

**THE EFFECT OF MACROECONOMIC VARIABLES ON THE
PRICE OF SHARIA HEALTH SECTOR SHARES LISTED ON THE
JAKARTA ISLAMIC INDEX 70 (JII70)
FOR THE PERIOD 2018-2022**

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Abstract

This study examines the impact of macroeconomic factors on the performance of health sector sharia stocks listed on the Jakarta Islamic Index 70 (JII 70). The research adopts a quantitative approach, utilizing panel data regression to analyze the relationship between inflation, exchange rates, and the share prices of health sector issuers included in the JII 70. This research falls under the category of quantitative descriptive analytics. The population of this study consists of all health sector issuers listed on the JII 70 Islamic stock index. The sample includes health sector issuers registered on the JII 70 Islamic stock index from 2018 to 2022. The findings reveal that inflation has no significant impact on health sector Islamic stocks. Furthermore, the results indicate a negative correlation between exchange rates and stock prices, although this relationship is not statistically significant. Overall, the macroeconomic variables examined, namely inflation and exchange rates, do not exert a significant influence on the value of Islamic equities in the healthcare sector. Nevertheless, investors should still monitor these indicators as economic conditions can change unpredictably.

Keywords: Exchange Rate, JII 70, Inflation

1. INTRODUCTION

The capital market is an important part of supporting a country's economy, including in Indonesia. Thus, the capital market plays an important role in Indonesia's economic growth through contributions to state revenues, corporate funding, and increased economic activity. According to Wahyudi & Nabella (2020) compared to the conventional capital market, the Islamic capital market is believed to be stronger against crises, changes in economic fundamentals and financial market shocks. These shocks are caused by expectations of the future of macro and micro factors in a country either rationally or adaptively to predictable or unpredictable economic fundamentals.

The development of the sharia-based economic sector, especially in Indonesia, is currently experiencing a significant increase. Indonesia is a country that has the largest Muslim population in the world so that it can be a great opportunity to develop the Islamic

capital market which is expected to show significant development from year to year. The Muslim population in Indonesia is 87.2% of the population. With this number, Indonesia has enormous potential to develop the Islamic financial and economic sectors that can contribute to achieving inclusive financial targets including the development of Islamic finance. (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2021). However, based on data from PT Kustodian Sentral Efek Indonesia (KSEI), the number of Islamic investors as of September 2022 was only 114,116 out of around 10 million capital market investors. According to Sari & Suryawati (2020) the factors that influence the increasing trend of Islamic stock investment in the capital market are changes in lifestyle and the level of awareness of the Indonesian people regarding the importance of applying sharia principles in investment activities. In addition, stocks have a positive appeal because they are expected to provide fairer profits in accordance with Islamic principles.

There are generally two basic approaches to analysing stocks: technical analysis and fundamental analysis. Macro factors do not always have a positive or negative impact on stock prices. Macroeconomic factors do not affect company performance immediately, but rather slowly. In contrast, stock prices will be affected immediately by macroeconomic changes, as investors react more quickly. When macroeconomic changes occur, investors will take into account the impact on company performance, then make decisions (Hidayat et al., 2019). The macroeconomic indicators are inflation, rupiah exchange rates, and interest rates because theoretically, these variables have a close relationship with changes in stock prices in the capital market (Veronica & Pebriani, 2020). This research will focus on inflation and rupiah exchange rate variables on one of the Islamic stock indices in Indonesia.

The Islamic stock index is a variable that shows the performance of Islamic stocks and as a comparative indicator and measure of portfolio performance of Islamic stocks. Based on data from the Indonesia Stock Exchange (2018), the Islamic stock index is a variable that shows the performance of Islamic stocks. Indonesia Stock Exchange (2018) The Jakarta Islamic Index 70 (JII70 Index) is an Islamic stock index presented by the IDX on 17 May 2018. The main focus in this study is Islamic stocks in the health sector. Listed health sector stocks may be one of the stocks affected by panic selling, because stocks in the health sector are directly related to the covid-19 event in Indonesia (Yusuf, 2020).

Based on empirical studies conducted by Sikana et al., (2023) that inflation has no significant effect on the JII70. In addition, Arintika & Isynuwardhana, (2015) Inflation has an insignificant effect with a negative coefficient on the Indonesian Sharia Stock Index in the long term and has an insignificant effect with a positive coefficient in the short term. Foreign Exchange Rate has a significant effect with a negative coefficient on the Indonesian Sharia Stock Index in the short term but has no significant effect in the long term. The strength of the exchange rate is positively correlated with trading activity in the stock market. In addition, according to Kamal et al., (2021). simultaneously, inflation and the Rupiah exchange rate have a significant effect on the Indonesian Sharia Stock Index (ISSI). Partially, the Rupiah exchange rate variable has a significant effect on the ISSI, but inflation has no significant effect on the Indonesian Sharia Stock Index (ISSI).

So the hypothesis built in this study is as follows:

H1: There is a direct positive and significant effect of the inflation variable on the price of Islamic stocks in the health sector indexed on the Jakarta Islamic Index 70 (JII70).

H2 : There is a direct negative and significant effect of exchange rate variables on Islamic share prices in the health sector indexed on the Jakarta Islamic Index 70 (JII70).

2. RESEARCH METHOD

This research is a study that uses quantitative methods. This research uses panel data which is a combination of time series and cross section. This study uses panel data regression to measure the effect of inflation and exchange rates on the share prices of health sector issuers included in the Jakarta Islamic Index (JII 70). This type of research is quantitative descriptive analytic. Researchers will use secondary data, namely the value of inflation, exchange rates and health sector share prices included in the Jakarta Islamic Index 70 (JII 70) for the period 2018-2022. The research population in this study are all issuers of health sector stocks registered in the JII 70 Islamic stock index. The sample of this study are all issuers of health sector stocks registered in the JII 70 Islamic stock index for the period 2018-2022. In this study, researchers will use Eviews 12 econometric software as a research tool. Panel data estimation is done with three approaches (Sriyana, 2014):

a) Common Effect Model

The simplest panel data model approach because it only combines time series and cross section data. In this model, neither time nor individual dimensions are considered, so it is assumed that the behaviour of company data is the same in various periods of time. This method can use the Ordinary Least Square (OLS) approach or the least squares technique to estimate the panel data model.

b) Fixed Effect Model

This model assumes that differences between individuals can be accommodated from differences in intercepts. To estimate panel data, the Fixed Effects model uses a dummy variable technique to capture intercept differences between companies, intercept differences can occur due to differences in work culture, managerial, and incentives.

c) Random Effect Model

This model will estimate panel data where disturbance variables may be interconnected over time and between individuals. In the Random Effect model, differences in intercepts are accommodated by the error terms of each company. The advantage of using the Random Effect model is that it eliminates heteroscedasticity. This model is also called the Error Component Model (ECM) or the Generalised Least Square (GLS) technique.

The steps in choosing a regression model are as follows (Widarjono, 2013):

a) Chow Test

Chow test is a test to determine the Fixed Effect or Random Effect model that is most appropriate to use in estimating panel data.

b) Hausman Test

The Hausman test is a statistical test to choose whether the Fixed Effect or Random Effect model is most appropriate.

c) Lagrange Multiplier Test

To find out whether the Random Effect model is better than the Common Effect (OLS) method, the Lagrange Multiplier (LM) test is used.

Goodness of Fit Test of Panel Data Regression Model

Hypothesis Test

There are two types of hypotheses on regression coefficients, namely:

a) F-Test

The F-test is intended to test the hypothesis of the regression coefficient (slope) simultaneously, in other words, it is used to ensure that the selected model is feasible or not to interpret the effect of the independent variable on the dependent variable.

H₀ = Not significant

H_a = significant

b) T-Test

The t-test is used to test the regression coefficient individually. The test is carried out on the population regression coefficient, whether it is equal to zero, which means that the independent variable has no significant effect on the dependent variable, or not equal to zero, which means that the independent variable has a significant effect on the dependent variable.

H₀: No Effect

H_a: Affected

c) Coefficient of Determination

The Coefficient of Determination (Goodness of Fit) is denoted by R-squared which is an important measure in regression, because it can inform whether the estimated regression model is good or not. According to Sugiyono (2008), the guidelines for interpreting the correlation coefficient are as follows:

- 1) If the correlation interval is 0.00 - 0.199, the correlation is very low.
- 2) If the correlation interval is 0.20 - 0.399, then the correlation is low.
- 3) If the correlation interval is 0.40 - 0.599, then the correlation is moderate.
- 4) If the correlation interval is 0.60 - 0.799, then the correlation is strong.
- 5) If the correlation interval is 0.80 - 1.000, the correlation is very strong.

3. RESULTS AND DISCUSSION

The endogenous variable in this thesis is the share price of the health sector in the JII 70 stock index (Y) which is the best sharia stock index listed on the IDX, which has 30 issuers in each period. There are 3 health sector issuers listed in JII 70 for the period 2018-2022. The data is monthly closing price data. The four companies include:

- a. PT Kimia Farma Tbk (KAEF)
- b. PT Kalbe Farma Tbk (KLBF)
- c. PT Mitra Keluarga Karyasehat Tbk (MIKA)

Data on exogenous variables, namely inflation (X1) and exchange rates (X2) in this study are valid data published. The research data processing by conducting several tests including model selection, followed by panel data regression tests, and finally hypothesis testing using Eviews 12 statistical tools.

3.1. Descriptive Statistics

Table 1. Descriptive Statistics

	X1	X2	Y
Mean	0.027990	14424.96	2061.861
Median	0.028550	14336.74	1972.500
Maximum	0.059500	15867.43	4250.000
Minimum	0.013200	13380.36	580.0000
Std. Dev.	0.011505	492.1575	642.7992
Skewness	0.857525	0.809967	0.452154
Kurtosis	3.489295	3.825810	2.598947
Jarque-Bera	23.85604	24.79610	7.339620
Probability	0.000007	0.000004	0.025481
Sum	5.038200	2596493.	371135.0
Sum Sq. Dev.	0.023694	43357207	73961152
Observations	180	180	180

Source: Processed with Eviews (2023)

Based on the data in table 1. there are 180 observed data. The data observed in the research variables during the 2018-2022 time span provides an overview of the distribution and characteristics of each variable.

3.2. Model Selection

This model selection test will be carried out Chow test, Hausman test and finally LM test. The model specification test is used to select the most appropriate model among the estimated models used, namely pooled least square, random effect model, and fixed effect model.

a. Chow Test

Table 2. Chow Test Results

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	46.144348	(2,175)	0.0000
Cross-section Chi-square	76.237804	2	0.0000

Source: Data processed (2023)

Based on table 2. it is known that the Prob. Cross-section < 5% so as to reject H₀, thus this test concludes that the best model is the Fixed Effect Model.

b. Hausman Test

Table 3. Hausman Test Results

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	2	1.0000

* Cross-section test variance is invalid. Hausman statistic set to zero.

Source: Data processed (2023)

From the information in Table 3, it is known that the Hausman test conducted is invalid. This is because one of the independent variables of the research data does not meet the random effect requirements. Meanwhile, if the research data does not meet the random effect requirements, the eviews programme will reject the Hausman test. So it can be concluded that the fixed effect model is better.

3.3. Panel Data Regression (Fixed Effect Model)

Table 4. Fixed Effect Model (FEM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2875.031	1191.104	2.413753	0.0168
X1	-7630.935	3629.300	-2.102592	0.0369
X2	-0.041565	0.084842	-0.489914	0.6248
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	512.7148	R-squared	0.360235	
Mean dependent var	2061.861	Adjusted R-squared	0.345612	
S.D. dependent var	642.7992	S.E. of regression	519.9877	
Akaike info criterion	15.37287	Sum squared resid	47317769	
Schwarz criterion	15.46157	Log likelihood	-1378.559	
Hannan-Quinn criter.	15.40883	F-statistic	24.63447	
Durbin-Watson stat	0.276428	Prob(F-statistic)	0.000000	

Source: Data processed (2023)

The fixed effect model approach assumes that the intercept of each individual is different while the slope between individuals is fixed (the same). Based on Table 4, the panel data regression results with the fixed effect model state that all independent variables (inflation and exchange rate) have an insignificant effect on the dependent variable. The Rsquared value for this model is 0.360235 or 36.0235% which means that all independent variables have the ability of 36.0235% in explaining the variability of the dependent variable. While the remaining 63.9765% is explained by the residual variables.

3.4. Panel Data Regression Equation

$$Y = 2875.03127093 - 7630.93534259 * X1 - 0.0415654658728 * X2$$

The explanation is as follows:

- a. The constant value of 2875.03127093 means that without the inflation (X1) and exchange rate (X2) variables, the Stock Price (Y) variable will increase by 2875.03127093.
- b. The beta coefficient value of the inflation variable (X1) is - 7630.93534259, if the value of other variables is constant and variable X1 has increased by 1 unit, the Stock Price variable (Y) will decrease by 7630.93534259.
- c. The beta coefficient value of the exchange rate variable (X2) is -0.0415654658728, if the value of other variables is constant and the X2 variable increases by 1 unit, the Stock Price variable (Y) will decrease by 0.0415654658728.

3.5. Results of the t-test

Table 5. Results of the t-test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2875.031	1463.705	1.964216	0.0511
X1	-7630.935	4459.914	-1.711005	0.0888
X2	-0.041565	0.104260	-0.398672	0.6906

Source: Data processed (2023)

The effect of the independent variable on the dependent variable partially is as follows:

- a) The t test results on the inflation variable (X1) obtained a probability value of 0.0888 greater than the significance level of 0.05, so Ha is rejected and H0 is accepted. This means that the inflation variable (X1) has a partially insignificant effect on the share price of the JII 70 health sector (Y).
- b) The t test results on the exchange rate variable (X2) obtained a probability value of 0.6906 greater than the significance level of 0.05, so Ha is rejected and H0 is accepted. This means that the exchange rate variable (X2) has a partially insignificant effect on the share price of the JII 70 health sector (Y).

3.6. Results of the F- Test

Table. 6 Results of the F- Test

R-squared	0.022846
Adjusted R-squared	0.011804
S.E. of regression	638.9940
Sum squared resid	72271456
Log likelihood	-1416.677
F-statistic	2.069116
Prob(F-statistic)	0.129342

Source: Data processed (2023)

The sig. value of 0.129342 is greater than the 0.05 significance level, meaning that inflation (X1) and exchange rates (X2) have an insignificant effect on the JII 70 health sector share price (Y).

3.7. Determination Coefficient Test

Table 7. Determination Coefficient Test

R-squared	0.022846
Adjusted R-squared	0.011804
S.E. of regression	638.9940
Sum squared resid	72271456
Log likelihood	-1416.677
F-statistic	2.069116
Prob(F-statistic)	0.129342

Source: Data processed (2023)

The adjusted R Square value is 0.011804 or 1.1804%. The coefficient of determination shows that the independent variables consisting of inflation and exchange rates are able to explain the JII 70 health sector stock price variable by 1.1804%, while the remaining 98.8196% is explained by other variables not included in the model.

4. CONCLUSION

Some of the findings of this thesis are expected to be new insights in the world of investment and researchers in the field of Islamic economics in the future. The author takes the health sector as the subject under study for a period of 5 years before and after the Covid-19 pandemic incident, to be precise the period 2018-2022.

- 1) Partially, it was found that inflation has an insignificant effect on the endogenous variable, Islamic stocks in the healthcare sector. This indicates that an increase in the

value of inflation has the potential to decrease the value of Islamic equities in the healthcare sector.

- 2) The results indicate that there is a negative relationship between the exchange rate and stock prices, but this effect is not statistically significant. Nonetheless, the results indicate that there is a tendency for inflation to potentially decrease the value of Islamic equities in the healthcare sector, although the effect is not statistically strong within the period studied.
- 3) Simultaneously, all macroeconomic variables studied (Inflation and exchange rate) have an insignificant influence on the value of Islamic equities in the healthcare sector. This suggests that in predicting the value of Islamic equities in the healthcare sector, it is still important to consider macroeconomic factors together, rather than only considering one variable separately.

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