ANALYSIS EFFECT OF EXCHANGE RATES AND INTEREST RATES OF BANK INDONESIA ON SHARE PRICE


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Abstract

Every company should be able to set the price of shares in accordance with market prices to make investors interested in investing shares in the capital market. This study aims to determine and analyze the effect of exchange rate and interest rate of Bank Indonesia Certificates on share price of Property and Real Estate company that was listed on the Indonesia Stock Exchange (IDX).

This research is a quantitative descriptive, population in this study are all company property and real estate listing in IDX as many as 48 companies with sampling purposive sampling techniques in order to obtain a sample 30 property and real estate company on the Stock Exchange. Data analysis techniques in this study using classical assumption test and multiple linear regression test consisting of partial test (t test), simultaneous test (F test), and the determinant coefficient (R-Square).

The results of this study indicate that partial and simultaneous exchange rate and interest rate variables SBI has significant influence on stock prices and real estate property company on the Stock Exchange Period 2014-2017.

It can be concluded that there is a negative effect of exchange rates and stock prices with significant value of 0.048. There is a significant positive effect between the Bank Indonesia Certificates to stock price with the significant value of 0.000. Exchange and Interest Rates have significant effect on stock prices and real estate property company on the Stock Exchange.

Keywords: Exchange rate, interest rate of Bank Indonesia Certificates, stock price.

RELIMINARY

1.1 Background

At the present time, the development of the world economy is growing very rapidly so that many foreign companies that have a competitive advantage to invest in Indonesia. That will cause business competition is very tight. In order to survive, each company will seek to expand its business either by selling the company's shares on the stock market as a major alternative for funding sources.

When the company decided to sell its shares in the stock market, then the company should be able to set the share price in accordance with market prices in order to attract investors to invest. According to Fahmi (2015: 80), defines stock as a "proof of participation capital holdings / fund in a company, the paper is clearly stated nominal value, company name, followed by the right and obligation to explain to each holder and inventory ready for sale ". While the share price by Jogiyanto Hartono (2016) is as the value of shares where the value of the stock consists of three grades, namely: Book Value, Market Value, Intrinsic Value.
In conjunction with this study, researchers will analyze two factors that affect the stock price, the exchange rate (exchange rate) and the SBI interest rate. Determination of the rupiah against foreign currencies is important for capital market players in Indonesia, as foreign exchange rates greatly influence the amount of costs to be incurred and the amount of costs that will be obtained in stocks and securities transactions.

Pure (2013: 244) said that "the exchange rate as the number of domestic money needed to obtain one unit of foreign currency more". Meanwhile, according to Mahyus Ekanada (2014), defines "the exchange rate as a currency relative to the currencies of other countries and play an important role in decision-shopping, because the exchange rate allows us to translate the prices of various countries into one language the same price".

Based on the above, it can be understood that the exchange rate or the exchange rate against a currency is the rupiah currency or a country against other foreign currencies. Exchange rates are volatile and unstable will affect foreign investors' confidence in the Indonesian economy. This issue will certainly have a negative impact Cosmos stock trading in the capital market. Because foreign investors will tend to pull their money so the Capital of Flow and this will impact on the share price decline.

In addition to the foreign exchange rates affect the stock price is the interest rate which the high interest rates that would encourage the owners of capital to invest in a bank named by reason of expected profit rate. Boediono (2014: 76) defines the level of interest rates as the "price of the use of investment funds. The interest rate is one indicator in determining whether someone will make an investment or saving ". Meanwhile, according Sunariyah "interest rate as the price of the loan and expressed as a percentage of the principal". (Sunariyah, 2013: 80)

The property sector as one of the rapidly growing sector in Indonesia and become an important indicator in analyzing a country's economic health. Based on data collected by the Association of REI (Real Estae Indonesia), growth in property business in Indonesia increased by 30%, which indicates that the business cycle in the property sector is still not optimal. In an RE Expo 2015 exhibition in Singapore, noted that the comparison of the growth of the real estate business is quite sharp. Exhibition held in 2015, the property is to compare the percentage growth in 2015 to 2014 which is only about 15 percent to 20 percent. (Direktoritraining.com, 2015)

The phenomenon that occurred in 2017 that the world crisis on the European continent in 2010 and Turkey in 2016 which have an impact on the fall of the stock price on the company's property and real estate.hal can be seen in the following table:

<table>
<thead>
<tr>
<th>Year</th>
<th>Property Stock Index and Real Estate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Rp.444,073</td>
</tr>
<tr>
<td>2015</td>
<td>Rp.509,476</td>
</tr>
<tr>
<td>2016</td>
<td>Rp.524,478</td>
</tr>
<tr>
<td>2017</td>
<td>Rp.503,493</td>
</tr>
</tbody>
</table>

Source: www.yahoo finance.go.id (Data processed)

From table above can be seen that in the year 2014-2015 sectoral indices property company shares and real estate increased by 14.73%. However, in 2015-2016 the growth of sectoral stock price index grew only 2.95% which is somewhat lower than in the previous year. Then in 2016-2017 sectoral index stock has decreased significantly.
by -4%. This indicates there is a problem with the sectoral company property and real estate in Indonesia. If this continues, it is inevitable to affect the bankruptcy and weak economic growth in Indonesia.

This research was also supported by research Hilmi Luthfiana (2018) entitled the effect of exchange rates, interest rates, and inflation on the stock price index, real estate and real estate listed on the Stock Exchange, where the research results show that the exchange rate (exchange rate of US $ against Rupiah ) significant negative effect on the property sector stock price index in the Indonesia stock Exchange. This means that the higher exchange rate (US $ / US $), the lower the stock price index, the property sector in BEI. However, interest rates did not significantly affect the property sector stock price index in the Indonesia Stock Exchange. This means that high or low levels of interest rates in Bank Indonesia set has not been able to increase the value of the property sector stock price index at the Stock Exchange premises.

1.2. Formulation of the problem
Based on the above, the problems can be formulated as follows:

a. How does the exchange rate effect on stock prices and real estate property companies listed on the Indonesia Stock Exchange Year 2014-2017?

b. How can the influence of SBI interest rate on stock prices and real estate property company listed in Indonesia Stock Exchange in 2014-2017?

c. How to influence the exchange rate and interest rate SBI jointly effect on stock prices and real estate property company listed in Indonesia Stock Exchange in 2014-2017?

THEORETICAL BASIS
2.1. Definition of Capital Markets
The capital market is a place where various parties, especially companies selling shares (stocks) and bonds (bond) in order to get results that will be added or used as additional funds to strengthen the company's capital (Fahmi, 2015: 48). In addition, according to Hadi, the capital market is a situation which gives an opportunity sellers and buyers meet and conduct negotiations in commodity exchange capital, where capital here either in the form of debt (bonds) and equity (equity), (Nor Hadi, Capital Markets Issue 2, Yogyakarta: Graha Science, 2015: 14)

According to Azis, Mintarti, and Nadir (2015: 15): "The stock market is a place to share the market as a long-term financial instruments that can be traded either letters money (bonds), equities (stocks), mutual funds, derivatives and other instrumen". Based on these descriptions, it can be concluded that the capital market is a place where the trading of shares or bonds and other securities.

2.2. understanding Stocks
Simply put stock is a sign statements or possession of any person or body in the company. Fahmi (2015: 80), defines stock as a "proof of participation capital holdings / fund in a company, the paper is clearly stated nominal value, company name, followed by the right and obligation to explain to each holder and inventory ready for sale" , Meanwhile, according to Jogiyanto Hartono (2016) is a proprietary company shares are sold. If the company only issued one share class only, this stock is called ordinary shares (common stock). The company also spent more classes of shares, namely the so-called preference shares (preferend stock).

According to Fahmi (2014: 270) shares a "proof of stock ownership in a company, the paper is clearly stated nominal value, the company name and stock ready for sale.
Meanwhile, according to Riva, et al., (2013: 147), a form of the stock is "a piece of paper stating that the owner of the paper is an owner of the company". Based on the above, it can be concluded that the stock is a letter or proof that physically writing the paper owner is the owner of the company and the share of ownership is determined by a large sebarapa equity invested in the company.

Not surprisingly said that the stock is the most risky types of securities, the investor will bear the full risk of the share capital when the company went bankrupt. There are two possibilities to expect an investor to buy shares, first, dividends or profits distributed, to receive a dividend should bewaiting for the AGM is done, therefore the dividend is an attraction for investors who buy stocks for the long-term interests. While the second is a capital gain or a difference in the selling price and purchasing power. Investors will have an advantage when selling price is higher than the price when he bought and vice versa. (Budialim, Geofani. 2013).

2.3. **Stock price**

Sri Ratna Hadi (2013) defines "stock price as the value of shares in the rupiah that occurs due to the action of purchasing and stock offering on the stock exchange by fellow members of the exchange". It can be concluded that the stock price is the selling price prevailing in the stock market are determined by supply and demand. Meanwhile, according Albab (2015: 1) states "if the number of shares higher demand than offers automatically share price will rise, and vice versa, if the demand for shares is lower than the offer the stock price will decline".

Romaidi (2017) defines "stock price as the value of the equity investment in a company that has been listed on the stock exchange and the shares were outstanding.

Meanwhile, according to Jogiyanto Hartono (2016) discloses the share price as the value of shares, and explained that the value (price) of the shares of three values (the stock price), namely:

1) **Book Value (Book value)**

Book value is the value of the issuer's shares according to the company's books. The book value is influenced by nominal value and share premium, the value of paid-in capital and retained earnings

2) **Market Value (Market value)**

In contrast to the book value, market value is the price of the securities indicated by the market supply at any given moment. The market value is determined by supply and demand that occurred in the stock market

3) **Intrinsic Value (Intrinsic value)**

Intrinsic value is the value of a stock should the company or the actual value of a stock.

Until the author's understanding that the share price is the price of a stock or stock value currently prevailing in the stock market.

2.4. **Exchange rate**

The course of export and import activities will encourage the exchange of two or more different currencies. This transaction will give rise to demand and supply on a particular currency.

Mahyus Ekananda (2014) which states that "the exchange rate of a currency ralatif against the currencies of other countries. Exchange rate also plays an important role in shopping decisions. Because of the exchange rate allows us to translate the prices of various countries into one language the same price ". Meanwhile, according to Pure
(2013: 244) defines the exchange rate (exchange rate) as "the amount of domestic money needed to obtain one unit of foreign currency more".

2.5. Interest rate

According to Boediono (2014: 76) is the interest rate: "The price of the use of investment funds (Loanable funds). The interest rate is one indicator in determining whether someone will make an investment or saving ". Meanwhile, according Sunariyah (2013: 80) defines interest as the price of the loan and expressed as a percentage of the principal and the interest rate is a measure of the price of the resources used by the debtor to be paid by the creditor.

2.6. Bank Indonesia Certificates (SBI)

Bank Indonesia Certificates (SBI) began publication in 1970 to create short-term financial instruments and is a reliable monetary tools to stabilize the national economy by raising and lowering the interest rate of SBI. Governments could also monetary expansion or contraction by lowering the interest rate SBI (DA Dwi Rahmawati and Wahyu Hidayat, 2017).

a. Definition of Bank Indonesia Certificates

Based on Bank Indonesia Circular Letter No. 8/13 / DPM on Bank Indonesia Certificate Issuance via auctions, Bank Indonesia Certificates, hereinafter referred to as SBI are securities in rupiah currency issued by Bank Indonesia in recognition of short-term debt. Meanwhile, according to Rahmawati and DA Dwi Wahyu Hidayat (2017), states that "Bank Indonesia Certificates are bearer securities issued by the central bank and SBI nominal value of securities in order to carry out a monetary kebijakan through open market operations".

2.7. Conceptual framework

2.8. Research hypothesis

Based on the theory and background exposure and prior conceptual framework, then the hypothesis proposed in this study are:

RESEARCH METHODS

3.1. Types of research
This research uses descriptive quantitative research, because it describes the quantitative data obtained menyangkutt state of subject / phenomenon of a population or a sample and the variables that will examine the relationship.

3.2. Place and time of research
This study was performed on companies listed in Indonesia Stock Exchange (IDX) where corporations Property and Real Estate listing in BEI period 2014-2017. The research data retrieval time during December 2018 - January 2019.

3.3. Population and Sample
The population in this study are all Property and Real Estate companies listed in Indonesia Stock Exchange during the period 2014-2017, as many as 48 companies. The samples used were selected based on purposive sampling metod is sampling based on certain criteria. samples
A total of 30 companies, the data used is secondary data obtained from the official website and the Indonesia Stock Exchange (www.idx.co.id).

4.1. Classic assumption test

1. Normality Test
Normality test aims to test whether the regression model, the independent variables and variables related to both of them have a normal distribution or not. A good regression model is to have a normal distribution of data.
- H1; normal population data berdisribusi
- If asymsing > alpha of 0.5 means that H1 is accepted
- If asymsing < alpha of 0.5 means that H1 is not acceptable

2. Test Multicollinearity
This test was conducted to test whether the regression model has a correlation between the independent variables. How to detect the presence of multicollinearity is to look at the value of tolerance and the value of inflation factor (VIF). The two measures shows each independent variable which is explained by the independent variables measuring the variability tolerance lainya. Nilai selected independent variables that are not explained by other independent variables, the cut-off value which is commonly used for addressing their multicollinearitas is the tolerance value > 0.10, or equal with the value of vif <10. Multicollinearity can also be detected by analyzing the correlation matrix of the independent variables.
If there is a correlation between the independent variables are quite high (generally above 0.90 or 90%), then this is an indication of multicollinearity (Ghozali, 2012).

3. Test Heteroskedasticity
This test aims to test whether the regression model occurred inequality variance (dispersion of data) or any other observation to observation.
- If sig> 0.05, there are no symptoms heterosdastisitas.

4. Test autocorrelation
This test is used to determine whether or not the correlation that occurs between the residuals on the observation by other observations in the regression model. Methods using test durbin watso (DW) with the following conditions:
   a. DW Figures below -2 means there is positive autocorrelation
   b. Figures DW between -2 to +2 means no autocorrelation
   c. Figures DW above +2 mean negative autocorrelation.
5. Multiple Linear Regression Test

Multiple linear regression analysis was used to test whether the independent variables have an influence on the dependent variable simultaneously or partially. Multiple linear regression analysis according Sugiyono (2016: 188) can be formulated as follows:

\[ Y = a + b_1 x_1 + b_2 x_2 \]

Information:
- \( Y \) = Subjects in the predicted variable
- \( a \) = Coefficient constant
- \( b \) = Coefficient of regression
- \( x_1 \) = Exchange
- \( x_2 \) = SBI

4.2. Hypothesis testing

1. Partial Correlation test (t test)

Berujuan correlation test to test whether two variables are independent variables and the dependent variable has a strong relationship strong or not, whether the relationship is positive or negative (Danang Sunyoto, 2016: 57).

According Sugiyono (2014: 241), while the formula of product moment correlation is as follows:

\[ r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} \]

Information:
- \( r \) = Coefficient of correlation
- \( x \) = Independent variable
- \( y \) = The dependent variable

The correlation coefficient (r) indicates the degree of correlation between the independent variable (X) with the dependent variable (Y). Coefficient values must be contained within the limits of -1 to +1 (-1 \(< r <+1\)), which resulted in several possible reasons:

1) A positive sign indicates a positive correlation between the variables were tested, which means that any increases and decreases in the value of X will be followed by an increase and decrease Y.

2) The negative sign indicates a negative correlation between the variables tested, which means that any increases and decreases in the value of X will be followed by the rise and decline of Y and vice versa.

3) If \( r = 0 \) or close to 0, then it indicates a weak correlation or no correlation at all between the variables studied.

2. Correlation Sumultan (F)

To find out all the independent variables and the dependent variable explained, then tested the hypothesis simultaneously using statistical test F, according to the formula:
Information:

\[ R^2 = \text{Coefficient of Determination} \quad X_1, X_2, Y \]
\[ n = \text{Number of Observations} \]
\[ k = \text{The number of variables with a significant level of 0.05 or 5\%.} \]

The criteria used are as follows:
- Ho is rejected if \( F_{hu} > F_b \)
- Ho is accepted if \( F_{hu} \leq F_b \)
- If significant numbers \( \geq 0.05 \), then Ho is not rejected.
- If significant numbers \( <0.05 \), then Ho is rejected.

3. The coefficient of determination (R2)

The coefficient of determination aims to measure the extent to which the model's ability to explain the independent variable. The determination coefficient is between zero and one, if the value of \( R^2 \) it means the ability of small independent variable in explaining the variation is very limited dependent variable (Imam Ghozali, 2016: 98).

The formula coefficient of determination by (Sugiono, 2015: 231) is as follows:

\[
K_d = r^2 \times 100\%
\]

Kd \( = \) Coefficient of Determination
r\(^2\) \( = \) Coefficient of correlation

DISCUSSION RESULT

Analysis of the data retrieved a description of this study are reported separately stock prices, exchange rates, and interest rates of the years 2014-2017 with a sample of 30 properties and real estate companies listed on the Stock Exchange. Description of the variables in the descriptive statistics used in these variables include the mean and standard deviation of the dependent variable is the stock price and the two independent variables, exchange rates and interest rates of SBI.

1. Normality test

the results of residual analysis states that the significance of the regression function Foreign Exchange and Interest Rates (SBI), the price of property companies and real estate amounted to 0.098. The value is greater than 0.05 so that we can conclude the regression function and the data from these three variables have normal distribution.

1. test Multicollinearity

VIF's acquisition value and the exchange value of SBI interest rate is 2,702 <10 with a tolerance value 0370> 0:10, which means that the classified research data there are no symptoms or disorders multikolinieritas in the regression models.

2. test Heteroskidastity

Based on the results it can be seen that the scatterplot graph points spread above and below zero and the points do not form a particular pattern and spread. It can be concluded disqualify Heteroskidastity test.

3. autocorrelation test

on the test results obtained DW autocorrelation test (durbin watson test) amounted to 1,877, which means that the value of DW is located between -2 to +2 so that conclusions drawn from these results is the absence of autocorrelation between residuals.
on the observation by other observations in the regression model thus regression models were used can be continued because it does not deviate from the classical assumption test and regression model is feasible for use.

Results of Multiple Linear Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td></td>
<td>20 088</td>
</tr>
<tr>
<td>X1_KURS</td>
<td>-0.506</td>
<td></td>
</tr>
<tr>
<td>X2_SUHUK_BUNGA_SBI</td>
<td>0.795</td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS output, January 2019

Based on the above table, the regression equation can be structured as follows:

\[ Y = 20088 - 0.506X1 + 0.795X2 \]

The result of this equation describes the interpretation as follows:

a. The constant value of 20 088 means that if there is no variable rate and interest rate of Bank Indonesia Certificates (SBI), the amount of shares amounted to 20 088 haga.

b. -0.506 exchange rate of regression coefficient means that the value of the dollar exchange rate of USD has a negative correlation to the stock price, which means that an increase of 1 unit value of the dollar exchange rate USD will result in a decrease in the share price of -0.506.

c. The regression coefficient rate Indonesian Bank Certificate (SBI) by 0.795 means SBI interest rate has a positive relationship to the stock price, which decreased 1 interest rate will cause an increase of the share price of 0.795.

Hypothesis testing

1. Partial Test (Test T)

The \( t \)-test was conducted to determine how the effect of exchange rate and interest rate of Bank Indonesia Certificates (SBI) individually / partial to the stock price. In this case the partial testing is done by looking at the level of sig. \( \alpha \) of 5% or 0.05.

According to the table showing the exchange rate has a value of \( t \)-count - 2002 and 0.048 the probability value with a significance level of 0.05 which means sig 0.048> 0.05. Based on the above results it can be concluded that the rate of significant negative effect on the company's stock price of the property and real estate in BEI period 2014-2017.

Interest rates on the Indonesia Bank Certificate (SBI) has a value of \( t \)-count equal to 3,604 and probability value of 0.000 with a significance level of 5% or 0.05 which means sig 0.000> 0.05. Based on the above results it can be concluded that the interest rate of Bank Indonesia Certificates (SBI) positive significant effect on stock prices and real estate property company in BEI period 2014-2017.

2. Simultaneous Test (Test F)

Simultaneous \( F \) test or tests used to test whether there are significant independent variable exchange rate and interest rate SBI together or simultaneously to the stock price of the dependent variable. To determine whether or not the simultaneous
relationship is to look at test probability value $f < \text{significance level of 5\%, or 0.05, then there is a significant effect.}$

Berdasatkan processed SPSS above, indicates that the value $f$ calculated at 7.491 and probability value of 0.01 < significance level of 5\% or 0.05. means that there are independent variables simultaneously influence the exchange rate and the SBI interest rate on the dependent variable on the company's stock price the property and real estate listed on the Stock Exchange from 2014 to 2017 period.

3. Test R2 or Coefficient of Determination
R2 test is performed to determine how much the stock price is affected by the independent variable

Test Results R2 (coefficient of determination)

<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.337</td>
</tr>
</tbody>
</table>

According to the table above can be seen the result of the acquisition number $R$ is equal to 0.337, or 33.7\%. This shows the magnitude of the effect of the exchange rate and the proportion of SBI interest rate of stock prices by 33.7\%. while the remaining 66.3\% is influenced by other variables not examined.

CONCLUSION
Based on the results of the discussion above, it can be concluded as follows:

1. Exchange rate (USD / IDR) negatively affect the stock price of the property and real estate company listed on the Indonesia Stock Exchange (SBI) in the period 2014-2017. Significant because 0.048 > 0.05, so that $H_a$ accepted and rejected.

2. Interest Rate of Bank Indonesia Certificates (SBI) and significant positive effect on stock prices and real estate property companies listed on the Indonesia Stock Exchange 2014-2017 period. Because a significant 0.000 > 0.05, so that $H_a$ accepted and rejected.

3. Variable rate and the interest rate of Bank Indonesia Certificates (SBI) together or simultaneously have a significant influence on stock prices and real estate property company listed on the Indonesia Stock Exchange 2014-2017 period. Because a significant 0.001 > 0.05, so that $H_a$ accepted and rejected.

4. Based on the regression results obtained R2 values of 0.337 or by 33.7\%, which means that a large proportion of the influence of the SBI interest rate and exchange rate against the stock price is 33.7\% and the remaining 66.3\% influenced by variables that are not investigated.

SUGGESTION

1. For Investor
   For investors who are interested in investing in real estate companies and real estate in BEI should be thorough in analyzing stocks that will benefit as expected.

2. For further research
   For further research is expected to use different variables that have not been examined in this study. Is also expected to use a number of long research period and increase the study sample.
3. for issuers
   The results of this study are expected to provide an overview and information especially for corporate leaders that will be able to consider the effect of the exchange rate and the SBI interest rate on stock prices and real estate property companies listed on the Stock Exchange.

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