
Analysis of the Effect of Return on Equity and Earning Per Share on the Share Price of PT Kalbe Farma, Tbk with the Rupiah Exchange Rate as a Moderating Variable

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Abstract

This study aims to analyze the effect of fundamental company factors, namely Return on Equity (ROE) and Earning Per Share (EPS), on Stock Prices with the Rupiah Exchange Rate as a moderating variable. The research focuses on the pharmaceutical and banking industries, specifically PT Bank Mandiri (Persero), Tbk and PT Kalbe Farma, Tbk, during a 42-month period from January 2016 to June 2019. The method used is quantitative research with associative analysis to test the causal relationship between variables. Data analysis techniques included classical assumption testing, multiple linear regression, and Moderated Regression Analysis (MRA) to determine whether the Rupiah Exchange Rate strengthens or weakens the relationship between independent variables and stock prices. This study is expected to provide investors with an overview of financial performance and the influence of macroeconomic variables before investing in the capital market.

Keywords: Return On Equity, Earning Per Share, Stock Price, Rupiah Exchange Rate.

INTRODUCTION

PT Kalbe Farma, one of the largest pharmaceutical companies and market leaders in the pharmaceutical industry for 27 years, is listed on the Indonesia Stock Exchange and has also been affected by the JKN program. In order to maintain and even increase investor confidence in purchasing PT Kalbe Farma shares, the management of PT Kalbe Farma has implemented several strategies to boost performance. One of these strategies is to increase the volume of prescription drug sales to the National Health Insurance (JKN) program and target the private hospital market. The marketing strategy for prescription drugs supplied to JKN continues to be improved, with a share of 15% to 17% of the prescription drug market. Meanwhile, for the premium and branded product market, Kalbe Farma will increase its sales share to the private hospital market (www.kalbefarma.com).

PT Kalbe Farma, Tbk has fluctuating ROE, EPS, and share prices. Ideally, ROE should tend to increase. This is intended to give a good reputation to investors/capital owners. ROE is the company's ability to generate profits that have an effect on the rate of return received by investors in the form of dividends. The fluctuation in EPS also shows the success of PT Kalbe Farma, Tbk's management in achieving profits for PT Kalbe Farma, Tbk shareholders. Thus, it can be concluded that during the 42 months between January 2016 and June 2019, PT Kalbe Farma, Tbk has not managed its capital efficiently. This is indicated by the fluctuation (up or down) in its own capital's ability to provide funds for creditors, coupled with the current global economic situation, as shown

by the continued weakening of the rupiah until the end of June 2019, which reached an average of IDR 14,250 per US dollar, causing turmoil in the stock market, so that investors are very cautious about investing their capital. Therefore, companies must maintain their cash flow to cover their expenses.

LITERATURE

Return On Equity

Return on Equity (ROE) is a financial ratio that measures how efficiently a company generates net income from the capital invested by shareholders; the higher the ROE, the better the company is at converting capital into profits for its investors. This ratio shows the level of profit earned from each rupiah of equity, making it an important indicator of profitability and management performance in creating value. Although a high ROE is generally considered good, this figure can be “misleading” if the company has a large amount of debt. This is because debt reduces the denominator (equity), thereby artificially increasing the ROE ratio even though the company's financial risk has increased.

Earning Per Share

Earnings Per Share (EPS) is an important financial ratio that shows the amount of a company's net income allocated to each outstanding common share, serving as a key indicator of the company's profitability and efficiency in generating profits for shareholders. The higher the EPS, the greater the profit generated per share, which is generally considered favorable, although other factors such as growth and debt are also important considerations for investors. Therefore, EPS is a key indicator of a company's profitability that investors often use to assess the value of a stock before investing.

Rupiah Exchange Rate

The rupiah exchange rate is the price of the Indonesian currency (IDR) compared to other currencies. Another term for this is the exchange rate, which is the price of one currency against another. In the context of international trade and the global economy, exchange rates play an important role because they determine the value of a currency when exchanged for another currency.

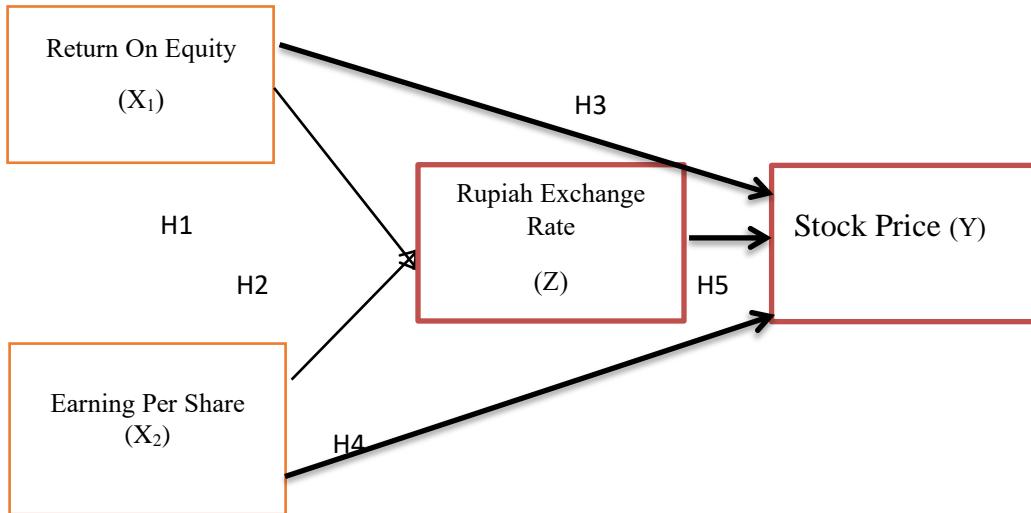
Stock Price

The stock price is the value determined by the strength of the supply and demand for shares in a particular market mechanism and is the selling price from one investor to another. The stock price is one indicator of company management.

METHODS

This type of research is categorized as associative analysis research. Associative research is research that aims to determine the influence or relationship between two or more variables. Therefore, this study aims to determine the influence between the independent variable and the dependent variable and how strong that influence is. This associative analysis research uses quantitative research methods. Quantitative research methods are used to measure independent and dependent variables using numbers that are processed through statistical analysis. The population is a collection of all measurements, objects, or individuals being studied. A sample is a part of the population to be studied. The sample in this study is a portion of the population that meets the sample criteria. The population of this study is pharmaceutical companies listed on the IDX for the period 2016-2019. PT. Kalbe Farma was chosen because this company has become a market leader in the pharmaceutical industry in Indonesia and also has a strategic role in the development of the Indonesian economy in the pharmaceutical industry, where the pharmaceutical sector has been in demand by investors who want to invest since the launch of the government program, namely the BPJS health service in 2014.

Figure 1. Conceptual Framework



RESULTS AND DISCUSSION

PT Kalbe Farma Tbk Stock Price Analysis

PT Kalbe Farma's stock price fluctuated over the 42-month research period from January 2016 to June 2019, ranging from Rp 1,335 to Rp 1,370. The lowest stock price was in August 2018, and the highest stock price was in August 2016 at Rp 1,795. The decline in stock price in August 2018 was caused by fluctuations in the US dollar exchange rate against all currencies in the world, especially the rupiah, which was under pressure and experienced a weakening exchange rate.

Return on Equity (ROE) Analysis of PT Kalbe Farma Tbk

In the ROE table for PT Kalbe Farma over 34 months from January 2016 to June 2019, the rate ranged from 16.48% to 20.88%. The lowest return on equity value of 15.2% occurred in June 2018. Meanwhile, the highest return on equity value occurred in September 2016, at 20.88%.

Earning Per Share (EPS) Analysis of PT Kalbe Farma Tbk

Based on the table above, it can be seen that the lowest Earning Per Share (EPS) growth value of PT Kalbe Farma during the 42-month research period was Rp43, occurring from January 2016 to April 2016. Meanwhile, the highest Earning Per Share (EPS) value of PT Kalbe Farma was in March 2019 at Rp 52.4.

Analysis of the Rupiah Exchange Rate Against PT Kalbe Farma Tbk's Share Price

Kalbe Farma CEO Vidjongtius confirmed that the weakening of the rupiah has caused production costs to increase due to higher raw material import costs. This is especially true given that 90% of the company's raw materials are imported. He mentioned that this price increase is necessary to compensate for the high exposure of raw material costs, which account for 70% of the total cost of goods sold. He further explained that every 1% depreciation of the rupiah will have an impact of 0.35% on the cost of goods sold.

Descriptive Statistical Analysis

Descriptive statistical analysis is used to determine the description of data based on the maximum value, minimum value, mean value, and standard deviation value of the ROE (X1), EPS (X2), stock price (Y), and rupiah exchange rate (Z) variables.

Table 1. Descriptive Statistical Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
ROE	42	15,20	20,88	18,2705	1,46993
EPS	42	43,00	52,40	49,4619	2,53223
Kurs	42	13017,00	15187,00	13721,5952	544,23771
HS	42	1210,00	1795,00	1519,0000	142,05907
Valid N (listwise)	42				

Based on Table 1, we know that:

The minimum value of ROE is 15.2 and the maximum value of ROE is 20.88. Meanwhile, the average and standard deviation of ROE are 18.2705 and standard deviation 1.4693.

The minimum value of EPS is 43.00 and the maximum value of EPS is 52.4. Meanwhile, the mean and standard deviation of EPS are 49.4619 and 2.53223, respectively.

The minimum value of the exchange rate is 13017 and the maximum value of the exchange rate is 15187. Meanwhile, the mean and standard deviation of the exchange rate are 13721.59520 and 509.14106, respectively.

The minimum value of the Stock Price is 1210 and the maximum value of the Stock Price is 1,795. Meanwhile, the average and standard deviation of the Stock Price are 1519.000 and 142.05907.

Normality Assumption Test

The histogram and normal probability plots below show whether the residuals are normally distributed or not. Here are the results:

Figure 2. Histogram Normality Test

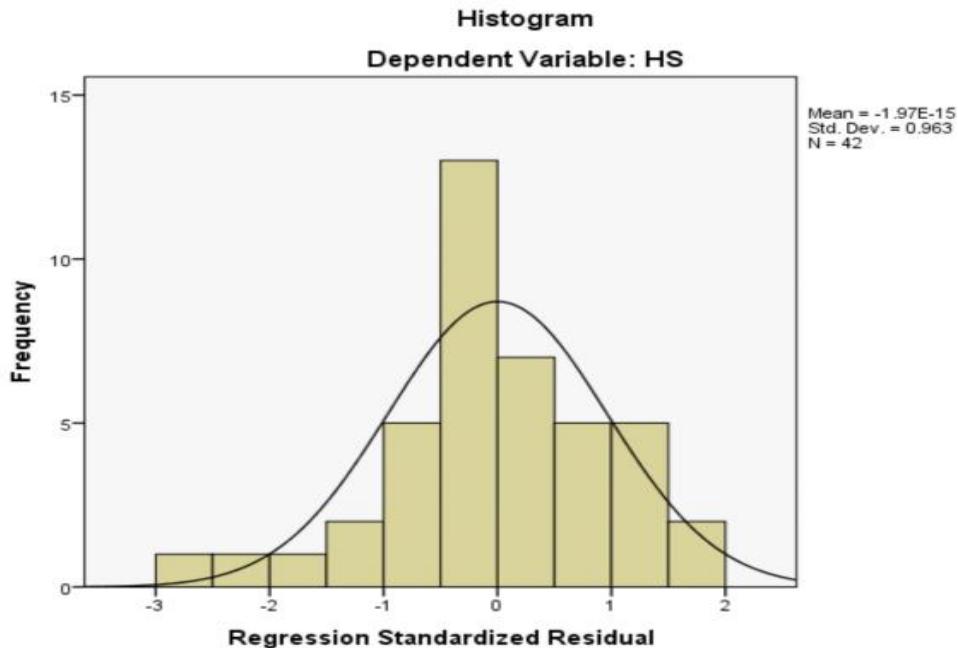
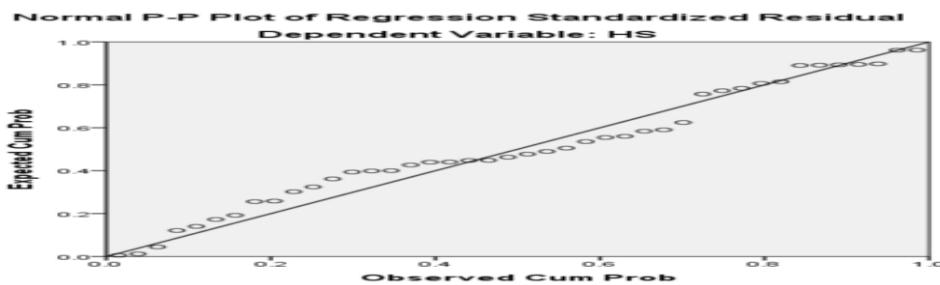


Figure 3. Normality Test Pplot



From the histogram graph, it can be seen that the residuals are normally distributed and symmetrical, not skewed to the right or left. On the normal probability plot graph, the points are scattered around the

diagonal, indicating that the residuals are normally distributed. The normality test results can also be seen in the One Sample Kolmogorov-Smirnov Normality Test in Table 2:

Table 2. Normality Test Results

<i>One-Sample Kolmogorov-Smirnov Test</i>		
		<i>Unstandardized Residual</i>
N		42
<i>Normal Parameters^{a,b}</i>		0,0000000
		90,61604222
<i>Most Extreme Differences</i>		0,104
		0,097
		-0,104
<i>Test Statistic</i>		0,104
<i>Asymp. Sig. (2-tailed)</i>		0,200
<i>a. Test distribution is Normal.</i>		
<i>b. Calculated from data.</i>		
<i>c. Lilliefors Significance Correction.</i>		
<i>d. This is a lower bound of the true significance.</i>		

Thus, according to Table 2, the Kolmogorov-Smirnov test statistic value is 0.104 and significant at 0.05 (because $p=0.200 > 0.05$). Therefore, we do not reject H_0 , which states that the residuals are normally distributed.

Multicollinearity Test

The SPSS output display for VIF and tolerance indicates that there is no serious multicollinearity. No VIF value exceeds 10 and no tolerance value is less than 0.10. This is also confirmed by the results of the correlation between independent variables, which show no significant correlation. The highest correlation is only 0.673, which is between ROE and exchange rate.

Table 3. Multicollinearity Test Results

Coefficients^a

	<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>		<i>Collinearity Statistics</i>		
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>T</i>	<i>Sig.</i>	<i>Tolerance</i>	<i>VIF</i>
1	(Constant)	2703,789	848,081		3,188	0,003		
	ROE	3,552	15,598	0,037	0,228	0,821	0,411	2,433
	EPS	33,782	6,787	0,602	4,977	0,000	0,732	1,367
	Kurs	-0,213	0,041	-0,815	-5,154	0,000	0,428	2,338

a. Dependent Variable: HS

Autocorrelation Test

The following SPSS output shows a Durbin Watson value of 0.896. According to the table with $n = 42$ and $K = 3$, the D_W value is 1.383 and $du = 1.666$. Therefore, since the calculated DW value is $< du$, it can be concluded that there is no autocorrelation between the residuals.

Table 4. Autocorrelation Test Results

Model Summary^b

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Estimate</i>	<i>Durbin-Watson</i>

1	0,770 ^a	0,593	0,561	94,12505	0,896
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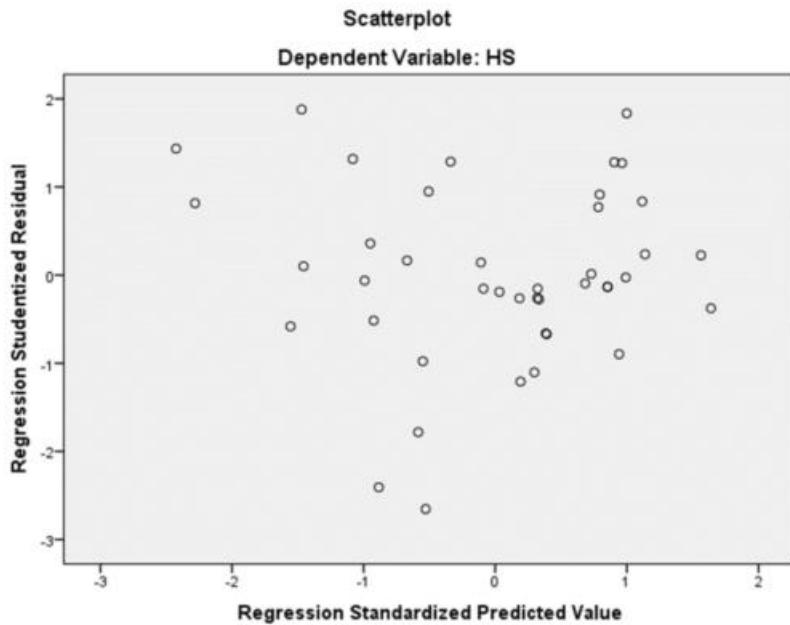
a. Predictors: (Constant), Kurs, EPS, ROE

b. Dependent Variable: HS

Heteroscedasticity Test

The Heteroscedasticity Test aims to test whether there is inequality in the variables from one observation sample to another in the regression model. If the variables from one observation sample to another remain constant, it is called homoscedasticity, and if they differ, it is called heteroscedasticity. The following graph shows whether the regression model is homoscedastic or heteroscedastic.

Figure 4. Scatter Plot Test



From the scatterplot graph, it can be seen that the points are scattered randomly above and below the number 0 on the Y-axis. This indicates that there is no heteroscedasticity in the regression model.

Hypothesis Testing

Partial Testing (t-test)

To interpret the coefficients of independent variables, you can use either unstandardized coefficients or standardized coefficients. The following are the results of the T-test:

Table 5. T-test Results

Coefficients^a

	<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>
1	(Constant)	2703,789	848,081		3,188 0,003
	EPS	33,782	6,787	0,602	4,977 0,000
	Kurs	-0,213	0,041	-0,815	-5,154 0,000
	ROE	3,552	15,598	0,037	0,228 0,821

a. *Dependent Variable: HS*

Of the three independent variables included in the regression model, the ROE variable is not significant, as can be seen from the significance probability of 0.821. Meanwhile, EPS and KURS are significant at 0.05. From this, it can be concluded that the Stock Price variable is influenced by EPS and the Rupiah Exchange Rate.

Stock Price = 2703.789 + 33.782 EPS – 0.213 Exchange Rate + 3.552 (ROE), so

the constant of 2703.789 indicates that if the independent variables are constant, the average stock price of PT Kalbe Farma is Rp. 2703.789

The EPS regression coefficient of 33.72 indicates that every increase in the stock price per share will increase shareholder income by IDR 33.72.

The ROE regression coefficient of 3.552 indicates that every increase in the stock price per share will increase shareholder income by 3.552 times.

Simultaneous Effect Significance Test (F Test)

Unlike the T Test, which tests the significance of partial regression coefficients individually with separate hypothesis tests that each regression coefficient is equal to zero. This type of hypothesis test is called a test of overall significance for the observed and estimated regression line. Is the price linearly related to ROE, EPS, and exchange rate? Here are the results:

Table 6. F Test Results

Anova

	<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	Regression	490750,049	3	163583,350	18,464	0,000 ^b
	Residual	336661,951	38	8859,525		
	Total	827412,000	41			

a. Dependent Variable: HS

b. Predictors: (Constant), Kurs, EPS, ROE

From the ANOVA or F test, a calculated F value of 18.464 with a probability of 0.000 was obtained. Since the probability is much smaller than 0.02, the regression model can be used to predict stock prices, or it can be said that ROE, EPS, and exchange rates together affect stock prices.

CONCLUSIONS AND RECOMMENDATION

Partially, Return On Equity contributes $0.436 = 43.6\%$ to the stock price, while the remaining $0.564 = 56.4\%$ is influenced by other variables outside the scope of this study. It is also known that Return on Equity partially has less effect on stock prices, with a significance value of 0.001, which is smaller than 0.05 ($0.000 < 0.05$) and a Tcount value of 4.868, which is greater than the Ttable value of 2.0195 ($4.686 > 2.0195$), therefore Return on Equity has a less significant effect on the stock price of PT Kalbe Farma. This is different from the research by Ayu Dek Ira Roshita Dewi (2016) and Reni Wahyuningrum (2015), whose research found that Return on Equity partially has a positive effect on stock prices.

Partially, Earning Per Share contributes $0.593 = 59.3\%$ to the share price, while the remaining $0.407 = 40.7\%$ is influenced by other variables outside the scope of this study. It is also known that earnings per share partially affect stock prices, with a significance value of 0.000, which is smaller than 0.05 ($0.000 < 0.05$), and a T-value of 7.37, which is greater than the T-table value of 2.0195 ($7.37 > 2.0195$). . Therefore, Earnings Per Share has a significant influence on the stock price of PT Kalbe Farma. This is in line with previous studies conducted by Ayu Dek Ira Roshita Dewi (2016), Reni Wahyuningrum (2015), and Lidya Agustina (2013), where Earnings Per Share partially influences stock prices. Therefore, for investors, a high Earning Per Share value indicates that the company is able to generate profits for its shareholders. This encourages investors to increase the amount of capital invested. An increase in demand for the company's shares drives up

the share price. Thus, earnings per share / Earning Per Share (EPS) indicates the company's ability to generate profits and distribute the profits earned by the company to its shareholders. Earnings Per Share can be used as a key indicator for investing in PT Kalbe Farma shares. This is because Earnings Per Share is also a way to measure the success in achieving profits for the company's shareholders.

From the results of moderation testing using the Moderated Residual Analysis (MRA) and Pure moderation approaches, the regression coefficient of the stock price is positive although significant (Sig. $0.000 < 0.05$ significant). This means that the Exchange Rate variable is significant in moderating the relationship between ROE and stock price. Where there is an increase in Adjusted R square, where ROE partially affects stock prices by a difference of $0.331 - 0.099 = 0.232$. Simultaneously, ROE and exchange rate also affect stock prices by a difference in Adjusted R Square with the same value of Adjusted R Square $0.331 - 0.293 = 0.038$, indicating that ROE is moderated by exchange rate in affecting stock prices.

From the results of the moderation test using the Moderated Residual Analysis (MRA) and Pure moderation approaches, the regression coefficient of the stock price is positive, although significant (Sig. $0.000 < 0.05$ significant). This means that the exchange rate variable is significant in moderating the relationship between EPS and stock price. Partially, the EPS variable affects stock prices with an Adjusted R Square difference of $0.593 - 0.041 = 0.551$, while simultaneously, EPS and exchange rate affect stock prices with an Adjusted R Square difference of 0.593 .

For companies, since it has been proven that the variables Return On Equity and Earning Per Share do not significantly affect the share price of PT Kalbe Farma and the Rupiah Exchange Rate as moderating variables in this study, companies are expected to provide objective, relevant, and verifiable financial information so that investors can assess the condition of a company and be confident in their decision to purchase PT Kalbe Farma shares.

For investors and prospective investors, it is advisable to first examine the condition of the company they wish to invest in. This can be done by looking at the company's financial statements, including the Return on Equity and Earnings Per Share ratios. However, looking at the company's financial condition alone is not sufficient, especially when limited to only two variables, as a basis for making investment decisions. Therefore, investors should consider all aspects, both fundamental and technical, that may affect stock prices.

For future researchers interested in the same or similar topics, this study still needs improvement, because future studies should use different data and time periods and add several other variables, both internal and external, that can affect stock prices, in order to describe the general conditions and represent the whole, as well as expand the scope of analysis.

REFERENCES

Agus Sartono, (2010), *Manajemen Keuangan Teori dan Aplikasi* (4 th ed.), Yogyakarta: BPFE.

Agustina, Lidya, 2013, *Pengaruh Return On Asset (ROA), Earning Per Share (EPS), dan Tingkat Suku Bunga SBI Terhadap Harga Saham (Studi Pada Indeks LQ45 Tahun 2010)*. Jurnal Akuntansi vol 5, no 1 mei 2013, hal 1-23, Universitas Maranatha, Bandung.

Arifin, Ali (2004), *Membaca Saham*, Penerbit Andi, Yogyakarta.

Bambang, Riyanto, 2001, *Dasar-Dasar Pembelanjaan Perusahaan, Edisi Keempat, Cetakan Ketujuh*, BPFE Yogyakarta, Yogyakarta.

Brigham, Eugene F dan Joel Houston, 2004, *Financial Management, Edisi 10, Jilid 1, Alih Bahasa Ali Akbar Yulianto*, Penerbit Salemba Empat, Jakarta

Bernstein, Leopold A & Wild, John J, 2005, *Analysis of Financial Statements*, Perpustakan Freedom , Jakarta

Bhuono, A Nugroho, 2005, *Strategi Jitu Memilih Metode Statistik Penelitian dengan SPSS*, Penerbit Andi, Yogyakarta.

Darmadji, Tjiptono dan Fakhrudin, 2006. *Pasar Modal di Indonesia pendekatan Tanya Jawab*. Salemba Empat: Jakarta

Dewi, Rosita ayu dek, 2016, *Pengaruh suku bunga SBI dan inflasi, serta fundamental perusahaan (earning per share, return on equity, dan debt to equity ratio) terhadap harga saham pada perusahaan Indeks LQ-45 di Bursa Efek Indonesia (BEI) periode 2011-2014*. E-Jurnal Manajemen Unud, Vol. 5, No. 4, 2016: 2484-2510. Universitas Udayana, Bali

Fahmi, Irham, 2012, *Analisis Laporan Keuangan .Cetakan ke 2*, Alfabeta. Bandung

Garrison dan Norren, (2001), *Akuntansi Manajerial, Edisi Pertama, Jilid Dua*, Salemba Empat, Jakarta.

Ghozali, Imam. (2016), Aplikasi Analisis Multivariate Dengan program IBM SPSS 23, Badan penerbit Universitas Diponegoro, Semarang.

Gitman Lawrence, 2000, *Principles of Managerial Finance, Ninth Edition*, Addison Wesley Longman, Inc.

Imam, Ghozali, 2016, *Aplikasi Analisis Multivariate dengan Program SPSS 23, Edisi 8*, Penerbit Universitas Diponegoro, Semarang.

Jogiyanto, HM, 2009. *Teori Portofolio dan Analisis Investasi. Edisi 6*, BPFE, Yogyakarta.

Kasmir, 2008, *Analisis Laporan Keuangan. Rajawali Pers , Jakarta*

Mishkin, F S, 2008, *Ekonomi uang, perbankan, dan pasar keuangan buku*, Salemba Empat, Jakarta

Priyatno, 2009, *SPSS Untuk Analisis Korelasi, Regresi, dan Multivariate*, Penerbit Gava Media, Yogyakarta.

Sadikin, Ali, 2016, *Pengaruh Interest rate risk, kurs risk, dan financial risk, terhadap return saham perusahaan farmasi*. Universitas lambung mangkurat, Banjarmasin .

Silalahi, Uber, 2006. *Metode Penelitian Sosial* , Penerbit Refika Aditama, Bandung.

Simamora, H, 2002, *Akuntansi Manajemen*, edisi 2, UPP AMP YKPN, Jakarta.

Sunariyah. 2006. *Pengantar Pengetahuan Pasar Modal, Edisi Kelima*, UPP STIM YKPN, Yogyakarta.

Syamsuddin, Lukman, 2011, *Manajemen Keuangan Perusahaan (konsep Aplikasi dalam Perencanaan,pengawasan dan pengambilan keputusan - edisi baru)* Rajawali pers Jakarta.

Sutrisno, 2001, *Manajemen Keuangan*, Ekonesia, Yogyakarta

Sudana, IM, 2011, *Manajemen keuangan perusahaan teori dan praktek*, Erlangga, Jakarta.

Sugima, 2008, *Metode Riset (Bisnis Dan Manajemen) Edisi Pertama*, Guardaya Intimarta, Bandung.