

## Does Investor Sentiment Affect Islamic Stock Prices? Evidence From Indonesia

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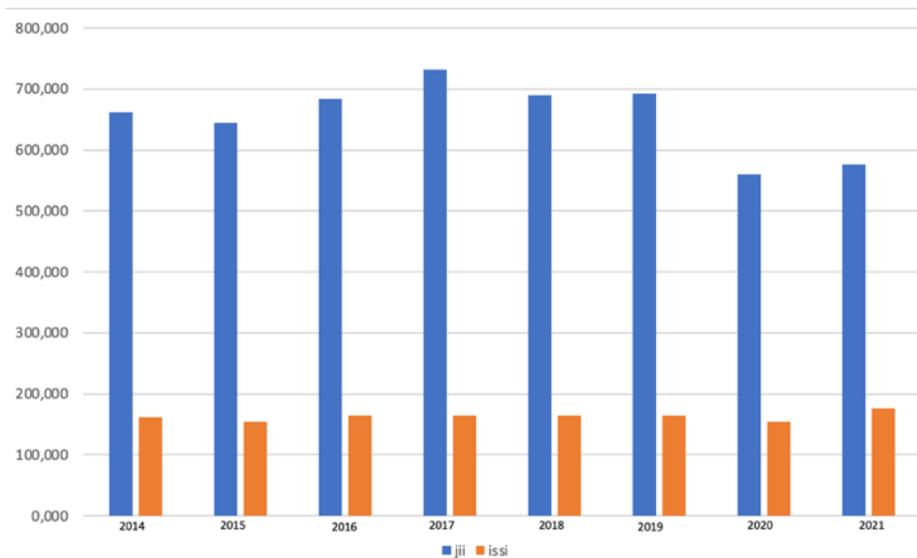
**ABSTRACT.** The Islamic finance industry in Indonesia has grown rapidly in the last decade, one of which is marked by the number of sharia stocks. Sharia stocks, based on the underlying principle, prohibit the involvement of investor sentiment which is often used as a consideration in investment decisions because there are elements of tadlees in it. This study examines the influence of investor sentiment on islamic stock prices index. This study aims to analyze whether Islamic stock price indices are influenced by investor sentiment. The representation of Islamic stock price indices are Indonesia Sharia Stock Index (ISSI) and Jakarta Islamic Index (JII). This study utilizes ARCH/GARCH analysis to determine whether there is an influence of investor sentiment on Islamic stock prices. The statistical tool used is e-views 12.0 program. The research findings stated that investor sentiment influences Jakarta Islamic Index (JII) but doesnt influence Indonesia Sharia Stock Index (ISSI). The difference in the results between the two Islamic stock indices can be explained by the different constituents and criteria for selecting Islamic stocks.

Keyword: Islamic Stock Price; Investor Sentiment; Tadlees

JEL Classification: G11; G19

**INTRODUCTION**

The industry of islamic finance has been established and is growing rapidly every year. Indonesia sharia capital market was created for the first time in 1997. It began with the launch of a sharia mutual fund product by Danareksa Syariah, and then continued with the launch of the Jakarta Islamic Index (JII) as a sharia index in 2000. The Jakarta Islamic Index (JII) is a benchmark or benchmark for sharia shares in Indonesia. in which there are 30 shares that have been selected by the National Sharia Council (DSN) per semester, to be precise every January and June. Market capitalization of JII had reached 48% of the total share capitalization on the IDX in the end of 2006. By 2011, a sharia product is issued namely Indonesian Sharia Stock Index (ISSI) is issued by IDX. Indonesian Sharia Stock Index (ISSI) is an index that contains of all Islamic stocks listed on the Indonesia Stock Exchange (IDX) and those shares are provided on the Sharia Securities List. Below is the movement of Jakarta Islamic Index and Indonesian sharia stock index during last eight years.



**Figure 1. Movement of JII and ISSI in 2014-2021**

The movement of Indonesian sharia stock index and Jakarta islamic Index are affecteded by several factors including psychological factor. Investor sentiment is one of these psychological factor (Lan, Huang, & Yan, 2021). Investor sentiment can be interpreted more broadly as beliefs about future cash flows and investment risk that are supported by non-accounting or non-fundamental information (Chen, Chou, & Lin, 2019). This non-fundamental information is often associated with rumours. This is in line with (Li, Bu, Li, & Wu, 2020) which explains that investor sentiment can be stated as a tendency to speculate. Investors do speculation to predict a profit that will be gained in the future by using non-fundamental information. This speculation involves more rumors than fundamentals (Baker, Wurgler, & Yuan, 2012).

Islamic principles state that all forms of transactions that contain speculation, whether intentional or only participating in taking part, are considered haram or not permissible. Speculation activities carried out by investors are based on non-fundamental information so that it cannot be known

with certainty whether the information is true or not. Allah says in the Quran (49:6) "O you who believe! If a wicked person comes to you with news, then investigate, so that you do not inflict (disaster) on a people without knowing, so you will be sorry for what you did." Kitab Al-Buyu Chapter Transactions (Sahih Muslim) states that Islam forbids all forms of speculation for the purpose of individual gain over the imbalance of information costs or asymmetric information. Speculation in Islam is also prohibited because it is a part of maysir, which is a business activity in which it is clear that speculation is irrational, illogical, quantitatively and qualitatively unclear. This irrationality has been proven in (Fischer Black, 1986). The findings show that the long-term significance of stocks with investor sentiment can make irrational investors able to outperform rational investors.

The Fatwa of the National Syari'ah Council Number 40/DSN-MUI/X/2002 concerning the Capital Market and General Guidelines for the Implementation of Sharia Principles in the Capital Markets states that transactions must be carried out according to the principle of prudence and speculation and manipulation are not allowed. contains elements of dharar, gharar, usury, maisir, risywah, immorality and tyranny. One of the elements of dharar, gharar, usury, maisir, risywah, immorality and tyranny as referred to is using insider information or parties within the company to benefit from transactions whose implementation is prohibited and creates misleading information. This misleading information is categorized in tadbis (fraud), where tadbis is not allowed in Islam. This is stated in the Financial Services Authority Regulation Number 15/POJK.04/2015 concerning the Application of Sharia Principles in the Capital Market which states that tadbis is an action taken by a seller to cover or hide the defects of the contract object to deceive the buyer that the contract object is not defective. Actions that are classified as tadbis in the capital market include conducting transactions first when he has information that someone will carry out large transactions (front running) and misleading information (misleading information), namely providing information or making statements that are misleading or materially incorrect with the aim of to influence the price movement of securities.

Rumors are news whose content and source are not known. Rumors are often clarified incorrectly by the issuer of a security. The spread of rumors by one party can influence changes in index movements and this stock prices movement will influence investors in making investment decisions (P H & Rishad, 2020). These investment decisions include buying or selling shares when rumors circulate and selling or buying back shares when company management announces clarification or an official statement regarding the rumors circulating. This will result in an advantage for one party and a loss for the other party, namely beginner investors and investors who have limited information.

Sholihin (2010) explains that fiqh tadlees can be defined as a transaction in which there is something that is unknown to one party. Islam states that every transaction must refer to the principle of ridha or willingness between two persons or parties who make transactions, each party must have full information so that no party feels harmed. Rumors can be categorized as tadlees types of quality and price transactions because it can influence stock price movement to be very low and very high which does not describe the stock quality and fair value. Rumors also collide the voluntary agreement principle between the two parties because one of the parties does not

have full information. The agreement between the two parties reached at the time of the transaction is temporary, i.e. the cheated party does not yet know the truth of the rumors. When the rumors were clarified by the company, the cheated party felt reluctant. So based on this explanation, Muslim investors are prohibited to involve rumors in making decisions whether to sell or buy stocks in capital market.

Several previous studies only tested the effect of investor sentiment on sharia stock returns and compared them to conventional counterpart without in-depth discussion of Islamic views on investor sentiment (Al Hashfi, Naufa, & Munawaroh, 2021; Sutanto, 2021; Tauseef, 2020). To the best of our knowledge, this is the first to examine the effect of investor sentiment on Islamic stock prices in Indonesia as proxied by two Islamic stock indices including ISSI and JII to get more representative results with the most recent data and provide explanation of investor sentiment in the view of Islamic economics.

Behavioral finance theory tells about how real human behaviour can strongly affect financial decision or financial arrangement (Boda & Sunitha, 2018). In particular, behavioral finance elaborates how investor psychology can influence corporate decisions, financial decisions and financial markets. Investor psychology in this case is investor sentiment. Investor sentiment is basically an investor's attitude towards a particular security or financial market. Investor sentiment includes the feelings, mood or psychology of investors, which are expressed in the activities and price movements of securities used in the market. When investor sentiment is very positive, many stocks are overpriced. In an efficient market, investors quickly see stocks that are too expensive or too low and then decide to sell stocks that are too expensive and buy stocks that are too cheap. A decrease in demand for overpriced stocks causes the stock price to fall until the stock is no longer expensive, while higher demand for under-priced stocks drives the price up. This fact is in line with (Spilioti, 2016) in his research which shows that the most important factor in explaining the difference between stock prediction prices and stock realization apart from macroeconomic variables is investor sentiment. This study findings are supported by (Aloui, Shahzad, Hkiri, Hela, & Khan, 2021) and (Rashid, Hassan, & Yein, 2014) which show that investor sentiment does affect stock prices. Based on the theory and previous research, the hypotheses can be formulated as follows,

H1 : investor sentiment has a positive effect on JII

H2 : investor sentiment has a positive effect on ISSI

## **METHODS**

The research method is a strategy used by researchers to answer research problems. Research design, research objectives, population and sample, types of data, techniques used to obtain data, empirical models and analytical tools must be written in this section. If the instrument used to obtain the data is a questionnaire, the tools used to ensure reliability, validity and ways to maintain respondents' privacy must be written. If the research design adopted is qualitative or other designs, for example experimental, then the appropriate rules and procedures relevant to the design must be written.

The variables to be studied consist of the dependent variable and the independent variable. The independent variable studied is investor sentiment which is proxied by Consumer Confident Index (CCI). The dependent variables studied were the Indonesian Islamic Stock Index (ISSI) and the Jakarta Islamic Index (JII). Data of Indonesian Sharia Stock Index (ISSI) and Jakarta Islamic Index (JII) is taken from [www.idx.co.id](http://www.idx.co.id), starting from the beginning of January 2014 to the end of August 2021. Data of Consumer Confident Index is taken from Bank Indonesia website, [www.bi.go.id](http://www.bi.go.id). The first step in time series analysis is to perform the Jarque-Bera normality test and the ARCH-LM heteroscedasticity test. If it turns out that the time series data has heteroscedasticity, the research will continue using the ARCH/GARCH method to test the hypotheses.

### Normality test

Normal distributed data is one of the assumptions in statistical analysis. Jarque-Bera test is one of the tests to determine whether the data is normally distributed or not. According to Winanrno (2015: 5.41-5.43) the Jarque-Bera test is a statistical analysis tool that measures the difference in skewness and kurtosis of the data and is compared with if the data is normally distributed. The Jarque-Bera normality test is based on the fact that the skewness and kurtosis values of the data are normally distributed equal to zero. The Jarque-Bera test is distributed with the Chi-square (X<sup>2</sup>) statistic at the degree of freedom 2. Alpha (α) used in this study is 5% with the following hypothesis:

H<sub>0</sub> = Data is normally distributed

H<sub>1</sub> = Data is not normally distributed With the provisions,

Under the condition,

If the Jarque-Bera value < 2 (not significant) then the data is normally distributed

If the probability is greater than > 5%, then the data is normally distributed with the null hypothesis being normally distributed data

### Heteroscedasticity Test

The ARCH-LM test is used to detect whether there are ARCH elements in the data. The ARCH test was conducted to show whether the researcher could use the ARCH/GARCH model or the ARIMA model alone. The hypotheses used are:

H<sub>0</sub> = Data does not contain ARCH elements (data is homoscedasticity)

H<sub>1</sub> = Data contains ARCH elements (data is heteroscedasticity)

If the Chi-square (X<sup>2</sup>) count on  $\text{prob}(\text{Obs} \cdot R^2) < = 5\%$ , then we can reject H<sub>0</sub> and it can be concluded that there is an element of heteroscedasticity. If there is an ARCH element in the data, then we use the ARCH/GARCH method. If there is no ARCH/GARCH element, the analysis will continue with simple regression.

### ARCH/GARCH

The next step is to perform an ARCH/GARCH analysis which is used to test hypotheses whether there is investor sentiment impact on stock price.

$$Y_t = \beta_0 + \beta_1 X_t + \epsilon_t \dots\dots\dots 1$$

$$\sigma_t^2 = \alpha_0 + \alpha_1 \epsilon_{t-1}^2 + \lambda_1 \sigma_{t-1}^2 \dots\dots\dots 2$$

Above are the general model of ARCH/GARCH and error variance equation (Wijaya & Nugraha, 2020). Dependent variable (Y<sub>t</sub>) is stock price which is proxied by ISSI and JII, while independent variable (X<sub>1</sub>) is investor sentiment proxied by consumer confident index (CCI).

**RESULT AND DISCUSSION**

Based on Table 1, it is known that during the study period the Indonesian Islamic stock price index (ISSI) had a standard deviation of 12.730 while the Jakarta Islamic Index (JII) had a standard deviation of 67.139. This shows that the JII movement has higher volatility than ISSI. The Jarque-Bera value for ISSI is  $(4.016) > 2$  with prob  $(0.00) < 5\%$ , so ISSI is not normally distributed. Meanwhile, the jarque fallow values of CCI and JII were 25.177 and 4.916 or  $>2$  and prob 0.134 and 0.085 or  $>5\%$ , respectively. This shows that the CCI and JII data are normally distributed.

**Table 1. Descriptive Statistics**

	Mean	Median	Max	Min	Std.Dev	JarqueBera	Observasi
<b>ISSI</b>	162,699	161,645	187,580	132,290	12,730	4,016	92
<b>CCI</b>	112,932	116,900	128,200	77,300	13,667	25,177	92
<b>JII</b>	658,717	666,180	793,960	467,460	67,139	4,916	92

Source: processed secondary data

From the results of the ARCH-LM test on JII, the Prob value is 0.0053 when compared to a significance level of 0.05, which means that we reject H0 and it can be concluded that there is heteroscedasticity in the data. The rejection of H0 means that there is an ARCH effect in the research data so that the model estimation can use ARCH/GARCH. Next is to test the effect of investor sentiment on JII with ARCH/GARCH.

F-statistic	8,170691	Prob. F(1,89)	0,0053
Obs*R-squared	7,651822	Prob.chi-Square(1)	0,0057

Test Equation:  
 Dependent Variable: RESID^2  
 Method: Least Squares  
 Sample (adjusted): 2014M02 2021M08  
 Included observations: 91 after adjustments

Variable	Coefficient	Std.Error	t-Statistic	Prob
C	1380,754	492,9012	2,801278	0,0062
RESID^2(-1)	0,289637	0,101327	2,858442	0,0053

R-squared	0,084086	Mean dependent var	1965,433
Adjusted R-squared	0,073795	S.D dependent var	4445,158
SE of regression	4278,000	Akaike info criterion	19,58209
Sum squared resid	1,63E+09	Schwarz criterion	19,63728
Log likelihood	-888,9852	Hannan-Quinn criter	19,60436
F-statistic	8,170691	Durbin-Watson stat	1,918956
Prob(F-statistic)	0,005301		

**Figure 2. Hetersoscedasticity of JII**

Based on figure 2, the prob value  $(0.0000) < 5\%$ , then H1 is accepted. This shows that investor sentiment has an effect on JII. The coefficient of determination of 0.5506 indicates that investor sentiment affects the movement of JII by 55.06% and the rest is explained by other variables

outside the model. The percentage of this influence is quite large considering that investor sentiment is not included in the macroeconomic and microeconomic factors that are often involved in research models. The results of this study are supported by the research of (Sutanto, 2021) and (Tauseef, 2020) which states that there is a positive correlation between investor sentiment and stock returns. Stock returns have a indirectional relationship to stock price movements. (Di, Shaiban, & Hasanov, 2021) found that Islamic company stock are more sensitive to fluctuations in investor sentiment than their conventional counterparts. Thus, these research indirectly supports the finding, namely investor sentiment positively affects stock prices.

Variable	Coefficient	Std.Error	z-Statistic	Prob
C	246,6703	1,19E-07	2,07E+09	0,0000
CCI	3,626057	0,034993	103,6225	0,0000
Variance Equation				
C	617,8325	170,0375	3,633507	0,0003
RESID(-1)^2	0,699257	0,232909	3,002277	0,0027
GARCH(-1)	-0,027276	0,149409	-0,182561	0,8551
R-squared	0,550694	Mean dependent var	658,7177	
Adjusted R-squared	0,545702	S.D dependent var	67,13938	
SE of regression	45,25306	Akaike info criterion	10,11433	
Sum squared resid	184305,6	Schwarz criterion	10,25138	
Log likelihood	-460,2592	Hannan-Quinn criter	10,16965	
Durbin-Watson stat	0,572502			

**Figure 3. RCH/GARCH Test of investor sentiment on JII**

On the other hand, based on Islamic finance, the movement of JII which is a sharia stock index should not be influenced by investor sentiment. Investor sentiment is not justified in influencing Islamic stock prices because investor sentiment contains elements of rumors. Rumors contained in investor sentiment can be classified as *tadlis* because rumors can affect stock price fluctuations to be very high or very low which does not reflect the quality and fair value of the stock. (Sholihin, 2010) explains that *fiqh tadlis* can be interpreted as a transaction that contains something that is not known to one party (unknown to one party). Every transaction in Islam must be based on the principle of willingness between the two parties, each party must have complete information so that no party feels cheated. *Tadlis* are classified into four types of transactions including quantity *tadlis* or reducing the size or scale, quality *tadlis* or not showing defects in goods, price *tadlis* or taking advantage of the buyer's ignorance of market prices and time *tadlis* or fulfilling the delivery time of goods which they realize cannot be fulfilled. So based on this explanation, rumors are categorized as *tadlis* types of quality and price.

The practice of *tadlis* has been clearly prohibited in the regulations issued by the National Sharia Council and the Financial Services Authority. Fatwa of the National Sharia Council Number 40/Dsn-Mui/X/2002 concerning the Capital Market and General Guidelines for the Implementation of Sharia Principles in the Capital Market Sector (MUI, 2002). (Rashid et al., 2014) adds that if the Islamic finance industry is influenced by investor sentiment, then this shows that the behavior in the Islamic finance industry has similarities with the conventional financial

industry. Furthermore, this shows that investors do not recognize the difference between Islamic and conventional financial instruments. Therefore, it is necessary to redesign the Islamic capital market system and regulations for Muslim investors. This is important to do in order to maintain the purity of the concepts and objectives contained in sharia principles. This research also contributes to the debate about whether or not there is an influence of investor sentiment on Islamic stocks and how to respond to it.

F-statistic	0,202837	Prob. F(1,89)	0,6535
Obs*R-squared	0,206923	Prob.chi-Square(1)	0,6492

Test Equation:  
 Dependent Variable: RESID^2  
 Method: Least Squares  
 Sample (adjusted): 2014M02 2021M08  
 Included observations: 91 after adjustments

Variable	Coefficient	Std.Error	t-Statistic	Prob
C	37,54782	6,857952	5,475077	0,0000
RESID^2(-1)	-0,047749	0,106022	-0,450374	0,6535
R-squared	0,002274	Mean dependent var	35,82256	
Adjusted R-squared	-0,008937	S.D dependent var	54,02236	
SE of regression	54,26321	Akaike info criterion	10,84730	
Sum squared resid	262060,1	Schwarz criterion	10,90249	
Log likelihood	-491,5523	Hannan-Quinn criter	10,86957	
F-statistic	0,202837	Durbin-Watson stat	1,973280	
Prob(F-statistic)	0,653536			

**Figure 4. Hetersoscedasticity of ISSI**

From the results of the ARCH-LM test on ISSI, the Prob value is 0.6535 when compared to a significance level of 0.05, which means that we reject H2 and it can be concluded that there is no heteroscedasticity in the data. The rejection of H2 means that there is no ARCH effect in the research data so that the model estimation will use linear regression. Next is to test the effect of investor sentiment on ISSI using linear regression.

Variable	Coefficient	Std.Error	t-Statistic	Prob
C	144,8488	11,00669	13,16007	0,0000
CCI	0,158069	0,096764	1,633547	0,1058
R-squared	0,028796	Mean dependent var	162,6999	
Adjusted R-squared	0,018005	S.D dependent var	12,73088	
SE of regression	12,61575	Akaike info criterion	7,929269	
Sum squared resid	14324,15	Schwarz criterion	7,984090	
Log likelihood	-362,7564	Hannan-Quinn criter	7,951395	
F-statistic	2,668475	Durbin-Watson stat	0,517278	
Prob(F-statistic)	0,105848			

**Figure 5. Linear Regression of Investor Sentiment on ISSI**

Based on figure 5, the prob value (0.1058) > 5%, then H2 is rejected. This shows that investor sentiment has no effect on ISSI. This value confirmed by its coefficient of determination of 0.028 which indicates that investor sentiment affects the movement of ISSI by 2,8% only. The percentage of this influence is very small (not significant) compared to JII determination coefficient. Or in other words, ISSI is influenced by 91.2% of other variables outside the model. If it is not a psychological variable, the theory that may supports this finding is the efficient market hypothesis. This theory concludes that stock prices reflect all available information in capital market and all investors act rationally. Rational means that investors in determining their investment decisions are based on fundamental considerations and do not involve psychological aspects such as investor sentiment (Efeoğlu & Çalışkan, 2019). There may be some investors who will act irrationally but their behavior in trading transactions is random (random) so that the effect is mutually canceling and does not affect the price (XIONG & WANG, 2019). In addition, arbitrator investors who act rationally will reduce the influence of irrational investor behavior on prices in the capital market. This finding indirectly implies that ISSI price movements are in accordance with Islamic finance principles which prohibit the involvement of investor sentiment.

The difference in the results between the two Islamic stock indices can be explained by the different constituents and criteria for selecting Islamic stocks. ISSI constituents are all sharia shares listed on the Indonesia Stock Exchange (IDX) and included in the Sharia Securities List (DES) issued by Financial Service Authority (OJK). This means that the IDX does not select sharia shares that are included in the ISSI. Meanwhile, JII conducts stock selection in stages as follows:

Sharia stocks that are included in the constituents of the Indonesian Sharia Stock Index (ISSI) have been listed for the last 6 months, Select 60 stocks based on the order of the highest average market capitalization in the last 1 year, then 30 of 60 stocks were selected based on the highest average daily transaction value in the regular market. The remaining 30 shares are JII's constituent share.

The high daily transactions allow the opportunity for tadelles to occur, so it becomes logical if investor sentiment affects JII and not ISSI. Meanwhile, ISSI which covers all sharia shares is more representative to state that in general the practice of the Indonesian capital market is in accordance with sharia principles.

## CONCLUSION

Based on data analysis, it can be concluded that based on the results of testing hypothesis one, investor sentiment has a significant positive effect on the Jakarta Islamic Index (JII). This finding is in line with behavioral finance science but indirectly shows that JII's sharia stock investment is not in accordance with sharia investment principles. Based on the results of testing the hypothesis two, investor sentiment has effect on the Indonesia Sharia Stock Index (ISSI). This finding is not in line with behavioral finance science but indirectly shows that ISSI's Islamic stock investment is in accordance with Islamic investment principles. This finding contributes to the debate on investor sentiment involvement in Islamic stock prices. This finding is also important for Muslim investors and traders as a consideration in making investment decisions. This study is limited to the sharia index in Indonesia so the results cannot be generalized globally. Future research agendas

can reach more samples and involve other psychological variables as an effort to develop behavioral finance studies.

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