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Performance of Sharia and Conventional Stock during the Pandemic of Covid-19 in Indonesia

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Abstracts:
This research aims to analyse the difference between sharia and conventional stock performance in Indonesia Stock Exchange at the time of pandemic Covid-19. The research took a sample of all the companies whose stocks were actively traded in the period of March – May 2020. Of the 681 shares listed, only 583 stocks were traded continuously for 3 months and 98 of the risk stock was zero, so the samples were selected as many as 583 shares consisting of 391 sharia shares and 192 conventional stocks. The testing results of Levene's test showed the value F > 0.05 which means changes in stock performance occurring in sharia and conventional stocks are the same. The value t =-1.035 and its significance (P = 0,301) indicate a decrease in the performance of stocks occurring in sharia and conventional stocks. The average performance of sharia and conventional shares is the same as-0.28837 for sharia shares and-0.23466 for conventional stocks

Keywords: Return, risk, risk-adjusted return, performance, sharpe ratio

1. Introduction

Pandemic Covid-19 which struck the world with 76 positively confirmed countries has a big impact on all sectors, including trading on the Indonesia Stock Exchange. On March 2, 2020 the Indonesian government issued a formal declaration that in Indonesia was confirmed Covid-19. The statement responded to the market with a decrease in the stock price of 236 shares or 35% of all traded stocks. The average stock price decrease was 0.08% in the trade close of 2 March 2020. The decline continued to occur and resulted in the Indonesian capital market experiencing trade pressures that resulted in a significant decrease in the combined Stock price index (JCI). So that the board of Directors of Indonesia Stock Exchange issued a decision of board of Director number: KEP-00024/IDX/03-2020 dated March 10, 2020 on the change of the guidelines for the continuity of trade in the Indonesia Stock Exchange in case of emergency, in order to maintain a regular, fair and efficient trading of securities Based on the decision of the Board of Directors, IDX held a temporary suspension of trade (trading halt) on 12, 13, 17, 19, 23 and 30 March 2020.

The decline of the JCI on March 2, 2020 to 5,361.246 which was previously at the end of February JCI closed at 5,452.704. At the end of March 2020 it fell to 4,538.930 and by the end of April the JCI increased at level 4,716.403. This level lasts at the end of May that is at level 4,753.612

The Sharia stock index (ISSI), which is an index of Sharia stock groups, is also a decline. In early March, 155.310 was decreased compared to trade in the end of February at 156.750.At the end of March ISSI still declining at level 133.990. In late April and May 2020 ISSI was still in the range of 144.865 and 143.810. This shows that sharia stocks are the same as conventional stocks as affected by pandemic Covid-19. The difference with the previous crisis that had occurred in 2008, sharia stocks have better resilience in the economic condition of the crisis (Albaity & Ahmad, 2008). Based on the background, this research aims to determine if there is a difference between Sharia and conventional stock performance in the pandemic of Covid-19 using Sharpe ratio analysis.

2. Theoretical Background

2.1. Return

(Gitman, 2009) defines return as follows: "Return is the total gain or loss over a certain period of time. Generally, a percentage of the initial investment value is measured as a change in value over the cash distribution over a period of time".(Berk & DeMarzo, 2017)"Return is the difference between the sale and purchase price of an asset plus a cash distribution expressed in a percentage of the purchase price". According to (Hartono, 2017)return there are two return realization and return expectations. Return of actual realization or return is calculated based on historical data while return expectation is expected return to be obtained by investor in future.

2.2. Risk

The risk according to (Tendelilin, 2010) is the difference between the actual return and the expected return. There are two types of risks are systematic risk and unsystematic risk. Systematic risk is a market risk that is influenced by

macroeconomic factors such as interest rate, inflation rate and government policy. Systematic risk cannot be eliminated but can only change or fluctuate due to changes in macroeconomic factors. Unsystematic risk is inherent in the company's risk so that it can be reduced by making diversification of investment portfolio

2.3. Performance Stock

Stock performance is part of the company's performance assessment. According to(Brigham, 1999)Return is a tool that can measure the company's financial performance from the company's own shares. The calculation of return is based on changes in the stock market price formed by demand and supply of stock in the capital market. Market prices can represent an investor's valuation of the company's value as the market price is no longer influenced by issuers and underwriters. The analysis of stock performance is crucial for investors to ensure the profits that investors will gain from investment shares. Analysis related to changes in the price of stocks can be done with a fundamental and technical approach. The fundamental approach of analyzing the stock price relationship with the conditions of change occurring is reflected in the net worth value of the company. The technical approach analyzes the price of stocks that occur due to market demand and offerings, so the information used to conduct the analysis comes from external parties of the company.

2.4. Ratio Sharpe

The ratio of Sharpe or known to the reward to variability developed by William F. Sharpe is one of the many methods used to assist investors in calculating the level of return adjusted to the risk level (Sharpe, 1966). The Sharpe ratio is an advantage gained from risk-free levels per unit of volatility or total risk. Volatility is a measure of price fluctuations of an asset or portfolio

Reduce the risk-free rate of returns that give investors the opportunity to further isolate the benefits associated with risk-taking activities. Risk-free returns are the return on investment with zero risk, which means that investors do not expect risk. The advantage of the Sharpe ratio is that it can be used to conduct performance evaluations in the past where return actual is included in the calculation formula. The same can also be done to calculate the approximate ratio of Sharpe by using the expected return level and free level. The Sharpe ratio can be used to figure out the stock performance ratings which is the higher the Sharpe ratio shows the better the stock performance. As for the level of Sharpe ratio is as follows < 1= bad, 1 – 1.99 = adequate, 2 – 2.99 = very good, > 3 = excellent

2.5. Review of Previous Research

Some research on the analysis of the performance comparison of sharia and conventional stock conducted in Indonesia, among others: the research of (Ahmad & Ibrahim, 2002) and (Albaity & Ahmad, 2008)conducted research on the performance comparison of Sharia stock indices and composite indices on Malaysian exchanges. Both studies show similar results that there is no difference between Sharia and conventional stock performance.(Abbes, 2012)examined the differences in the performance of Shariah and conventional stocks from 35 index in developing countries and GCC markets. Test results show that there are no differences in sharia and conventional stock performance. The study of the comparison of Islamic and conventional financial performance by (Affaneh, Albohali, & Boldin, 2013) shows that there is no difference in portfolio returns and risk-free assets (Kurniawan & Asandimitra, 2014). In his research stated that in 2008, 2009, 2012 the overall Sharia index had better performance than the conventional index performance using risk adjusted performance. This is because the screening process performed by the Indonesian stock exchange on Sharia indices results in good performance when the economic conditions are declining. In the year 2010, 2011 JII performance was worse than LQ45 performance because the screening process conducted by the Indonesia Stock Exchange on conventional indices resulted in better performance than the sharia index during normal economic conditions. (Amalia & Kartikasari, 2016) conducted research on the comparison of sharia and conventional stock performance period of 2011 – 2015. Results showed that there were no differences in sharia and conventional stock performance. (Sholihah & Asandimitra, 2017) examined the performance comparison of Sharia stock indices and conventional indices of the period 2011 – 2016. The Sharia stock indices used are Sharia stock index Indonesia (ISSI) and Jakarta Composite Index (JCI) as conventional indices. The results showed that during this period, ISSI had better stock performance than JCI by using Sharpe ratio analysis. (Setiawan, 2017) also conducted research on the comparison of Sharia stock performance using JII (Jakarta Islamic Index) and conventional shares (JCI). The results showed that conventional stock performance was better than Sharia stock performance. (Febrianti, 2018)also conducted research on the comparison of the performance of Sharia (JII) and conventional (LQ 45) shares with the results showed that there are differences in Sharia and conventional stock performance. The performance of Sariah stocks tends to be stable while conventional stocks change and stock decline occurs quite significantly.

3. Research Methodology

The measurement of stock performance is conducted to determine the difference in Sharia and conventional stock performance in the early pandemic Covid-19 in Indonesia. The population of the research data used is all stocks listed on the Indonesia Stock Exchange as of March toMay, 2020. Stocks listed at IDX per May 2020 as of 681. The sample is selected by the Purposive sampling method with the following criteria:

- Active shares are traded as of 2 March to 30 May respectively
- Stock risk (standard deviation) ≠ 0

Based on the purposive sampling criteria, from 681 registered shares, only 583 stocks were traded continuously for 3 months and 98 of the risk stock of zero, so the samples were chosen as much as 583 shares consisting of 391 sharia shares and 192 conventional stocks.

Stock performance was measured using the Sharpe ratio which is a comparison of the return and total stock portfolio risks. The Total risk is a standard deviation which includes the systematic risk and the risk of the portfolio itself. The higher the ratio of Sharpe indicates that the better the stock performance. Sharpe ratio is calculated by formula:

Sharpe Ratio = (Ri – Rf) / σ

Ri   = Stock return of companies i
Rf   = Risk free rate
σ   = Standard deviation

Return of stock is the rate of return of stock calculated based on changes in the daily closing price by using the formula as the next:

$$Ri = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Ri   = Return of securities i
Pt   = Closing price on day t
Pt-1   = Closing price on the t-1 day

Standard deviation is the level of risk of stock calculated with the following formula:

$$SD = \sqrt{\sum_{i=1}^{n} [R_i - E(R_i)]^2}$$

SD   = Standard deviation
Ri   = return Securities i
E(Ri) = expected return of securities i

Analysis to determine the difference in the performance of sharia and conventional stocks used Test Levene. This analysis aims to test the similarity of variants of several populations with the following provisions:

- F value has significance level ($P < 0.05$) is the variance of the two populations is not homogeneous
- F value has significance level ($P > 0.05$) is the variance of both populations is homogeneous

Based on the F value, we can determine whether there is a difference of sharia and conventional stock performance with the following provisions:

- If the data is homogeneous then we can take the T value in the column Equal variance assumed, the value T with significance $p < 0.05$ indicates there is a difference in performance between sharia stocks and conventional stocks. If $p > 0.05$ shows no difference in performance between sharia stocks and conventional stocks
- If heterogeneous data then we can take the value of T in the column Equal variance not assumed, value T has significance $p < 0.05$ indicates that there is a difference in performance between sharia stocks and conventional stocks. If $p > 0.05$ indicates that there is no difference in performance between sharia stocks and conventional stocks
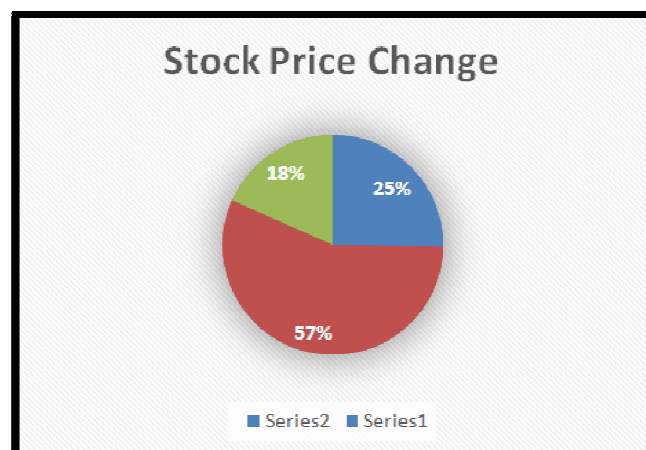
4. Research Discussion

Figure 1

In the early period of Indonesia experienced the pandemic Covid-19, Figure 1 showed that 384 shares or 57% of the traded stocks suffered a decrease in the stock price. The greatest decrease is the Bank Central Asia Tbk (BBCA) stock, which is Rp 5,500 from Rp 31,450 to Rp 25,950. 125 shares or 18% of shares are not subjected to price changes. As for the

increase in the stock price of 172 shares or 25% of the total traded shares. The biggest increase is the stock price of Dian Swastika Sentosa TBK (DSSA) which amounted to Rp 1,650 from Rp 17,875 to Rp 19,525
The details of sharia and conventional stocks with price changes can be seen on Figure 2
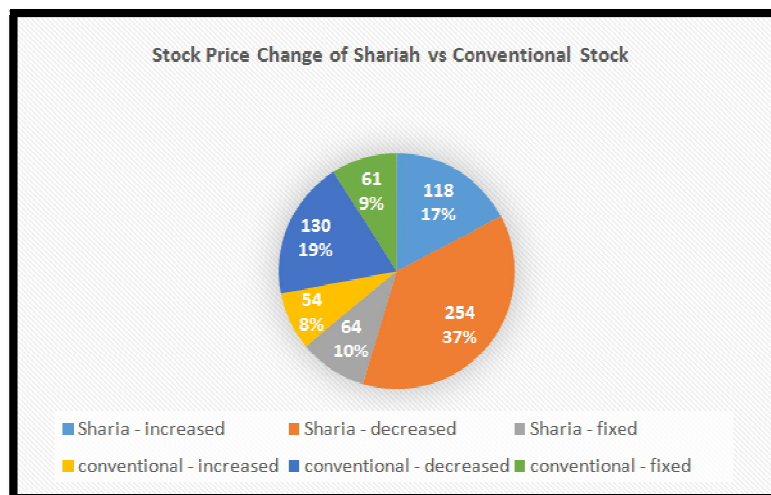

Figure 2

The decrease in the stock price is dominated by sharia stocks as much as 254 shares or 37% while conventional stocks have decreased by 130 shares or 19%. The number of Sharia shares also increased the price of more than 118 shares or 17%, while the conventional stocks were increased by only 54 shares or 8%. While stocks with a fixed price of only 64 shares or 10% for sharia shares and 61 conventional shares or a 9% compound

The change in the stock price could be used as the basis for the stock performance assessment during the initial period of Indonesia experiencing the Covid-19 pandemic. The stock performance assessment uses the Sharpe ratio, the greater the Sharpe ratio shows the better the stock performance.
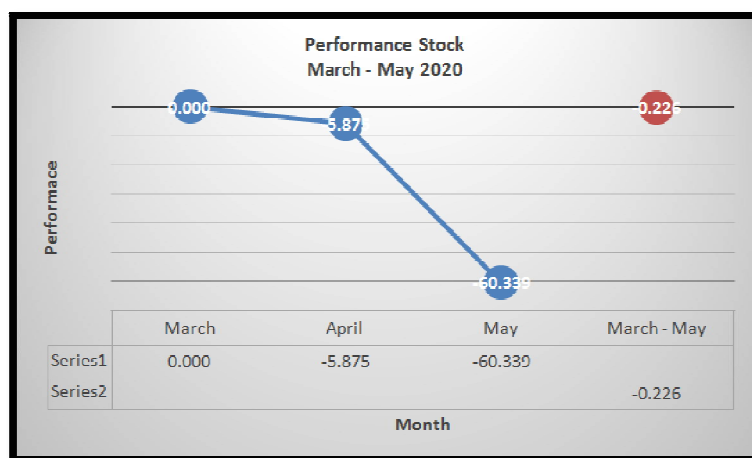

Figure 3

Figure 3 shows the initial quarter performance pandemic Covid-19 in Indonesia of-0.226. In March the average stock performance was 0, it showed that the average stock price change was equal to the SBI rate of 5.7505%. In April the stock performance decreased with an average of the Sharpe ratio index of-5.875. This decline continues in May with a Sharpe ratio index of-60.339

	Type	N	Mean	Std. Deviation	Std. Error Mean
Performance	Sharia	391	-.24530	.623544	.031534
	Conventional	192	-.18605	.258007	.018620

Table 1: Group Statistics

Table 1 shows the mean value of Sharia stock performance of-0.24530 and-0.18605 for conventional stocks. The Fortune Mate Indonesia Tbk (FMII) share has the greatest Sharpe ratio of 0.002 and the Yelooo Integra Datanet Tbk (YELO) share has the least Sharpe ratio of-9.878.

To know the performance comparison of sharia and conventional stocks using Levene's test. Test results of the Leven's test can be seen in Table 2the value F = 3.464 significance 0.063 shows the data of sharia and conventional stock

performance is homogeneous because of sig > 0.05. Value T =-1.264 significance 0,207 because sig> 0.05 indicates no difference in Sharia and conventional stock performance

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df	Sig. (2 tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Performance	Equal variances assumed	3,464	,063	-1,264	581	,207	-.059250	.046870	-.151304	.032805
	Equal variances not assumed			-1,618	568,302	,106	-.059250	.036621	-.131179	.012679

Table 2: Independent Samples Test

5. Conclusion

The results showed that most stocks had decreased prices. Indonesia's official statement of positive Covid-19 on March 2, 2020 responded with the price reduction of most stocks the decline took place during the observation period, 57% of the traded shares had decreased compared to the prior declaration of official pandemic Covid-19 in Indonesia. Comprising 37% of Sharia shares and 19% of conventional shares. The decrease in the stock price that lasted during the observation period resulted in low performance of stocks and even stock performance showed negative numbers. Negative share performance will harm the investor because the expected return of the stock is smaller than the rate risk free asset or the rate of SBI (Bank Indonesia certificate).

- Levene's test shows the significance of the value F > 0.05 which means the change in stock performance occurring in sharia and conventional stocks is the same.
- The value t =-1.035 and the significance (P = 0,301) indicates the decrease in the performance of stocks occurring in sharia and conventional stocks
- The average performance of Sharia shares is-0.28837 and the conventional stock is-0.23466 with a relatively small difference of-0.053702. With the relatively small difference it shows that the average share of sharia and conventional stocks is the same.

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