales among companies of nearly the same size, there was a huge difference in performance among these companies. The rate of profit growth (GROWTHD) reflected the development of the enterprise, the greater the speed, the more development of the enterprise. However, the issue of sustainable development or sustainable growth rate also depended on the potential of financial support from loans or equity. If constraint financial resources support a high growth rate, it will lead to high risks and may be difficult to maintain the growth. The average growth rate reached 9.01% and the highest growth rate was recorded at 458.7%. Some companies even was recorded with negative growth. The variation in growth rates among these companies was quite large (525.97%). The ratio of the book value on the market price (BVP), on average, less than 1 (0.16%) indicated that listed companies were highly appreciated by the market during the research period. As the market value was much larger than the book value for the research sample, it could be seen that the market had a high opinion and a certain level of trust in those companies. It is common that in those companies of positive returns, the market value will be likely to be greater than the book value. However, we also need to consider the type of business, the nature of the company's assets and liabilities as well as its specific characteristics to assess and take a more specific look into each company.

Table 4
Correlation Matrix

	ROE	ROA	ROS	SIZETS	DOA	GROWTHD	ABNORMAL	BVP
ROE	1							
ROA	0.3822	1						
ROS	0.2809	0.6470	1					
SIZETS	0.0791	0.0107	0.0282	1				
DOA	-0.4945	-0.1628	0.0146	0.1870	1			
GROWTHD	0.0013	-0.1054	-0.1737	0.1286	0.0974	1		
ABNORMAL	0.1284	0.2727	0.0716	-0.0073	0.0014	0.0193	1	
BVP	-0.2315	-0.2955	-0.0432	-0.2306	-0.0035	-0.1297	-0.2014	1

Source: Calculated by the research group based on software R

Table 4 presents the results of correlation coefficient among variables, the purpose of examining the close correlation among independent and dependent variables is to eliminate the factors that can lead to the phenomenon of multicollinearity before running the regression model. There was no pair of correlation coefficient among the independent variables in the model greater than 0.8, thus multicollinearity would be less likely to occur.

5.2. The research result

Regression with the profitability variable of ROE

For all regression models (the difference lies in the variable of profitability), the research group will be compared and we will select the appropriate model: OLS, FEM or REM. To examine and select the appropriate model among the three regression methods above, the research team used F and Hausman tests. By F-test, we saw that Prob> F = 0.000 <α = 5%, therefore, with a statistically significant level of

5%, H_0 is rejected. This means that with the data collected, it was shown that the method of running the FEM model was suitable and that OLS was inappropriate because of the existence of fixed effects in each enterprise over time. After selecting FEM model instead of OLS running method, the research team respectively conducted the estimation of existing table data based on the methods of running FEM and REM models. According to the results of running the FEM and REM models, the research team carried out the Hausman test to compare the selection of FEM or REM models. The Hausman test results are presented in Table 5. It can be seen that Prob> chi2 = 0.000 means P_value = 0.000 <α = 5%, so there is enough basis to reject the assumption H_0, then the fixed effects model (FEM) is more appropriate than the random effects model (REM). Through testing the methods of running models, FEM proved to be the best model selected. However, before analyzing in details the influential factors on the abnormal return of stocks, the research team conducted the following tests: heteroscedasticity, autocorrelation and made necessary adjustments to overcome the limitations of the model.

Test of autocorrelation

The Wooldridge test method was applied to test whether there was any autocorrelation or not for regression models. The following hypotheses were assumed: H_0: autocorrelation does not exist; H_1: autocorrelation exists. If the test result produces P_value = 0.0000 <α = 0.05, the assumption H_0 will be rejected, i.e autocorrelation exists.

Test of heteroscedasticity

To test whether the model was subject to the heteroscedasticity or not, the research team used Modified Wald test. With the assumption H_0: heteroscedasticity did not exist, H_1: heteroscedasticity existed. The test results produced small P-value (less than 0.05 default), and that H_0 hypothesis was rejected and H_1 hypothesis was accepted. Based on the results indicated in Table 4, the coefficient P_value <α = 0.05. Thus, H_0 hypothesis was rejected. The results of testing model show that the obtained P-value values were all equal to 0.000 <α (5%), which implied that the hypothesis H_0 where heteroscedasticity did not exist in the model was rejected with 5% significant level. Therefore, the research team worked on to overcome the defects of the regression model by GLS regression method.

Table 5
Regression with the profitability variable of ROE

	FEM model	REM model	GLS model
ROE	0.3373***	0.2384***	0.3373
BVP	-156.7838***	-81.4539***	-156.7838***
DOA	0.0943***	0.0287**	0.0943**
GROWTHD	0.0828**	-0.0036	0.0828*
SIZETS	-0.5223***	-0.0300**	-0.5223***
_cons		0.5426***	
N	894	894	894
Hausman test		Chi-Square	= 76.997 P-value=0.0000
LM test	Chi-Square =	14957 P-value =	0.0000
Wooldridge test	Chisq = 83.608 P-value =	0.0000	
Breusch Pagan test	BP = 202.01 P-value=0.0000		

t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01

Source: Calculated by the research group based on software R

Regression results by GLS

After performing regression and tests and selecting the appropriate model of FEM, the research team overcame the detected defects of the model by GLS method (Generalized least squares). The results are

presented in Table 5 which have overcome the defects of the model. Thus, the research results show that the market value, capital structure, growth rate and size are the variables that have maintained the significant impacts on the abnormal return of stocks in the model. Among these, the factors of growth and capital structure have the positive relationship with the abnormal return. On the contrary, the size and the market value have the reverse relationship with the abnormal return.

Regression with the profitability variable of ROA

Using the similar method of model selection to the profitability variable of ROA. The research results are shown in Table 6:

Table 6
Regression with the profitability variable of ROA

	FEM model	**REM model**	**GLS Model**
ROA	1.4802***	1.2586***	1.4802***
BVP	-147.4445***	-59.5310***	-147.4445***
DOA	0.0198	0.0173	0.0198
GROWTHD	0.1359***	0.0312	0.1359***
SIZETS	-0.5135***	-0.0216	-0.5135***
_cons		0.3457*	
N	894	894	894
Hausman test		Chisq = 80.839 P-value=0.0000	
LM test	chisq = 14927 P-value = 0.0000		
Wooldridge test	Chisq = 86.054 P-value = 0.0000		
Breusch Pagan test	BP = 36.842 P-value=0.0000		

t statistics in brackets * $p<0.1$, ** $p<0.05$, *** $p<0.01$

The research results have revealed that with the significance level of 1%, ROA, the market value, growth rate and size were the variables that had significant impacts on the abnormal return of stocks in the model. In particular, the profitability and growth rate were positively related to the abnormal return, whereas the results also show that the market size and value were inversely related to the abnormal return. These results were also homogeneous when regression was performed with the profitability variable of ROS, as shown in Table 7.

The regression results obtained the estimated coefficient α accordingly, which show that the profitability variables of ROA and ROS both had positive impacts on the abnormal return of listed companies. This has implied an increase in profitability led to the rise in the fluctuations of stock returns compared with the market. This result is consistent with the study conducted by Zaheri and Barkhordary (2015). The SIZETS variable representing the size of an enterprise has been proven to have a reverse impact on the abnormal return. The regression result of the variable ln (TA) (<0) is contrary to Hypothesis 2 on the impact of the size on the abnormal return of the stock. It can be explained that when the size of a listed company increases, the company will have more resources to operate and grow stably, as well as to gain market confidence; there is less fluctuation in the return of stocks than that of the market, which causes the abnormal return of stocks to fall. In addition, the growth rate had a positive impact on the abnormal return in all three (03) research models.

Regression with the profitability variable of ROS

This result corresponded to Saghafy and Salimi (2007). According to the study, when an enterprise had an increasing revenue growth rate, there would be also a rise in the return of that stock, as well as the

difference between the return of that stock and the benchmark return would be widened. The results for BV/MV variable also indicated the reverse impact on BHAR of the stock, which is consistent with the original hypothesis of the paper and recent research results by Mothlagh et al. (2016), but contrary to the conclusions drawn from the study by Chan et al. (1991).

Table 7
Regression with the profitability variable of ROS

	FEM model	**REM model**	**GLS Model**
ROS	0.0209***	0.0136*	0.0209***
BVP	-167.9427***	-91.1123***	-167.9427***
DOA	0.0239	0.0036	0.0239
GROWTHD	0.1140***	0.0107	0.1140**
SIZETS	-0.5187***	-0.0243*	-0.5187***
_cons		0.5346***	
N	894	894	894
Hausman test		Chi-Square = 72.244 P-value=0.0000	
LM test	Chi-Square = 14896 P-value = 0.0000		
Wooldridge test	Chi-Square = 82.653 P-value = 0.0000		
Breusch Pagan test	BP = 32.399 P-value=0.0000		

t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01

N Source: Calculated by the research group based on software R

For the variable of capital structure, only the ROE regression model is of statistical significance. The results show a positive relationship between DOA and BHAR. This result is confirmed by Idris and Bala (2015). The more money a company borrows, the greater the profits the shareholders receive from holding the stocks. This can be explained by the fact that when the company increased its usage of loans, its stock prices would have relatively stronger fluctuation compared with the peers but use less debt to reflect the increase in its financial risks.

6. Conclusions and recommendations

First, research results have shown that the size of an enterprise had a reverse impact on the abnormal return of stocks. Thus, the larger the size, the lower the abnormal return. Therefore, in order to obtain a large abnormal return, listed companies do not necessarily increase their sizes. According to O'Neil (2000) "a successful stock investor in the US, the father of effective stock analysis and selection method CAN SLIM, deemed that stocks of large-scale companies, quality products were not always worth buying, as the demand for these stocks was quite large while the supply was low". Therefore, the price was often artificially pushed up, which did not reflect the actual value of stocks. It also caused difficulties in making a large profit. Stocks with low circulating volume in the market were often more promising and likely to increase prices compared with those of large circulation.

Second, the research demonstrated that the more money a company borrows, the less return its shareholders receive. This can be explained by the fact that when the company increased its usage of loans, its stock prices would have relatively stronger fluctuation compared with the peers but use less debt to reflect the increase in its financial risks. In fact, high debt ratio will lead to the risk of bankruptcy. Those companies of high debt ratios will "caution" in capturing the investment opportunities. They tend to reduce the costs of creating efficiencies in the future such as R&D costs, branding, etc., which means

ignoring the opportunity to add value. Besides, high debt also leads to the risk of losing customers, employees and suppliers, etc. According to the pecking order theory, when the company needs to invest in a new project, the company will respectively perform in the following order: first the retained profits, followed by debts and finally issuing shares. Thus, in order to achieve the higher abnormal return, listed companies are required to adjust their capital structure to achieve the highest efficiency and should use less loans as well as utilizing the equity instead. However, there is a drawback where the cost of equity is often higher than that of debt.

Third, like the size factor, the BV/MV ratio had a reverse impact on the abnormal return of stocks. Thus, in order to achieve the higher abnormal return, listed companies need to develop a strategy of reducing BV / MV ratio, i.e. increasing the market value of stocks.

The market price of a stock is determined based on the latest transactions or among companies of similar areas with the same transactions. Market prices reflected the supply and demand for the product.

The market price of stocks is affected by many factors, both macro and micro ones, including the following five main factors:

The development of the domestic and the world economy: Domestic stock prices are heavily influenced by both national and the world economy. As the economy grows, most of the sectors are affected, and stock prices are not exceptional.

Business performance of the enterprise: This is the direct reason that causes the stock prices to soar. A company with a good performance and large profits will surely have their stock prices increase and investors will be more confident to give their money to those companies to make a profit.

Market supply / demand rules: The stock market always operates according to the law of supply and demand. Stock prices will rise when more people need to buy a product code but few people desire to sell. Supply exceeds demand, therefore, stock prices will be pushed up.

Information causing the market noise: on the stock market appears the inaccurate information of market noise, which stems mainly from the speculations of some investors.

Investor sentiment: The fundamental factor in stock price volatility lies in the investor confidence in the future of stock prices, corporate profits and share returns.

Fourth, the research results show that the growth rate had a positive impact on the abnormal return in all three (03) research models. The growth potential of an enterprise could be expressed by the growth rate of total assets, revenue, net profit or investment capital. In order to achieve the higher abnormal returns, listed companies are required to maintain the high and stable growth rates over the years. To do so, listed companies need to develop strategies, build up operational objectives and specific solutions that are appropriate to each development stage of the company.

Fifth, the profitability variables of ROA and ROS both had positive impacts on the abnormal return of listed companies. Thus, in order to obtain the abnormal return, listed companies should work out solutions to increase the profitability of ROA and ROS.

In fact, on stock exchanges, stocks of any enterprise with high ROA and ROS are more expensive and also preferable. The steady growth of ROA and ROS show that the business situation of that enterprise was stable. The fluctuation of ROA, ROS and erratic increase or decrease meant that businesses were not stable and ineffective. In order to increase ROA, listed companies need to pay proper attention to the impacts of two factors which are the profitability of net revenue and asset turnover. From the perspective

of management, it is necessary to develop business strategies, management measures to generate high profitability and high asset turnover. With the indicator of ROS, when the revenue is unchanged and if the enterprise manages the cost well and minimizes the arising costs, the profit will be higher and thus the rate of ROS will also be improved. In case of low ROS due to ineffective cost management, the company is required to work out the solutions to cut down on these costs where appropriate.

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