

Effect of EPS, ROE, PER, DPR, and Interest Rate on Stock Prices in the Jakarta Islamic Index Group from 2014 to 2017

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Abstract: The research objective was to analyze the effect of earning per share (EPS), return on equity (ROE), and price earning ratio (PER), dividend payout ratio (DPR), interest rate on stock prices. Sampling using purposive sampling method, with the criteria of 10 issuers that have the highest stock capitalization value in the Jakarta Islamic Index (JII) during the period 2014-2017. Analysis used multiple linear regressions. This research data passed the classic assumption test. The results showed that earning per share and return on equity had a significant effect on stock prices, whereas, price earning ratio, dividend payout ratio, and interest rate have no effect.

1 INTRODUCTION

Investors choose stocks that require historical data on stock price movements on stock exchanges on an individual, group, or combination basis. Given that stock investment transactions occur in every share with a variety of very complex and different problems, stock price movements require specific information. Information that is simple and can represent a certain condition will realize the problem map. This is symbolized by numbers or certain terms. Based on this problem map, investors can predict the situation that will occur in the future. The historical mapping system contains a number of facts and certain quantities that describe changes in stock prices in the past. The form of historical information that is considered very appropriate to describe the movement of stock prices in the past is a stock price index. The stock price index provides a description of stock prices at a certain time or a certain period. The stock price index is a record of changes and movements in stock prices since the first time they circulated until a certain time (Sunariyah, 2011).

A company can obtain its own capital through 2 ways to hold part of its profits and issue new common shares. If profit is not retained, the profit

will be distributed in the form of dividends. Investors who receive dividends can use it to buy shares in other companies. If the profit is retained, it means that the shareholders reinvest the profits that are entitled to the company. Therefore shareholders require that the company must be able to provide a minimum of the profits that can be obtained by shareholders on other investment alternatives that have the same risk as the company's risk (Atmaja, 2003).

2 THEORETICAL FRAMEWORK

According to (Husnan, 2005), shares are proof of company ownership in the form of Limited Liability Company (LLC). The owner of a company's stock is referred to as a shareholder and can be said to be the owner of the company. The responsibility of the owner of the company in the form of LLC is limited to the capital deposited. In conducting business activities including investments in shares, investors will certainly be faced with potential benefits and risks. According to (Darmadji and Fakhrudin, 2006), the benefits of buying shares are as follows:

1. Get Dividends

Dividends are the distribution of profits given by the issuing company for the profits generated by the company. Dividends are given after obtaining approval from shareholders in the General Meeting of Shareholders (GMS). Investors who are entitled to receive dividends are investors who hold shares up to the time limit determined by the company at the time of dividend announcement. Generally dividends are one of the attractions for shareholders with a long-term orientation, for example institutional investors, pension funds, and others. The dividends distributed by the company can be in the form of cash dividends and stock dividends. Cash dividends are given to each shareholder in the form of cash in certain rupiah amounts for each share, while share dividends are given to each shareholder in the form of shares so that the number of shares held by an investor will increase with the share dividend distribution.

2. Capital Gain

Capital Gain is the difference between the purchase price and the selling price. Capital gain is formed by the trading activity of shares in the secondary market. Generally, investors with short-term orientation pursue profits through capital gains. The investor can buy shares in the morning, then sell them again in the afternoon if the stock increases.

Besides these two advantages, it is also possible for shareholders to get bonus shares (if any). Bonus shares are shares that are distributed to shareholders taken from premium shares. The stock premium is the difference between the selling price and the nominal price at the time the company makes a public offering on the primary market.

In addition to getting profits, buying shares can also risk as follows:

1. Not Receiving Dividend

The company will distribute dividends if its operations make a profit. Therefore, companies cannot distribute dividends if they suffer losses. In other words, the potential profit of investors to get dividends is determined by the performance of the company.

2. Capital Loss

In stock trading activities, investors do not always get capital gains or profits on the shares they sell. There are times when investors must sell shares at a price lower than the purchase price. Thus, an investor experiences capital loss. In buying and selling shares, sometimes to avoid the potential for greater losses as the stock price

continues to decline, an investor is willing to sell his shares at a low price. This term is known as cut loss.

3. The company went bankrupt or liquidated

If a company goes bankrupt, of course it has a direct impact on the company's shares. In accordance with the rules for listing shares on the Stock Exchange, if a company goes bankrupt or liquidated, the shares of the company will automatically be issued from foam or delisted. In the condition that the company is liquidated, the shareholders will be in a lower position than the creditors or bondholders. This means that after all the company's assets are sold, the proceeds of the sale are first distributed to the creditors or bondholders, and if there are still leftovers, then distributed to the shareholders.

4. Shares are issued from the Exchange (delisting).

Another risk faced by investors is if the company's shares are excluded from the listing of the Stock Exchange or delisted. The company's shares are delisted from the stock exchange generally due to poor performance, for example in a certain period of time they have never been traded, suffered several years of losses, did not distribute consecutive dividends for several years, and various other conditions in accordance with the Securities Listing Regulations at the Exchange. Delisted shares are of course not traded again on the exchange. Even though these stocks can still be traded outside the stock exchange, there is no clear price benchmark and if sold usually at a price much lower than the previous price.

5. The stock is suspended.

A stock suspended or terminated by the Securities Exchange Authority causes investors to be unable to sell their shares until the suspension is revoked. The suspension usually takes place in a short time, for example a trading session, two trading sessions, but can also take place within a period of several trading days. This is done by the exchange authority if a share experiences a tremendous surge in prices, a company is bankrupt by its creditors, or various other conditions that require the Exchange Authority to temporarily stop trading the shares. The trading of these shares will be resumed until the relevant company provides confirmation or other information clarity. Abnormal stock price movements (caused by unclear information) are not speculations for investors.

The stock price is very important to know in advance by investors before deciding on a stock investment. According to (Darmadji and Fakhruhin,

2006), stock prices are formed because of the demand and supply of shares. Then, the demand and supply occur because of many factors, both specific to the stock and macro nature such as the state of the economy, social and political conditions, and information that develops. In other words, the stock price is the buying and selling price that is being applied in the securities market which is determined by market forces, in the sense that it depends on the strength of demand and supply.

Investors also need to know some ratio analysis related to company performance. Ratio analysis can have an impact on the fluctuation of stock prices, such as Earning Per Share (EPS), Return on Equity (ROE), Price Earning Ratio (PER), and Dividend Payout Ratio (DPR). The four ratios are internal factors that can affect the fluctuation of stock prices. Earning Per Share (EPS) or income per share is a form of profit given to shareholders of each share owned. EPS is obtained from a comparison between net income after tax and the number of ordinary shares outstanding. Furthermore, Return on Equity (ROE) is a ratio that examines the extent to which a company uses its resources to be able to provide a return on equity. ROE is obtained from the comparison between net income after tax and equity. Whereas, Price Earning Ratio (PER) is a comparison between market price per share and earnings per cent (Fahmi, 2014). According to (Darmadji and Fakhruddin, 2006) Dividend Payout Ratio (DPR) is a ratio that measures the ratio of dividends to company profits. This ratio is used to measure dividend policy with the Dividend per Share formula : $\text{Earning per Share} \times 100\%$. Dividend policy is a decision taken by a company regarding the distribution of the company's net profit or the distribution of company property to shareholders in the form of dividends or holding in the form of retained earnings.

According to (Sunariyah, 2011), the interest rate is the price of a loan. Companies that borrow funds are charged interest as a price for the source of funds used. The interest rate is expressed as a percentage of principal per unit of time. Interest is a measure of the price of resources used by the debtor that is paid to creditors. Time units are usually expressed in units of year (one investment year) or can be shorter than one year.

The Indonesian capital market was developed into two major groups of shares. First, conventional stock groups, while others are sharia stock groups. Islamic stocks are grouped into one index called the Indonesian Syariah Stock Index (ISSI). According to (Sunariyah, 2011), in order to develop the Islamic Stock Market of the Jakarta Stock Exchange (JSX)

together with PT Danareksa Investment Management (DMI) has launched a stock index made based on Islamic sharia namely the Jakarta Islamic Index (JII). According to (Hartono, 2009), JII uses a basis dated January 1995 with an initial value of 100. JII is updated every 6 months, namely at the beginning of January and July. JII is an index containing 30 company shares that meet investment criteria based on Islamic law, with the following procedure:

1. The selected shares must have been recorded for at least the last 3 months, except for shares included in 10 large capitalization.
2. Having a debt to asset ratio should not exceed 90% in annual or mid-year financial statements,
3. From the number 1 and 2 criteria, 60 stocks were chosen with the largest order of market capitalization in the last 1 year.
4. Then 30 stocks are selected in the order of the level of average liquidity in the value of regular trading over the past year.

3 RESEARCH METHOD

1. Population and sample

According to (Suliyanto, 2009), the population is the whole object whose characteristics we want to test. The sample is part of the population whose characteristics we want to test. The population used in this study is as many as 30 companies whose shares have been included in the Jakarta Islamic Index for the 2014-2017 period. In a study two methods can be used in determining the sample data, namely probability sampling or non-probability sampling. On probability sampling, randomly selected data means that each prospective sample data has the same opportunity or probability to be selected as data or samples of a study. Whereas in non-probability sampling the data used as samples must meet specific criteria in their selection.

The sampling technique in the Non-probability sample is purposive sampling which is based on certain criteria for specific purposes. The criteria that form the basis of sample selection are:

- a. Companies listed in the Jakarta Islamic Index on the Indonesia Stock Exchange,
- b. Shares traded during the 2014-2017 observation period for the most active companies.
- c. Data needed is available on the website www.idx.co.id.

Based on the criteria specified above, a sample of 17 companies was obtained for the 2014-2017 observation period, then 10 (ten) large capitalized companies were taken.

2. The Data Analysis Method

a. Regression Analysis

This study uses a multiple regression analysis method. The regression equation used in this study is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Remarks:

Y = Stock Price

α = intercept/constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = partial regression coefficients of the dependent variable

X_1 = Earning per Share (EPS)

X_2 = Return On Equity (ROE)

X_3 = Price Earning Ratio (PER)

X_4 = Dividend Payout Ratio

X_5 = Interest Rate

ε = error for the i-observation

b. Classic assumption test

According to (Ghozali, 2013), before estimating the regression coefficient value, it is necessary to test the classic assumptions as follows:

- 1) Normality test, aims to test whether in the regression model of the confounding or residual variables have a normal distribution.
- 2) Multicollinearity test, aims to test whether in the regression model used there is a correlation between independent variables.
- 3) Heteroscedasticity test, aims to test whether in the regression model variance from residual inequality occurs one observation to another observation.
- 4) Autocorrelation test, aims to test whether in the linear regression model there is a correlation between the confounding errors in period t with the interfering error in period t-1 (before).

c. Goodness of Fit

1) Coefficient of Determination

This test aims to measure how far the model's ability to explain the variation of the dependent variable. The small value of R^2 means that the ability of independent variables to explain the dependent variable is very limited. Conversely, if the value of R^2 is close to

one, it means that the independent variables provide almost all the information needed to predict the dependent variable.

2) Simultaneous Significance Test (F Test)

The F statistical test basically shows whether all the independent or free variables included in the model have a joint effect on the dependent variable.

$H_0: b_1 = b_2 = \dots = b_k = 0$, meaning whether all independent variables are not significant explanations of the dependent variable.

$H_A: b_1 \neq b_2 \neq \dots \neq b_k \neq 0$, meaning that all independent variables simultaneously are significant explanations of the dependent variable.

d. Significant Individual Parameter Test (t Test)

The t statistical test basically shows how far the influence of one independent variable / explanatory individually in explaining the variation of the dependent variable.

$H_0: b_i = 0$, meaning whether an independent variable is not a significant explanation of the dependent variable.

$H_A: b_i \neq 0$, meaning that the variable is a significant explanation of the dependent variable.

4 ANALYSIS AND RESULTS

In linear regression analysis there are several assumptions that must be fulfilled so that the resulting regression equation will be valid if used to predict (Santoso and Ashari, 2005). Based on the results of the classic assumption test, the following results are obtained:

1. One-Sample Kolmogorov-Smirnov Test Normality Test obtained the Sig. (2-tailed) of $0.704 > 0.05$. This means that standardized residual values are declared to spread normally.
2. The results of the calculation of Tolerance value indicate that there is no independent variable that has a Tolerance value of less than 0.10 and the value of Variance Inflation Factor (VIF) has a VIF value of more than 10. So it can be concluded that there is no multicollinearity between independent variables in the regression model.
3. Based on the Heteroscedasticity test with the Glejser method it is known that the regression model does not occur symptoms of heteroscedasticity. This is because of the Sig.

independent variables on residual absolute > 0.05.

4. Outocorrelation test results using the Durbin Watson method, obtained a DW value of 1.985. Because the DW value is 1985 located between dU and 4-dU, it can be concluded that the regression equation model does not contain autocorrelation problems.

Table 1: Determination Coefficient Hypothesis Test Results

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.914 ^a	.836	.811	43.38695

Predictors: (Constant), interest rates, price earnings ratio, earn per share, dividend payout ratio, and return on equity

Based on Table 1 we see the Adjusted R-Square value is 0.81. This means that 81% of the stock price variable can be explained by variations in the five independent variables, namely EPS, ROE, PER, DPR, and interest rates. While the remaining 17% is explained by other reasons outside the model.

Table 2: F Test Results

Model	Df	F	Sig.
Regression	5	34.574	.000 ^b
Residual	34		
Total	39		

a. Dependent Variable: stock price

b Predictors: (Constant), interest rates, price earnings ratio, earnings per share, dividend payout ratio, and return on equity

Based on the ANOVA test results in Table 2, the calculated F value is 34,574 with a significance value of < 0.05, then the regression model can be used to predict that EPS, ROE, PER, DPR and interest rates together influence stock prices.

Table 3: The Results of t Test

Coefficients ^a				
Model	Unstand Coef	Stand Coef	t	Sig.
(Constant)	759.302		16.388	.000

EPS	.002	.683	8.218	.000
ROE	.011	.383	2.987	.005
PER	-.012	-.154	-1.518	.138
DPR	.006	.133	1.433	.161
Tk.Bunga	.502	.009	.127	.899

a. Dependent Variable: harga saham

In Table 3, it can be seen that of the five independent variables, the EPS and ROE variables show a sig value of < 0.05, it can be concluded that EPS and ROE variables have a significant effect on stock prices. While the PER, DPR, and Interest Rate variables are > 0.05, it can be concluded that the effect of the PER, DPR, and Interest Rate variables on the Stock Price is not significant. Based on the table above the multiple linear regression equation is made as follows $Y = 759,302 + 0,002X_1 + 0,011X_2 - 0,012X_3 + 0,006X_4 + 0,502X_5 + \varepsilon$

5 DISCUSSION

1. Effect of Earning per Share (EPS) on Stock Prices

Referring to table 3, the sig value 0,000 < 0,05 is obtained, then HA is accepted and H0 is rejected. EPS variables have t test 8.218 and t table 2.032. Because t test > t table can be concluded that the EPS variable has a positive and significant effect on stock prices. EPS has a regression coefficient of 0.683 which means that every increase in EPS in one unit, then the stock price rises by 0.683 assuming that the other independent variables are constant. This result is in accordance with the research of (Bratamanggala, 2018), (Wijayanti and Sulasmiyati, 2018), (Aletheari and Jati, 2016) that EPS has a significant positive effect on stock prices.

2. Effect of Return on Equity (ROE) on Stock Prices

Based on table 3, obtained a value of 0.005 < 0.05, then HA is accepted and H0 is rejected. ROE variables have t test 2.987 and t table 2.032. So t test > t table can be concluded that the ROE variable has an influence on stock prices. So it can be concluded that ROE has a positive and significant effect on stock prices.

ROE has a regression coefficient of 0.383, which means that every increase in ROE in one unit, the stock price rises by 0.383 assuming that the other independent variables are constant.

These results are consistent with the research of (Kamar, 2017), (Halim and Basridan Faisal, 2016), and (Susilowati, 2015), that ROE has a significant positive effect on stock prices.

3. Effect of Price Earning Ratio (PER) on Stock Prices

If seen in table 3, the sig value is $0.138 > 0.05$, then H_A is rejected and H_0 is accepted. PER variable has t test -1.518 and t table 2.032. So t test $<$ t table can be concluded that the variable PER has no effect on stock prices. So it can be concluded that PER does not have a significant effect on stock prices. PER has a regression coefficient value of -0.154. This means that every increase in PER per unit, the stock price decreases by 0.154 assuming that the other independent variables are constant. This result is different from the research of (Astuty, 2017), (Suselo et al., 2014), (Ervinta, 2013) which states that PER has a positive and significant effect on stock prices.

4. Effect of Dividend Payout Ratio (DPR) on Stock Prices

Based on table 3, the sig value is $0.161 > 0.05$, then H_A is rejected and H_0 is accepted. The DPR variable has a t test of 1.433 and t table of 2.032. So t test $<$ t table can be concluded that the DPR variable has no effect on stock prices. PER has a regression coefficient of 0.133, which means that every increase in DPR is one unit, then the stock price rises by 0.133 assuming that the other independent variables are constant. This result is different from the research of (Jahfer and Mulafara, 2016), (Wijaya R.Z., 2017.) which states that the DPR has a positive but not significant effect on stock prices.

5. Effect of the Effect of Interest Rates on Stock Prices

In the coefficients column in table 3, there is a sig value of $0.899 > 0.05$, then H_A is rejected and H_0 is accepted. The Interest Rate variable has a t test of 0.127 and t table of 2.032. So t test $<$ t table can be concluded that the interest rate variable has no effect on stock prices. So it can be concluded that the interest rate does not have a significant effect on stock prices. The interest rate has a regression coefficient of 0.009, which means that every increase in one unit of interest rates, the stock price rises by 0.009 assuming that the other independent variables are constants. This result is different from (Satoto and Budiwati, 2013) research which states that the BI rate has a positive effect on stock prices. While the results of his research by (Kristanti and Lathifah, 2013), state that the BI rate has a negative effect on stock prices.

6 CONCLUSIONS

Based on the results of testing using multiple linear regression analysis with a sample of 10 companies listed in the Jakarta Islamic Index in the period 2014-2017, it can be concluded:

1. Variables Earning Per Share has a positive and significant effect on stock prices in 10 companies listed in the Jakarta Islamic Index with the largest capitalization value in the 2014-2017 period.
2. Variable Return on Equity has a positive and significant effect on stock prices in 10 companies listed in the Jakarta Islamic Index with the largest capitalization value in the 2014-2017 period.
3. Price Earning Ratio variable has a negative but not significant effect on stock prices in 10 companies listed in the Jakarta Islamic Index with the largest capitalization value in the 2014-2017 period.
4. Variables Dividend Payout Ratio has a positive and insignificant effect on stock prices in 10 companies listed in the Jakarta Islamic Index with the largest capitalization value in the 2014-2017 period.
5. Variable Interest Rates have a not significant positive effect on stock prices in 10 companies listed in the Jakarta Islamic Index with the largest capitalization value in the 2014-2017 period.

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