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Performance Evaluation of Mutual Funds in Indonesia: An Analysis of Risk-Adjusted and Market Timing

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ABSTRACT

This research investigates the performance of 38 Indonesian mutual funds, consisting of 21 fixed income funds and 17 equity funds, from August 2017 to May 2025. The evaluation employs various risk-adjusted performance measures, including the Sharpe ratio and Jensen's alpha, as well as market timing analysis using the Treynor-Mazuy and Henriksson-Merton models. The results indicate that fixed income funds posted a higher average monthly return (0.34%) than both equity funds (0.08%) and the market index (0.30%). Notably, the risk-free rate (0.45%) surpassed the returns of all fund categories and the market. Performance analysis reveals that only 10 funds outperformed the market based on the Sharpe ratio, and just one fund recorded a statistically significant positive Jensen's alpha. Similarly, market timing evaluation identified only one fund with a significant positive coefficient, suggesting effective market timing ability. These findings are consistent with the Efficient Market Hypothesis, implying that most Indonesian mutual funds are unable to consistently generate superior risk-adjusted returns or exhibit strong market timing skills. The study provides relevant insights for investors and fund managers regarding mutual fund selection and performance expectations in Indonesia. However, the research acknowledges limitations in sample size and scope, recommending that future studies include broader samples, longer observation periods, and additional explanatory variables to enrich the understanding of mutual fund performance in the Indonesian capital market.

Keywords: Efficient Market Hypothesis, Indonesian Capital Market, Market Timing, Mutual Funds, Risk-Adjusted Performance

INTRODUCTION

Investment portfolio performance is significantly important to investors, both individual and institutional, as it directly impacts wealth accumulation. One of the most popular investment instruments is mutual funds. In Indonesia, mutual fund investments have shown rapid growth, with total assets under management increasing significantly from IDR 284 trillion as of March 2016 (IndoPremier, 2016) to over IDR 781 trillion in April 2025 (Kontan, 2025). Mutual funds offer diversified investment opportunities to reduce investment risk and potential loss due to market fluctuation (Bennur, 2023; Bhargava et al., 2024). Additionally, the ease of access and relatively low minimum investment make mutual funds appealing to a wide range of investors. In the Indonesian capital market, the popularity of mutual funds continues to increase, supported by higher financial literacy, improved information technology, and regulations that provide easier access to mutual fund investment. Furthermore, mutual funds are managed by professional investment managers, making them attractive to investors who may not have the time, knowledge, or experience to manage their own portfolios. Mutual funds also offer relatively high liquidity, allowing investors to buy or sell their investment units easily.

Mutual funds function as collective investment vehicles that pool funds from multiple investors to be invested in a diversified portfolio of securities by an experienced investment manager. According to Law of the Republic of Indonesia Number 8 of 1995 concerning capital Market, mutual funds are defined as financial vehicles used to collect funds from the public and

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invest them in a portfolio of securities by an investment manager authorized by the relevant authorities. Bodie, Kane, and Marcus (2018) also explain that mutual funds allow investors to achieve their investment goals with managed levels of risk through diversification and professional management.

There are several types of mutual funds available in the Indonesian capital market (Bursa Efek Indonesia, n.d.). Firstly, Equity Mutual Funds which invest at least 80% of their portfolio in stocks, with high risk but also the potential for high long-term returns due to price fluctuations in the capital market. Secondly, Fixed Income Funds which invest at least 80% of their portfolio in bonds or debt securities, offering moderate risk and more stable returns compared to equity funds. Thirdly, Money Market Funds which invest in money market instruments such as deposits, Bank Indonesia Certificates (SBI), or short-term bonds with maturities of less than one year, characterized by low risk and high liquidity. Lastly, Balanced Funds which allocate their portfolios among stocks, bonds, and money markets, aiming to balance potential returns with investment risk. While mutual funds provide a number of benefits for investors, performance evaluation remains crucial as it determines the attractiveness of these products and affects investors' financial outcomes. The measurement such as total return, do not adequately account for the risks taken by fund managers (Grau-Carles et al., 2009). As a result, risk-adjusted performance measures such as the Sharpe ratio, Treynor measure, Jensen's alpha, and information ratio are widely adopted to provide a more comprehensive evaluation of fund performance by considering both return and risk. Furthermore, the market timing ability of fund managers has become a topic of increasing interest in academic research and practical investment decision-making. Quantitative models such as those introduced by Henriksson-Merton and Treynor-Mazuy provide a way to assess whether managers can generate superior returns through market timing strategies.

Despite the substantial growth and popularity of mutual funds in Indonesia, empirical research on their risk-adjusted performance and market timing ability remains limited, particularly compared to studies in developed markets. Given the unique characteristics and challenges of the Indonesian capital market, such as higher volatility and lower efficiency compared to mature markets Rorizki et al., 2022), it is essential to further understand how mutual funds actually perform in this context.

The main objective of this study is to evaluate the performance of mutual funds in Indonesia by utilizing various risk-adjusted performance measures and assessing the market timing ability of fund managers. Specifically, this research seeks to analyze the risk-adjusted returns of mutual funds through established metrics such as the Sharpe ratio, Treynor measure, Jensen's alpha, and information ratio. In addition, the study aims to examine whether mutual fund managers in Indonesia possess effective market timing skills, applying the Henriksson-Merton and Treynor-Mazuy models as analytical tools. Lastly, this research intends to compare the performance of mutual funds with relevant market benchmarks, including the Indonesia Stock Exchange Composite Index (IHSG) and risk-free assets, over the observation period.

This research contributes to the existing body of knowledge by providing comprehensive empirical evidence on the risk-adjusted performance and market timing ability of mutual fund managers in Indonesia. The findings are expected to offer valuable insights for investors in making more informed investment decisions, support fund managers in evaluating and refining their management strategies, and assist regulators in formulating policies aimed at improving transparency and competitiveness within the mutual fund industry. Furthermore, this study provides contextual insights into the performance of mutual funds within the unique characteristics of the Indonesian capital market.

LITERATURE REVIEW

Portfolio Concept and Risk Diversification (Modern Portfolio Theory – Markowitz)

Modern Portfolio Theory (MPT), pioneered by Harry Markowitz in 1952, is widely regarded as the foundational framework for investment portfolio construction and management. The central tenet of MPT is that investors can achieve an optimal trade-off between expected return and risk by holding a diversified portfolio rather than concentrating their investments in a single security (Markowitz, 1952). Diversification, as advocated by MPT, enables investors to reduce the

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overall risk of their portfolios, since the returns of different assets are not perfectly correlated. This means that negative returns from some assets can be mitigated by positive returns from others, thereby lowering the total portfolio risk. MPT further posits that the risk of a portfolio is not merely the weighted average of the risks of its individual assets, but also depends crucially on the correlations among those assets. By strategically combining assets with low or negative correlations, investors can construct an "efficient portfolio" that offers the highest expected return for a given level of risk, or, conversely, the lowest risk for a given level of expected return (Bodie, Kane, & Marcus, 2018).

The set of these optimal portfolios forms what is known as the efficient frontier, a graphical depiction of portfolios that maximize expected return for each level of risk. Rational investors, according to MPT, will select portfolios located along the efficient frontier, in line with their own risk preferences. This theoretical foundation also underpins the concept of mutual funds, which pool funds from many investors to invest in a broad selection of assets, thus offering instant diversification benefits even to investors with limited capital.

Although MPT has been subject to various critiques, particularly its reliance on historical data, the assumption of normally distributed returns, and the presumption of rational investor behavior, it remains highly influential in contemporary portfolio management and risk assessment practices..

Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model (CAPM), developed independently by Sharpe (1964), represents a fundamental advancement in the theory of asset pricing and portfolio management. CAPM provides a framework for quantifying the relationship between systematic risk and expected return for assets, particularly stocks and portfolios. The model posits that the expected return on an investment is determined by the risk-free rate plus a risk premium that is proportional to the asset's sensitivity to overall market movements, commonly referred to as beta (β). The key equation of the CAPM is $E(Ri) = Rf + \beta i\,[E(Rm) - Rf]$, where $E(Ri)$ is the expected return on asset i, Rf is the risk-free rate, βi is the beta of asset i, and $E(Rm)$ is the expected return of the market portfolio. CAPM assumes that all investors hold the market portfolio as the optimal portfolio on the efficient frontier and are only compensated for bearing systematic (non-diversifiable) risk, as unsystematic risk can be eliminated through diversification. Beta, therefore, becomes the only relevant measure of risk in determining expected returns in equilibrium (Bodie, Kane, & Marcus, 2018).

The model serves as the basis for evaluating the performance of mutual funds by enabling the calculation of risk-adjusted excess returns, commonly known as Jensen's alpha. A positive alpha indicates that a portfolio has outperformed the expected return predicted by CAPM, suggesting superior management or stock selection skills by the fund manager (Jensen, 1968).

Despite its widespread application in financial analysis and portfolio evaluation, CAPM has faced criticism for its strong assumptions, including market efficiency, homogeneous investor expectations, and the existence of a risk-free asset. Empirical evidence has sometimes shown deviations from CAPM predictions, leading to the development of alternative asset pricing models such as the Arbitrage Pricing Theory (APT) (Ross, S. A. (1976) and multi-factor models (Fama & French, 1993). Nevertheless, CAPM remains a widely used tool in both academic research and industry practice for assessing expected returns and risk-adjusted performance.

Efficient Market Hypothesis (EMH

The Efficient Market Hypothesis (EMH), first articulated by Fama (1970), posits that financial markets are informationally efficient, such that security prices at any moment fully reflect all available information. This central idea implies that it is virtually impossible for investors to consistently achieve returns above average market returns on a risk-adjusted basis, since asset prices instantaneously incorporate and respond to new information. EMH has become a foundational theory in finance and serves as a benchmark for evaluating both investment strategies and market behaviour.

According to EMH, there are varying degrees of efficiency depending on the breadth of information considered. In its weak form, the hypothesis states that all historical price and trading

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information is already embedded in current prices, rendering technical analysis ineffective for generating abnormal returns. The semi-strong form suggests that all publicly available information, including financial statements and news, is also incorporated into prices, thus negating the effectiveness of fundamental analysis. The strong form of EMH goes further to argue that all information, both public and private, is instantly reflected in security prices, implying that even insider information cannot be exploited for excess returns (Bodie, Kane, & Marcus, 2018).

The implications of EMH for mutual fund performance are profound. If markets are indeed efficient, active fund managers would be unable to consistently outperform passive benchmarks once management fees and transaction costs are accounted for. Any observed outperformance would be attributable to chance rather than skill. Empirical studies in many markets frequently support this notion, finding that the majority of actively managed mutual funds underperform their respective benchmarks over the long run (Ferreira et al., 2011). As a result, EMH has influenced the growing popularity of low-cost passive investment vehicles such as index funds and exchange-traded funds (ETFs).

Nevertheless, EMH has its critics, particularly regarding its application in emerging markets. Critics point to market anomalies, periods of investor irrationality, and information asymmetry that suggest markets may not always be perfectly efficient. These inefficiencies can potentially provide opportunities for skilled fund managers to achieve superior performance through effective stock selection or market timing, especially in markets where regulatory frameworks, transparency, and investor sophistication are still evolving. Therefore, while EMH remains a powerful theoretical framework, its practical implications can differ across market environments, shaping expectations about the value that active management can deliver

Mutual Fund Performance Measurement

Evaluating the performance of mutual funds requires the use of robust quantitative measures that capture both the returns generated and the risks undertaken by fund managers. While total return provides a straightforward measure of investment gain, it does not account for the variability of returns or the level of risk associated with achieving those returns. Consequently, a range of risk-adjusted performance metrics has been developed to provide a more nuanced assessment of mutual fund performance. Among the most widely used are the Sharpe ratio (Sharpe, 1966), which measures excess return per unit of total risk (as indicated by standard deviation); the Treynor ratio (Treynor, 1965), which measures excess return relative to systematic risk (beta); Jensen's alpha (Jensen, 1968), which estimates the portion of a fund's return attributable to managerial skill after adjusting for market risk; and the information ratio, which compares a fund's alpha to the volatility of that alpha, thereby assessing the consistency of outperformance (Bodie, Kane, & Marcus, 2018).

These risk-adjusted measures enable investors and researchers to compare funds with different risk profiles on an equal footing and to distinguish between luck and genuine managerial skill in generating returns. For example, a high total return may appear impressive but may simply be the result of taking excessive risks. In contrast, a high Sharpe ratio or positive Jensen's alpha indicates that a fund manager has been able to generate superior returns without exposing investors to disproportionate levels of risk. In the Indonesian mutual fund context, the application of these risk-adjusted metrics is particularly important due to the varying volatility and performance characteristics across different fund types and market conditions.

Despite their usefulness, these measures also have limitations. For example, the Sharpe ratio assumes that returns are normally distributed and may not adequately capture downside risk, while Jensen's alpha is sensitive to the choice of benchmark and market model (Bodie, Kane, & Marcus, 2018). Nevertheless, the systematic use of risk-adjusted performance measures remains a cornerstone of mutual fund evaluation, guiding both academic research and practical investment decision-making

Market Timing Theory

Market timing theory refers to the ability of fund managers to anticipate market movements and adjust their portfolio allocations accordingly to maximize returns or minimize losses. Unlike

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stock selection, which focuses on choosing individual securities, market timing emphasizes the decision of when to enter or exit specific asset classes based on predictions of overall market trends. The concept has attracted significant academic attention, as successful market timing could potentially enable mutual fund managers to outperform passive benchmarks, thereby generating positive alpha for investors.

To empirically evaluate market timing ability, several econometric models have been developed. The Treynor-Mazuy model extends the traditional CAPM framework by adding a quadratic term to capture non-linear relationships between portfolio returns and market returns, where a significant positive coefficient suggests successful market timing by the manager (Treynor & Mazuy, 1966). Similarly, the Henriksson-Merton model introduces a dummy variable to detect whether fund managers can correctly predict and react to market upturns and downturns (Henriksson & Merton, 1981). The statistical significance and magnitude of the coefficients in these models serve as evidence of a manager's timing skill.

While the prospect of market timing is appealing, a substantial body of empirical research has found that very few mutual fund managers are able to consistently add value through market timing, especially after accounting for fees and transaction costs (Olbryś, 2023). These findings are often cited as support for the Efficient Market Hypothesis, which asserts that it is extremely difficult to outperform the market through timing strategies. Nonetheless, the assessment of market timing remains relevant, particularly in emerging markets where market inefficiencies and higher volatility may offer greater opportunities for skilled managers to exploit trends and deliver superior performance.

RESEARCH METHOD

Research Approach

This research employs a descriptive-evaluative approach, aiming to provide a comprehensive analysis of mutual fund performance in Indonesia based on risk-adjusted performance measures and market timing ability. The study focuses on describing actual phenomena and evaluating mutual fund performance using established quantitative indicators, without testing causal relationships between variables

Data Sources and Types

The data used in this study is secondary and historical in nature, consisting of monthly net asset value (NAV) per unit and mutual fund classification, which is limited to Equity and Fixed Income funds. In addition, benchmark return data from the Jakarta Composite Index (JCI) and the 1-year Indonesian government bond yield (as a proxy for the risk-free rate) are also included. The period of analysis covers August 2017 to May 2025, allowing for a five-year-plus time span to observe patterns and long-term effects. Historical performance data of mutual funds were primarily collected from the website Investing.com, which provides publicly accessible mutual fund information and financial market data.

Monthly data is employed in this study rather than daily or yearly data for several reasons (Caporale et al., 2019). First, monthly frequency helps to reduce the impact of short-term noise and extreme fluctuations that often appear in daily data, thereby providing a more stable and representative measure of fund performance over time. Second, monthly data offers a sufficient number of observations for robust statistical analysis, while avoiding the problem of data sparsity that can occur with yearly data, especially for risk and return measures that require consistent intervals Furthermore, the use of monthly data is widely accepted in mutual fund performance research, as it strikes a balance between capturing relevant return dynamics and ensuring data quality.

Population and Sample

The population of this study comprises all mutual funds that were registered and actively managed in the Indonesian capital market during the observation period. The research sample was selected using a purposive sampling method, where funds were chosen based on specific criteria,

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primarily due to data limitations and the availability of consistent and reliable information. The use of data from Investing.com introduces certain constraints regarding coverage and completeness; however, the research design incorporates transparent and replicable procedures, ensuring that similar studies can be conducted with broader datasets or alternative data sources in the future. The detailed process of sample selection is presented in Table 1.

Table 1. Research Sample Selection

Sample Selection Criteria	Number of Funds
Mutual funds active in Rupiah currency (Equity, Fixed Income, Money Market, and Balanced) – Source: Bareksa.com	901
Mutual funds not listed on Investing.com	(807)
Incomplete data for the period August 2017 – May 2025	(18)
Funds denominated in US dollars	(4)
Funds not classified as equity or fixed income mutual funds	(4)
Mutual funds included in the final sample	38

Data Sources and Types

Performance evaluation is conducted using the following main indicators. Risk-adjusted performance: Sharpe ratio, Treynor measure, Jensen's alpha, information ratio. Market timing ability: Henriksson-Merton and Treynor-Mazuy model coefficients. Other performance metrics: Total return, average return, standard deviation of returns, beta from CAPM regression. Benchmarking is conducted using market index (JCI) returns and the risk-free rate (1-year Indonesian government bond yield).

Hypothesis

The performance of mutual funds can be evaluated not only through absolute returns but also through risk-adjusted measures such as the Sharpe ratio, Treynor ratio, Jensen's alpha, and information ratio. These metrics provide a comprehensive assessment of a fund manager's ability to generate superior returns relative to the risks undertaken. The Efficient Market Hypothesis (EMH) posits that, in an efficient market, it is exceedingly difficult for fund managers to consistently outperform market benchmarks after accounting for risk and fees (Fama, 1970). However, empirical studies in both developed and emerging markets have shown mixed results, with some evidence suggesting that certain managers may achieve positive risk-adjusted returns, particularly in less efficient markets or during periods of market turbulence (Zada et al., 2021).

In addition, the ability of mutual fund managers to time the market, adjusting portfolio allocations in anticipation of market movements, has been the subject of considerable debate. Models such as Treynor-Mazuy and Henriksson-Merton have been widely used to detect market timing ability. While most studies find limited evidence of successful market timing in mature markets, some research indicates that managers in emerging markets, such as Indonesia, may have more opportunities to exploit market inefficiencies (Peter, 2009). Drawing from this body of theory and empirical findings, the following hypotheses are proposed:

H1. Indonesian mutual funds do not generate significantly positive risk-adjusted returns (Sharpe ratio, Treynor ratio, Jensen's alpha, and information ratio) relative to market benchmarks.

H2. Indonesian mutual fund managers do not exhibit significant market timing ability as measured by the Treynor-Mazuy and Henriksson-Merton models.

These hypotheses will be empirically tested using data on mutual fund performance in Indonesia over the observation period, employing relevant risk-adjusted metrics and market timing models. The results are expected to provide insight into the effectiveness of active mutual fund

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management and the validity of the efficient market hypothesis in the Indonesian context. The conceptual framework can be illustrated as shown in Figure 1.

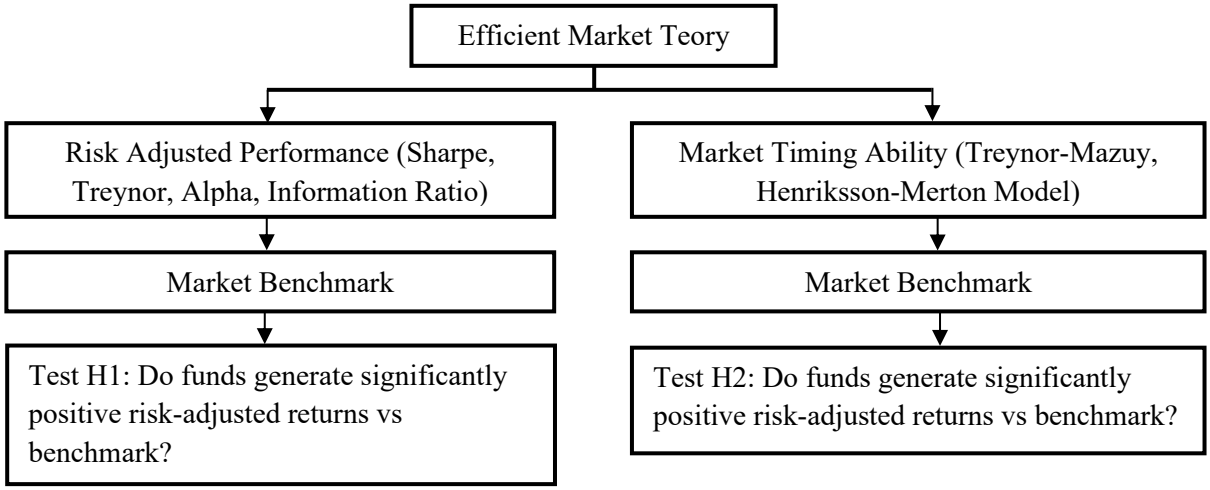

Figure 1. Conceptual Framework

Data Analysis Technique

Data are analyzed descriptively using statistical summaries, tabulation, and visualization (such as tables and charts) to describe the distribution and variation in mutual fund performance across asset classes. Risk-adjusted performance indicators are calculated based on standard formulas, while market timing ability is assessed using coefficients and p-values from the Henriksson-Merton and Treynor-Mazuy models. Comparative analysis is also performed between mutual fund performance and relevant benchmarks (JCI and risk-free rate). Therefore, The research procedure can be illustrated as shown in Figure 2.

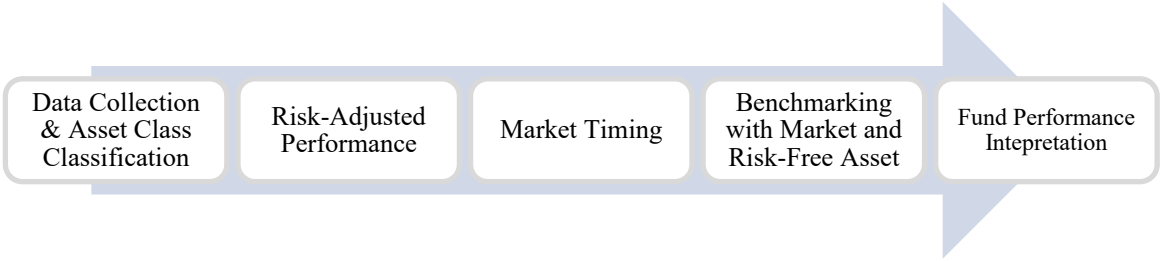

Figure 2. Research Procedure

1. The first step involves collecting secondary data on Indonesian mutual funds, specifically those classified as equity and fixed income funds, for the period of August 2017 to May 2025. This includes gathering monthly net asset value (NAV) data, as well as benchmark returns from the Jakarta Composite Index (JCI) and the 1-year Indonesian government bond yield. After data collection, mutual funds are grouped according to their asset class to ensure accurate and relevant analysis within each category.
2. Risk-Adjusted Performance Evaluation. In this stage, the study evaluates the performance of each mutual fund using risk-adjusted performance measures, including the Sharpe ratio, Treynor ratio, Jensen's alpha, and information ratio. This process consists of several steps:
   a. Calculating Monthly Returns. First, Mutual Fund Returns. Monthly returns for each mutual fund are calculated based on changes in the Net Asset Value (NAV) per unit. The formula used is: $Rp = \frac{NAV_t - NAV_{t-1}}{NAV_{t-1}}$, where Rp is the monthly return of the portfolio (mutual fund) in month *t*, NAV_t is the NAV at the end of month t, and NAV_{t-1} is the NAV at the end of the previous month. Second, Market Returns. Similarly, monthly returns for the market benchmark (Jakarta Composite Index – JCI) are calculated as:

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$Rm = \frac{P_t - P_{t-1}}{P_{t-1}}$, where Rm is the market return, P_t is the closing price of JCI in month t.

b. Converting Annual Risk-Free Yield to Monthly Rate. The risk-free rate, proxied by the 1-year Indonesian government bond yield, is typically reported on an annual basis. To obtain the effective monthly rate, the annual yield is converted using the following formula: $R_f = (1 + R_{f,a})^{\frac{1}{12}} - 1$, where R_f is the effective monthly risk-free rate, and $R_{f,a}$ is the annual risk-free rate.

c. Calculating Risk-Adjusted Performance Measures. Once the monthly returns for mutual funds, the market, and the risk-free rate are obtained, the following risk-adjusted performance metrics are calculated. Firstly. Calculating Sharpe Ratio. Sharpe Ratio measures the excess return per unit of total risk (standard deviation). $Sharp\ Ratio = \frac{\overline{R_p} - \overline{R_f}}{\sigma_p}$, where R_p is the average monthly return of the mutual fund, R_f is the average monthly risk-free rate, σ_p is the standard deviation of the fund's monthly returns. Secondly, calculating Treynor Ratio. Treynor Ratio measures the excess return per unit of systematic risk (beta). $Treynor\ Ratio = \frac{\overline{R_p} - \overline{R_f}}{\beta_p}$, where is the beta of the mutual fund (obtained from CAPM regression). Thirdly, calculating Jensen's Alpha. Jensen's Alpha Indicates the fund's abnormal return relative to that predicted by CAPM. $\alpha_p = \overline{R_p} - \left[\overline{R_f} + \beta_p(\overline{R_m} - \overline{R_f})\right]$. Where $\overline{R_m}$ is the average monthly return of the market. Forthly, Calculating information Ratio. Information ratio evaluates the consistency of excess returns (alpha) over its tracking error (standard deviation of alpha). $Information\ Ratio = \frac{\overline{\alpha_p}}{\sigma_\epsilon}$, σ_ϵ is the standard deviation of the residuals (errors) from the CAPM regression, representing the tracking error.

3. Market Timing Evaluation. The next step is to examine the market timing ability of mutual fund managers. This is accomplished by applying established econometric models, specifically the Treynor-Mazuy and Henriksson-Merton models, to determine whether fund managers are able to adjust their portfolios in anticipation of market movements. The analysis focuses on the significance and direction of the market timing coefficients obtained from these models.

   a. Treynor-Mazuy Model. The Treynor-Mazuy (TM) model extends the traditional Capital Asset Pricing Model (CAPM) by adding a quadratic (squared) term for market excess returns to capture nonlinearities associated with market timing ability. The regression equation is as follows: $R_p - R_f = \alpha + \beta(R_m - R_f) + \gamma(R_m - R_f)^2 + \epsilon_t$, where R_p is Portfolio (mutual fund), R_f is Risk-free rate, R_m is Market return, β is Sensitivity of the portfolio to market returns (systematic risk), γ is Coefficient indicating market timing ability, and ϵ_t is error term. A significantly positive value of γ suggests that the fund manager possesses market timing skills.

   b. Henriksson-Merton Model. Henriksson-Merton Model tests market timing ability by including a dummy variable that distinguishes between up and down markets. The regression equation is: $R_p - R_f = \alpha + \beta(R_m - R_f) + \gamma D(R_m - R_f) + \epsilon_t$, where D is Dummy variable, equal to 1 if $R_m - R_f > 0$, and 0 otherwise. Other variables are defined above. A significantly positive γ coefficient in this model also indicates successful market timing. For each mutual fund, the TM and HM regressions are estimated using monthly excess returns over the observation period. The focus of analysis is on the value and statistical significance (p-value) of the γ coefficient. If γ is statistically significant and positive, it suggests that the fund manager has demonstrated market timing ability. Otherwise, there is no evidence of such skill.

4. Market benchmarking. In this stage, the study systematically compares the performance of each mutual fund to both the market benchmark and the risk-free asset. This dual benchmarking approach is essential to determine whether active mutual fund management

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adds value compared to passive alternatives such as simply investing in the broad market index or risk-free government securities.

Fund Performance Interpretation. In the final stage, the results from risk-adjusted performance evaluation, market timing analysis, and benchmarking are synthesized and interpreted to draw meaningful conclusions about the mutual funds under study

RESULT AND DISCUSSION

Based on the descriptive statistics table for monthly average returns, average return for all mutual funds is 0.0020 or 0.2% per month, the average for fixed income mutual funds is 0.34% per month, the average for equity mutual funds is 0.0008 or 0.08% per month, the average market return is 0.0030 or 0.30% per month, and the average risk-free rate is 0.0045 or 0.45% per month. Looking at the distribution, the minimum return for equity funds reaches -0.12%, while the minimum return for fixed income funds remains positive (0.09%), indicating greater stability in fixed income mutual funds. The highest maximum return is also achieved by fixed income funds (0.62%), which is higher than equity funds (0.48%). The details are presented in Table 2 below.

Table 2. Descriptive Statistics of Monthly Average Returns

Item	Average Return				
	All	Fix Income	Equity	Market	Risk-Free
N	38	21	17		
Mean	0.002026161	0.003369103	0.000816667	0.0030	0.00446
Standard Deviation	0.001958789	0.001374042	0.001639317		
Minimum	-0.00124819	0.000902797	-0.001248186		
Maximum	0.006207846	0.006207846	0.004778729		

From the table 3, we can see that the results show fixed income funds, on average, performed better than equity funds or the market index during the observation period. The average return of fixed income funds (0.34%) is higher than the average return of equity funds (0.08%) and is also slightly higher than the market index return (0.30%). In addition, all of the top three funds with the highest average returns are fixed income funds. Furthermore, the risk-free rate (0.45%) is even higher than the average market return (0.30%) and the average return of all mutual funds, except for a few top-performing fixed income funds. This reflects a market condition that was rather conservative or full of uncertainty during the study period, making risk-free investment returns more competitive. Moreover, the standard deviation for equity funds (0.16%) is higher than that of fixed income funds (0.13%), indicating greater risk/volatility in equity mutual funds, which is consistent with the general characteristics of equity products.

Table 3. Top 3 Fund Monthly Return Compare to Market and Risk-Free Rate

Fund	Top 3			Market	Risk-Free
	All	Fixed Income	Equity		
Principal Bond	0.0062			0.0030	0.00446
Batavia Dana Obligasi Plus	0.0050				
Insight Renewable Energy Fund	0.0050				
Principal Bond		0.0062			
Batavia Dana Obligasi Plus		0.0050			
Insight Renewable Energy Fund		0.0050			
Sucorinvest Equity			0.0048		
Rencana Cerdas			0.0028		
INAMI Equity Fund			0.0027		

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With regard to mutual fund performance, the results presented in Table 4 show that most mutual funds in the sample performed below the market benchmark on key performance metrics. Out of 38 mutual funds evaluated, only a minority outperformed the market in terms of risk-adjusted and absolute return measures. Sharpe Ratio is only 10 funds (26%) higher than the market, while the remaining 28 funds (74%) underperformed. Treynor Ratio is only 6 funds (16%) outperforming the market based on the Treynor measure. Only one fund (2.6%) recorded a positive and statistically significant Jensen's alpha (significance level < 0.1), suggesting that it outperformed the market after accounting for risk. Along with Jensen's Alpha, therefore Information Ratio is also only 1 fund showed a positive information ratio, signaling consistent outperformance versus the benchmark. Total return and average return is16 funds (42%) recorded a higher total return than the market, and 15 funds (39%) exceeded the market in terms of average return.

Table 4. Summary of Performance by Performance Indicators

Performance	Sharpe	Treynor	Jensen's Alpha	Information Ratio	Total Return	Avg Return
Outperformed Market	10	6	1	1	16	15
Underperformed Market	28	32	37	37	22	23

These findings suggest that, for the observation period, most Indonesian mutual funds failed to deliver risk-adjusted or absolute returns superior to the market benchmark. The very low number of funds with positive and significant Jensen's alpha and information ratio further supports the notion that consistent outperformance is rare. This pattern aligns with the Efficient Market Hypothesis (EMH) and align with the study of Ferreira et al. (2011). which argues that in an efficient market, it is difficult for active managers to outperform the market after adjusting for risk and costs. The results imply that, for most investors, selecting actively managed funds does not guarantee superior risk-adjusted returns compared to passive investment strategies tracking the broad market index. These findings provide empirical evidence that Indonesian mutual funds, in general, do not generate significantly positive risk-adjusted returns relative to the market, thereby confirming Hypothesis 1.

Table 5. Summary of Market Timing Ability

Description	Model Henrikkson Merton	Model Treynor Mazuy
Significant	2	7
Unsignificant	36	31
Gamma > 0	1	1
Funds	Danamas Rupiah Plus (Fix Income)	Danamas Rupiah Plus (Fix Income)

The market timing evaluation using both the Henriksson-Merton and Treynor-Mazuy models reveals in the table 5 show that only a small minority of mutual fund managers in the sample demonstrated statistically significant market timing ability. Model Henriksson-Merton is only 2 out of 38 funds showed significant market timing coefficients, while the remaining 36 were not significant. Moreover, only 1 fund exhibited a positive and significant gamma coefficient, namely Danamas Rupiah Plus (Fixed Income). Model Treynor-Mazuy is only 7 funds had significant market timing coefficients, and again, only 1 fund (Danamas Rupiah Plus - Fixed Income) recorded a positive gamma. The other significant results likely represent negative timing or spurious significance. These results indicate that the vast majority of Indonesian mutual funds in the sample did not exhibit successful market timing ability. The fact that almost all funds have non-significant

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gamma coefficients means that most fund managers were unable to add value through timing the market, in line with findings from many previous studies in both developed and emerging markets. This evidence supports the Efficient Market Hypothesis (EMH) and the findings of Olbryś (2023), which suggest that it is extremely difficult for active managers to consistently anticipate and profit from market movements, especially after accounting for transaction costs and management fees. These findings suggest that, overall, the majority of mutual fund managers in Indonesia were unable to effectively anticipate and respond to market movements during the observation period, thereby confirming Hypothesis 2.

The sequential filtering of mutual funds in the sample beginning with average return outperforming the market, then total return, Treynor measure, and finally Sharpe ratio identifies a select group of funds that deliver superior performance relative to the market benchmark (JCI) across multiple metrics. The top-performing funds are shown in table 4 below

Table 4. Funds Top Performance

Nama RD	Sharpe Ratio	Treynor Measure	SharpRm	TreynorRm	Beta	Total_ReturnRp	Avg_ Return (Rp)	Total Rm	Avg_ Rm
BRI Melati Pendapatan Utama	-0.014	-0.001	-0.038	-0.001	0.167	0.460	0.004	0.224	0.003
Batavia Dana Obligasi Plus	0.034	0.003	-0.038	-0.001	0.151	0.570	0.005	0.224	0.003
Syailendra Fixed Income Fund Kelas A	-0.009	-0.001	-0.038	-0.001	0.127	0.480	0.004	0.224	0.003
Principal Bond	0.162	0.015	-0.038	-0.001	0.115	0.769	0.006	0.224	0.003
Insight Renewable Energy Fund	0.106	0.016	-0.038	-0.001	0.031	0.583	0.005	0.224	0.003
Sucorinvest Equity	0.007	0.000	-0.038	-0.001	1.016	0.407	0.005	0.224	0.003

All funds listed in the table 6 have both average and total returns that exceed the market benchmarks (Avg_Return > Avg_Rm; Total_Return > TotalRm), demonstrating their ability to generate higher returns for investors compared to simply tracking the IHSG. Treynor measure and Sharpe ratio values that are superior to the market. This indicates that their outperformance is not solely the result of taking excessive risk, but rather reflects their ability to earn higher returns per unit of risk, both for total risk (Sharpe) and systematic risk (Treynor). Furthermore, the top-performing funds identified through sequential filtering all exhibit beta values substantially below one. This low beta indicates that these funds have relatively low sensitivity to market fluctuations compared to the market index (beta market = 1). Notably, all five funds BRI Melati Pendapatan Utama, Batavia Dana Obligasi Plus, Syailendra Fixed Income Fund Kelas A, Principal Bond, and Insight Renewable Energy Fund Kelas A are classified as fixed income mutual funds. The beta values for these fixed income funds range from as low as 0.031 up to 0.167, significantly below the market benchmark. This means their returns are much less volatile and less responsive to

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movements in the stock market, aligning with the characteristic risk profile of fixed income products. Despite having lower market risk exposure, these funds not only outperformed the market in terms of average and total return, but also achieved higher Sharpe and Treynor ratios than the benchmark. This demonstrates strong performance not just in absolute terms, but also after adjusting for both total and systematic risk. The dominance of fixed income funds among the top performers may reflect market conditions during the observation period, where fixed income assets provided more favorable returns and risk profiles compared to equities. This could be due to factors such as rising or stable bond yields, or periods of heightened stock market volatility that made fixed income products relatively more attractive.

CONCLUTION

This study provides comprehensive evidence regarding the performance of Indonesian mutual funds during the period from August 2017 to May 2025. The results demonstrate that, on average, fixed income funds outperform both equity funds and the market index in terms of average monthly returns and stability, with average returns of 0.34% per month compared to 0.08% for equity funds and 0.30% for the market index. However, the risk-free rate (0.45%) remains higher than the market and most mutual funds, except for several top-performing fixed income funds. The majority of mutual funds in the sample failed to deliver risk-adjusted or absolute returns superior to the market benchmark. Only a small minority of funds outperformed the market in terms of the Sharpe ratio (26%), Treynor ratio (16%), and total return (42%), and just one fund recorded a statistically significant positive Jensen's alpha. Furthermore, the market timing analysis confirms that only a handful of funds demonstrated significant timing ability, with most funds unable to consistently anticipate or capitalize on market movements. These findings support the Efficient Market Hypothesis, indicating that active management in the Indonesian mutual fund industry rarely leads to consistent outperformance.

The findings suggest several important implications for stakeholders. For investors, the results underscore the importance of not relying solely on historical returns when selecting mutual funds, but rather considering risk-adjusted performance measures and recognizing the limited value added by market timing strategies. For fund managers, the evidence highlights the need to focus on cost efficiency, transparency, and innovative portfolio management to enhance value for investors. Regulators may use these findings to encourage fair competition, improve industry standards, and enhance investor protection through better disclosure of risk-adjusted performance metrics.

This research is subject to several limitations. The study focuses on a relatively small sample of 38 mutual funds with complete data, covering only equity and fixed income funds during the observation period. The analysis does not include other asset classes or funds with incomplete data, which may limit the generalizability of the findings. Additionally, the study relies on historical performance and does not account for future market developments or structural changes in the industry. Future research should consider expanding the sample, incorporating a wider variety of mutual fund types and performance measures, exploring the impact of other variable including macroeconomic factors and regulatory changes on mutual fund performance in Indonesia.

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