MEASUREMENT OF THE RISK LEVEL AND INDIVIDUAL SHARE PROFIT BY USING A HISTORICAL APPROACH TO THE VALUE AT RISK (VAR) METHOD ON THE TOP 10 BEST COMPANY STOCK IN RTI PERIOD 2023

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Abstract: Research has been conducted to measure individual risk with profit level using the Value at Risk (VaR) approach. The research method used to analyze the data with refers to the Historical Simulation Model approach. The data used is the daily asset return data obtained from the daily closing price of shares during the January 2022 period. The results of the VaR method approach are Historical Simulation. The model shows NICL (PT Pam Mineral Tbk)stock with risk of 30 million to 40 million. The measurement results show that if the funds invested are Rp. 500,000,000.00 with a 95% confidence level, the period is 1 year 248 days from published stock data of each company.

Keywords: Historical Simulation Model, Stock, Individual Stock, Value at Risk.

INTRODUCTION

The concept of risk is often interpreted with negative and dangerous connotations. Risk management is important in making investments. Every investor must be able to face and or protect investment assets according to their ability to face a risk. Therefore, risk measurement is important in this case. Fardiansyah (2006) Buchdadi, 183 states that risk measurement with the Value at Risk (VAR) method is currently very popularly used widely by the financial industry around the world. In line with that, government regulations, in this case Bank Indonesia (BI) regulation No.5/8/PBI/2003 on the implementation of risk management for banks in 2008 and circular letter No.5/21/DPNP dated September 29, 2003 on the application of the VAR method, caused the development of the VAR concept in banking institutions to grow rapidly.

Based on previous research conducted by Rowland Pasaribu (2013) that the level of measurement of individual stock VaR risk with the historical simulation method greatly influences the investment decisions to be taken. Rowland Pasaribu (2010) That the level of VaR risk measurement in stocks with the stock portfolio method is very feasible as an investment decision for investors. Nurul Hidayah (2018) That the level of VaR risk measurement in BUMN stocks with the Variance Covriance method shows the best calculation results in Quarter 4. Kevin Juido (2013) That the level of VaR risk measurement in LQ-45 stocks with individual and stock portfolio methods, shows that there is a relationship between risk and the health of a company. Yohanna Theresia (2020) The results showed that at a confidence level of 95% the VaR portfolio calculation showed an average VaR value of 0.044956. This situation shows that there is 95% confidence that the losses that will be borne by investors will not exceed.

The market risk of a single investment or portfolio can be measured by referring to the possibility of financial loss due to a combination of movements in systematic economic variables such as interest and exchange rates (Fallon, 1996).Measuring market risk is important for regulators and managers in assessing solvency and risk in allocating scarce capital.In addition, market risk is prevalent as one of the main risks faced by financial institutions.

Value at Risk (VaR) is a measure that can be used to assess the worst possible loss for an investor or a business entity on its investment in securities or assets, either individually or in a portfolio at a given time, at a specified level of probability. In VaR, the probability of loss is calculated from the chance of the loss being worse than a set percentage. According to J.P Morgan in his writing in RiskMetriks-Technical Document

"VaR is a measurement of the worst possible loss under normal market conditions at time T with a certain level of confidence α". In this study, the VaR method will be used, namely the Historical Simulation method.

Various methods of VaR measurement are common initially following the stages: selection of risk factors and selection of risk modeling methods.

Investing in the domestic equity market this year has been challenging for investors. This can be seen from the return given by the Composite Stock Price Index (CSPI) throughout 2023, which is still recorded in the red zone, aka minus. However, a number of stocks were recorded to be able to experience significant gains, some of which have even strengthened by more than 100% in the first quarter of this year.

Quoting RTI Business on Thursday (3/30/2023), PT Pam Mineral Tbk (NICL) shares topped the list of top gainers throughout 2023. NICL's price has surged 133.5% since the beginning of the year. Followed by shares of PT Hartadinata Abadi Tbk (HRTA), which increased by 77.23%. The third position was occupied by the shares of PT Menthobi Karyatama Raya Tbk (MKTR), which shot up 75.19%. Furthermore, the shares of PT Dewi Shri Farmindo Tbk (DEWI) increased by 63.46%. In the fifth position of the fastest stock this year is PT Gudang Garam Tbk (GGRM), which cost 49.44%. Then following right behind Gudang Garam are the shares of PT H.M. Sampoerna Tbk. (HMSP), which this year has increased by 45.24%. Then, completing the top ten are PT Sumber Mas Konstruksi Tbk (SMKM) with an increase of 41.13%, PT Surya Semesta Internusa Tbk (SSIA) with an increase of 34.31%, PT Bank Syariah Indonesia Tbk (BRIS) up 29.84% and PT GoTo Gojek Tokopedia Tbk (GOTO) which appreciated 27.47%. These are the 6 stocks of companies that recorded the biggest increase throughout 2023 based on RTI data and make one of the references for investment decisions in 2023.

RESEARCH METHOD

This research is a study on the stock performance of a number of listed companies that recorded a sharp surge during the current year 2023. Even the performance of the bank issuer's shares can beat the Composite Stock Price Index (JCI). The Composite Stock Price Index (JCI) rose 0.47 percent year to date (ytd). JCI was at 6,007 at the close.

The following are 10 shares of bank issuers that recorded the biggest increase throughout 2023 based on data from the RTI website. PT Pam Mineral Tbk (NICL). PT Hartadinata Abadi Tbk (HRTA).PT Menthobi Karyatama Raya Tbk (MKTR).PT Dewi Shri Farmindo Tbk (DEWI).PT Gudang Garam Tbk (GGRM).PT H.M. Sampoerna Tbk (HMSP).PT Sumber Mas Konstruksi Tbk (SMKM).PT Surya Semesta Internusa Tbk (SSIA). PT Bank Syariah Indonesia Tbk. (BRIS). PT GoTo Gojek Tokopedia Tbk. (GOTO).

The sampling technique was carried out using purposive sampling method where this sampling technique was taken from a number of certain criteria from the entire population of existing company issuers by considering or certain criteria. The criteria chosen are companies that publish complete financial data from 2022. From the criteria determined by the researcher, there are several companies that according to the criteria are incomplete, namely PT Menthobi Karyatama Raya Tbk (MKTR), PT Dewi Shri Farmindo Tbk (DEWI), PT Sumber Mas Konstruksi Tbk (SMKM) and PT GoTo Gojek Tokopedia Tbk (GOTO). the following are companies that are not included in the research process because the stock data of the 4 companies does not match the criteria of the researcher and is not taken into account in further research.

Research Objects The investment instruments studied in this study are 6 stocks (issuers), JCI, and SBI interest rates during the period 2022.

1. Stock Price Data
   The stock price data to be studied is the closing price of 6 stocks (closing price) on each day during the 2021 period. The value of stock profit and risk is taken from monthly stock price changes, both individually.
2. Composite Stock Price Index (JCI) Data
   JCI data is taken from daily index data during the 2022 period. JCI data represents market data, needed to calculate the rate of return and market risk.
3. Indonesian Interest Rate (SBI) Data
   SBI-I month interest rate data is obtained from BI monthly reports during the 2022 period. This SBI data is used as a proxy for risk free rate of return. The choice of SBI-I month is based on the consideration that stock returns and risks are also calculated on a monthly basis.

The stock samples in this study are shares of issuers that fall into the required category, the elimination requirement of a complete data per day starting from the January 2022 period and these selected stocks will be followed up for processing into research. After the process of checking the completeness of research data on 10 companies included in the TOP 10 RTI. Researchers carried out the next process of looking for complete published data from bank shares in each bank based on (IDX). However, there are only 6 issuers of shares of companies that are published to provide reports. Shares in the 2022 period will be studied further.

Value at Risk (VaR) is a method of calculating market risk to determine or anticipate the maximum risk of loss that can be accepted in a single-instrument or multi-instrument investment or commonly called individuals and portfolios, at a certain confidence level, during a certain holding period under normal market conditions.

RESULT AND DISCUSSION

Value at Risk Calculation

NICL Individual Shares with Historical Method

The following is the calculation of the issuer's shares using the historical method, with Ms.Excel calculations and the following results are obtained:

Table 1. Lowest Return Value of NICL SharesBroad Differentiation or Differentiation

Bin	*Frequency*	*Cumulative %*
-13%	1	0.41%
-9%	1	0.81%
-8%	1	**1.22%**
-7%	1	1.63%
-7%	2	2.44%
-7%	0	2.44%
-7%	1	2.85%
-7%	1	3.25%
-7%	1	3.66%
-7%	1	4.07%
-7%	1	4.47%
-6%	1	**4.88%**
-6%	1	5.28%

Source: Excel Data Processing

From the results of the above calculations, it can be seen that at a 5% confidence level (in the range of -1.22% - 4.88%) is the lowest daily return on NCIL issuer shares, that the profit that investors will receive will not be more than the range of Rp 5 million - Rp 23 million, with an estimated risk of loss of 6% - 8%. This shows that if you invest an amount of capital of IDR 500 million, the potential losses bome range from IDR 30 million to IDR 40 million.

HRTA Individual Shares with Historical Method

The following is the calculation of the issuer's shares using the historical method, with Ms.Excel calculations and the following results obtained:

Table 2. Lowest Return Value of HRTA Shares

Bin	*Frequency*	*Cumulative %*
-6%	1	0.41%
-4%	1	0.81%
-3%	1	**1.22%**
-3%	2	2.03%
-3%	0	2.03%
-3%	1	2.44%
-3%	1	2.85%
-2%	3	4.07%
-2%	0	4.07%
-2%	0	**4.07%**
-2%	5	6.10%

Source: Excel Data Processing

From the results of the above calculations, it can be seen that at a 5% confidence level (in the range of 1.22% - 4.07%) is the lowest daily return on the shares of the issuer HRTA that the profit received by investors will not be more than the range of Rp 6 million - Rp 20 million, with an estimated level of risk of loss is around 2% - 3%. This shows that if investors invest an amount of capital of Rp. 500 million, the potential losses borne range from Rp. 10 million to Rp. 15 million.

GGRM Individual Shares with Historical Method

The following is the calculation of the issuer's shares using the historical method, with Ms.Excel calculations and the following results obtained:

Table 3. Lowest Return Value of GGRM Shares

Bin	*Frequency*	*Cumulative %*
-8%	1	0.45%
-5%	1	0.89%
-5%	1	**1.34%**
-4%	1	1.79%
-4%	1	2.23%
-4%	1	2.68%
-4%	1	3.13%
-4%	1	3.57%
-3%	1	4.02%
-3%	1	4.46%
-3%	1	**4.91%**
-3%	1	5.36%

Source: Excel Data Processing

From the results of the above calculations, it can be seen that at a confidence level of 5% (in the range of 1.34% - 4.91%) the lowest daily return on shares of the issuer GGRM that the profit received by investors will not be more than the range of Rp 7 million - Rp 25 million, the level of estimated risk of loss is around 3% - 5%. This shows that if investors invest an amount of capital of Rp. 500 million, the potential losses borne range from Rp. 15 million to Rp. 25 million.

HMSP Individual Shares with Historical Method

The following is the calculation of the issuer's shares using the historical method, with Ms.Excel calculations and the following results obtained:

Table 4. Lowest Return Value of HMSP Shares

Bin	*Frequency*	*Cumulative %*
-5%	1	0.41%
-5%	1	0.81%
-4%	1	**1.22%**
-4%	2	2.03%
-4%	0	2.03%
-3%	1	2.44%
-3%	1	2.85%
-3%	1	3.25%
-3%	1	3.66%
-3%	1	4.07%
-3%	1	**4.47%**
-3%	2	5.28%

Source: Excel Data Processing

From the results of the above calculations, it can be seen that at a 5% confidence level (in the range of 1.22% - 4.47%) the lowest daily return on shares of the issuer HMSP that the profit received by investors will not be more than Rp 6 million - Rp 22 million, the estimated level of risk of loss is around 3% - 4%. This shows that if an investor invests an amount of capital of Rp 500 million, the potential loss borne is around Rp 15 million to Rp 20 million.

SSIA Individual Shares with Historical Method

The following is the calculation of the issuer's shares using the historical method, with Ms.Excel calculations and the following results obtained:

Table 5. Lowest Return Value of SSIA Shares

Bin	*Frequency*	*Cumulative %*
-8%	1	0.41%
-7%	1	0.81%
-6%	1	**1.22%**
-6%	1	1.63%
-6%	1	2.03%
-6%	1	2.44%
-5%	1	2.85%
-5%	1	3.25%
-5%	1	3.66%
-5%	1	4.07%
-5%	1	4.47%
-5%	1	**4.88%**
-4%	1	5.28%

Source: Excel Data Processing

From the results of the above calculations, it can be seen that at a confidence level of 5% (in the range of 1.22% - 4.88%) the lowest daily return on shares of the issuer SSIA that the profit received by investors will not be more than the range of Rp 6 million - Rp 24 million, the estimated level of risk of loss is around 5% - 6%. This shows that if an investor invests an amount of Rp 500 million, the potential loss borne is around Rp 25 million to Rp 30 million.

BRIS Individual Shares with Historical Method

The following is the calculation of the issuer's shares using the historical method, with Ms.Excel calculations and the following results obtained:

Table 6. Lowest Return Value of BRIS Shares

Bin	*Frequency*	*Cumulative %*
-8%	1	0.40%
-7%	1	0.81%
-6%	1	**1.21%**
-6%	1	1.61%
-6%	1	2.02%
-6%	1	2.42%
-5%	1	2.82%
-5%	1	3.23%
-5%	1	3.63%
-5%	1	4.03%
-5%	1	4.44%
-5%	1	**4.84%**
-4%	1	5.24%

From the results of the above calculations, it can be seen that at a confidence level of 5% (in the range of 1.21% - 4.84%) the lowest daily return on BRIS issuer shares that the profit received by investors will not be more than the range of Rp 6 million - Rp 24 million, the estimated level of risk of loss is around 5% - 6%. This shows that if an investor invests an amount of capital of IDR 500 million, the potential loss that will be borne is around IDR 25 million to IDR 30 million.

Based on previous research conducted by researcher Rowland B Pasaribu (2013), that the results of the calculation of VaR (Value at Risk) with the method of analysis tools from historical simulations, the issuer's stock criteria will be selected with the smallest level of risk, which can be concluded that the research that has been done is in line and in line. That if the smaller the level of risk that investors can bear, the better it will be to do as an investment decision.

CONCLUSION and SUGGESTION

Based on the data processing and data analysis that has been carried out, the following conclusions can be drawn:

In the Historical Method for Individual stock selection from 6 company issuers that show the worst issuer stock risk value and produce 6% - 8% with a 95% confidence interval is 5%, namely the shares of the issuer NICL. It can be concluded that if an investor invests an amount of capital of Rp. 500,000,000.- then the potential loss borne is around Rp. 30 million - Rp. 40 million.

For the next writing, you should use several other methods so that the analysis results can provide more accurate information and become material for consideration. Likewise, the number of companies or issuers can be increased again, not referring to just one phenomenon as the author states for the accuracy of the results of the calculation, as for the techniques used as decision considerations not from fundamentals alone, but technical so that considerations become clear. Here the author does not carry out a technical analysis strategy in writing, therefore this writing does not take into account or consider aspects of factors that exist outside the company.

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