

Indikator: Jurnal Ilmiah Manajemen dan Bisnis

Vol. 10 No. 1, January 2026: 22-33
E-ISSN : 2598-4888, P-ISSN : 2598-6783
https://publikasi.mercubuana.ac.id/index.php/indikator

Equity Risk Management: Identification and Measurement Using the Value at Risk (VaR)- Variance-Covariance Method

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Article Info:

Keywords:
Risk Management;
Value at Ris (vaR);
Portofolio;
Variance Covariance;

Article History:
Received : 29-11-2025
Revised : 11-01-2026
Accepted : 18-01-2026

Article DOI :
http://doi.org/10.22441/indikator.v10i1.39159

Abstract

The capital market is one of the investment instruments that provides profit opportunities as well as contains risks due to price fluctuations in the market. The purpose of this analysis is to measure the risk level of the portfolio and estimate the maximum potential loss using the Value at Risk (VaR) method with the Variance-Covariance approach. The method used is quantitative descriptive with the object in the form of a portfolio consisting of a combination of ICBP, ASII, and BBCA shares as a representation of diversification across sectors. The results of the analysis show that the portfolio has a return of -0.004 with a standard deviation of 1.48% which indicates a less than optimal performance but with a relatively stable fluctuation level. In addition, the result of the Value at Risk (VaR) calculation at a 95% confidence level shows a potential loss of 2,82% or around Rp28,176,234 from the total investment value of Rp1,000,000,000. This shows that portfolio risk is still at a predictable and well-managed limit. Thus, risk management through diversification and VaR measurement is important in maintaining the stability of investment value.

How to cite : Azmayuni, W. A., & Putri, N. S. R. (2026). Equity Risk Management: Identification and Measurement Using the Value at Risk (VaR)- Variance-Covariance Method. *Indikator: Jurnal Ilmiah Manajemen Dan Bisnis*, *10*(1), 22–33. https://doi.org/10.22441/indikator.v10i1.39159



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INTRODUCTION

The capital market is one of the investment facilities that offers opportunities to earn profits through an increase in asset value and dividend distribution. Along with economic development and financial globalization, stock investment activities have experienced a significant increase. However, high profit potential is also followed by a high level of risk because stock prices tend to fluctuate following economic conditions, politics, and market

e-ISSN: 2598-4888
p-ISSN: 2598-6783

sentiment. The fluctuation causes market risk (market risk), which is the risk of loss that arises due to changes in the price of financial instruments in the market (Jorion, 2007). Therefore, investors not only need to consider the expected profit level, but also must know the maximum limit of risk or loss that may occur so that investment decisions can be made more rationally and measurable (Risman et al., 2021).

The uncertainty of stock price movements encourages the importance of implementing a risk management strategy in an investment portfolio. One of the strategies that can be used is hedging. Hedging is an effort to reduce the impact of losses that may arise due to unexpected changes in market prices by managing the risk exposure of investors (Hull, 2018). In the context of stock investment, hedging strategies are becoming increasingly important because dynamic market conditions can cause the portfolio value to decline in a relatively short time. With the hedging mechanism, investors can control the level of risk borne without having to eliminate the opportunity to gain profit from the investment made.

One of the methods that is widely used in risk measurement to support hedging strategies is Value at Risk (VaR). (Risman et al., 2017), Value at Risk is a method used to estimate the maximum loss that may occur on an asset or portfolio in a certain period with a certain level of confidence. VaR is one of the popular risk measuring tools because it is able to present risk information in a simple and easy-to-understand form. In its application, there are several approaches to calculate VaR, one of which is the Variance-Covariance method. This method utilizes the variance and covariance of asset returns in the portfolio and assumes a normal return distribution so that it can be used to efficiently estimate the magnitude of market risk (Dowd, 2005).

Risk analysis in a portfolio will provide more representative results if done on stocks that come from different sectors. Therefore, the portfolio consisting of shares of PT Indofood CBP Sukses Makmur Tbk (ICBP), PT Astra International Tbk (ASII), and PT Bank Central Asia Tbk (BBCA) was chosen because it represents the primary consumer goods sector, the industrial and automotive sectors, and the banking sector. The three stocks are also known to have a large market capitalization, high liquidity levels, and include stocks that are actively traded on the Indonesia Stock Exchange. The difference in the characteristics of the sector allows the formation of portfolio diversification that can reduce investment risk as well as provide a more comprehensive picture of the market risks faced by investors. Based on this, the market risk hedging analysis on ICBP, ASII, and BBCA stock portfolios using the Value at Risk (VaR) method, the Variance-Covariance approach is interesting to do to find out the maximum potential loss that can occur in the portfolio.

LITERATURE REVIEW

Market Risk and Market Risk Hedging

Market risk is the risk that arises from changes in market conditions which can lead to a decline in the value of assets, securities, or investment portfolios. According to Jorion (2007), market risk refers to the potential loss resulting from movements in market variables that influence the value of investments. These market variables include fluctuations in stock prices, interest rates, foreign exchange rates, and other macroeconomic factors. Market risk is categorized as systematic risk because it originates from overall market conditions and cannot be eliminated through diversification. Therefore, investors and companies need to understand and manage market risk carefully, as significant market fluctuations can affect investment performance and overall financial stability.

e-ISSN: 2598-4888
p-ISSN: 2598-6783

To manage the risk, investors can implement a hedging strategy, which is an investment protection effort from potential losses due to unwanted price movements. In risk management, the implementation of hedging is based on the results of the risk measurement faced by investors. One of the methods that is often used is Value at Risk (VaR), which is a method used to estimate the maximum loss that may occur in a portfolio in a certain period and level of trust. The measurement results can be the basis for determining the appropriate hedging strategy to minimize potential investment losses.

Stock Portfolio

Stock portfolio is a collection of several stocks combined in one investment with the aim of optimizing the level of profit and managing risk. According to Markowitz (1952), a portfolio is not just a collection of assets, but a combination of investments designed to achieve the optimal balance between risk and return. Portfolio formation is done through diversification, which is the spread of funds in various different stocks so that the risk is not concentrated on one asset only. Thus, losses that occur in one stock can be offset by the performance of other stocks, so that unsystematic risks can be minimized and investment goals can be achieved more effectively.

Return Portfolio

Portfolio return is the total rate of return generated from all investments included in a portfolio. It represents the combined performance of the individual assets held in the portfolio and reflects the overall gain or loss earned by investors during a specific period. Portfolio return is an important indicator used to evaluate the effectiveness of investment decisions and the overall performance of a portfolio (Bodie et al., 2021).

In general, portfolio return is calculated as the weighted average of the returns of all assets contained in the portfolio. This means that each stock contributes to the portfolio return according to its portfolio weight or proportion of invested funds. The larger the allocation of funds to a particular stock, the greater its impact on the portfolio's total return. Therefore, the composition and allocation of assets play a significant role in determining portfolio performance. By selecting appropriate portfolio weights, investors can seek to maximize expected returns while maintaining a level of risk that is consistent with their investment objectives (Elton et al., 2014).

Portfolio Risk

Portfolio risk is the possibility of a deviation between the expected return and the actual return. This risk reflects uncertainty in investment results that is affected by asset price fluctuations in the portfolio.

Portfolio risk is not only determined by the risk of each stock, but also by the relationship between stocks measured through correlation. If the stocks in the portfolio have a low or negative correlation, then the portfolio risk can be suppressed through the diversification mechanism. On the other hand, if the correlation between stocks is high, then the risk reduction becomes less than optimal.

Portfolio Weight as Fund Proportion on Each Stock

Portfolio weight is the proportion of total funds allocated to each stock or asset within an investment portfolio. This weight indicates the contribution of each asset to the overall portfolio in terms of both expected return and risk. In portfolio management, the allocation of funds among different assets plays a crucial role in determining the portfolio's performance and risk profile.

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p-ISSN: 2598-6783

Mathematically, the sum of all portfolio weights must equal one, or 100 percent of the invested funds. Changes in the weight assigned to individual assets will directly influence the portfolio's overall return and level of risk. Assets with larger weights generally have a greater impact on portfolio performance than those with smaller allocations. Therefore, determining the optimal portfolio weight is an essential step in portfolio optimization, as investors must allocate their funds in a way that aligns with their investment objectives, return expectations, and risk tolerance. Proper weight allocation can help investors achieve a more efficient balance between risk and return.

Variance and Covariance

Variance and covariance are important components in measuring stock portfolio risk. Variance is used to measure the level of spread or volatility of the return of a stock against its average value, so the greater the value of the variance, the higher the risk that the stock has. Meanwhile, covariance is used to measure the relationship of return movement between two or more stocks in a portfolio. According to Risman A, (2025) Investing.com, portfolio variance pays attention to the covariance value or correlation coefficient between securities in the portfolio, where the lower the correlation between stocks, the greater the diversification benefits obtained so that the portfolio risk can be reduced.

In stock portfolio analysis, the calculation of variance and covariance is required to obtain portfolio variance that reflects the overall risk of the selected stock combination. The portfolio variance then becomes the basis for the Value at Risk (VaR) method of the Variance-Covariance approach to estimate the maximum potential loss that may occur in the stock portfolio in a certain level of confidence and period of time (Zulfikar, 2016; CFA Institute, 2020).

Value at Risk

Value at Risk (VaR) is a statistical method used to measure the amount of potential loss that may be experienced by an investment or portfolio in a certain period at a certain level of confidence. The value of VaR can be presented in the form of a percentage or nominal money so that it makes it easier for investors to estimate the level of risk faced. According to Risman A, (2025), VaR is a statistical approach used to measure market risk by estimating the maximum loss that has the potential to occur in an investment portfolio in a certain period of time and confidence level. Thus, VaR becomes one of the widely used tools in risk management to assess the possibility of losses that can arise due to market fluctuations.

In general, the calculation of Value at Risk (VaR) is based on three main components, namely:

1. Time horizon, which is the period of time used in risk measurement, such as daily, weekly, or monthly.
2. Confidence level, which generally uses a confidence level of 95% or 99% to show the level of confidence in the estimated maximum loss produced.
3. Risk size, which is the maximum potential loss that can occur in a certain period at a set level of confidence.

The VaR value can be interpreted as the maximum loss limit that is expected not to be exceeded during the observation period with a certain level of confidence.

Conceptual Framework

This study focuses on measuring market risk in a portfolio consisting of BBCA, ASII, and ICBP stocks. The analysis begins with the identification of market risk as the primary risk associated with stock price fluctuations. Subsequently, risk measurement is conducted using the Value at Risk (VaR) method with the Variance-Covariance approach. The process involves

e-ISSN: 2598-4888
p-ISSN: 2598-6783

calculating stock returns, expected returns, variance, standard deviation, covariance, portfolio return, portfolio risk, and ultimately the Value at Risk (VaR) to estimate the maximum potential loss that may occur in the portfolio. The conceptual framework of this study is presented in Figure 1.

Figure 1. Conceptual Framework

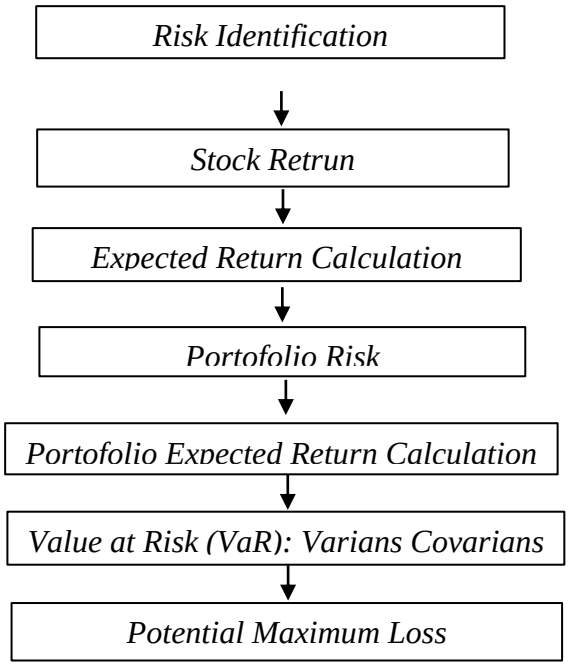


Figure 1 illustrates the conceptual framework of this study. The analysis begins with the identification of market risk in the stock portfolio consisting of BBCA, ASII, and ICBP. Subsequently, stock returns and expected returns are calculated, followed by the measurement of portfolio risk. The results are then used to calculate the portfolio expected return and Value at Risk (VaR) using the Variance-Covariance method to estimate the maximum potential loss that may occur in the portfolio.

METHOD

This study employs a descriptive quantitative approach to analyze market risk in a portfolio consisting of BBCA, ASII, and ICBP stocks. The research utilizes secondary data in the form of daily closing stock prices during April 2026. Data processing and analysis were conducted using Microsoft Excel.

The data analysis consisted of two stages: risk identification and risk measurement. Risk identification was conducted by determining market risk as the focus of the study in the selected stock portfolio. Subsequently, risk measurement was performed using the Value at Risk (VaR) method with the Variance-Covariance approach to estimate the maximum potential loss of the portfolio. The calculation process involved determining stock returns, expected returns, variance, standard deviation, covariance, portfolio return, portfolio risk, and Value at Risk (VaR). The calculation steps are presented as follows:

1. Collecting stock closing price data of ICBP, ASII, BBCA on April 1 to 30 2026,
2. Calculating Stock Return (Ri)

$$R_{it} = \frac{P_t - P_{t-1} + D_t}{P_{t-1}}$$

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Description:
R_{it} = Stock return in period t
P_t = Current stock price
P_{t-1} = Previous stock price
D_t = Dividend received during period t

3. Calculating Expected Stock Return (Ri) During the Period with the following formula:

$$E(Ri) = \frac{\Sigma Ri}{n}$$

Description:
$E(R_i)$ = Expected Stock Return
ΣR_i = Total stock returns
n = Number of observations

4. Determining Portofolio Weights

$$w_i = \frac{Investmnet\ in\ asset\ i}{Total\ investment}$$

Description :

w_i = Weights of stock i n the portofolio

5. Calculating Varinace

$$\sigma_i^2 = \frac{\Sigma_{t-1}^{n}(R_i - E(R_i))^{\ 2}}{n}$$

Description :
σ_i^2 = Variance of stock i

6. Calculating Standard Deviation

$$\sigma_i = \sqrt{\sigma_i^2}$$

Description :

σ_i = Standard Deviation of stock i

7. Calculating Covariance

$$Cov(R_A, R_B) = \frac{\Sigma_{t=1}^{n}(R_{Ai} - E(R_A))(R_{Bi} - E(R_B))}{n}$$

Description :

$Cov(R_A, R_B)$ = Covariance between stock A and stock B

8. Calculating Expected Portofolio Return

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$$E(R_P) = \sum_{i=1}^{n} w_i E(R_i)$$

Description :
$E(R_P)$ = Expected portofolio return
w_i = Portofolio weight
$E(R_i)$ = Expected return of stock i

9. Calculating Prortofolio Variance and Standard Deviation

Portofolio Standard Daviation :

$$\sigma_p = \sqrt{\sigma_p^2}$$

Portofolio Varinace :

$$\sigma_p^2 = \sum_{i=1}^{n}\sum_{j=1}^{n} w_i\, w_j \sigma_{ij}$$

Description:
σ_p = Performance variance
σ_p^2 = Portofolio standard deviation
$w_i w_j$ = Portofolio weights
σ_{ij} = covariance between assets

10. Calculating Value at Risk (VaR) Variance-Covariance Method

$$VaR = W_0 P_\alpha \sigma_p \sqrt{t}$$

Description :

VaR = Value at Risk
W_0 = Initial Invesment Value
P_α = Z-score t the selected confidence level
P_α = $\frac{i(n=1)}{100}$ →Percentile
σ_p = Portofolio Standard Deviation
t =Holding period

In this study, the Value at Risk (VaR) calculation was conducted using a 95% confidence level with a Z-score value of 1.645. The resulting VaR value represents the maximum potential loss that may occur in the portfolio over the specified holding period

RESULTS AND DISCUSSION

Expected Return Calcultion Result, Standard Deviation, and Variance

The following table presents the results of calculating the expected return, standard deviation, and variance of ICBP, ASII, and BBCA shares. These three indicators are used to describe the expected profit level as well as the risk level of each stock. Expected return shows the average rate of return, standard deviation measures the level of return fluctuation, while variance shows the extent of the spread of the return data to the average value.

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Tabel 1. Expected Return, Standard Deviation, and Varians stock

Calculation Results	ICBP	ASII	BBCA
Expected Return	-0.00431362	-0.001950087	-0.004990104
STDEV (σ)	0.013635688	0.025088911	0.023483592
VAR Ri	0.000185932	0.000629453	0.000551479

Source: Processed Data 2026

Based on the results in the table, all stocks show an expected return with a negative value, which indicates that on average the return obtained in the observation period tends to decrease. In terms of risk, ASII stock has the highest level of risk shown by the largest standard deviation and variance, while ICBP has the lowest risk compared to the other two stocks. This shows that ASII has a higher return fluctuation, while ICBP is relatively more stable even though it still has a negative return.

Variance-Covariance Matrix Calculation Result

The following table shows the variance-covariance matrix of ICBP, ASII, and BBCA stocks. This matrix describes the risk relationship between stocks, both from the variance side of each stock (main diagonal) and covariance between stocks (values outside the diagonal). Variance shows the risk level of each stock, while covariance shows the direction and strength of the return movement relationship between stocks.

Tabel 2. Matrix Variance-Covariance

	ICBP	ASII	BBCA
ICBP	0.000185932	8.10E-05	0.000136601
ASII	8.10E-05	0.000629453	9.33E-05
BBCA	0.000129771	8.87E-05	0.000551479

Source: Processed Data 2026

Based on the results in the table, all stocks show an expected return with a negative value, which indicates that on average the return obtained in the observation period tends to decrease. In terms of risk, ASII stock has the highest level of risk shown by the largest standard deviation and variance, while ICBP has the lowest risk compared to the other two stocks. This shows that ASII has a higher return fluctuation, while ICBP is relatively more stable even though it still has a negative return.

Portofolio Performance Calculation Result

This portfolio performance calculation is carried out to find out the extent of the profit level (return) obtained and the amount of risk caused by the combination of ICBP, ASII, and BBCA shares. The results of the calculation include several important indicators, namely portfolio return as a picture of investment results, as well as variance and standard deviation as a measure of the spread and risk level of the portfolio. All of these calculation results are then presented in the form of the following table to make it easier to understand.

Tabel 3. Calculation Portofolio

Calculation Results	Value
return Portofolio	-0.004
Portofolio Varians	0.000220502
stdev portofolio	1.48%

Source: Processed Data 2026

e-ISSN: 2598-4888
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The calculation results show that the portfolio produces a return of -0.004, which indicates that on average the investment performance is still in a negative condition during the observation period. This condition shows that the portfolio has not been able to provide optimal returns according to expectations.

The weight composition used in this portfolio consists of ICBP of 33%, ASII of 33%, and BBCA of 34%, which shows that the allocation of funds is relatively balanced between the three stocks, with a slightly larger portion of BBCA. This almost even weight distribution reflects a diversification effort so that the risk is not centralized on one specific issuer.

Meanwhile, the variance value of 0.000220502 and the standard deviation of 1.48% illustrates that the fluctuation rate or change in the portfolio value is relatively not too big. This shows that the daily return movement of the portfolio is still in a fairly stable range. Thus, even though the level of profit obtained is still not good, the risk borne by the stock combination tends to be at a fairly controlled level and does not show high volatility.

Value at Risk Calculatio Result

The Value at Risk (VaR) calculation is carried out to provide an overview of the potential maximum loss that can occur in the portfolio in normal market conditions with a certain level of confidence. In this calculation, a confidence level of 95% is used with an initial investment value or portfolio value of Rp1,000,000,000. The results of the VaR calculation are then summarized and presented systematically in the following table so that it is easier to understand and analyze.

Tabel 4. Hasil Perhitungan VaR

Confidence Level	Initial Portfolio Value	VaR (%)	Potential Loss
95%	Rp1,000,000,000	2.82%	Rp28,176,234

Source: Processed Data 2026

The calculation results show that at a 95% confidence level, a portfolio with an investment value of Rp1,000,000,000 has a Value at Risk of 2,82%. That is, in relatively normal market conditions, the maximum potential loss that may occur is estimated to be in that range. If converted into nominal value, the maximum potential loss is around Rp 28,176,234.

This value shows that the risk inherent in the portfolio can still be estimated and is not extreme, so the level of loss fluctuation is still within the limits that can be controlled. In other words, although the risk of loss still exists, the amount is still relatively moderate to the total investment value. This also indicates that the portfolio has a fairly good level of resilience to changes in short-term market conditions, so that it can be a consideration in decision-making regarding risk management and future investment strategies.

CONCLUSION

The capital market is one of the investment facilities that offers profit opportunities as well as risks due to stock price fluctuations that are influenced by various market conditions. The uncertainty causes market risk inherent in every investment activity, so that investors not only focus on potential returns, but also need to understand and manage the risks that may occur. In risk management, a hedging approach is used as an effort to reduce the impact of losses due to unwanted price movements, as well as Value at Risk (VaR) as a method to measure the potential maximum loss in a certain period. VaR with the Variance-Covariance approach utilizes variance and covariance between assets to describe the risk level of the portfolio in a

e-ISSN: 2598-4888
p-ISSN: 2598-6783

more measurable way, especially in a portfolio consisting of cross-sector stocks such as ICBP, ASII, and BBCA.

The results of the analysis show that the portfolio has a return of -0.004 which indicates that the performance is still not optimal during the observation period. However, the risk level reflected from the standard deviation of 1.48% shows that the portfolio fluctuation is still relatively under control. In addition, the result of the Value at Risk (VaR) calculation at a 95% confidence level shows a maximum loss potential of 2,82% or around Rp28,176,234 from a total investment of Rp1,000,000,000. This shows that although the return has not provided optimal results, the risk level of the portfolio is still within the limits that can be predicted and managed well through diversification and appropriate risk measurement.

REFERENCES

Adrianto, F., & Susdiani, L. (2013). Pengukuran risiko portofolio dengan menggunakan metode Value at Risk (VaR). Jurnal Kajian Akuntansi dan Auditing, 8(2). https://ejurnal.bunghatta.ac.id/index.php/jkaa/article/view/6496

Amin, F. A. M., Udin, M. N., Anuar, D. S. M. S., Jasni, N. A. M., & Mahazal, N. S. (2020). The volatility of individual securities in measuring Value at Risk of a portfolio. International Journal of Academic Research in Business and Social Sciences, 10(10). https://doi.org/10.6007/IJARBSS/v10-i10/7765

Botha, M. (2011). Portfolio liquidity-adjusted Value-at-Risk. SAJEMS. https://sajems.org/index.php/sajems/article/view/309

Holton, G. A. (2003). Value-at-risk: Theory and practice. Academic Press.

Investopedia. (2004, September 29). Value at risk (VaR) https://www.investopedia.com/articles/04/092904.asp

Investopedia.(Portfolio variance. https://www.investopedia.com/terms/p/portfolio-variance.asp

Jones, T. M., & Wicks, A. C. (1999). Convergent Stakeholder Theory. The Academy of Management Review, 24(2), 206–221. https://doi.org/10.2307/259075

Jorion, P. (2007). Value at Risk: The New Benchmark for Managing Financial Risk (3rd ed.). McGraw-Hill Education.

Markowitz, H. (1952). Portfolio selection. Journal of Finance, 7(1), 77–91. https://doi.org/10.1111/j.1540-6261.1952.tb01525

Nainggolan, P. A., & Risman, A. (2025). Analisis Value at Risk (VaR) menggunakan metode analisis variance-covariance, historical simulation, dan Monte Carlo simulation. ResearchGate. https://www.researchgate.net/publication/390948188_Analisis_Value_at_Var_VaR_Menggunakan_Metode_Analisis_Variance-_Covariance_Historical_Simulation_dan_Monte_Carlo_Simulation

e-ISSN: 2598-4888
p-ISSN: 2598-6783

Nurul Aryani, & Risman, A. (2025). Analisis Value at Risk (VaR) portofolio: Metode variance-covariance, historical simulation, dan Monte Carlo. ResearchGate. https://www.researchgate.net/publication/391345283_ANALISIS_VALUE_AT_RISK_VAR_PORTOFOLIO_METODE_VARIANCE-_COVARIANCE_HISTORICAL_SIMULATION_DAN_MONTE_CARLO

Oktorina, M., Siregar, S. V., Adhariani, D., & Mita, A. F. (2022). The diffusion and adoption of integrated reporting: a cross-country analysis on the determinants. Meditari Accountancy Research, 30(1), 39–73. https://doi.org/10.1108/MEDAR-12-2019-0660

Phillips, R., Freeman, R. E., & Wicks, A. C. (2003). What Stakeholder Theory Is Not. Business Ethics Quarterly, 13(4), 479–502. http://www.jstor.org/stable/3857968

Yang, Y., Orzes, G., Jia, F., & Chen, L. (2019). Does GRI Sustainability Reporting Pay Off? An Empirical Investigation of Publicly Listed Firms in China. Business & Society, 60(7), 1738–1772. https://doi.org/10.1177/0007650319831632

Risman, A., Salim, U., Sumiati, S., & Indrawati, N. K. (2017). Commodity prices, exchange rates and investment on firm's value mediated by business risk: A case from Indonesian stock exchange. European Research Studies Journal, 20(3), 511–524. https://doi.org/10.35808/ersj/725

Saputra, W. H., & Aqsari, H. W. (2025). Modified VaR for portfolio analysis. BAREKENG Journal. https://www.researchgate.net/publication/398073258

Risman, A., Mulyana, B., Silvatika, B. A., & Sulaeman, A. S. (2021). The effect of digital finance on financial stability. Management Science Letters, 11, 1979–1984. https://doi.org/10.5267/j.msl.2021.3.012

Ainunnisa, D., Oktaviani, D., & Risman, A. (2024). The Effect of Risk Management on Profitability: Empirical Study of Banking Companies Listed in Indonesian Stock Exchange 2019-2023. Indikator: Jurnal Ilmiah Manajemen dan Bisnis, 8(3), 99-109. doi:http://dx.doi.org/10.22441/indikator.v8i3.28287

Jannah, S., Surbakti, M., & Ascarya, A. (2025). Developing Green Banking Performance Measurement for Islamic Bank with Maqasid Shariah. Indikator: Jurnal Ilmiah Manajemen dan Bisnis, 9(1), 1-21. doi:http://dx.doi.org/10.22441/indikator.v9i1.29039

Jenita, Muah, & Risman, A. (2024). Manajemen Inovasi. Karawang: Saba Jaya Publisher.

Kuosuwan, B., Risman, A., Dudukalov, E., & Kozlova, E. (2024). Digital banking and environmental impact: How Fintech supports carbon footprint reduction. BIO Web of Conferences, 145. https://doi.org/10.1051/bioconf/202414505017

Ningrum, M., & Risman, A. (2022). Performance Analysis of Protected Fund and Equity Fund Using Sharpe, Treynor, Jensen. Indikator: Jurnal Ilmiah Manajemen dan Bisnis, 6(1), 52 - 62. doi:http://dx.doi.org/10.22441/indikator.v6i1.15228

Pamungkas, A., & Risman, A. (2025). The Role of Financial Performance in Mediating the Effect of Sustainability on Firm Value: A Study on Property and Real Estate Companies.

e-ISSN: 2598-4888
p-ISSN: 2598-6783

The EUrASEANs: Journal on Global Socio-Economic Dynamics, (2(51), 222-234. https://doi.org/10.35678/2539-5645.2(51).2025.222-234

Prameswary, R., & Muslimin, M. (2025). The Behavioral Finance Perspective on MSMEs: Impact of Digital Finance, Financial Literacy, and Financial Inclusion. Indikator: Jurnal Ilmiah Manajemen dan Bisnis, 9(2), 1-11. doi:http://dx.doi.org/10.22441/indikator.v9i2.32979

Puryandani, E. S., et al. Manajemen Portofolio dan Investasi. Edited by Edinov, Shelby, Eureka Media Aksara, 2024..

Risman, A., Parwoto & Sulaeman, A., (2020). The Mediating Role of Firm's Performance on The Relationship between Free Cash Flow and Capital Structure, Psychology and Education Journal, Vol. 58 No. 1: 1209-1216.

Risman, A., Subhani, M., & Ushakov, D. (2021). Nexus between Financial Fundamentals and Automotive (Car) Industry. ARDL approach. E3S Web of Conferences, 244. https://doi.org/10.1051/e3sconf/202124408015

Risman, A. (2021). Kurs Mata Uang dan Nilai Perusahaan. Banyumas: Pena Persada.

Risman, A., & Susanti, A. (2023). Determination of The Firm's Performance Through Islamic Corporate Governance, Islamic Intellectual Capital and Company Size: Case Studies on Indonesian Islamic Banks (2018–2021). The EUrASEANs: Journal on Global Socio-Economic Dynamics, (6(43), 202-213. https://doi.org/10.35678/2539-5645.6(43).2023.202-213

Risman, A., Markonah, M., Mubarok, J., & Saputra, B. L. E. (2024). The Islamic Perspective of Gold-Based Investment: The Case of Indonesia. Tazkia Islamic Finance and Business Review, 18(1), 1–17. https://doi.org/10.30993/tifbr.v18i1.363

Risman, A. (2024). The Behavioral Islamic Finance: Conceptual Framework and Literature Review. Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE), 7(2), 3216-3230. https://doi.org/10.31538/iijse.v7i2.5071

Risman, A. (2024). The Behavioral Finance of MSME: Digital Finance, Managerial Biases, Financial Literacy. Dinasti International Journal of Economics, Finance & Accounting. 5(2): 641-649. https://doi.org/10.38035/dijefa.v5i2.2660

Wahyuningsih, L., & Risman, A. (2025). The Effect Enterprise Risk Management, Sustainable Banking Disclosure, Financial Inclusion on Firm's Value. Indikator: Jurnal Ilmiah Manajemen dan Bisnis, 9(1), 76–86. doi:http://dx.doi.org/10.22441/indikator.v9i1.30684