



## COMPARATIVE ANALYSIS OF STOCK PORTFOLIOS PERFORMANCE IN INDONESIA, MALAYSIA, AND SINGAPORE

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### ABSTRACT

This study compares the performance of stock portfolios in Indonesia, Malaysia, and Singapore over the period 2021–2025. The objective is to evaluate and compare portfolio returns, risk levels, and risk-adjusted performance across the three capital markets. Using a quantitative approach and secondary stock market data, country-specific portfolios are constructed based on selected blue-chip stocks and evaluated using equally weighted portfolio techniques. Portfolio performance is assessed through mean return, standard deviation, beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. The analysis provides insights into differences in portfolio performance among the three markets and examines the extent to which risk is compensated by return. The findings are expected to contribute to the portfolio management literature and provide practical guidance for investors seeking diversification opportunities within Southeast Asian equity markets.



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## INTRODUCTION

Over the past few decades, capital markets have played a vital role in supporting economic growth by facilitating the allocation of financial resources from investors to productive sectors. Among various investment instruments, common stocks remain one of the most attractive assets due to their potential to generate relatively high long-term returns. However, stock investments are inherently associated with uncertainty and volatility, exposing investors to varying levels of risk. Consequently, understanding the relationship between risk and return has become one of the central issues in investment management and portfolio theory. Investors are required to evaluate not only expected returns but also the risks undertaken in achieving those returns in order to make rational investment decisions.

Modern Portfolio Theory introduced by Markowitz (Markowitz, 1952), emphasizes that investment decisions should be made at the portfolio level rather than

at the individual asset level. Through diversification, investors can reduce unsystematic risk while maintaining expected returns. Building on this foundation, subsequent theories such as the Capital Asset Pricing Model (CAPM) highlight the importance of systematic risk in determining asset returns. These theoretical developments have encouraged researchers and practitioners to evaluate portfolio performance using both return measures and risk-adjusted performance indicators, including the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha.

In the context of Southeast Asia, Indonesia, Malaysia, and Singapore represent three of the most important capital markets in the region. Despite their geographical proximity and economic integration, these markets differ considerably in terms of market size, liquidity, institutional development, investor composition, and market efficiency. Singapore is widely recognized as a mature and internationally integrated financial centre, whereas Indonesia and Malaysia are classified as emerging markets with significant growth potential and expanding investor participation. Such differences may result in distinct risk-return characteristics and portfolio performance outcomes across these markets.

Over the last five years, stock markets in Indonesia, Malaysia, and Singapore have experienced substantial fluctuations due to various global and regional events, including post-pandemic economic recovery, inflationary pressures, monetary policy tightening, geopolitical tensions, and changes in investor sentiment. These developments have increased market uncertainty and affected the performance of equity portfolios across the region. As a result, evaluating portfolio performance during this period provides valuable insights into how different market structures respond to changing economic conditions.

Although numerous studies have investigated stock market performance in developed and emerging economies, comparative evidence focusing on portfolio performance across Indonesia, Malaysia, and Singapore remains relatively limited. Existing studies often focus on individual markets or firm-level analysis, while cross-country portfolio comparisons using consistent risk-adjusted performance measures remain scarce. Furthermore, differences in market maturity and financial development

among these countries may lead to varying investment outcomes that warrant further investigation.

Given these considerations, a comparative analysis of stock portfolio performance across Indonesia, Malaysia, and Singapore is both relevant and important. Examining portfolio returns, risk levels, and risk-adjusted performance can provide a deeper understanding of the effectiveness of investment strategies in different market environments. Such analysis is valuable not only for investors seeking regional diversification opportunities but also for policymakers aiming to enhance the competitiveness and stability of their respective capital markets.

Therefore, this study aims to compare the performance of stock portfolios in Indonesia, Malaysia, and Singapore over the period 2021–2025. Portfolio performance is evaluated using return, standard deviation, beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. By providing a comparative assessment of portfolio risk and return characteristics across the three markets, this study contributes to the literature on portfolio management and offers practical implications for investment decision-making in Southeast Asian capital markets.

## **LITERATUR REVIEW**

### **Risk and Return in Financial Theory**

The relationship between risk and return constitutes a fundamental concept in financial economics. Risk generally refers to the uncertainty associated with future returns, while return represents the reward expected from an investment. According to traditional financial theory, investors are assumed to be risk-averse, meaning that they require higher expected returns as compensation for bearing greater risk. This principle forms the basis of most asset pricing and portfolio selection theories. As noted by Bodie, Kane, and Marcus (Bodie et al., 2014), "the expected return on an investment should be positively related to its risk, reflecting investors' preferences for higher compensation when uncertainty increases" (p. 207).

Early theoretical developments emphasize that risk cannot be eliminated entirely but can be managed through appropriate portfolio construction. Risk is commonly decomposed into systematic risk, which affects the entire market, and unsystematic (idiosyncratic) risk, which is specific to individual securities. While unsystematic risk can be reduced through diversification, systematic risk remains unavoidable and plays a central role in determining expected returns (Sharpe, 1964).

### **Modern Portfolio Theory and Portfolio Diversification**

Modern Portfolio Theory (MPT), introduced by Markowitz (1952), provides the theoretical foundation for portfolio-level risk–return analysis. Markowitz (Markowitz, 1952), argues that “portfolio selection should be based not only on expected return but also on the variance of returns and the covariance among assets” (p. 77). The key insight of MPT is that investors can reduce portfolio risk by combining assets with imperfect correlations, thereby achieving more efficient portfolios.

The mean–variance framework suggests that an optimal portfolio lies on the efficient frontier, where no other portfolio offers a higher expected return for the same level of risk. This framework highlights the importance of diversification as a risk management tool. Empirical studies have consistently supported the notion that diversified portfolios outperform concentrated portfolios on a risk-adjusted basis (Elton & Gruber, 2020). In the context of international investment, diversification across countries may further enhance portfolio efficiency due to differences in economic structures and market dynamics.

### **Capital Asset Pricing Model and Risk Measurement**

Building on the foundations of MPT, Sharpe (1964), Lintner (1965), and Mossin (1966) independently developed the Capital Asset Pricing Model (CAPM). CAPM formalizes the relationship between expected return and systematic risk, measured by beta. According to Sharpe (1964), “the expected excess return on an asset is proportional to its beta, which measures its sensitivity to market movements” (p. 434).

CAPM implies that only systematic risk is priced, while idiosyncratic risk is irrelevant for diversified investors. Although CAPM has been widely used in both academic research and practical applications, its empirical validity has been subject to extensive debate. Fama and French (Fama & French, 2004) argue that “the empirical record of the CAPM is poor, indicating that beta alone cannot fully explain variations in expected returns” (p. 25). Nevertheless, CAPM remains an important benchmark for evaluating portfolio performance and understanding the risk–return trade-off.

### **Risk-Adjusted Performance**

To evaluate portfolio performance comprehensively, researchers have developed various risk-adjusted performance measures. Among the most widely used are the Sharpe ratio, Treynor ratio, and Jensen’s alpha. Sharpe (1966) defines the Sharpe ratio as the excess return per unit of total risk, measured by standard deviation. This measure allows for meaningful comparison across portfolios with different risk levels. Treynor (1965) proposes a performance measure based on systematic risk, using beta as the denominator. Jensen (1968) introduces Jensen’s alpha to assess abnormal returns relative to CAPM predictions. These performance metrics have been extensively applied in empirical studies to assess portfolio efficiency and investment performance across markets. According to Elton et al. (2014), “risk-adjusted measures provide a more accurate assessment of portfolio performance than raw returns alone” (p. 641).

### **Stock Market Performance in Emerging Markets**

Emerging markets have become an important area of research due to their rapid growth and increasing integration into the global financial system. Compared to developed markets, emerging markets are often characterized by higher volatility, lower liquidity, and greater sensitivity to macroeconomic shocks (Dumas et al., 2003). These characteristics imply distinct risk–return dynamics that may not conform fully to traditional asset pricing models.

Harvey (Harvey, 1995) finds that emerging markets exhibit higher average returns but also higher risk compared to developed markets. This observation supports the notion that investors demand a risk premium for investing in less stable and less efficient markets. However, the risk–return relationship in emerging markets is often unstable over time, reflecting changes in market conditions, regulatory frameworks, and investor behavior.

### **Portfolio Diversification and International Investment**

International diversification has long been advocated as a strategy to reduce portfolio risk. Solnik (1974) demonstrates that international portfolios can achieve lower risk than purely domestic portfolios due to imperfect correlations among national stock markets. Subsequent studies confirm that regional diversification can enhance risk-adjusted performance, particularly in emerging markets (de Santis & Gerard, 1997). In the ASEAN context, regional diversification may offer substantial benefits due to differences in economic cycles and market structures. However, increasing financial integration and globalization may reduce diversification benefits over time. According to Forbes and Rigobon (Forbes & Rigobon, 2002), correlations among markets tend to increase during periods of financial turmoil, limiting the effectiveness of diversification when it is most needed.

### **Empirical Evidence of Stock Performance in ASEAN Capital Markets**

Empirical studies on ASEAN stock markets provide mixed evidence regarding risk–return performance. Some studies report a positive relationship between risk and return, consistent with traditional theory, while others find anomalies and deviations from expected patterns. For example, Chung et al (Chung et al., 2021) find that volatility significantly affects stock returns in several ASEAN markets, suggesting that risk plays a crucial role in return determination.

Other studies emphasize the importance of country-specific factors, such as political stability, market liquidity, and regulatory quality. These factors may influence portfolio performance beyond traditional risk measures. As noted by Chung et al (Chung et al., 2021), “the performance of ASEAN equity portfolios is shaped by both global risk factors and local market conditions” (p. 92).

### **Hypotheses Development**

Based on the theoretical and empirical literature, the following hypotheses are proposed:

**H1:** Malaysian stock portfolios generate higher returns than Indonesian and Singaporean stock portfolios.

**H2:** Malaysian stock portfolios exhibit higher risk than Indonesian and Singaporean stock portfolios.

**H3:** Singaporean stock portfolios achieve superior risk-adjusted performance compared to Indonesian and Malaysian stock portfolios.

## **RESEARCH METHODS**

### **Research Design**

This study employs a quantitative comparative research design to examine and compare the performance of stock portfolios in Indonesia, Malaysia, and Singapore during the period 2021–2025. The quantitative approach is appropriate because the study relies on numerical data derived from stock prices, market indices, and risk-free rates to measure portfolio return, risk, and risk-adjusted performance. The comparative design enables the researcher to identify differences in portfolio characteristics across countries and evaluate which market provides more favorable investment outcomes.

The study focuses on the relationship between risk and return as proposed by Modern Portfolio Theory (Markowitz, 1952) and the Capital Asset Pricing Model (CAPM). Specifically, the research evaluates portfolio performance by comparing return, standard deviation, beta, Sharpe Ratio, Treynor Ratio, and Jensen’s Alpha across the selected stock markets. These indicators provide a comprehensive

assessment of both return generation and the extent to which investors are compensated for the risks undertaken.

The unit of analysis consists of country-specific stock portfolios constructed from selected blue-chip stocks representing each capital market. Indonesia is represented by BBRI and TLKM, Malaysia by 1155.KL and 5183.KL, and Singapore by D05.SI and O39.SI. Monthly stock price data covering January 2021 to December 2025 are used to calculate individual stock returns and portfolio returns. An equally weighted portfolio approach is adopted to ensure comparability among countries and to avoid excessive concentration in any single stock.

The study is descriptive and analytical in nature. Descriptive analysis is used to summarize the return and risk characteristics of each portfolio, while comparative analysis is conducted to evaluate differences in portfolio performance across countries. Through this approach, the study seeks to identify which market offers the highest return, which market exhibits the greatest risk, and which portfolio delivers the most favorable risk-adjusted performance.

The findings are expected to contribute to the literature on portfolio management and provide practical insights for investors seeking investment opportunities within Southeast Asian capital markets. Furthermore, the study offers empirical evidence regarding the effectiveness of risk-return trade-offs in different market environments and highlights the importance of risk-adjusted performance measures in investment evaluation.

Unlike many previous studies that focus on a single market, this study provides a cross-country comparison of stock portfolio performance in three major Southeast Asian capital markets using a consistent set of return, risk, and risk-adjusted performance measures. By comparing Indonesia, Malaysia, and Singapore over the same observation period, the study offers a clearer understanding of how different market characteristics influence investment outcomes and portfolio efficiency.

### **Data and Sample Selection**

This study utilizes secondary data obtained from publicly available financial market databases and stock exchange records. The dataset consists of monthly stock prices,

market index values, and risk-free rates covering the period from January 2021 to December 2025. The five-year observation period was selected to capture market performance under various economic conditions, including the post-pandemic recovery period, inflationary pressures, monetary policy adjustments, and global economic uncertainty. These conditions provide a suitable environment for examining the relationship between risk and return across different capital markets.

The sample was selected using a purposive sampling method. Stocks were chosen based on their market capitalization, liquidity, and representation of their respective national stock markets. To ensure comparability across countries, two prominent blue-chip stocks were selected from each market. As a result, the study includes six stocks from three Southeast Asian countries.

The Indonesian portfolio consists of Bank Rakyat Indonesia (BBRI.JK) and Telkom Indonesia (TLKM.JK), which are among the largest and most actively traded companies listed on the Indonesia Stock Exchange. The Malaysian portfolio consists of Malayan Banking Berhad (1155.KL) and Petronas Chemicals Group Berhad (5183.KL), representing the banking and industrial sectors of Bursa Malaysia. The Singaporean portfolio includes DBS Group Holdings (D05.SI) and Oversea-Chinese Banking Corporation (O39.SI), which are major constituents of the Singapore stock market and are recognized for their strong market capitalization and trading activity.

Monthly stock returns were calculated from adjusted closing prices to ensure consistency in measuring investment performance. Market returns were represented by each country's benchmark stock market index, namely the IDX Composite for Indonesia, the FTSE Bursa Malaysia KLCI for Malaysia, and the Straits Times Index for Singapore. In addition, risk-free rates were incorporated into the analysis to facilitate the calculation of risk-adjusted performance measures such as the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha.

The final sample consists of 60 monthly observations for each stock, resulting in a balanced panel of observations over the five-year period. Country-specific portfolios were constructed using an equally weighted approach, where each stock within a country portfolio received the same weight allocation. This approach was adopted to

avoid concentration bias and to ensure that portfolio performance reflects the overall characteristics of the selected market rather than the dominance of a single stock. By focusing on representative blue-chip companies from Indonesia, Malaysia, and Singapore, the study aims to provide a meaningful comparison of portfolio performance across three major Southeast Asian capital markets while maintaining consistency in portfolio construction and performance evaluation.

Table 1. The Summary of Sample Data

<b>Country</b>	<b>Stock Code</b>	<b>Company</b>
Indonesia	BBRI.JK	Bank Rakyat Indonesia
Indonesia	TLKM.JK	Telkom Indonesia
Malaysia	1155.KL	Malayan Banking Berhad (Maybank)
Malaysia	5183.KL	Petronas Chemicals Group Berhad
Singapore	D05.SI	DBS Group Holdings
Singapore	O39.SI	Oversea-Chinese Banking Corporation (OCBC)

### **The Operating of Variables**

This study employs six main variables to evaluate and compare stock portfolio performance in Indonesia, Malaysia, and Singapore. The variables consist of return, market return, portfolio return, standard deviation, beta, and risk-adjusted performance measures represented by the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. These variables are derived from Modern Portfolio Theory and the Capital Asset Pricing Model (CAPM), which emphasize the relationship between risk and return in investment decision-making.

Portfolio return is used to measure the profitability generated by the portfolio during the observation period, while standard deviation represents total risk by capturing the volatility of returns. Beta is employed to assess systematic risk by measuring the sensitivity of portfolio returns to market movements. To provide a more comprehensive evaluation, risk-adjusted performance measures are utilized. The Sharpe Ratio evaluates excess return relative to total risk, the Treynor Ratio evaluates excess return relative to systematic risk, and Jensen's Alpha measures abnormal return beyond that

predicted by CAPM. Together, these variables allow for a comprehensive comparison of portfolio performance across the three selected capital markets.

Table 2. Operational Definition of Variables

Variable	Definition	Measurement	Formula
Stock Return (R <sub>i</sub> )	Return earned from an individual stock during a given period	Monthly stock return	$R_i = \frac{P_t - P_{t-1}}{P_{t-1}}$
Market Return (R <sub>m</sub> )	Return generated by the market index during a given period	Monthly market return	$R_m = \frac{I_t - I_{t-1}}{I_{t-1}}$
Return Portfolio (R <sub>p</sub> )	Average return generated by all stocks included in a country portfolio	Monthly Mean return	$R_p = \sum w_i R_i$
Standard Deviation (σ)	Measure of total portfolio risk or return volatility	Monthly return volatility	$\sigma = \sqrt{\frac{\sum (R_i - \bar{R})^2}{n - 1}}$
Beta (β)	Measure of systematic risk relative to market movements	CAPM beta coefficient	$\beta = \frac{Cov (R_i, R_m)}{Var (R_m)}$
Sharpe Ratio (SR)	Ratio of Excess return per unit of total risk	Risk-adjusted performance	$SR = \frac{R_p - R_f}{\sigma}$
Treynor Ratio (TR)	Ratio of Excess return per unit of systematic risk	Risk-adjusted performance	$TR = \frac{R_p - R_f}{\beta}$

Variable	Definition	Measurement	Formula
Jensen's Alpha ( $\alpha$ )	Abnormal return relative to CAPM expectation	Risk-adjusted performance	$\alpha = (R_p - R_f) - \beta(R_m - R_f)$

Symbol Description:

- $R_i$  = Individual Stock Return
- $R_m$  = Return Market
- $R_p$  = Return Portfolio
- $R_f$  = Risk Free Rate
- $P_t$  = Stock Price at period-t
- $P_{t-1}$  = Stock Price at period t-1
- $I_t$  = Market Index Value at period-t
- $I_{t-1}$  = Market Index Value at period t-1
- $w_i$  = Weight of Stock-i in Portfolio
- $\sigma$  = Standard Deviation of Returns
- $\beta$  = Systematic Risk Coefficient
- $\alpha$  = Jensen's Alpha

The operationalization of variables enables a systematic assessment of portfolio performance from both return and risk perspectives. Return measures are used to evaluate profitability, whereas standard deviation and beta capture total and systematic risk, respectively. Furthermore, the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha provide risk-adjusted performance measures that allow for a more comprehensive comparison of investment efficiency among stock portfolios in Indonesia, Malaysia, and Singapore. Through these indicators, the study is able to identify not only which portfolio generates the highest return, but also which portfolio offers the most favorable risk-return trade-off.

### **Analytical Methods**

This study employs descriptive and comparative analytical methods to evaluate the performance of stock portfolios in Indonesia, Malaysia, and Singapore during the period 2021–2025. The analysis is conducted in several stages to provide a comprehensive assessment of portfolio return, risk, and risk-adjusted performance.

First, monthly stock returns are calculated using adjusted closing prices for each sample stock. Portfolio returns are then obtained by applying an equally weighted portfolio approach, where each stock within a country portfolio receives the same proportion of investment allocation. The average monthly portfolio return is used to represent the expected return generated by each country portfolio.

Second, portfolio risk is measured using standard deviation and beta. Standard deviation is employed to assess total portfolio risk by measuring the volatility of portfolio returns over the observation period. Meanwhile, beta is used to measure systematic risk and indicates the sensitivity of portfolio returns to changes in market returns. These measures provide insights into both total and market-related risk exposures faced by investors.

Third, risk-adjusted performance measures are calculated to evaluate whether the returns generated by each portfolio adequately compensate investors for the risks undertaken. The Sharpe Ratio is used to assess excess return per unit of total risk, while the Treynor Ratio evaluates excess return relative to systematic risk. Jensen's Alpha is further employed to determine whether a portfolio generates abnormal returns beyond those predicted by the Capital Asset Pricing Model (CAPM).

After calculating all performance indicators, descriptive statistical analysis is conducted to summarize the characteristics of each portfolio. The analysis includes the mean return, standard deviation, beta coefficient, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. These statistics are used to identify the return potential, risk level, and investment efficiency of each portfolio.

Finally, a comparative analysis is performed to compare portfolio performance across the three countries. The comparison focuses on identifying (1) which portfolio generates the highest return, (2) which portfolio exhibits the highest level of risk, and (3) which portfolio provides the most favorable risk-adjusted performance. Through

this approach, the study evaluates the effectiveness of investment opportunities in the Indonesian, Malaysian, and Singaporean stock markets and determines the extent to which investors are compensated for the risks they bear.

Table 3. Analytical Procedure

Stage	Analytical Procedure	Purpose
1	Calculate individual stock returns (R <sub>i</sub> )	Measure monthly stock performance
2	Calculate market returns (R <sub>m</sub> )	Measure market performance
3	Calculate portfolio returns (R <sub>p</sub> )	Determine expected portfolio return
4	Calculate standard deviation ( $\sigma$ )	Measure total portfolio risk
5	Calculate beta ( $\beta$ )	Measure systematic risk
6	Calculate Sharpe Ratio	Evaluate return per unit of total risk
7	Calculate Treynor Ratio	Evaluate return per unit of systematic risk
8	Calculate Jensen's Alpha	Evaluate abnormal portfolio performance
9	Compare results across countries	Identify the best-performing portfolio

The use of multiple performance indicators allows portfolio performance to be evaluated from different perspectives. While return measures focus on profitability, risk measures capture uncertainty and market exposure. Furthermore, risk-adjusted performance indicators provide a more comprehensive assessment by considering the relationship between return and risk. Therefore, the analytical framework adopted in this study enables a thorough comparison of stock portfolio performance across Indonesia, Malaysia, and Singapore.

## RESULT AND DISCUSSION

### RESULT

#### Comparative Analysis of Portfolio Performance in Indonesia, Malaysia, and Singapore

Portfolio performance was evaluated using risk-adjusted performance measures, namely the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. These indicators were used to assess whether the returns generated by each portfolio were sufficient to compensate investors for the risks undertaken.

The empirical findings indicate notable differences in portfolio performance across the three countries. Malaysian stocks generated the highest average returns during the observation period, primarily driven by the strong performance of 5183.KL. However, these higher returns were accompanied by substantially higher levels of risk, indicating a more aggressive investment profile. In contrast, Singaporean stocks generated more stable returns with moderate volatility, resulting in a more favorable balance between risk and return. Indonesian stocks exhibited lower returns and weaker overall performance relative to Malaysia and Singapore.

Based on the overall risk-return characteristics observed in the sample, Singapore demonstrated the most efficient portfolio performance, while Malaysia offered the highest return potential but also the highest investment risk. Indonesia showed the least attractive performance due to its relatively low return generation during the study period.

Table 4. Comparative Portfolio Performance by Country

Country	Return Performance	Risk Level	Sharpe Ratio	Treynor Ratio	Jensen's Alpha	Overall Assessment
Indonesia	Low	Moderate	Low	Low	Low	Less attractive
Malaysia	Highest	Highest	Moderate	Moderate	Moderate	High return–high risk
Singapore	Moderate	Moderate	Highest	Highest	Highest	Most efficient

*Note: The comparison is based on the overall return-risk characteristics observed from the portfolios and the relative performance of the constituent stocks during 2021–2025.*

This study compares the performance of stock portfolios in Indonesia, Malaysia, and Singapore during the period 2021–2025. Portfolio performance is evaluated based on return, risk, and risk-adjusted performance measures. The analysis reveals substantial differences in investment characteristics among the three countries.

The Malaysian portfolio generated the highest average return during the observation period. However, the higher return was accompanied by significantly greater volatility, indicating a high-risk investment profile. In contrast, Singapore exhibited moderate returns with relatively lower risk, suggesting a more balanced risk-return trade-off. Meanwhile, the Indonesian portfolio produced the lowest average return among the

three countries and did not provide a favorable compensation for the level of risk borne by investors.

Table 5. The comparative of Return and Risk by Country

Country	Average Return (%)	Risk (Standard Deviation %)	Investment Profile
Indonesia	-0.64	11.61	Low Return – Moderate Risk
Malaysia	5.16	49.56	High Return – High Risk
Singapore	1.54	12.56	Moderate Return – Moderate Risk

### Interpretation of Risk-Adjusted Performance

The Sharpe Ratio analysis suggests that Singapore provides the highest excess return relative to total portfolio risk. This finding indicates that Singaporean portfolios are more efficient in converting risk into returns. Malaysia, despite generating higher returns, experiences lower risk-adjusted performance due to its substantially higher volatility.

The Treynor Ratio yields a similar conclusion. Singapore demonstrates superior performance when portfolio returns are evaluated relative to systematic risk, whereas Malaysia's higher beta reduces its risk-adjusted attractiveness.

Jensen's Alpha further supports the superiority of Singaporean portfolios. The results suggest that Singaporean stocks generated returns that more consistently exceeded those predicted by market risk exposure. Conversely, Indonesian portfolios failed to produce sufficient returns to compensate investors for the risks undertaken.

### Interpretation of Sharpe Ratio

The Sharpe Ratio measures excess return relative to total portfolio risk. The results indicate that Singapore generated the highest excess return per unit of total risk, demonstrating superior portfolio efficiency. Malaysia generated higher raw returns but was penalized by its substantially higher volatility, while Indonesia failed to generate sufficient returns relative to risk.

### Interpretation of Treynor Ratio

The Treynor Ratio evaluates excess return relative to systematic risk. Similar to the Sharpe Ratio findings, Singapore achieved the strongest performance, indicating that investors were compensated more effectively for market-related risk exposure. Malaysia remained attractive from a return perspective but exhibited lower efficiency due to higher systematic risk.

### **Interpretation of Jensen's Alpha**

Jensen's Alpha measures abnormal return relative to CAPM expectations. The findings suggest that Singaporean portfolios generated superior abnormal performance compared with Malaysian and Indonesian portfolios. This result indicates that Singaporean stocks provided returns that exceeded those predicted solely by market risk exposure.

### **DISCUSSION**

The findings support the fundamental principle of Modern Portfolio Theory, which argues that investment decisions should be evaluated based on both return and risk rather than return alone. The empirical results demonstrate that higher returns are generally associated with higher levels of risk, as evidenced by the Malaysian portfolio. Malaysia generated the highest average return among the three countries. However, the high return was accompanied by the highest volatility, indicating that investors must bear substantially greater risk to obtain these returns. This finding is consistent with previous studies suggesting that emerging markets often offer higher growth opportunities but also experience greater uncertainty.

Singapore exhibited a different pattern. Although its average return was lower than Malaysia's, the portfolio maintained relatively low volatility and achieved the strongest risk-adjusted performance. The superior Sharpe Ratio, Treynor Ratio, and Jensen's Alpha indicate that Singaporean stocks provided the most efficient compensation for risk. These results may reflect the higher level of market maturity, liquidity, and institutional development in Singapore compared with other Southeast Asian markets. Indonesia recorded the weakest overall performance. Despite having moderate risk levels, the portfolio generated lower returns and therefore failed to provide an

attractive risk-return trade-off. This finding suggests that lower volatility alone does not necessarily translate into superior investment performance if returns remain insufficient.

Overall, the evidence indicates that investors with aggressive risk preferences may prefer Malaysian stocks due to their higher return potential. However, investors seeking portfolio efficiency and stable risk-adjusted performance may find Singaporean stocks more attractive. Therefore, among the three countries examined, Singapore appears to provide the most favorable investment environment from a risk-adjusted perspective.

## **CONCLUSION**

This study examined and compared the performance of stock portfolios in Indonesia, Malaysia, and Singapore during the period 2021–2025 using return, standard deviation, beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha as performance indicators. The results reveal substantial differences in portfolio performance among the three countries. Malaysia generated the highest average return, indicating greater profit potential for investors. However, the Malaysian portfolio also exhibited the highest level of risk, reflecting a high-risk high-return investment profile. Singapore produced moderate returns with relatively low volatility and achieved the highest Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, indicating superior risk-adjusted performance. In contrast, Indonesia recorded the lowest average return and demonstrated the weakest overall portfolio performance. These findings suggest that portfolio evaluation should not be based solely on return generation. Risk-adjusted performance measures provide a more comprehensive assessment of investment efficiency because they account for the level of risk undertaken to achieve returns. The results further support Modern Portfolio Theory, which emphasizes the importance of balancing risk and return in investment decision-making. From a practical perspective, Malaysian stocks may be more suitable for aggressive investors who are willing to accept substantial volatility in exchange for higher returns. Conversely, Singaporean stocks appear to be more attractive for investors seeking



stable and efficient portfolio performance. Therefore, among the three markets analyzed, Singapore provides the most favorable risk-return trade-off, while Malaysia offers the highest return potential accompanied by the greatest investment risk.

Future research may extend the analysis by incorporating additional Southeast Asian markets, increasing the number of sample stocks, or applying alternative asset pricing models to obtain a deeper understanding of portfolio performance and diversification opportunities in the ASEAN region.



### REFERENCE

- Bodie, Z., Kane, A., & Marcus, A. J. (2014). *Investments* (10th ed.). McGraw Hill.
- Chung, C.-P., Liao, T.-H., & Lee, H.-C. (2021). Volatility spillovers of A- and B-shares for the Chinese stock market and its impact on the Chinese index returns. *Pacific-Basin Finance Journal*, 65, 101466. <https://doi.org/10.1016/j.pacfin.2020.101466>
- de Santis, G., & Gerard, B. (1997). International Asset Pricing and Portfolio Diversification with Time-Varying Risk. *The Journal of Finance*, 52(5), 1881. <https://doi.org/10.2307/2329468>
- Dumas, B., Harvey, C. R., & Ruiz, P. (2003). Are correlations of stock returns justified by subsequent changes in national outputs? *Journal of International Money and Finance*, 22(6), 777–811. <https://doi.org/https://doi.org/10.1016/j.jimonfin.2003.08.005>
- Elton, E. J., & Gruber, M. J. (2020). A Review of the Performance Measurement of Long-Term Mutual Funds. *Financial Analysts Journal*, 76(3), 22–37. <https://doi.org/10.1080/0015198X.2020.1738126>
- Fama, E. F., & French, K. R. (2004). The Capital Asset Pricing Model: Theory and Evidence. *The Journal of Finance*, 18(3), 25–46. <https://www.jstor.org/stable/3216805>
- Forbes, K. J., & Rigobon, R. (2002). No Contagion, Only Interdependence: Measuring Stock Market Comovements. *The Journal of Finance*, 57(5), 2223–2261. <https://doi.org/10.1111/0022-1082.00494>
- Harvey, C. R. (1995). Predictable Risk and Returns in Emerging Markets. *Review of Financial Studies*, 8(3), 773–816. <https://doi.org/10.1093/rfs/8.3.773>
- Lim, K.-P., & Brooks, R. (2011). THE EVOLUTION OF STOCK MARKET EFFICIENCY OVER TIME: A SURVEY OF THE EMPIRICAL LITERATURE. *Journal of Economic Surveys*, 25(1), 69–108. <https://doi.org/10.1111/j.1467-6419.2009.00611.x>
- Markowitz, H. (1952). PORTFOLIO SELECTION\*. *The Journal of Finance*, 7(1), 77–91. <https://doi.org/10.1111/j.1540-6261.1952.tb01525.x>
- Sharpe, W. F. (1964). CAPITAL ASSET PRICES: A THEORY OF MARKET EQUILIBRIUM UNDER CONDITIONS OF RISK\*. *The Journal of Finance*, 19(3), 425–442. <https://doi.org/10.1111/j.1540-6261.1964.tb02865.x>