

Analysis of Inflation, Interest Rates, and Current Ratio to Systematic Risk in BUMN companies listed on the Indonesia Stock Exchange

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Article History: Received: 10 January 2021; Revised: 12 February 2021; Accepted: 27 March 2021; Published online: 20 April 2021

Abstract: Investors will consider many factors in investing in stocks, one systematic risk is reflected in the value of the beta coefficient. Beta shows the volatility of stock returns to market returns. The purpose of this study is to determine the effect of inflation, interest rates, and current ratios on the systematic risk of state-owned companies listed on the IDX in the 2014-2019 period. This type of research is descriptive verification. The method used is panel data analysis with the Common Effect method. The results of this study indicate that inflation, interest rates have a significant effect on systematic risk, and the current ratio has no significant effect on systematic risk.

Keywords: inflation, interest rates, current ratio, systematic risk

1. Introduction

One of the stocks that attract investors is the shares of state-owned companies, not only local investors but also foreign investors.

In addition, BUMN shares are often included in the Liquid Index 45 (LQ45). The LQ45 index is formed by the most actively traded stocks (Hartono, 2013). During the period 2014 to 2019, on average there were around 16 state-owned companies included in the LQ45 Index. According to the OJK, public and investor interest in BUMN shares is very high. State-owned companies are not easily intervened by political interests because they are directly monitored by minority shareholders, namely the public.

During the period 2015 to 2018, BUMN assets grew by an average of 12%, while for profit it increased by an average of 8%. Even though this increase, this achievement was still less than the average growth during the previous government. In the 2010-2014 period, BUMN assets recorded an average increase of 17%, while profits were 12%. For 2019, the Ministry of BUMN is aiming for BUMN asset growth of 12% from the previous year's target. Meanwhile, in terms of profit, it is targeted to grow by 8.43% compared to 2018 projection. Theory Markowitz's portfolio states that to be able to accept greater risk, investors must receive compensation with the opportunity to get a large return as well.

Risk and return are two inseparable elements, risk and return have a unidirectional relationship where the greater the risk borne, the greater the return obtained (Hartono, 2013).

Unsystematic risk is the risk that occurs randomly which not all companies experience. Meanwhile, systematic risk is also known as market risk. Systematic risk can be measured by the extent to which a particular stock tends to move up or down following the market (Brigham and Houston, 2010). Systematic risk is reflected in the beta coefficient value. Beta is a measure of the volatility of security returns or portfolio returns to market returns. Beta worth indicates that systematic risk is the same as market risk, so that if the market return increases by 1%, then the security return also moves up 1% (Hartono, 2013). Calculating beta is important in analyzing securities or portfolios.

2. Review of theory

In analyzing stocks, investors can perform fundamental analysis prospects for the company. The first thing to macroeconomic factors that affect the performance of all companies, then proceed with an industry analysis, and finally an analysis of the company that issues securities to assess whether the security is profitable or detrimental to investors.

Inflation

The general and continuous trend of increasing price levels. In theory, inflation is an activity that describes a national economy. According to Irham Fahmi (2014: 67) an event that shows the condition and situation of the price of goods that have increased due to the weakening of the currency of a country or the value of the rupiah.

Interest rate

When interest rates are high, investors will withdraw their investment in stocks and move investments in the form of savings or deposits (Tandelilin, 2010). This condition will cause the company's performance to decline, thus making the capital market uncertain because it cannot provide certainty of return for stock exchange players. So that the performance of the capital market will decline, and the decline in the performance of the capital market can result in a decrease in the stock market price and the composite stock price index. The interest rate is the percentage that results from a loan of funds within a certain period of time. According to Boediono (2014: 76) The interest rate is an indicator in determining whether someone will invest or save.

Current ratio

Latiefasari Hani Diana (2011) revealed that the liquidity variable has a positive influence on dividend policy. Liquidity is the company's ability to meet short-term financial obligations. The higher the company's liquidity, the higher the company's ability to pay dividends. Failure to pay debt can lead to bankruptcy, so company liquidity must be considered.

Inflation, interest rates, and current ratios can affect systematic risk. However, previous research on these factors still shows mixed results. Research by Sudiyatno & Nuswandhari (2009) and Pangemanan (2013) found that inflation has a negative and significant effect on systematic risk. Soeroso's research (2013) found that the current ratio has a positive and significant systematic risk.

3. Research methods

This research uses quantitative methods. Quantitative method is research that looks at symptoms or symptom relationships are used to study a specific population or sample, with the aim of testing predetermined hypotheses (Sugiyono, 2011). . This research is a type of descriptive verification research. The population in this study were all state-owned companies listed on the Indonesia Stock Exchange, as many as 20 companies. The data used in this study are secondary data.

Regression analysis is used to predict how far the value of the dependent variable will change, if the value of the independent variable is manipulated (increased or decreased) (Sugiyono, 2011). Used date timeseries with cross sections and panel program. So that the regression analysis method using panel data is called panel data regression (Juanda and Junaidi, 2012). The variables used in this study:

1. Inflation

The tendency of an increase in the prices of products as a whole (Tandelilin, 2010).

$$\text{Inflasi} = \frac{\text{HKn} - \text{HKn} - 1}{\text{HKn} - 1} \times 100\%$$

2. Interest Rate

Interest rate according to Boediono (2014: 76) is "the price of the use of investment funds (loanable funds). The interest rate is an indicator in determining whether someone will invest or save ". Interest rates are expressed as a percentage of the principal per unit of time

3. Current ratio

The company ability obligations use current asset

$$CR = \frac{\text{Current asset}}{\text{Current liabilities}}$$

4. Systematic Risk

Systematic risk is the variability of stock or portfolio returns caused by changes in overall market returns (Van Horne & Wachowicz, 2012).

$$\beta = \frac{\sum RiRm - nRiRm}{\sum Rm^2 - nRm^2}$$

Research Hypothesis

Based on the theory, frame of mind and empirical study, the research hypothesis is:

H1: There is a significant influence between the inflation rate and Systematic Risk

H2: There is a significant influence between interest rates on Systematic Risk

H3: There is a significant influence between the level of the current ratio on Systematic Risk

H4: There is a significant influence between the inflation rate, interest rate, and current ratio simultaneously on Systematic Risk.

Population and Sample

Population this study company listing in IDX2014-2019, totaling 20 companies.

4. Results and discussion

Descriptive statistics

Based on data processing, the following descriptive statistics were obtained:

information about the max value, min value, mean, median and standard deviation can be found.

a. Systematic Risk

The lowest systematic risk is equal to

-0,700. The highest systematic risk is 2,316. Meanwhile, the mean (average) systematic risk was 1.2122. With a systematic risk of 1.2122, it means that when the market return increases by 1, the stock return will also increase by 1.2122. The standard deviation of systematic risk is 1.04209. The standard deviation shows the size of the spread of the data from the mean.

b. Inflation

The minimum inflation value is 2.39% and the max value is 3.45%. the median on the inflation variable is 3.20%. Independent Variable Inflation has an average of 3.51% with a standard deviation of 0.44%.

c. Interest Rate

The minimum interest rate is 4.25% and the max value is 6.00%. The median value of the SBI variable is 4.75%. The Independent Variable SBI has a mean of 4.95% with a standard deviation of 0.54%.

d. Current ratio

The highest value is 10,642. Meanwhile, the lowest current ratio is 0.682. The mean (average) current ratio is 2.41655. With a current ratio of 2.41655.

Model Testing

The regression model in this study can be expressed by the following equation:

$$Y = C + b1 X1 + b2 X2 + b3 X3 + e$$

In panel data regression, to be able to determine the right model in this study must first go through several test stages. First, the Chow test is conducted, which compares whether the Comment Effect or Fixed Effect or Random Effect models are good to use. The results obtained from this Chow test are the Fixed Effect model that is appropriate to use because the Chi Square cross-section probability value is 0.3120 > 0.05 or the F value > 0.05. so model is the commoneffect.

Table 1.1 Common Effect Regression Analysis Results

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Variable	Coefficient	Std. Error	t-Static	Prob.
C	1.791424	3.219275	0.525462	0.0003
Inflation	4.121283	10,20454	0.394050	0.0140
Interest rate	4.621824	44,790192	0.086677	0.0237
CR	0.076273	0.101966	0.567827	0.3028
R-Square	0.272563			
Adjusted R-Square	0.291864			
F-statistic	31.18237			
Prob.(F-statistic)	0.000000			

Source: Processing data

$$Y = 1.791424 + 4.121283 \text{ INFLATION} + 4.621824 \text{ SBI} + 0.076273 \text{ CR}$$

Hypothesis testing

This study uses a significance level (α) of 5%. F value is 31.18237 and statistical probability value 0.00000 <0.05, so H_0 Rejected, which means that there is a significant influence between inflation, interest rates, and current ratio on systematic risk simultaneously. While the t test for the inflation variable has prob. 0.0140 <0.05. This research is supportive. Research conducted by Coryaina (2013) and Fauzi (2009) found that inflation has a positive and significant effect on systematic risk. Interest Rate Variable has prob. 0.0237 <0.05. This study supports the research conducted by Pangemanan (2013) which found that interest rates have a positive and significant effect on systematic risk and the Variable Current Ratio has prob. of 0.3028 > 0.05

Coeffisient of Determination

To find out how far the independent variables, namely inflation, interest rates and current ratios, can explain the systematic risk variable based on the R-Square results obtained of 0.272563, meaning that the variable inflation, interest rates and current ratio affect systematic risk by 27.25% while the rest is equal to 72.75% influenced by other variables.

5. Conclusion

Based on the results obtained regarding the effect of Inflation, Interest Rates and Current Ratio on Systematic Risk in BUMN companies listed on the Indonesia Stock Exchange during the period 2014 - 2019 by applying the Common Effect Panel Data Regression model. The results of this study simultaneously have a positive and significant effect on inflation variables. on systematic risk, the variable interest rate has a positive and significant effect on systematic risk, while the variable current ratio has no significant effect on systematic risk.

6. Suggestion

For further researchers to be able to develop this research by considering other variables that can affect Systematic Risk and the analysis model in panel data with the common effect, for further researchers to be able to consider the fixed effect or random effect method to get more accurate results.

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