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EVALUATION OF CONVENTIONAL AND SHARIA STOCK PERFORMANCE BASED ON SHARPE, TREYNOR, AND JENSEN INDECES

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Abstract

The purpose of the research is to analyse the performance of conventional and sharia stocks in the Indonesian capital market for the 2019-2023 period. the LQ45 and JII indices are used as proxies to represent each of the conventional and sharia stocks. The method used in this research is descriptive method, where the evaluation of the performance of conventional and sharia stocks is measured based on the sharpe, treynor, and jensen indices. The population in this research are all stocks included in the LQ 45 and JII indices in the 2019-2023 period. The samples in this study were 19 conventional stocks from the LQ 45 indices and 13 Islamic stocks from the JII indices. The sampling method used is non-probability sampling with a purposive sampling approach. the results of this study show several stocks that have performed well during the 2019-2023 period. In conventional stocks, namely: ADRO, ANTM, BBRI, ICBP, INCO, ITMG. While in sharia stocks, namely ADRO, ANTM, ICBP, INCO. These stocks can be considered by investors to be included in the investment portfolio. The conclusion of this study is that the performance of conventional and sharia stocks based on the Sharpe, Treynor, and Jensen, value of stocks is dominated by negative values, which means that the condition of stock analysis is quite bad compared to the portfolio, portfolio beta, and the market or benchmark used.

Keywords: Stock Performance, Conventional Stock, Sharia Stock, LQ45, JII

INTRODUCTION

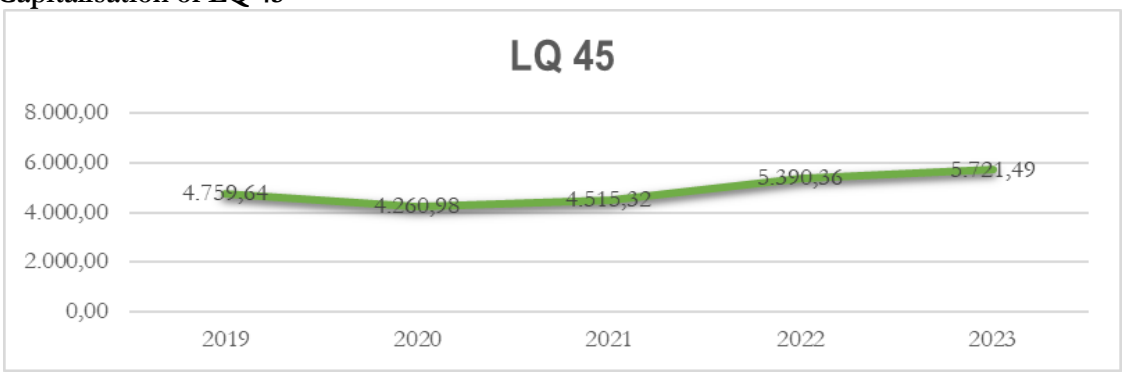
The capital market is a place for funding for companies and other institutions and a place to invest for investors. The capital market plays an important role in a country's economy because it functions as a means of investing in financial instruments, one of which is shares (Fajar, 2018). The capital market serves as a platform for companies and other institutions to secure funding while providing investors with opportunities to invest. It holds a significant role in a country's economy by facilitating investment in financial instruments, including stocks (Raza & Ye, 2024). One form of financial investment in the Indonesian capital market is shares. Shares serve as evidence of capital or financial participation in a company. They are documents that explicitly state the nominal value, the name of the company, and detail the rights and obligations assigned to each shareholder (Li et al., 2024) As an instrument traded in the capital market, shares have various classifications. They are classifications based on their characteristics, such as common stocks and preferred stocks. Classification based on trading performance includes categories such as blue-chip stocks, income stocks, growth stocks, speculative stocks, and counter-cyclical stocks (Bartlett, 2023). These classifications help investors choose stocks that align with their financial goals, risk tolerance, and investment strategies. For instance, risk-averse investors may prefer blue-chip or income stocks, while those seeking high growth might opt for growth or speculative stocks (Meiryani et al., 2023). Understanding these categories also enables investors to build a diversified portfolio, balancing risk and return by including various types of stocks suited to different market conditions and economic cycles (Begum et al., 2023)

There are also classifications based on certain religious or ethical considerations, which are often referred to as faith-based stocks such as conventional stocks and Sharia stocks (Diane Binangkit & Savitri, 2016). Sharia stocks themselves are products found in the capital market in Indonesia whose activities are generally in line with conventional capital markets in general (Homaidi et al., 2024). The difference with the conventional capital market lies in the products and transaction mechanisms that must not conflict with Islamic law (Listyawati & Nurchayati, 2020). These stocks are issued by companies that operate in sectors permissible under Sharia principles, excluding industries such as gambling, alcohol, and interest-based financial services. The transaction mechanisms for Sharia stocks are also designed to avoid elements of gharar (uncertainty), maysir (gambling), and riba (usury) (Muneeza et al., 2024).

The emergence of conventional and Sharia stock investment options allows investors in the capital market to understand stock performance in order to determine the best investment in the capital market. Stock performance serves as an indicator of a company's overall success, assessed through the market value of its shares circulating in the capital market. It provides insights into how well a company is performing and its perceived value among investors, making it a critical factor in evaluating a company's financial health and growth potential (Jerogin & Brown, 2024). Stock performance can be measured more easily using a proxy. This proxy may be based on the issuer's industry type, such as manufacturing or banking, or by utilizing a market indices and volatility (Widodo, 2022).

In the capital market in Indonesia there are various indices that can be used by investors as a trading reference, in conventional stocks there is the LQ 45 indices which is one of 44 stock indices on the Indonesia Stock Exchange, the LQ 45 Indices is a combination of 45 stocks with high liquidity and large market capitalisation and has good company fundamentals (Polatikan, 2015). The growth of the LQ 45 Indices seen from its market capitalisation value is quite good, it had decreased in 2019, then its market capitalisation value always increased in the following years so that in 2023 it was worth Rp 5,721.49 trillion.

Figure 1
Capitalisation of LQ 45



Source: Data processed by Otoritas Jasa Keuangan (2024)

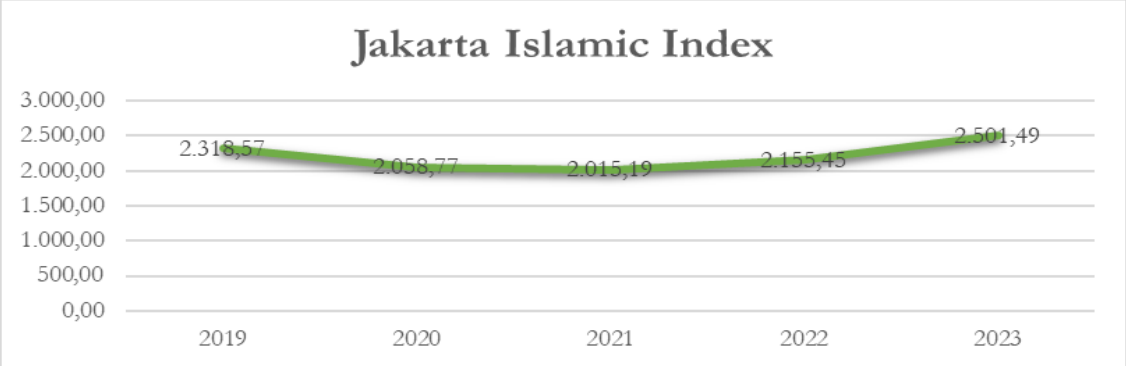
The decline in the performance of LQ 45 stocks was caused by several factors. A study conducted by (Ripal et al., 2024) stated that the LQ 45 indices price experienced a significant drop starting in March 2020, this movement was influenced by the impact of the COVID-19 pandemic, which led to decreased revenue due to reduced economic activity, as well as increased operational costs. This decline caused related stocks to fall because investors perceived that the companies' profit potential was weakening. In addition, according to (Purwanti et al., 2024), the decline in stock returns in LQ 45 during the 2019-2023 period

was influenced by stock risks, a particularly the high volatility in certain sectors such as commodities and real estate. It was also affected by higher interest rate policies in 2022-2023, which reduced the attractiveness of stocks compared to other investment instrument.

In sharia stocks there is The Jakarta Islamic Indices (JII), the first sharia indices launched in the Indonesian capital market, the indices was launched on 3 July 2000. The constituents of the JII are the 30 most liquid sharia stocks listed on the IDX (Bursa Efek Indonesia, 2019). Judging from its market capitalisation, the JII has experienced fluctuating growth in the last 5 years, experiencing a decline in 2019 and 2020, then increasing in the following years. In 2023 the JII experienced an increase of 16% when compared to the previous year, the JII recorded a capitalisation of IDR 2,501.49 trillion in 2023 from the previous IDR 2,155.45 trillion.

Figure 2

Capitalisation of the Jakarta Islamic Indices



Source: Data processed by Otoritas Jasa Keuangan (2024)

Based on the data explained from the LQ 45 Capitalization and the Jakarta Islamic Indices Capitalization (JII), there are quite different capitalization values, seen from the same year, namely 2023. In the LQ 45 which is the capitalization for the conventional stock market, it shows a value of IDR 5,721.49 trillion, while for the JII in the same year it was recorded at IDR 2,155.45 trillion.

During the 2019-2023 period, stocks on the Jakarta Islamic Indices experienced a decline in performance due to several things, Research conducted by (Fahrini et al., 2024) states that the COVID-19 pandemic has an impact on the decline in profits of companies listed on the Jakarta Islamic Indices, besides that fundamental factors such as DER owned by stocks in the JII are generally low due to sharia rules, but during difficult economic periods, this leverage limitation limits the company's expansion ability. Then in research conducted by (Mufid & Rosyidah, 2024) stated that the decline in stock performance in the JII was caused by several macroeconomic factors such as inflation that occurred during the 2022-2023 period put pressure on the company's net profit so that it had a negative impact on stocks, then the weakening rupiah exchange rate in 2022 caused investor concern, causing stock sell-offs in several major sectors in the JII.

According to evaluating the performance of a stock portfolio in the capital market, investors consider not only the potential returns but also other factors, such as the degree of risk involved in the portfolio (Zhang et al., 2023). This is because high returns cannot always cover the risks involved, so returns need to be adjusted to the risks faced, known as "risk-adjusted returns". Return and risk have a positive correlation, which means that the higher the return, the higher the risk (Shenjere & Ferreira-Schenk, 2024). This relationship reflects

the principle that investors must be willing to accept greater uncertainty and potential losses to achieve higher potential gains. Conversely, investments with lower returns generally carry lower risks, making them more suitable for risk-averse investors (Dong, 2024).

According to Hartono (2016), there are several calculation models that can be done with the Risk Adjusted Return method, including; first, the Sharpe method developed by William F. Sharpe (1996), this measurement is done by dividing the difference value of the average performance and the average risk-free interest with the standard deviation. The second is the Treynor method developed by Jack L. Treynor (1965), this ratio measures portfolio performance with systematic risk by calculating portfolio beta as an indicator. The third is the Jensen method developed by Michael C. Jensen (1968), this method shows the difference between the actual rate of return obtained by the portfolio and the expected rate of return if the portfolio is on the capital market line. (Tandelilin, 2010).

Research on the performance analysis of Islamic and conventional stocks shows different results. Muthoharoh & Sutapa (2014) in their research on the comparison of conventional and Islamic stocks measured using a t-test shows that based on the average return and risk of the Composite Stock Price Indices, Sharia stocks have a better performance than conventional stocks. Fajar (2018) in his research suggests that the average Sharia stocks measured using the return method have a lower average than conventional stocks, while research measured by Mann whitney U-Test shows that there is no significant difference between Sharia and conventional stocks in the IDX manufacturing sector.

Compared to previous research, this study focuses on the evaluation of conventional and sharia stock performance, through analysis of on going market conditions in choosing the best investment. This difference is also shown by the analysis indicators used, namely the Sharpe, Treynor and Jensen indeces. This indicator focuses more on the analysis of past returns with the intention of predicting the level of return and ratio that will occur in the future. This study is not the same as previous studies that discuss the comparison of average returns on conventional and sharia stocks only, but also look at the lowest and highest archives and the performance of both stocks.

The issue addressed in this study is the performance of conventional and sharia stocks based on the Sharpe, Treynor, and Jensen indices. The purpose of this study is to analyze the performance of conventional and sharia stocks using the Sharpe, Treynor, and Jensen indices.

RESEARCH METHODS

Type and Approach

This research was conducted using a quantitative method with a descriptive analysis approach, namely research by presenting facts through describing what was seen, obtained, and felt. (Priadana & Sunarsi, 2021). This research describes the performance of stocks listed on the LQ45 and the Jakarta Islamic Indices (JII) using the Sharpe indices, Treynor indices, and Jensen indices.

Population and Sample

Population is a general area which is an object/subject that has certain qualities and characteristics that are determined by researchers in studying and drawing conclusions. (Sugiyono, 2010). The population in this study were LQ45 stocks and JII stocks in the Indonesian Capital Market from 2019-2023. The population and sample criteria for this study are as follows:

Table 1
Research Sample Criteria

No.	Criteria	Jumlah	Total
1	Stocks that are always listed in LQ45 and JII during the 5-year observation period between 2019-2023.	LQ 45 = 23 JII = 15	38
2	Not doing a stock split, because it will cause bias in the calculation of stock returns.	LQ 45 = (4) JII = (2)	(6)
	Stocks that fulfil the sample criteria		32

Source: Data processed by Otoritas Jasa Keuangan (2024)

Sampling Technique

The sampling technique uses non-probability sampling technique through purposive sampling method. Purposive sampling is sampling carried out in accordance with the required sample requirements. Sampling is done deliberately to samples that have certain characteristics, characteristics, criteria, and traits (Fauzy, 2019). Based on the criteria that have been set, the research sample is obtained as follows:

Table 2
Research Sample

No.	Conventional Stocks (LQ45)	Sharia stocks (JII)
1	ADRO	ADRO
2	ANTM	ANTM
3	ASII	CPIN
4	BBRI	EXCL
5	BBTN	ICBP
6	CPIN	INCO
7	EXCL	INDF
8	ICBP	INTP
9	INCO	KLBF
10	INDF	PGAS
11	INKP	PTBA
12	INTP	TLKM
13	ITMG	UNTR
14	KLBF	
15	PGAS	
16	PTBA	
17	SMGR	
18	TLKM	
19	UNTR	

Source: Data processed by Otoritas Jasa Keuangan (2024)

Operational Definition of Variables

The operational definition of a variable refers to the explanation of a variable by giving it a specific meaning, specifying activities related to the variable, or describing the operations needed to measure it. Researchers used the operational definition of variables as a guide in this study. The operational definition of these variables are as follow:

Table 3
Operational Definition of Research Variables

Variabel	Definisi Operasional	Indikator	Measurement
Stock Performance	The performance of a stock is assessed based on its return and the risks associated with it.	1. **Return**: Precentage change in share price along with dividend 2. **Risiko**: Stock price fluctuation	Using daily stock price data during the research period to calculate return and risk.
Conventional Stock	Shares that are traded without considering sharia principles.	Share that are not listed in the sharia securities list.	Stocks listed on the stock exchange (LQ45).
Sharia Stock	Shares that comply with sharia principles based on DSN or OJK guidelines	Shares listed in the Sharia Securities List.	Stocks that are included in the JII and fulfil certain condition, such as limit on the ratio of interest based debt to total assets.
Sharpe Indices	A ratio to assess the performance of a portofolio by taking into account the rate of return and risk.	$Sp = \frac{Rp - Rf}{\sigma p}$	- Rp: Portfolio Return - Rf: Risk Free Rate - σp: Standard deviasion
Treynor Indices	A ratio used to evaluate portfolio performance by taking into account systematic risk (beta).	$Tp = \frac{Rp - Rf}{\beta p}$	- Rp: Portfolio Return - Rf: Risk Free Rate - βp: Portfolio Beta
Jensen Indices	A measuring tool to assess the difference between the actual return of the portfolio and the expected return based on the CAPM model.	Jp = Rp-[Rf+βp(Rm-Rf)]	- Rp: Portfolio Return - Rf: Risk Free Rate - Rm: Market Return - βp: Portfolio Beta
Market Return (Rm)	The average rate of return of the stock market which is usually measured using a specific market indices.	Market return is calculated from the change in the value of the market indices (IHSG).	Data was obtained from the movement of market indices during the study period.
Risk Free Rate (Rf)	A rate of return that has no investment risk, generally using government bond interest rates.	The interest rate of the 10-year government bond yield.	Data is sourced from government bond yield as a proxy for risk of return

Analysis Method

The data analysis method is a way of processing a collection of data which then the results of data processing are interpreted to answer the problems that have been formulated. In this study, data analysis was carried out using Microsoft Excel software. The steps taken in carrying out data analysis are as follows:

1. Sharpe Ratio:

a. Calculating Stock Return
Calculating the individual stock return earned during period t (Ri) is calculated using the following formula (Hartono, 2016):

$$\text{Ri} = \frac{Pt - Pt - 1}{Pt - 1}$$

Description:
Ri = Stock return i
Pt = Closing price of stock in period t
Pt-1 = Closing price of the stock in the previous period

b. Calculating market return (Hartono, 2016)

$$\text{Rm} = \frac{IHSGt - IHSGt - 1}{IHSGt - 1}$$

Description:
Rm = Market return
IHSGt = IHSG price for period t
IHSGt-1 = Previous period IHSG price

c. Calculating the Risk Free return (Risk Free Rate)
The calculation of the risk free rate value is done with SUN Yield 10 data.

$$Risk\ Free\ Rate = \frac{Yiel\ SUN\ 10}{n}$$

d. Measuring portfolio performance with the Sharpe ratio with the formula:

$$\text{Sp} = \frac{\text{Rp} - \text{Rf}}{\sigma\text{p}}$$

Description:
Sp = Sharpe performance indices
Rp = Portfolio return or market rate of return
Rf = Risk-free return risk-free interest rate
σp = Total risk which is the sum of unsystematic risk

2. Treynor Ratio

a. Calculating Stock Return
Calculating the individual stock return earned during period t (Ri) is calculated using the following formula (Hartono, 2016):

$$\text{Ri} = \frac{Pt - Pt - 1}{Pt - 1}$$

Description:
Ri = Stock return i
Pt = Closing price of stock in period t
Pt-1 = Closing price of the stock in the previous period

b. Calculating the beta value of stocks
The calculation of beta stocks can be done using the slope formula in Microsoft Office Excel or can use the following formula.

$$\beta\text{i}\,\frac{\sigma\text{iM}}{\sigma\text{M}^2}$$

Description:
βi = beta of stock i
σiM = covariance of security return with market return
σM^2 = market return variance

c. Measuring portfolio performance with the Treynor ratio with the formula:

$$\mathrm{Tp} = \frac{\mathrm{Rp} - \mathrm{Rf}}{\beta p}$$

Description:
Tp = Treynor performance indices
Rp = Portfolio return or market rate of return
Rf = Risk-free return risk-free interest rate
βp = Market risk of the portfolio or systematic risk of the portfolio

3. Jensen Ratio:

a. Calculating Stock Return
Calculating the individual stock return earned during period t (Ri) is calculated using the following formula (Hartono, 2016):

$$\mathrm{Ri} = \frac{Pt - Pt - 1}{Pt - 1}$$

Description:
Ri = Stock return i
Pt = Closing price of stock in period t
Pt-1 = Closing price of the stock in the previous period

b. Calculating market return (Hartono, 2016)

$$\mathrm{Rm} = \frac{IHSGt - IHSGt - 1}{IHSGt - 1}$$

Description:
Rm = Market return
IHSGt = IHSG price for period t
IHSGt-1 = Previous period IHSG price

c. Calculating the Risk Free return (Risk Free Rate)
The calculation of the Risk Free Rate value is done with SUN Yield 10 data.

$$Risk\ Free\ Rate = \frac{Yiel\ SUN\ 10}{n}$$

d. Measuring portfolio performance using the Jensen ratio with the formula:

$$\mathrm{Jp} = \mathrm{Rp}-[\mathrm{Rf}+\beta p(\mathrm{Rm}-\mathrm{Rf})]$$

Description:
Jp = Jensen performance indices
Rp = Portfolio return or market rate of return
Rf = Risk-free return risk-free interest rate
Rm = Market return
βp = Market risk of the portfolio or systematic risk of the portfolio

RESULTS AND DISCUSSION

RESULT

1. Conventional Stock Performance

Conventional stock performance assessment is based on the Sharpe, Treynor, and Jensen indices over the 2019-2023 period. The calculation of conventional stock performance based on the sharpe indices can be seen in table 4 below:

Table 4
Conventional Stock Performance

Stock Code	Risk Free Rate	Annual Return	Standard Deviasion	Market Return	Sharpe
IHSG	0,0689	0,0326	0,0405	0,0326	-0,8944
ADRO	0,0689	0,1439	0,1292	0,0326	0,5811
ANTM	0,0689	0,1738	0,1651	0,0326	0,6357
ASII	0,0689	-0,0724	0,0893	0,0326	-1,5817
BBRI	0,0689	0,0990	0,0767	0,0326	0,3927
BBTN	0,0689	-0,1259	0,1467	0,0326	-1,3277
CPIN	0,0689	-0,0700	0,0822	0,0326	-1,6906
EXCL	0,0689	0,0020	0,1040	0,0326	-0,6428
ICBP	0,0689	0,0024	0,0660	0,0326	-1,0074
INCO	0,0689	0,0574	0,1231	0,0326	-0,0931
INDF	0,0689	-0,0284	0,0622	0,0326	-1,5652
INKP	0,0689	-0,0634	0,1376	0,0326	-0,9612
INTP	0,0689	-0,1262	0,0891	0,0326	-2,1896
ITMG	0,0689	0,0484	0,1508	0,0326	-0,1357
KLBF	0,0689	0,0116	0,0606	0,0326	-0,9454
PGAS	0,0689	-0,1182	0,1340	0,0326	-1,3967
PTBA	0,0689	-0,1071	0,1033	0,0326	-1,7038
SMGR	0,0689	-0,1101	0,1044	0,0326	-1,7144
TLKM	0,0689	0,0104	0,0637	0,0326	-0,9179
UNTR	0,0689	-0,0372	0,1032	0,0326	-1,0279

Source: Data processed (2024)

Table 4 shows the calculation results on conventional stocks, from these results ANTM provides the best *return* results where the *return* value on the stock is 0.1738 (17.38%), while the lowest *return* is shown by INTP which is -0.1262 (-12.62%). In terms of risk, the stock with the highest risk is also shown by ANTM which is 0.1651 (16.51%), while the stock with the lowest risk is shown by KLBF which is 0.0606 (6.06%).

Stock performance based on the Sharpe indices is as follows.

Figure 3
Conventional Stock Performance measured by Sharpe Indices

Source: Data processed (2024)

From Table 4 we know that the calculation of the Sharpe indices on conventional stocks are dominated by stocks with negative results, as many as 16 out of a total of 19 stocks studied have negative values, which means that these stocks have poor performance. The lowest stock value is shown by INTP at -2.1896, while the highest value is shown by ANTM at 0.6357. Then there are 3 stocks that have good performance based on the Sharpe indices,

including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), and BBRI (PT. Bank Rakyat Indonesia Tbk.). Investors can consider these stocks to be included in the investment portfolio in the next period on the Indonesia Stock Exchange.

The assessment of conventional stock performance based on the Treynor indices can be seen in table 5 below

Table 5
Conventional Stock Performance

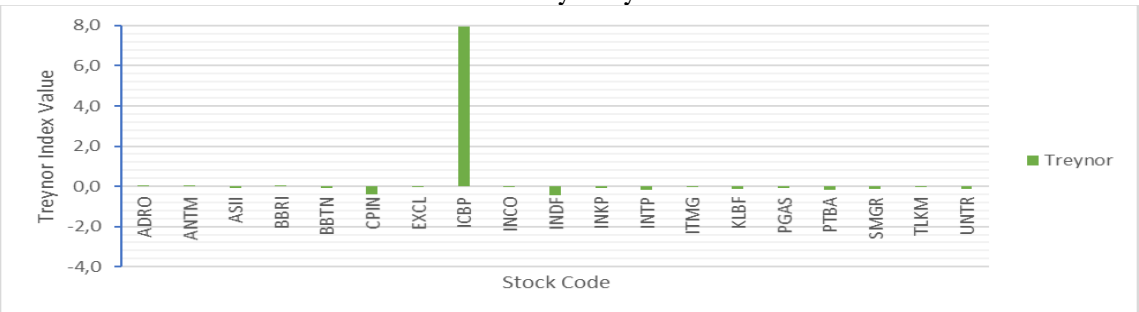
Stock Code	Risk Free Rate	Annual Return	Beta	Market Return	Treynor
IHSG	0,0689	0,0326	1,0000	0,0326	-0,0363
ADRO	0,0689	0,1439	1,3513	0,0326	0,0555
ANTM	0,0689	0,1738	2,6427	0,0326	0,0397
ASII	0,0689	-0,0724	1,3554	0,0326	-0,1042
BBRI	0,0689	0,0990	1,3569	0,0326	0,0222
BBTN	0,0689	-0,1259	2,3593	0,0326	-0,0825
CPIN	0,0689	-0,0700	0,3616	0,0326	-0,3842
EXCL	0,0689	0,0020	1,1474	0,0326	-0,0583
ICBP	0,0689	0,0024	-0,0084	0,0326	7,9561
INCO	0,0689	0,0574	1,8363	0,0326	-0,0062
INDF	0,0689	-0,0284	0,2111	0,0326	-0,4610
INKP	0,0689	-0,0634	1,6893	0,0326	-0,0783
INTP	0,0689	-0,1262	1,0605	0,0326	-0,1839
ITMG	0,0689	0,0484	1,8569	0,0326	-0,0110
KLBF	0,0689	0,0116	0,4602	0,0326	-0,1245
PGAS	0,0689	-0,1182	2,5647	0,0326	-0,0730
PTBA	0,0689	-0,1071	1,0227	0,0326	-0,1721
SMGR	0,0689	-0,1101	1,3742	0,0326	-0,1302
TLKM	0,0689	0,0104	0,9745	0,0326	-0,0600
UNTR	0,0689	-0,0372	0,9115	0,0326	-0,1164

Source: Data processed (2024)

Table 5 shows the calculation results on conventional stocks, from these results ANTM provides the best return results where the return value on the stock is 0.1738 (17.38%), while the lowest return is shown by INTP which is -0.1262 (-12.62%). Beta from the calculation results between the 2019-2023 period shows a range of -0.0084 to 2.6427. A security that has a beta < 1 is said to be less risky than the market portfolio risk. Conversely, a security that has a beta value > 1 is said to have a systematic risk greater than the market.

Stock performance based on the Treynor indices is as follows.

Figure 4
Conventional Stock Performance measured by Treynor Indices



Source: Data processed (2024)

From the Table 4 we know that the calculation of the Treynor indices on conventional stocks shows different results. A total of 15 out of a total of 19 stocks studied are negative, which means that these stocks have a poor performance. The lowest stock value is shown by INDF at -0.4610, while the highest value is shown by ICBP at 7.9561. Then there are 4 stocks that have good performance based on the Treynor indices, including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), BBRI (PT. Bank Rakyat Indonesia Tbk.), and ICBP (PT. Indofood CBP Sukses Makmur Tbk.). Investors can consider these stocks to be included in the investment portfolio in the next period on the Indonesia Stock Exchange.

The assessment of conventional stock performance based on the Jensen indices can be seen in table 6 below

Table 6
Conventional Stock Performance

Stock Code	Risk Free Rate	Annual Return	Beta	Market Return	Jensen
IHSG	0,0689	0,0326	1,0000	0,0326	0,0000
ADRO	0,0689	0,1439	1,3513	0,0326	0,1241
ANTM	0,0689	0,1738	2,6427	0,0326	0,2008
ASII	0,0689	-0,0724	1,3554	0,0326	-0,0921
BBRI	0,0689	0,0990	1,3569	0,0326	0,0793
BBTN	0,0689	-0,1259	2,3593	0,0326	-0,1092
CPIN	0,0689	-0,0700	0,3616	0,0326	-0,1258
EXCL	0,0689	0,0020	1,1474	0,0326	-0,0253
ICBP	0,0689	0,0024	-0,0084	0,0326	-0,0668
INCO	0,0689	0,0574	1,8363	0,0326	0,0551
INDF	0,0689	-0,0284	0,2111	0,0326	-0,0896
INKP	0,0689	-0,0634	1,6893	0,0326	-0,0710
INTP	0,0689	-0,1262	1,0605	0,0326	-0,1566
ITMG	0,0689	0,0484	1,8569	0,0326	0,0469
KLBF	0,0689	0,0116	0,4602	0,0326	-0,0406
PGAS	0,0689	-0,1182	2,5647	0,0326	-0,0941
PTBA	0,0689	-0,1071	1,0227	0,0326	-0,1389
SMGR	0,0689	-0,1101	1,3742	0,0326	-0,1291
TLKM	0,0689	0,0104	0,9745	0,0326	-0,0231
UNTR	0,0689	-0,0372	0,9115	0,0326	-0,0730

Source: Data processed (2024)

Table 6 shows the calculation results on conventional stocks, from these results ANTM provides the best return results where the return value on the stock is 0.1738 (17.38%), while the lowest return is shown by INTP which is -0.1262 (-12.62%). Beta from the calculation results between the 2019-2023 period shows a range of -0.0084 to 2.6427. A security that has a beta < 1 is said to be less risky than the market portfolio risk. Conversely, a security that has a beta value > 1 is said to have a systematic risk greater than the market.

The performance of stocks based on the Jensen indices is shown in the following figure.

Figure 5
Conventional Stock Performance measured by Jensen Indices

Source: Data processed (2024)

From table 5 we know that the calculation of the Jensen indices on conventional stocks shows different results. A total of 14 out of a total of 19 stocks studied are negative, which means that these stocks have a poor performance. The lowest stock value is shown by INTP at -0.1566, while the highest value is shown by ANTM at 0.2008. Then there are 5 stocks that have good performance based on the Jensen indices, including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), BBRI (PT. Bank Rakyat Indonesia Tbk.), INCO (PT. Vale Indonesia Tbk.), and ITMG (PT. Indi Tambangraya Megah Tbk.). Investors can consider these stocks to be included in the investment portfolio in the next period on the Indonesia Stock Exchange.

2. Sharia Stock Performance

The results of the calculation of Sharia stock performance based on the Sharpe indices during the 2019-2023 period are presented in the following table.

Table 7
Islamic Stock Performance

Stock Code	Risk Free Rate	Annual Return	Standard Deviation	Market Return	Sharpe
IHSG	0,0689	0,0326	0,0405	0,0326	-0,8944
ADRO	0,0689	0,1439	0,1292	0,0326	0,5811
ANTM	0,0689	0,1738	0,1651	0,0326	0,6357
CPIN	0,0689	-0,0700	0,0822	0,0326	-1,6906
EXCL	0,0689	0,0020	0,1040	0,0326	-0,6428
ICBP	0,0689	0,0024	0,0660	0,0326	-1,0074
INCO	0,0689	0,0574	0,1231	0,0326	-0,0931
INDF	0,0689	-0,0284	0,0622	0,0326	-1,5652
INTP	0,0689	-0,1262	0,0891	0,0326	-2,1896
KLBF	0,0689	0,0116	0,0606	0,0326	-0,9454
PGAS	0,0689	-0,1182	0,1340	0,0326	-1,3967
PTBA	0,0689	-0,1071	0,1033	0,0326	-1,7038
TLKM	0,0689	0,0104	0,0637	0,0326	-0,9179
UNTR	0,0689	-0,0372	0,1032	0,0326	-1,0279

Source: Data processed (2024)

Table 7 shows the calculation results on Sharia stocks, from these results the highest and lowest return values are shown by the same stocks as conventional stocks, ANTM

provides the best return results where the return value on the stock is 0.1738 (17.38%), while the lowest return is shown by INTP which is -0.1262 (-12.62%). In terms of risk, the stock with the highest risk is also shown by ANTM at 0.1651 (16.51%), while the stock with the lowest risk is shown by KLBF at 0.0606 (6.06%).

Stock performance based on the Sharpe indices is as follows.

Figure 6
Islamic Stock Performance measured by Sharpe Indices

Source: Data processed (2024)

From Table 7 we know that the calculation of the Sharpe indices on Sharia stocks shows different results. The Sharpe indices calculation results are dominated by stocks with negative results, as many as 11 out of a total of 13 stocks studied have negative values, which means that these stocks have poor performance. The lowest stock value is shown by INTP which is -2.1896, while the highest value is shown by ANTM which is 0.6357. Then there are 2 stocks that have good performance based on the Sharpe indices, including ADRO (PT. Adaro Energy Indonesia Tbk.) and ANTM (PT. Aneka Tambang Tbk.). Investors can consider these stocks to be included in the investment portfolio in the next period on the Indonesia Stock Exchange.

Analysis of Sharia Stock Performance Based on Treynor Indices as follows

Table 8
Islamic Stock Performance

Stock Code	Risk Free Rate	Annual Return	Beta	Market Return	Treynor
IHSG	0,0689	0,0326	1,0000	0,0326	-0,0363
ADRO	0,0689	0,1439	1,3513	0,0326	0,0555
ANTM	0,0689	0,1738	2,6427	0,0326	0,0397
CPIN	0,0689	-0,0700	0,3616	0,0326	-0,3842
EXCL	0,0689	0,0020	1,1474	0,0326	-0,0583
ICBP	0,0689	0,0024	-0,0084	0,0326	7,9561
INCO	0,0689	0,0574	1,8363	0,0326	-0,0062
INDF	0,0689	-0,0284	0,2111	0,0326	-0,4610
INTP	0,0689	-0,1262	1,0605	0,0326	-0,1839
KLBF	0,0689	0,0116	0,4602	0,0326	-0,1245
PGAS	0,0689	-0,1182	2,5647	0,0326	-0,0730
PTBA	0,0689	-0,1071	1,0227	0,0326	-0,1721
TLKM	0,0689	0,0104	0,9745	0,0326	-0,0600
UNTR	0,0689	-0,0372	0,9115	0,0326	-0,1164

Source: Data processed (2024)

Table 8 shows the calculation results on Sharia stocks, from these results the highest and lowest return values are shown by the same stocks as conventional stocks, ANTM provides the best return results where the return value on the stock is 0.1738 (17.38%), while the lowest return is shown by INTP which is -0.1262 (-12.62%). Beta from the calculation results between the 2019-2023 period shows a range of -0.0084 to 2.6427. A security that has a beta < 1 is said to be less risky than the market portfolio risk. Conversely, a security that has a beta value > 1 is said to have a systematic risk greater than the market.

Stock performance based on the Treynor indices is as follows.

Figure 7
Islamic Stock Performance measured by Treynor Indices

Source: Data processed (2024)

From Table 8 we know that the calculation of the Treynor indices on Sharia stocks shows different results. A total of 10 out of a total of 13 stocks studied are negative, which means that these stocks have a poor performance. The lowest stock value is shown by INDF at -0.4610, while the highest value is shown by ICBP at 7.9561. Then there are 3 stocks that have good performance based on the Treynor indices, including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), and ICBP (PT. Indofood CBP Sukses Makmur Tbk.). Investors can consider these stocks to be included in the investment portfolio in the next period on the Indonesia Stock Exchange.

Analysis of Sharia Stock Performance Based on Jensen Indices as follows

Table 9
Islamic Stock Performance

Stock Code	Risk Free Rate	Annual Return	Beta	Market Return	Jensen
IHSG	0,0689	0,0326	1,0000	0,0326	0,0000
ADRO	0,0689	0,1439	1,3513	0,0326	0,1241
ANTM	0,0689	0,1738	2,6427	0,0326	0,2008
CPIN	0,0689	-0,0700	0,3616	0,0326	-0,1258
EXCL	0,0689	0,0020	1,1474	0,0326	-0,0253
ICBP	0,0689	0,0024	-0,0084	0,0326	-0,0668
INCO	0,0689	0,0574	1,8363	0,0326	0,0551
INDF	0,0689	-0,0284	0,2111	0,0326	-0,0896
INTP	0,0689	-0,1262	1,0605	0,0326	-0,1566
KLBF	0,0689	0,0116	0,4602	0,0326	-0,0406
PGAS	0,0689	-0,1182	2,5647	0,0326	-0,0941
PTBA	0,0689	-0,1071	1,0227	0,0326	-0,1389
TLKM	0,0689	0,0104	0,9745	0,0326	-0,0231
UNTR	0,0689	-0,0372	0,9115	0,0326	-0,0730

Source: Data processed (2024)

The performance of stocks based on the Jensen indices is shown in the following figure.

Figure 8
Islamic Stock Performance measured by Jensen Indices

Source: Data processed (2024)

From Table 9 we know that the calculation of the Jensen indices on Islamic stocks shows different results. A total of 10 out of a total of 13 stocks studied are negative, which means that these stocks have poor performance. The lowest stock value is shown by INTP at -0.1566, while the highest value is shown by ANTM at 0.2008. Then there are 3 stocks that have good performance based on the Jensen indices, including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), and INCO (PT. Vale Indonesia Tbk.). Investors can consider these stocks to be included in the investment portfolio in the next period on the Indonesia Stock Exchange.

DISCUSSION

Conventional Stock Performance

1. Performance Analysis of Conventional Stocks Based on Sharpe Indices

The research finding shows that the calculation of the Sharpe indices on conventional stocks shows different results. The sharpe indices calculation results are dominated by stocks with negative results, as many as 16 out of a total of 19 stocks studied have negative values, which means that these stocks have poor performance. Then there are 3 stocks that have good performance based on the sharpe indices, including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), and BBRI (PT. Bank Rakyat Indonesia Tbk.). The positive value indicates that the company's investment return exceeds the expected return for the level of risk taken. This can be seen in table 3 where the standard deviation value as a total risk is lower than the company's stock return. These results can provide insight for investors in choosing an investment place and also for company management in order to maintain its performance.

Measurement using the Sharpe method or also referred to as the Reward to Variablity Ratio (RVAR) emphasises total risk or standard deviation. Standard deviation shows the small bear change in a stock's return on the average return of the stock in question for the purpose of predicting future performance using past data (Tandelilin, 2010). Past average returns are considered as future risk prediction returns. The portfolio risk premium, Rp - Rf, is compensation for bearing risk while the standard deviation of portfolio returns is a measure of risk. The standard deviation of return is a measure of total risk for a security or portfolio. Thus, the Sharpe indices is the ratio of compensation to total risk.

This finding is in line with the results of research by Az Zahra et al., (2024) which discusses the performance of conventional stock mutual funds and sharia stock mutual

funds, which resulted in findings that based on the Sharpe indices the resulting value is negative or minus with a value of -2.7760%. which means that the condition of the stock analysis is quite bad compared to the portfolio, portfolio beta and the market or benchmark used.

The results of the sharpe indices performance calculation help companies understand whether the level of return earned is proportional to the level of risk taken in the investment. The sharpe indices can also help companies to manage the risk of their investment portfolio more effectively, by taking into account whether the rate of return earned equals or exceeds the level of risk taken. As such, the results of the sharpe indices calculation can provide valuable insights for companies in managing their investment portfolios and making better decisions.

2. Performance Analysis of Conventional Stocks Based on Treynor Indices

Beta shows the size of the change in the return of a stock portfolio return to changes in market return. As a measure of investment risk, beta is used because generally stock price fluctuations are influenced by market fluctuations. Beta from the calculation results between the 2019-2023 period shows a range of -0.0084 to 2.6427. A security that has a beta < 1 is said to be less risky than the market portfolio risk. Conversely, a security that has a beta value > 1 is said to have a systematic risk greater than the market.

The research finding shows that the calculation of the Treynor indices on conventional stocks shows different results. A total of 15 out of a total of 19 stocks studied are negative, which means that these stocks have a poor performance. Then there are 4 stocks that have good performance based on the Treynor indices, including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), BBRI (PT. Bank Rakyat Indonesia Tbk.), and ICBP (PT. Indofood CBP Sukses Makmur Tbk.). Investors can consider these stocks to be included in the investment portfolio in the next period on the Indonesia Stock Exchange. Portfolios that have a Treynor Indices that is smaller than the market, Treynor Indices are located below the security market line, and this indicates that the portfolio's performance is below market performance. Conversely, portfolios that are above the security market line have performance above market performance (Karim et al., 2021). The greater the slope of the line or the greater the Treynor indices a portfolio has, meaning that the portfolio's performance becomes relatively better than portfolios that have a smaller Treynor indices.

Interesting findings in the study are in ICBP shares which have a very high Treynor indices value compared to other stocks. this shows that based on the Treynor indices assessment, ICBP shares have a very good performance compared to other stocks. this is because the stock has a very small beta value compared to other stocks which is -0.0084, based on the results of beta calculations, ICBP shares show that their portfolio risk is lower than the market portfolio risk because the beta value is < 1. while the beta value in other stocks has a value with a systematic risk greater than the market.

In evaluating the performance of a stock portfolio with the Treynor method or often referred to as the Reward to Volatility Ratio (RVOR), using past average returns as expected returns and also beta as a measure of risk. The assumption used is that the portfolio is well diversified so that the risk that is considered relevant is systematic risk (measured by beta). Like the Sharpe indices, the Treynor indices is also a risk compensation ratio. But in the Treynor indices, risk is measured not by total risk but only systematic risk (Sari et al., 2023).

This finding is in line with research conducted by Purwanti et al., (2024) which states that LQ 45 stocks with lower risk (low beta) are more attractive to investors during times of economic uncertainty, stocks with high risk experience significant volatility, during the pandemic to post-pandemic.

3. Analysis of Conventional Stock Performance Based on Jensen Indices

The Research finding shows that the calculation of the Jensen indices on conventional stocks shows different results. A total of 14 out of a total of 19 stocks studied are negative, which means that these stocks have a poor performance. The lowest stock value is shown by INTP at -0.1566, while the highest value is shown by ANTM at 0.2008. Then there are 5 stocks that have good performance based on the Jensen indices, including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), BBRI (PT. Bank Rakyat Indonesia Tbk.), INCO (PT. Vale Indonesia Tbk.), and ITMG (PT. Indi Tambangraya Megah Tbk.). Investors can consider these stocks to be included in the investment portfolio in the next period on the Indonesia Stock Exchange.

The Jensen Indices is an indices that shows the difference between the actual rate of return obtained by the portfolio and the expected rate of return if the portfolio is on the capital market line. The higher the Jensen value, the better the portfolio performance. The Jensen indices equation with the Treynor indices is that both portfolio performance measure indices use the securities market line as the basis for making equations. While the difference is that the Treynor indices is equal to the slope of the line connecting the portfolio position with the risk-free return, while the Jensen indices is the difference between the portfolio return and the portfolio return that is not managed in a special way (just following market returns) (Sari et al., 2023).

The findings in this study are in line with research conducted by (Fakriah et al., 2020) which reveals that many stocks from LQ 45 experience negative jensen values, this indicates that the returns generated by these stocks are not sufficient to compensate for the market risk they take, in other words, these stocks are unable to beat the expected returns based on the CAPM model.

Sharia Stock Performance

1. Performance Analysis of Sharia Stocks Based on Sharpe Indices

The Research finding shows that Stocks that perform well in sharia stocks are also included in stocks that perform well in conventional stocks, this is because many stocks listed in sharia stocks are also listed in stocks that do not require stock criteria such as sharia stocks. The calculation of the Sharpe indices on Sharia stocks shows different results. The sharpe indices calculation results are dominated by stocks with negative results, as many as 11 out of a total of 13 stocks studied have negative values, which means that these stocks have poor performance. The lowest stock value is shown by INTP which is -2.1896, while the highest value is shown by ANTM which is 0.6357. Then there are 2 stocks that have good performance based on the Sharpe indices, including ADRO (PT. Adaro Energy Indonesia Tbk.) and ANTM (PT. Aneka Tambang Tbk.).

According to Rudiyanto, (2019), Sharpe indices is a technique for measuring mutual fund performance by comparing the mutual fund risk premium with the mutual fund risk between the standard deviation. Based on the findings on the analyzed sharia stocks, the Sharpe indices is dominated by a negative indices, which means that the lower the Sharpe ratio value, the worse the relative return to the amount of investment risk taken.

The findings in this study are in line with research conducted by Zatmiko, (2023), which shows that many of the Sharia stocks in Indonesia have experienced a decline in performance, this is because many companies listed on the Jakarta Islamic Indices (JII) are affected by high market volatility. although some Sharia stocks managed to show positive returns, the risks taken by investors are not always proportional to the returns obtained, which is reflected in the relatively low Sharpe indices value.

2. Performance Analysis of Sharia Stocks Based on Treynor Indices

The research finding shows that the calculation of the Treynor indices on Sharia stocks shows different results. A total of 10 out of a total of 13 stocks studied are negative, which means that these stocks have a poor performance. The lowest stock value is shown by INDF at -0.4610, while the highest value is shown by ICBP at 7.9561. Then there are 3 stocks that have good performance based on the Treynor indices, including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), and ICBP (PT. Indofood CBP Sukses Makmur Tbk.).

Treynor indices as explained by Rudiyanto, (2019) which is a measurement that has the same method as Sharpe, namely based on the risk premium, but is used by dividing how much is the relative fluctuation risk to market risk. Based on research findings, the Treynor indices on sharia stocks is also still dominated by negative values, which means that performance is lower compared to risk-free investments.

Just like conventional stocks, ICBP stocks have a very high Treynor indices value compared to other stocks, this is because the stock has a very small beta value compared to other stocks which is -0.0084. This finding is in line with previous research conducted by Annisa (2024), which states that in the food and beverage sector, defensive consumption sector stocks show a lower beta compared to other sectors such as energy and infrastructure, this reflects the stability of demand for basic needs products, stocks in this sector become defensive choices for investors during times of economic uncertainty.

3. Performance Analysis of Sharia Stocks Based on Jensen Indices

The research finding shows that the calculation of the Jensen indices on Sharia stocks shows different results. A total of 10 out of a total of 13 stocks studied are negative, which means that these stocks have poor performance. The lowest stock value is shown by INTP at -0.1566, while the highest value is shown by ANTM at 0.2008. Then there are 3 stocks that have good performance based on the Jensen indices, including ADRO (PT. Adaro Energy Indonesia Tbk.), ANTM (PT. Aneka Tambang Tbk.), and INCO (PT. Vale Indonesia Tbk.).

Jensen indices as explained by Rudiyanto, (2019) as a method that is almost the same as Treynor, namely both using the beta factor in measuring the investment performance of a portfolio, but showing the difference between the actual return obtained and the return rate that is calculated based on the capital market line. Based on the findings in the analysis of sharia stocks, most of them also have negative values, which means that the issuer's performance in securities is worse than the capital market standard or benchmark

In line with the research results from Nur Sa'diyah, et al. (2023) who discussed portfolio performance using the Sharpe, Treynor and Jensen methods on Sharia stocks, it showed that the resulting Jensen indices was dominated by negative values, with the analysis results being 25 stocks with positive values and 34 stocks with negative values.

CONCLUSIONS

Based on the calculation results in this study it shows The highest and lowest returns on conventional and sharia stocks are the same. The highest return is shown by ANTM, while the lowest return is shown by INTP. In terms of risk, the stock with the highest risk is shown by ANTM, while the stock with the lowest risk is shown by KLBF. The highest and lowest risks in conventional and sharia stocks are shown by the same stocks. Conventional stocks that have good performance based on the Sharpe indices are: ADRO, ANTM, BBRI. Then conventional stocks that have good performance based on the Treynor indices include: ADRO, ANTM, BBRI, ICBP. And conventional stocks that have good performance based on the Jensen indices include: ADRO, ANTM, BBRI, INCO, ITMG. These stocks can be considered by investors to determine the investment portfolio. Sharia stocks that have good performance based on the Sharpe indices are: ADRO, ANTM. Then Sharia stocks that have good performance based on the Treynor indices include: ADRO, ANTM, ICBP. And Sharia stocks that have good performance based on the Jensen indices include: ADRO, ANTM, INCO. These stocks can be considered by investors to determine investment portfolios.

This study limited to stocks listed on the LQ45 and JII indices during the 2019-2023 period, and the methods used are the Sharpe, Treynor, and Jensen. Therefore, further research is recommended to use the Sharpe, Treynor, and Jensen indices in assessing the performance of other investment instruments such as mutual funds. then the stock portfolio performance assessment method can be added with other methods such as the M^2 ratio.

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