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Analysis of the Effect of Government Policy to the Return of Shares in Industry of Cigarettes

Nursihan[1], Sri Hartoyo[2], Hendro Sasongko[3]

[1]Bogor Agricultural University, School of Business and Management, Bogor, Indonesia

[2]Bogor Agricultural University, Department of Economics, Indonesia

[3]Pakuan University, Department of Economics, Bogor, Indonesia

Abstract: ***The cigarette industry is one of the main industries at Indonesia Stock Exchange which has a high rate of return and risk. The rate of return can be measured by asset valuation methods. One of the asset valuation methods is the Three Factor Model Fama-French. The study was carried out to analyze the Three Factor Model Fama-French's variables developed from CAPM model by Fama-French, and to understand / comprehend the effect of the market, size, and book to the market ratio of stock return in tobacco industries at Indonesia Stock Exchange. A sample of this study is four firms from tobacco industries ranging from the period of December 2012 to January 2017. This study used two models and Analyzed by data panel regression with fixed effect models. The result was found that market, SMB, HML, and a dummy of the Three Factor Model Fama-French in tobacco industries at Indonesia Stock Exchange very fluctuating during the period of December 2012 to January 2017. Both models indicated resources and market size variables that have the significant effect to the excess return of four firms.***

Keywords: Tobacco Industry, Indonesia Stock Exchange, Three Factor Model Fama-French

1. Introduction

In the investing activity in the stock market, an investor needs to consider the returns and the risks to be faced. Return is the result that obtained from a stock investment. A Return received by investors may be a capital gain or positive rate between the sale price and the purchase price and cash dividends received from listed companies because the company get the benefits and gain ownership of the company. Return strongly associated with the risk of investing in the stock market is a risky investment. Risks faced by investors, namely capital loss and the risk of liquidation. A risk occurs because of the uncertainty in the capital market. This uncertainty is influenced by the company's financial performance and transactions that occurred in the capital market, such as changes in dividend payout policy, rights issues, capital investment itself (private placement), joint venture, merger or acquisition of the company. In addition, uncertainty can occur due to changes in supply and demand in the stock market, the policies in the fields of politics, economics, finance, law or regulation.

According to Saragih as usual as the country which rich in agricultural potential then the priority is to investments in agriculture. In this case, the cigarette industry is one industry that is included in the mega agribusiness sector that should be put forward potential and have an important role in economic development over the years.

The existence of the cigarette industry also provides a significant impact on employment in Indonesia. From the aspect of employment, tax policy also affected the sustainability of formal sector employment for 401.989 people, of which three-quarters or 291.824 people are involved in the production of clove cigarettes hand which is a labor-intensive industry. If coupled with the informal sector, this policy impact on the lives of 2 million tobacco farmers, 1.5 million of clove farmers, 600 thousand tobacco workers, and 2 million retail traders. Based on these data, we can conclude that the cigarette tax policy provides a significant influence on the lives of more than 6.1 million people of Indonesia. Cigarette industry plays an important role in the national economy. Tobacco from cigarette excise industries is a contributor to state revenue significantly. In the fiscal year 2014 tobacco tax contribution to the state budget amounted to 12.29%, 2015 amounted to 11.68%, and in 2016 amounted to 11.72%.

The issue of cigarette price increase up to Rp 50,000 influences the condition of the cigarette industry stock mid-year 2016. The impact of the issue of the cigarette price increase cigarette stock immediately plummeted, down to 10 thousand per share. This is reflected in the trend of the stock's closing price each month continues to fluctuate.

The fluctuation of the closing share prices investors sue the tobacco industry in the cigarette industry pay attention to the expected return on investment and volatility that has been and will be carried out as compensation for the risks to be faced, investors can take decisions in which they will invest. The existence of various problems facing the cigarette industry today and in the future will affect investment risk and return cigarette stocks in the capital markets, become a dilemma for investors to make a decision to invest in cigarette stocks. The various industry faced problems over the cigarette industry will be a risk that must be faced by investors if they want to invest in the tobacco industry. Problems regarding the selection of investment alternatives are options (trade-off) between a high return with high risk or low risk with a low rate of return. Measuring the level of risk needs to be done to be able to map these uncertainties. Therefore, this study will focus on the shares of the cigarette industry are listed on the Indonesia Stock Exchange period December 2012 to January 2017 to examine more stock returns cigarette, the formulation of the issues raised is how the development and influence of Market Risk Premium,

SMB, HML, and Dummy on a three-factor model to return stock to the tobacco industry in Indonesia stock Exchange during the period of December 2012 to January 2017.

2. Review of Literature

2.1 Model Fama-French Three Factor

Model Fama-French three-factor or three-factor asset pricing model first introduced by Fama and French (1995). This model is one of the CAPM model developed to describe the relationship between expected return and risk at a particular asset. CAPM theory states that the only variables that affect stock returns are known as systematic risk or beta. But in its development, several other empirical studies show that the expected return is not only influenced by beta alone. In addition to beta, were also found other factors that affect the expected return are firm size or size (Banz 1981). He also concluded that stocks that have small capitalization value tend to have a higher expected return than stocks that have a large capitalization value. In addition to size, there is one more factor that affects the expected return that book to the market ratio (Rosenberg et al. 1985). Companies that have a high ratio of book to market have a higher expected return than companies that have the low book to market ratio.

Further research conducted by Fama and French (1993) concluded that the firm size and the ratio of book to market have an influence on the rate of return of stocks in the United States. Therefore, in 1995 the Fama and French introduced a new model of three factors which is a modified model of the CAPM model by adding two factors, namely firm size and the ratio of book to market factors are to predict the rate of return on an investment.

2.2 Shares Return

Stock return is the return on an investment that is usually expressed as an annual percentage rate (Fakhruddin, 2008). Fahmi and Yovi (2009) said stock returns are profits earned by companies, individuals, and institutions of the results of its investments policy. The higher the better stock returns of investments made since it can generate profits, on the contrary, the stocks return or even negative, the worse the results of the investments made. Stock return is income expressed as a percentage of the initial capital investment. Investment income includes gains in the stock buying and selling shares, where if a profit is called capital gain and if the loss is called a capital loss (Samsul, 2006). Stock returns obtained from investing activities in the form of dividends is not an easy thing to predict, due to the dividend policy is a policy that is difficult for the company's management. Decisions regarding dividends are sometimes associated with financing decisions and investment decisions, dividend in each period in accordance with fluctuations in the number of acceptable investment opportunities available to the company.

3. Methodology and Procedure

The data used in this research is daily data closing stock price of cigarettes industrial enterprises listed on the Indonesia Stock Exchange that has met the criteria. The data amount is 1323 (from December 2012 until the end of January 2017). Data is recorded in accordance with the number of working days which in 1 week consists of 5 days and holidays are not recorded. Data obtained from the Capital Market Reference Center (PRPM) contained in the PT. Bursa Efek Indonesia.

The selection of stocks analyzed is also done on purposive because its role in the national development economy, in which the cigarette industry is a contributor to state revenues significantly. The criteria for selection of shares to be analyzed are:

1) The company went public-listed issues in the period prior to December 2012 until the end of January 2017 continuously (never delisting).
2) The company's shares belonging to the company engaged in the cigarette industry.
3) In addition, stock selection is done by looking at the share trading liquidity and market capitality. This is done by looking at agribusiness company shares are included in the BEI (Indonesa Stock Exchange) with high liquidity. The analyzed shares into the Stock Exchange for the period from December 2012 to January 2017.
4) The closing price data patterns that exist do not change the general pattern of extreme and sudden at one time (Step function).

Based on these criteria, it was selected four name of agribusiness company shares, are PT. HM. SampoernaTbk. (HMSP), PT. Bentoel International InvestamaTbk, PT. GudangGaramTbk, and PT Wismilak Inti MakmurTbk.

4. Results and Discussion

Analysis of a three-factor model of the cigarette industry excess return is done in twice. The first analysis did not use a dummy variable of cigarette price increasing issue up to Rp 50,000 and the second using dummy variables, the issue of rising prices. After performed classical assumption of the Model 1 and Model 2 in the three-factor model, both models tested by regression. The purpose of regression is to determine the relationship and influence between independent variables to dependent variables. In this study, dependent variables is excess return, while the independent variables are market, SMB, HML, and Dummy.

In the phase of processing or estimating Model 1 and Model 2, resulting multiple regression values as well as on the output processing with E-Views software which produces the following equation:

Model 1:

$R_i – R_f$ = -0.020399+ 0.721295MRP + 0.062313SMB - 0.797541HML

Model 2:

$R_i – R_f$ = -0.019693+ 0.725223MRP + 0.062575SMB - 0.794580HML -0.004905DUMMY1 - 0.007172DUMMY2

From its equation, can be seen that the variable MRP, SMB, HML is 0 unit, the first model will generate an excess return

value about -0.020399 units. When variables MRP, SMB, HML and Dummy is 0 unit, Model 2 will generate an excess return value about -0.019693 units.

On the results of data processing by using E-Views software, also shows that the R-squared value of Model 1 is about 42, 686%. This means that the variable market, SMB, and HML are used to influenced the variation in excess return on the Model 1 about 42,686%, while the rest influenced other variables that are not included in the model. The R-squared value of Model 2 amounted about 42 580%. This means that the variable market, SMB, HML, and dummy used to describe the variation of excess return on the Model 2 influencedabout 42 580%, while the rest influenced by other variables that are not included in the model.

F Test (F-Statistics) in Model 1 shows the probability value of 0.000 or less than the αvalue (0:05). The F test results in Model 1 concludes that market variables, SMB, and HML simultanly significant in affecting excess return at a significance level of 5%. F Test (F-Statistics) in Model 2 also shows the probability value of 0.000 or less than the α value (0:05). F test in Model 2 results concluded that the market variables, SMB, HML, and Dummy simultanly significant in affecting excess return at a significance level of 5%.

Model 1 and Model 2 on the market showed that the variables have a significant impact and a positive relationship to excess return at a significance level of 5%. This significant correlation indicates that the return movement of the Banking market will affect the movement of the excess return on a issuers in cigarette industry. A positive relationship indicates that when the return of the banking market moves up, the excess return on a issuers in cigarette industry will rise as well. When the market rises one unit then an increase in the excess return amounted to 0.721295 units in Model 1, and Model 2 amounted to 0.725223 units. This condition illustrates that investing in shares of tobacco companies tend to generate excess value.
In addition, the relationship of market variables that have a significant impact and a positive relationship to excess return also show that value stocks excess return cigarette industry has a direct relationship with the banking movement. When the bank increases, the excess return value of the shares of the cigarette industry is also likely to rise. Conversely, if the bank has decreased, the value of the excess return of shares cigarette industry also tends to fall as well.

A positive relationship between market variables of the excess return also shows that the condition of the stock market in the cigarette industry tends to be risky. The risks on the stock market in the cigarette industry is causing investors will expect a higher expected return as well.

SMB variables at Model 1 and Model 2 three-factor model also has a significant influence and have a positive relationship with the excess return at a significance level of 5%. This significant correlation indicates that company size affects the excess return on a issuers cigarette industry. A positive relationship indicates that issuers have the size of the company (firm size) is small or small market capitalization value will result in a higher excess return than stocks that have large market capitalization value. When SMB increase of one unit on the excess return than influence about 0.062313 units in Model 1 and in Model 2 its amounted to influenced 0.062575 units. This indicates that in general the stocks in the cigarette industry which have a size of company (firm size) is small or has a small market capitalization value can result in a higher excess return than stocks that have large market capitalization value. Values higher excess return is compensation for the risk of investing in shares of small-cap. If there is an increase in the share prices of small capitalization companies that together with companies with large market capitalization, the excess return generated by companies with small capitalization stocks are relatively higher. It also indicates that investing in stocks that have small capitalization in the cigarette industry is more profitable than stocks which have large capitalization for investors because the return will be accepted by the investor will be even greater. Conversely, investing in stocks that have large capitalization in the cigarette industry less profitable for investors because the return will be accepted by the investor will be smaller.

HML variables in Model 1 and Model 2 three-factor model have a significant influence and a positive relationship to excess return at a significance level of 5%. This significant correlation indicates that the ratio of book to market affects the excess return on a issuers cigarette industry. A positive relationship indicates that issuers have a book to market ratio is high or will generate an excess return that is lower than the issuers have a book to market ratio is low. This condition indicates that the HML variable that is a proxy of the book to the market ratio or the ratio of a stock price of the book to the market price, will be attractive to investors. The investors in the cigarette industry tend to make decisions in the ownership of shares in the cigarette industry is not based on the stock price itself. In addition, investors in determining investment shares in the cigarette industry do not pay attention to economic fundamentals of the company, for example, the level of earnings generated by the company.

Dummy variable as a proxy of the issue of cigarette price increase of Rp 50,000 in mid-2016 due to the increase in tax rates will be set by the government to the cigarette industry have a significant impact and have a positive relationship to excess return in Model 2. Significant relationships indicate that the issue of increasing of cigarette price of Rp 50,000 in mid-2016 and the increase in excise rates at the beginning of 2017 turned out to affect the excess return on a issuers cigarette industry. A positive relationship indicates that if there is an issue, then the excess return on a issuers cigarette industry will increase. This condition indicates that the decision of the ownership of shares in the cigarette industry by the investors tend to be influenced by the issue of a cigarette price increase of Rp 50,000 in mid-2016 to 2017. This is also reflected in the R-Squared value models. The addition of dummy variables (the issue of cigarette price increases due to higher tax rates) in the regression model, turned out to be a significant contribution in explaining excess stock returns together with a variable market, SMB, and HML. R-Squared value models have decreased in the amount of 42,686% -0106% in Model 1 and 42,580% in

Model 2. The issue of higher cigarette prices and excise rates on cigarette industry make investors less likely to shift their investment in other assets.

5. Conclusion and Recommendation

5.1 Conclusion

Development of the market, SMB (firm size), HML (book to market ratio) on a issuers cigarette industry over the period December 2012 to January 2017. Variable market, SMB, HML in model 1 are jointly able to explain the variation in excess return about 42,686 %. whereas market, SMB, HML in model 2 are jointly able to explain the variation in excess return about 42,580%. Variables market, SMB and HML in model 1 and model 2 showed a significant effect, whereas dummy1 and dummy2 variable in model 2 did not show a significant effect, which means that the issue of increasing price of cigarette to Rp. 50,000 and government regulations do not give effect to the tobacco industry stock returns over the period of December 2012 to January 2017.

5.2 Recommendation

A further research regarding the return to the tobacco industry needs to add other variables to increase the contribution of variables in explaining the level of stock returns. Another variable that can be added, such as dividend yield, leverage, the ratio E / B (Earning to Book Value), transaction or trade volume. This study also recommended further reserarch to addothers subsectors in the Indonesia Stock Exchange. The study period might be extended so that serves better results in explaining the level of stock returns.

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