Analysis of Macroeconomic Variables and Fundamental Analysis of Indonesia Shariah Stock Index (ISSI)

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Abstract:

This study atempts to analyze the effect of domestic macroeconomic variables: Inflation and BI Rate; global macroeconomic variables: World Oil Price (WTI); and financial ratios by using fundamental analysis: Earning Per Share (EPS), Price to Earning Ratio (PER), Debt to Equity Ratio (DER), dan Return On Equity (ROE) against Indonesia Sharia Stock Index (ISSI). This study uses quantitative method with multiple linier regression analysis with quarterly time sequences from the 1st quarter of 2011 to the 4th quarter of 2016. The data obtained from Dunia Investasi, Bank Indonesia's Report, Economagic, and Indonesia Stock Exchange. The sample was taken using purposive sampling and data was collected by recording techniques. The result of this study shows that all variables are influential where ISSI is negatively affected by World Oil Price (WTI), and positively affected by Inflation, BI Rate, EPS, PER, DER, and ROE.

INTRODUCTION

Indonesia, one of the largest Muslim countries in the world, is a large market for developing the Islamic finance industry. Islamic investment in the capital market has a role in developing the market share of Islamic finance industry in Indonesia. Investment in Islam is not only profit-oriented, but also an activity that is spiritual in nature and carried out in accordance with sharia norms and is the essence of an amaliyah science. Therefore, investment is highly recommended for every Muslim (Nawawi, 2012). This is also explained in the Word of Allah in QS. 59:18 that man must pay attention to what he has done for tomorrow.

The Islamization of the capital market in Indonesia is also developing well. This can be seen from institutional developments such as the Capital Market Supervisory Agency-Financial Institutions (Bapepam-LK), the Financial Services Authority (OJK), and the National Sharia Council-Indonesian Ulema Council (DSN-MUI) involved in making sharia regulations of capital market and the development of sharia capital market instruments in the Sharia Securities List (DES) such as sharia mutual funds, sharia shares, sharia bonds or sukuk. Purnawan (2014) said that the emergence of Islamic stock indexes on the Indonesia Stock Exchange (IDX) such as the Jakarta Islamic Index (JII) in 2000 and the Indonesian Sharia Stock Index (ISSI) in 2011 also completed the development of the Islamic capital market in Indonesia. This index is a guide for investors who want to invest their funds in Islamic stocks.
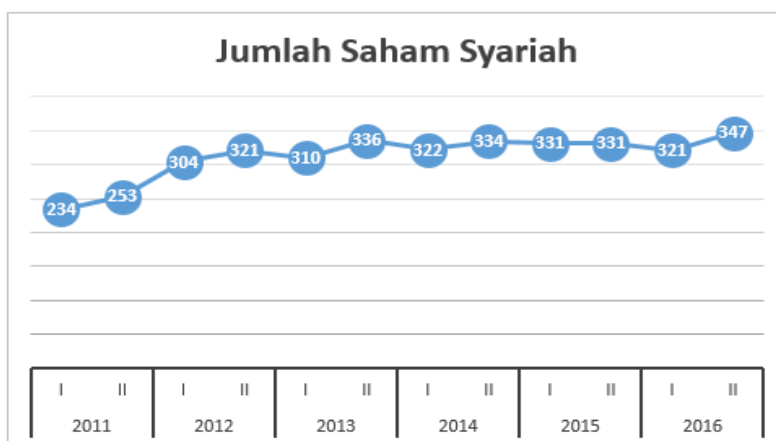
Figure 1. Development of Sharia Shares in DES as of December 2016
Data source: Financial Services Authority, has been reprocessed

Figure 1 shows the condition of the development of the Islamic stock market in Indonesia in DES up to 2016, where these stocks have passed industry type screening and screening of financial ratios determined by DSN-MUI. The increase in the number of shares entering DES shows that the number of issuers participating in the Islamic stock market is increasing.

The Indonesian Sharia Stock Index (ISSI) is one of the sharia-based capital market indices on the Indonesia Stock Exchange published by Bapepam-LK as an authorized regulator and cooperates with DSN-MUI (Suciningtyas and Khoiroh, 2015). ISSI constituents are all shares incorporated in DES and listed on the IDX. Historically, although this index is relatively new, it can be seen in Figure 1 that indicates that the existence of Islamic stocks is very attractive to investors. As shown by Figure 2, the value of the capitalization of Islamic stocks has shown a positive trend from 2011 to 2016. This indicates the presence of factors that are sensitive to the fluctuation of the ISSI movement.
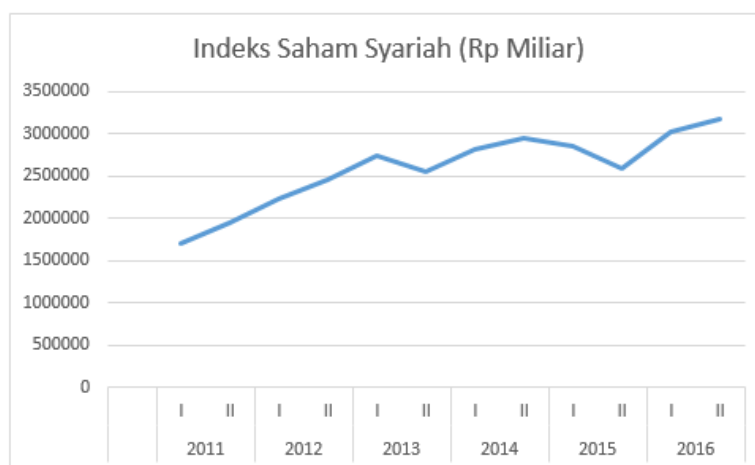

Figure 2. Development of the Indonesian Sharia Stock Index (ISSI)
Source: OJK, has been reprocessed

Many factors affect the Stock Index, including changes in central bank interest rates, the state of the global economy, the level of world energy prices, political stability of a country, and others (Blanchard, 2006). Thus, fluctuating ISSI is related to the country's macroeconomic conditions such as interest rates and the rupiah exchange rate and the influence of global economic uncertainty. In addition to these factors, the behavior of investors themselves will also affect the movement of the Stock Index.
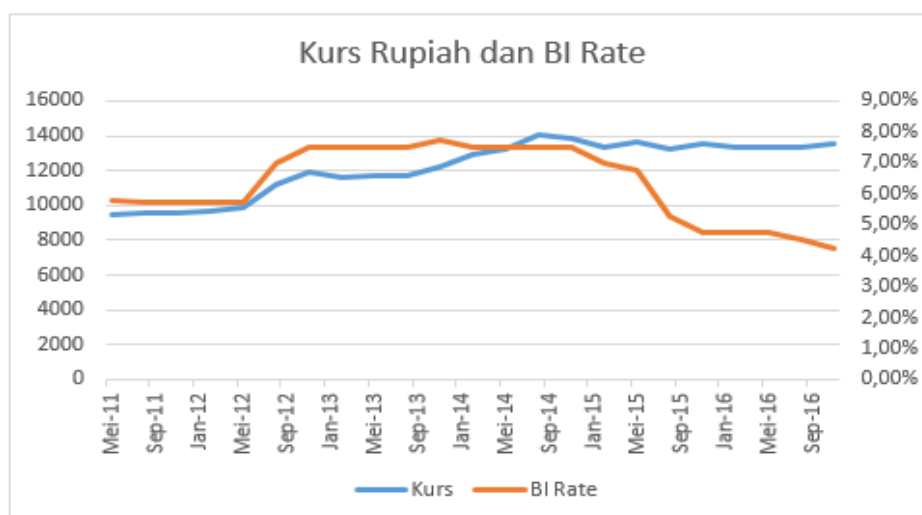
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Figure 3. Exchange Rate and BI Rate Movements
Source: Bank Indonesia, has been reprocessed

Controlled inflation rate provides room for lower interest rates. SBI interest rates fell from 7.75 in January 2015 to 4.75 in October 2016 (Figure 3). The lower the SBI interest rate to a certain extent, people will tend to look for other investment alternatives that are considered profitable, one of which is to switch stock investments. In conducting investment activities, investors first conduct an in-depth analysis of the type of investment to be selected, with the aim of minimizing risk. The analysis commonly used is fundamental analysis and technical analysis. Fundamental analysis considers that stock prices are a reflection of the value of the company concerned.

Therefore, in researching a stock through a fundamental approach, accounting information can be used with financial ratio analysis techniques which are the result of further calculations of financial statements (Jerry, 2012). There are various kinds of financial ratios used in conducting fundamental analysis, but in this writing fundamental analysis is limited to four types of financial ratios namely Earning per Share (EPS), Price Earning Ratio (PER), Debt to Equity Ratio (DER), and Return On Equity (ROE).

Based on the description above, the researcher wants to analyze how and how much domestic macroeconomic factors (Inflation and SBI Interest Rates) and the global economy (WTI World Oil Prices) and fundamental analysis in the form of financial ratios (Earning per Share, Price Earning Ratio, Debt to Equity Ratio, and Return On Equity) affect the movement of the Indonesian Sharia Stock Price Index (ISSI) manufacturing sector on the Indonesia Stock Exchange (BEI) for the period 2011 to 2016.

LITERATURE REVIEW

Investation

Investment can be defined as a form of managing funds to provide benefits by placing the funds in allocations that are expected to provide additional benefits or compounding (Fahmi and Hadi, 2011). Investment can be divided into real investment and financial investment. Real investment is investment in the real sector which involves tangible assets such as land, machinery, or factories. While financial investment is an investment that involves written contracts such as stocks and bonds (Fahmi and Hadi, 2011).

Islamic Capital Market

In general, in finance there are two types of financial markets namely the capital market (capital market) and the money market (money market). According to Manan (2009), the capital market is a means of bringing together surplus parties (surplus funds) with those who lack funds (deficit funds), where funds traded are long-term funds. The definition of the market according to the Capital Market Law (UUPM) No. 8 of 1995, "Capital markets are activities concerned with public offerings and trading of securities, public companies related to securities issued, and institutions and professions related to securities".

Sharia Shares

Stock (stock) can be defined as a sign of capital participation by a person or party (business entity) or a portion of ownership of a company or limited liability company. By including this capital, the party has a claim on company income, a claim on company assets, and is entitled to attend the General Meeting of Shareholders (Purnawan, 2014); (Waris, et.al., 2018); (Zulfikar & Mayvita, 2017). Based on inherent rights, shares can be divided into types of common shares and preferred shares. Common stock is a stock that places the ultimate owner of the distribution of dividends and rights to the company's wealth if the company is liquidated. Prefered stock is a stock whose owner has claim rights to the company's assets and dividend payments take precedence (Fahmi and Hadi, 2011). Sharia shares are equity securities and are included in the List of Sharia Securities (DES) issued by Bapepam and LK and their preparation involves DSN-MUI.

Stock Index

Stock index or stock index is the price or value with a standard calculation of a group of shares that are collected based on certain categories. Stock index is an indicator of the price movement of all the stocks it represents. One indicator of the country's economic conditions can be seen from the condition of the composite stock index of the shares of all publicly traded companies in the country. The composite stock index reflects the country's economy is slowing down or excited (Suta, 2000).

Inflation

Inflation is the process of increasing the prices of goods and decreasing the value of currencies generally and continuously. Inflation is an indicator to see the level of change, and is considered to occur if the price increase process continues and influences each other (Hidayati, 2012); (Tho'in & Iin, 2019). From this definition there are three criteria that need to be observed to see that inflation has occurred, namely rising prices, being general in nature, and occurring continuously over a certain period of time.

Bank Indonesia Certificate (SBI) Interest Rates

The interest rate is the cost of financing or the price paid to guarantee the amount of funds stated in an annual percentage (Pusporanoto, 2004); (Nuryanto, et al., 2014). According to Case and Fair (2004), the interest rate is the annual interest payment for a loan that is expressed as the loan percentage. Economists differentiate interest rates from nominal interest rates and real interest rates. Nominal interest rate is the rate that occurs in the market while real interest rate is a concept that measures the rate of return after being reduced by inflation.

World Oil Prices

Petroleum is an important production factor to drive the world economy because it is a vital input in the process of industrial production, especially to drive machinery, produce electricity, and for transportation. Current world oil prices refer to spot oil prices in US dollars per barrel (159 liters) of WTI (West Texas Intermediate) types traded on the New York Mercantile Exchange (NYMEX) or Brent oil types traded on the Intercontinental Exchange.

Fundamental Analysis

Fundamental analysis is a method of stock analysis by analyzing data or information related to company performance, generally financial statements are the main source in this analysis including the use of stock ratios such as earnings per share or Earning per Share (EPS), Price to Earning Ratio (PER), Debt to Equity Ratio (DER), Return On Equity (ROE), and others (Fakhruddin and Hendy, 2008). Earning Per Share (EPS) or earnings per share is the amount of income obtained in one period for each share outstanding (Baridwan, 2004). Price Earning Ratio (PER) is a very important factor and needs to be considered by investors before making investment decisions, because PER indicates the amount of rupiah that investors must pay to obtain one rupiah of company earnings or in other words PER indicates the price of one rupiah of earning (Tandelilin, 2001). One aspect assessed in measuring company performance is the aspect of corporate leverage or debt. Debt to Equity Ratio is a ratio that measures the level of use of goods (leverage) to the total shareholder's equity owned by each company (Ang, 1997). This ratio shows the composition or capital structure of total loans (debt) to capital owned by the company. The higher the DER shows the composition of total debt (short-term and long-term) is greater than the total own capital, so that the greater the company's burden on external parties (creditors). ROE is often referred to as the rate of return on Ner Worth, namely the company's ability to generate profits with owned equity so that this ROE is often referred to as the profitability of own capital (Tho'in, 2019); (Sartono, 2008). The greater the ROE percentage owned by the company, the greater and more effective the company's performance in generating profits.

Hypothesis

In this study, the hypothesis proposed by the researcher is as follows:

H1 : Inflation affects ISSI
H2 : SBI interest rates affect ISSI
H3 : World Oil Prices affect ISSI
H4 : Earning Per Share (EPS) affects ISSI
H5 : Price Earning Ratio (PER) affects ISSI
H6 : Debt to Equity Ratio (DER) affects ISSI
H7 : Return On Equity (ROE) affects ISSI
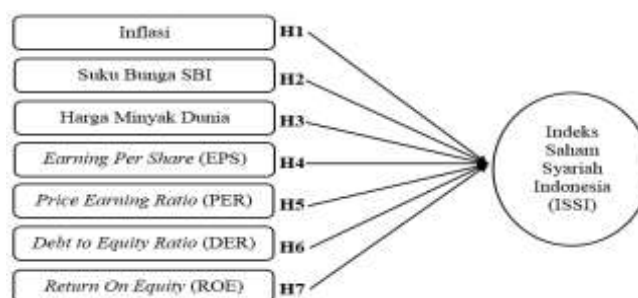
Theoretical Framework

Figure 4. Theoretical Framework

RESEARCH METHODS

This type of research is quantitative research with secondary data. The population of this study is the movement of the Indonesian Sharia Stock Index (ISSI), Inflation, SBI Interest Rates, World Oil Prices, Earning Per Share (EPS), Price Earning Ratio (PER), Debt to Equity Ratio (DER), and Return On Equity (DER), and Return On Equity (DER) ROE). The data used in this study are secondary data as a whole taken from official sources in quarterly form from the first quarter of 2011 to the fourth quarter of 2016. For ISSI data obtained through the website (www.duniainvest.com), Inflation data and SBI Interest Rates obtained from the official BI website (www.bi.go.id), WTI standard World Oil Price data obtained from the site (www.economagic.com), as well as data for fundamental analysis in the form of EPS, PER, DER, ROE obtained from the published financial statements manufacturing companies included in the ISSI list on the Indonesia Stock Exchange (IDX) from the official website of the IDX (www.idx.co.id).

This research uses quantitative methods with multiple linear regression analysis tools. The analysis is used to test the effect of the independent variables on the dependent variable. Before carrying out multiple linear regression analysis first do the Classic Assumption Test consisting of the Normality Test, Autocorrelation Test, Multicollinearity Test, and Heterokedasticity Test. And to see the accuracy of the sample regression function in estimating the actual value can be measured from its Goodness of Fit, namely the Coefficient of Determination (R^2), F Test, and t Test.

RESULTS AND DISCUSSION

Based on the results of the study, the following are the results of the Classical Assumption Test:
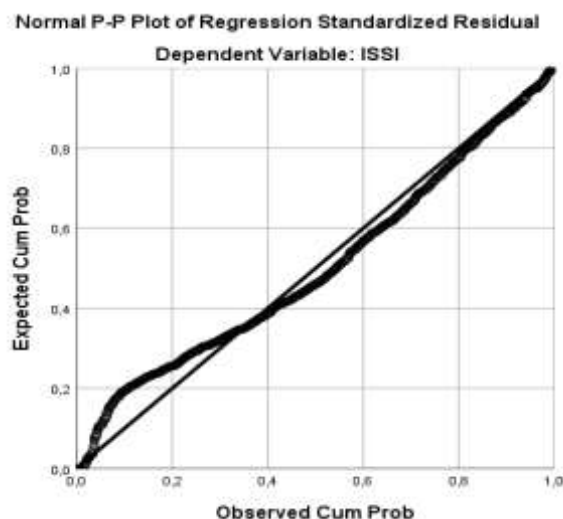
Normality Test

Figure 5. Normality Test Results
Source: SPSS Output (Data processing)

From Figure 3 above it can be said that the data follows and approaches the diagonal line, visibly the data can be said to be normal.

Autocorrelation Test

The Durbin-Watson value stated on the SPSS output is called the calculated DW. This number will be compared with the acceptance or rejection criteria that will be made with dL and dU values determined based on the number of independent variables in the regression model (k = 10) and the number of samples (n = 984). The dL and dU values can be seen in the DW table with a significance level of 5% (α = 0.05). The Durbin-Watson table shows that the value of dL = 1.87792 and dU = 1.91424 so that criteria can be determined whether or not autocorrelation occurs as shown in the table below. Table 1. Durbin-Watson Calculate Table.

Kriteria		Ragu-ragu		Ragu-ragu			Autokorelasi
	Negatif		Bebas		Positif		
DW~hitung~	Min	Dl	du	4-du	4-dl	Max	
1,952	0	1,87792	1,91424	2,08576	2,12208	4	Bebas

Source: has been reprocessed

The calculated DW value of 1.952 is more than 1.91424 and smaller than 2,08576 which means it is in an autocorrelation free area. So it can be concluded that the linear regression model does not occur autocorrelation.

Multicollinearity Test

Table 2. Multicollinearity Test Results

Variabel	Collinearity Statistics	
	Tolerance	VIF
INFLASI	0,382	2,615
SBI	0,450	2,221
WTI	0,416	2,402
EPS	0,457	2,189
PER	0,549	1,820
DER	0,962	1,039
ROE	0,759	1,318

Source: SPSS Output (Data processing)

In table 2 it can be seen that all independent variables have a VIF value of more than 10 and a tolerance value of more than 0.01, it can be concluded firmly that there is no multicollinearity problem.
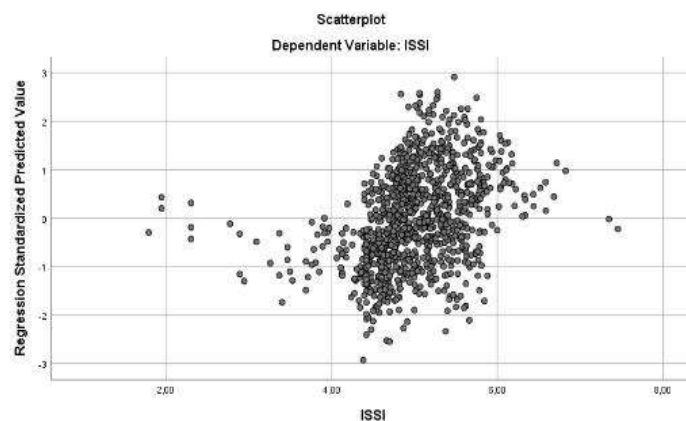
Heteroscedasticity Test

Figure 6. Scatterplot Heteroscedasticity Test
Source: SPSS Output (Data processing)

Based on Figure 3 above it is known that, 1) Data points are spread above and below or around the number 0; 2) The points do not collect only above or below only; 3) The spread of data points does not form a wavy widen then narrows and widens again; 4) Distribution of patternless data points. Thus it can be concluded that there is no heterokedasticity problem, so that a good and ideal regression model can be fulfilled.

Multiple Regression Results

Based on table 3, the results of multiple regression can be explained with the condition that the other variables are constant. The multiple regression above is known to have a constant of 4,494 finished, ISSI rose by 4,494%. The coefficient of the variable INFLATION = 0.241 which means that every increase of INFLATION by 1% will cause an increase in ISSI by 0.241 point. The coefficient of SBI variable = 0.549 which means that each increase in SBI interest rate by 1% will cause an increase in ISSI by 0.549 points. WTI variable coefficient (world oil price) = -0,368 which means that every 1% increase in world oil prices will cause a decrease in ISSI of 0.368 points. EPS variable coefficient = 0.076 which means that every 1% increase in EPS will cause an increase in ISSI by 0.076 points. The coefficient of variable PER = 0.080 which means that every 1% increase in PER will cause an increase in ISSI of 0.080 points. The variable coefficient DER = 0.027 which means that every 1% increase in DER will cause an increase in ISSI by 0.027 points. ROE variable coefficient = 0.035 which means that every 1% increase in ROE will cause an increase in ISSI by 0.035 points.

Goodness of Fit Test

Coefficient of Determination (R^2)

The value of R Square (R2) in the SPSS output is 0.125 or 12.5%. That is, the independent variables namely INFLATION, SBI, world oil prices (WTI), EPS, PER, DER, and ROE can explain the dependent variable, namely ISSI at 12.5% or R2 at = 0.125 indicating changes of 12.5% that occur at ISSI caused by these independent variables together. While the remaining 87.5% is explained by other variables not included in the regression model in this study.

F Test

From the SPSS output it can be seen that the significance value is 0,000 and the calculated F value is 19,874. The basis for decision making is a significance level of 5% or 0.05. Because the significance value is less than 0.05, it indicates the influence of inflation, SBI interest rates, world oil prices (WTI), Earning Per Share (EPS), Price Earning Ratio (PER), Debt to Equity Ratio (DER), and Return on Equity (ROE) simultaneously against ISSI. Another basis for decision making is that the calculated F value must be greater than the F table to determine the influence of the independent variable on the dependent variable. From table 4.4 it can be seen that the calculated F value (19.874) is greater than the F table (1.11), it can be concluded that the inflation variable, SBI Interest Rate, World Oil Price (WTI), Earning Per Share (EPS), Price Earning Ratio (PER), Debt to Equity Ratio (DER), and Return On Equity (ROE) simultaneously influence ISSI.

Table 3. Test Results t test

Variabel	Koefi-sien	t	Sig.
(Constant)	4,494	17,390	0,000
INFLASI	0,241	2,798	0,005
SBI	0,549	4,156	0,000
WTI	-0,368	-4,876	0,000
EPS	0,076	6,470	0,000
PER	0,080	6,048	0,000
DER	0,027	3,459	0,001
ROE	0,035	2,348	0,019
a. Dependent Variable: ISSI			

Based on table 3 above, the multiple regression results can be analyzed with a T table of 1.646 (df = n-k-1 = 984-7-1 = 976, significance 0.05) as follows:

From the regression equation in the table above, it can be seen that the calculated value of the inflation rate is equal to 2.798 with a significance level of 0.005. Because the significance value is smaller than 5% and the t-value (2.798) is greater than t table (1.646), there is an influence between the INFLATION variable on ISSI. Therefore, hypothesis 1 is accepted. This is supported by research conducted by Kismawadi (2013). From the table above, it can be seen that the t-value of the SBI interest rate is equal to 4,156 with a significance level of 0,000. Because the significance value is smaller than 5% and the t-value (4.156) is greater than t table (1.646), there is an influence between the SBI interest rate variable on ISSI. Therefore hypothesis 2 is accepted. This is supported by research conducted by Gan et al (2006).

From the table above, it can be seen that the t-value of the price of oilworld (WTI) is -4,876 with a significance level of 0,000. Because the significance value is smaller than 5% and calculated value (-4,876) more greater than t table (1,646) then there is influence between oil price variables world (WTI) towards ISSI. Based on the calculation results, it was found that WTI was influential against ISSI with a significance value 0,000. Therefore hypothesis 3 received. This is supported by research conducted by Antonio et al (2013) and Syafii et al (2013). From the table above, can be seen that the value of t arithmetic from Earning Per Share (EPS) is equal to 6,470 with a level significance of 0,000. Because of value significance of less than 5% and value t-count (6.470) is greater than t table (1,646) there is an intermediate influence EPS variable against ISSI. By therefore hypothesis 4 is accepted. This matter supported by research conducted by Safitri (2013). From the table above, it can be seen that the t value of the Price Earning Ratio (PER) is 6.048 with a significance level of 0,000. Because the significance value is less than 5% and the t-value (6.048) is greater than t table (1.646), there is an influence between PER variable with respect to ISSI. Therefore hypothesis 5 is accepted. This is supported by research conducted by Jerry (2012). From the table above, it can be seen that the t-value of the Debt to Equity Ratio (DER) is 3.459 with a significance level of 0.001. Because the significance value is smaller than 5% and the t-value (3.459) is greater than t table (1.646), there is an influence between the DER variable on ISSI. Therefore hypothesis 6 received. This is supported by research conducted by Safitri (2013). From the regression equation above, it can be seen that the t-value of Return on Equity (ROE) is 2,348 with a significance level of 0.019. Because the significance value is smaller than 5% and the t-value (2,348) is greater from t table (1,646) then there is influence between ROE variables on ISSI. Therefore hypothesis 7 received. This is supported by research conducted by Safitri (2013).

CONCLUSION

Domestic macroeconomic variables in the form of inflation and SBI interest rates have a significant effect on the Indonesian Syariah Stock Index (ISSI). Global macroeconomic variables namely World Oil Prices (WTI) have a significant effect on the Indonesian Sharia Stock Index (ISSI). Fundamental analysis in the form of EPS, PER, DER, and ROE ratios also affects the Indonesian Syariah Stock Index (ISSI). R^2 value of 0.125 or 12.5%. This means that 12.5% of the Indonesian Sharia Stock Index (ISSI) variable can be influenced by inflation, SBI interest rates, world oil prices, EPS, PER, DER, and ROE. While, the remaining 87.5% can be explained by other variables outside the study.

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